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Sesión 1
Reglas monetarias, reglas fiscales y fondos de estabilización: su coordinación y contribución a una adecuada gestión macroeconómica

Antecedentes

La variada gama de estrategias de desarrollo y cursos de política económica practicados en la región después de la segunda guerra mundial con el propósito de superar las 'trampas' del subdesarrollo, tuvo dos conspicuos denominadores comunes: (i) el acentuado grado de discrecionalidad con que fueron diseñadas, implementadas, revisadas y posteriormente substituidas por otras que más tarde experimentarían similar ciclo de vida; (ii) la inexistencia de evaluación de resultados de dichas estrategias y cursos de política (complementada por una correspondiente inexigibilidad de responsabilidad pública a sus responsables intelectuales y autores materiales). Mientras que en relación a esto último aun no se observan progresos suficientes, respecto a lo primero se vienen registrando cambios importantes que conviene registrar y analizar.

Los costos económicos y sociales acumulados tras décadas de intentos por transformar equilibrios de bajo nivel en otros de alto nivel (a los que deben sumarse los costos de las políticas de estabilización y ajuste que se hicieron necesarias para corregir los desequilibrios derivados de dichos intentos) tuvieron una importante y tal vez previsible consecuencia: una drástica reducción del espacio de legitimidad con que previamente contaron las políticas discrecionarias y una creciente adhesión al uso de reglas en la conducción de las políticas macroeconómicas. Dicha realidad se ha visto reforzada adicionalmente por la gradual pérdida de autonomía de las autoridades económicas domésticas para diseñar e implementar políticas públicas con independencia del entorno internacional. La construcción de nuevas y sólidas reputaciones de credibilidad --así como la reconstitución de las debilitadas por anteriores excesos de discreción-- hoy parece buscarse de manera creciente a través de la gradual reducción de los límites de lo posible para:

(1) *las autoridades monetarias* , mediante reglas como las de Taylor (relativa a la tasa de interés nominal); McCallum (relativas a la tasa de crecimiento de la base monetaria o de otros agregados monetarios, en la tradición de Friedman y Meltzer); o bien mediante la fijación de 'metas inflacionarias' (como en los casos de Chile, Brasil y México); llegándose a reglas duras como las requeridas por una caja de convertibilidad (Argentina), o la 'dolarización' oficial de la economía (Panamá y Ecuador);

las autoridades fiscales , mediante reglas relativas al nivel máximo anual de diversos indicadores del déficit público (Argentina; Brasil, Ecuador; Perú; Maastricht), o al nivel mínimo del superávit presupuestario estructural (Chile); o bien, respecto a la relación entre la tasa de crecimiento real del gasto público primario y la tasa de variación real del PIB (Argentina; Perú); o también, respecto a la variación anual de la deuda pública (Argentina), o a la proporción de dicho pasivo en relación al PIB (Brasil, Maastricht); o a límites al endeudamiento que no esté dirigido a la formación de capital (Argentina); o aun, mediante la fijación de metas fiscales pluri-anuales con mecanismos obligatorios de ajuste caso no sean cumplidas; o también, mediante reglas de creación y utilización de fondos generales de estabilización macroeconómica (Argentina; Ecuador, Perú), como también, de fondos especiales para estabilización de precios de *commodities* [como los fondos del cobre y del petróleo en Chile; o el fondo del petróleo en Venezuela; o el fondo del café en Colombia; entre otros].

Posibles focos de discusión

Revisar los tipos de reglas que los países de la región vienen adoptando para conducir sus políticas fiscal, monetaria y cambiaria; discutir si la reducción del espacio de decisiones discrecionarias ha venido

acompañada por mayores niveles de exigibilidad de responsabilidades y resultados; evaluar los objetivos de los fondos de estabilización (generales y específicos) y su coordinación con el resto de las reglas fiscales y monetarias; analizar la consistencia interna de diversas reglas adoptadas por un mismo país y la efectiva contribución de éstas a una adecuada coordinación y gestión macroeconómica que lleve en consideración la cobertura de riesgos fiscales y la sostenibilidad intertemporal de las políticas.

Sesión 2
La Política Fiscal, Monetaria y Cambiaria en los programas de estabilidad y crecimiento del área del *euro*: implicaciones y lecciones para la integración regional en América Latina y el Caribe

Antecedentes

La creación y entrada en operación del *euro,* a partir del 1 de enero de 1999, fue un evento de profundo significado para el futuro de los mercados económico-financieros internacionales y, muy probablemente también para nuestra región. Esto último en razón de los estrechos lazos comerciales, productivos y financieros que América Latina y el Caribe mantienen con Europa. Al mismo tiempo, el complejo y largo proceso de discusiones técnicas y políticas que condujo a la creación del *euro* representa una experiencia capaz de iluminar numerosos aspectos de las discusiones en torno de procesos de integración subregional como el Mercosur, Pacto Andino, Mercado Común Centroamericano, Caricom, y Alca.

Es por cierto prematuro tratar de alcanzar conclusiones respecto a los probables efectos directos e indirectos que la creación del *euro* puedan llegar a tener sobre los mercados y economías de nuestra región. En realidad, el principal impacto de la creación de la moneda europea única deberá sentirse en los propios países de la zona *euro*, aunque cabe esperar que otros países --con enlaces comerciales o financieros con Europa-- también sientan sus efectos. Dicha influencia dependerá de la capacidad del *euro* --medio y largo plazo-- para ganar espacio en las transacciones internacionales, lo que en gran medida será función del éxito de la política monetaria del Banco Central Europeo y del cumplimiento de las metas fiscales adoptadas en los programas de estabilidad y convergencia conocidos como Pacto de Estabilidad y Crecimiento. En el corto plazo, sin embargo, las vicisitudes del *euro* durante sus primeros dos años de vida, en términos de volatilidad y tendencia, pueden generar aprehensión en las economías de nuestra región por la considerable vulnerabilidad de éstas a choques externos. De hecho, tal condición aumentó sensiblemente durante los últimos años, en parte, debido a las reformas estructurales iniciadas por la mayoría de los países de la región después de la crisis de la deuda en 1982 (ej. reforma arancelaria, desregulación bancaria, liberalización financiera y privatizaciones), y en parte también, debido a la creciente movilidad de los capitales internacionales. La combinación de ambos factores viene limitando los grados de libertad de las autoridades económicas domésticas para diseñar sus políticas y usar instrumentos de asignación, distribución y estabilización macro-económica. Así es que ante una reducción en el grado de autonomía de las autoridades económicas, los resultados de su gestión dependen cada vez más de la coyuntura internacional

Por otro lado, el largo proceso recorrido por las economías europeas antes de converger hacia una moneda común es una experiencia única en la historia económica contemporánea. A lo largo de un proceso de creciente apertura comercial y de liberalización de los movimientos de capital, el *euro* representa la culminación de un proceso que se inició con tentativas de coordinación de las políticas cambiarias en respuesta a crisis externas y abarcó la compatibilización de las políticas monetarias, armonización tributaria y convergencia de las metas fiscales. Este proceso ha sido marcado por numerosas dificultades técnicas y problemas institucionales que los técnicos y políticos de los países miembros debieron enfrentar y resolver. Esta experiencia conforma un valioso acervo de conocimientos y prácticas

que merecen ser aprovechadas en favor del perfeccionamiento de los mencionados procesos de integración sub-regional de América Latina y el Caribe.

Posibles focos de discusión

Identificación y taxonomía de los principales canales de transmisión y posibles efectos de la creación del *euro* en las políticas monetarias, cambiarias y financieras de América Latina y el Caribe. Análisis de los efectos de la volatilidad y tendencia del euro --en relación al dólar y otras monedas—para dichas políticas. La experiencia europea en relación a la fijación de metas, procedimientos y reglas fiscales comunes en los programas de estabilidad (para países miembros) y de convergencia (para países no miembros). Requerimientos de comportamiento fiscal para la integración económica y monetaria. Lecciones de la experiencia europea.

Sesión 3
Aspectos internacionales de la tributación en América Latina

Antecedentes

En los últimos quince años, la estructura de los sistemas tributarios ha ido amoldándose a la influencia simultánea y recíproca de factores domésticos e internacionales, experimentando una uniformización sin precedentes, especialmente en el mundo en desarrollo, la que no ha sido acompañada por una correspondiente equiparación de las capacidades de gestión de las administraciones tributarias. Factores externos como la tendencia a la apertura comercial, el rol de la inversión extranjera directa, la creciente participación de las empresas transnacionales en la vida económica nacional, así como, la ampliación de diversos esquemas de integración subregional, entre otros, han contribuido a aumentar la importancia estratégica de los aspectos internacionales de la tributación. Sin embargo, el actual proceso de globalización, a diferencia del observado a fines del siglo XIX, se apoya en los notables progresos registrados en materia de tecnologías de la información, desregulación de los mercados financieros e importantes innovaciones de carácter institucional incorporadas al marco jurídico-regulatorio de dichos mercados, posibilitado la creación de un sinnúmero de nuevas opciones e instrumentos de financiamiento y promovido una fuerte integración de los sistemas financieros de todo el orbe, determinando así una mucho mayor mobilidad del factor capital respecto del factor trabajo

Como resultado se ha establecido una fuerte competencia entre países por mantener y atraer el ahorro y la inversión extranjera. Ante la dificultad de gravar al capital y sus rendimientos los países han reaccionado ajustando sus sistemas tributarios de manera generalmente pasiva. La tendencia mundial ha sido incrementar los impuestos al consumo y las contribuciones a la seguridad social, reduciendo los correspondientes al comercio exterior y la renta. De esta forma, las políticas tributarias --incluyendo las de países desarrollados-- han tendido a: (i) no retener ingresos en la fuente por concepto de intereses (debido al temor de una posible migración del ahorro interno y de las empresas multinacionales a otras jurisdicciones); (ii) reconocer ventajas tributarias a la repatriación de los rendimientos de las inversiones de sus corporaciones en el exterior. Consecuentemente, se ha puesto en tela de juicio el futuro del impuesto a la renta a nivel personal y sobre todo a nivel corporativo, como fuente sustantiva de ingresos fiscales. Adicionalmente, han comenzado a proliferar en todo el orbe zonas libres de tributación al capital, tanto para la producción de bienes como para la provisión de servicios internacionales, y se han legislado sistemas promocionales a la inversión en más de 125 países buscando atraer la localización de la IED dentro de sus respectivos territorios nacionales. Uno de los instrumentos mas importantes para una mayor efectividad en el control y para una asignación mas justa de la renta entre jurisdicciones tributarias

nacionales, es la legislación referente a precios de transferencia. En los últimos 5 años, cuatro países latinoamericanos han introducido normativas respecto a esta materia, las que merecen una comparación con las directivas establecidas a este respecto por la OCDE. Finalmente, es relevante analizar y discutir las ultimas definiciones y decisiones de la OCDE para la determinación de paraísos fiscales y regímenes tributarios preferenciales dañinos, la forma de combatirlos y restringir su expansión. Este movimiento hacia acciones multilaterales abre una fuerte interrogante sobre las diferentes posibilidades de institucionalizar la cooperación internacional a nivel de política y administración tributaria así como de los instrumentos apropiados para la determinación de cuando la competencia tributaria internacional es desleal y los mecanismos para restringirla.

Posibles focos de discusión

Son las normas y los mecanismos propuestos por la OCDE apropiados para la asignación de rentas entre diferentes jurisdicciones y su implementación práctica? Cuáles son los criterios objetivos para definir un régimen tributario preferencial como dañino o desleal y cuáles son las formas para restringirlos considerando otros tipos de tratos preferenciales, como ser, comerciales o financieros? En caso de ser pertinente a los efectos de controlar la competencia tributaria internacional desleal, es viable una organización mundial impositiva con fines de cooperación administrativa y coordinación de política tributaria?

Sesión 4
Incentivos fiscales y competitividad: experiencia y perspectivas para América Latina y el Caribe en una era de crecientes conflictos económico-comerciales internacionales

Antecedentes

En los últimos seis años, los conflictos económico-comerciales entre gobiernos nacionales experimentaron una ostensible escalada. Ello puede ser atribuido, en primer lugar, a una baja relación costo/beneficio del mecanismo para solución de controversias incorporado a la nueva institucionalidad de la OMC, y en segundo lugar, a la ampliación aprobada durante la ronda Uruguay de las áreas en que un país puede iniciar pedidos de consulta o bien, la formación de un panel (dichas nuevas áreas incluyen agricultura, textiles y vestimentas, derechos de propiedad intelectual vinculados al comercio, servicios, estándares técnicos, y barreras no arancelarias, entre otras). Si a lo anterior se agrega que la llamada Agenda del Milenio, a ser negociada en algún momento aun indefinido, contiene una lista de temas políticamente muy complejos (como las relaciones entre comercio y medio ambiente, normas laborales, inversión extrajera directa, regulación de competencia, procedimientos, y comercio electrónico), no parece aventurado anticipar que el mencionado actual grado de conflictividad comercial corre serios riesgos de acentuarse en los próximos años.

El punto de partida y preocupación subyacente de esta sesión es, precisamente, la conexión de este último escenario con los grados de libertad que a futuro podrán tener las autoridades domésticas de la región para diseñar su política fiscal. Esto se coloca en virtud de que los conflictos comerciales entre naciones, a pesar de sus múltiples posibles causas, parece que se vinculan cada vez más frecuentemente al manejo que los gobiernos hacen de la capacidad que tienen para aplicar impuestos y conceder subsidios, quiera sea a través del mecanismo directo y explícito de la política presupuestaria, o bien, a través de instrumentos que actúan de manera indirecta o implícita, pero que tienen efectos equivalentes a los anteriores y que son propios de la política cuasi-fiscal.

Es sabido que el éxito alcanzado por sucesivas rondas del GATT en materia de reducción de barreras arancelarias no significó el fin del proteccionismo, sino la transformación de sus procedimientos y manifestaciones. En realidad, aunque el uso discrecional de estructuras arancelarias con valor medio elevado y amplia variancia haya perdido vigencia, aún hoy existen numerosas economías –generalmente pequeñas y con estructuras productivas poco diversificadas, frecuentemente concentradas en actividades extractivas y/o agro-pecuarias, con bajo coeficiente de apertura comercial pero al mismo tiempo exportadoras de productos primarios-- que financian parte importante del gasto público con la recaudación de aranceles y tasas aduaneras relativas a operaciones de comercio exterior (con lo que, en dichos países, el objetivo de liberalización comercial choca con el de recaudación fiscal). En economías industriales maduras y en las economías de mayor tamaño en AL (en que la estrategia de substitución de importaciones y de búsqueda de soluciones autárquicas fue siendo abandonada en favor de una orientación exportadora combinada con creciente apertura comercial e integración a la economía mundial), terminó por consolidarse un nuevo modelo de proteccionismo cuya expresión fiscal son las medidas compensatorias, de salvaguardia y *antidumping*, a las que se sumaron políticas de promoción de exportaciones diseñadas con base en subsidios directos (incluidos en el presupuesto) e indirectos (que hacen parte de la política cuasi-fiscal y que se manifiestan en variadas modalidades de incentivos tributarios y líneas de créditos 'blandos' a la producción y/o exportación; garantías públicas; compras gubernamentales; leyes de concesiones públicas; acceso a divisas en condiciones más favorables que las de mercado; subsidios cruzados a través de tarifas y precios públicos, etc.).

Posibles focos de discusión

¿Qué relación guardan los conflictos comerciales enfrentados por los países de la región con sus decisiones de política fiscal (presupuestaria y cuasi-fiscal) ? ¿ qué tipo de restricciones coloca el Acuerdo sobre Subsidios y Medidas Compensatorias al futuro manejo de la política fiscal de nuestros países ? ¿ cuáles son los límites al uso de subsidios (directos e indirectos, explícito e implícitos) en apoyo de la competitividad internacional de nuestras exportaciones?.

Sesión 5
E-gobierno y gobernabilidad: perspectivas y experiencias nacionales en operaciones de tipo G2G, G2P y G2C (con énfasis en contextos de gobiernos federales)

Antecedentes

Los desarrollos registrados por las modernas tecnologías de la información (TI), complementados por una creciente aplicación de tales innovaciones en numerosos sectores de actividad, vienen siendo percibidos como importante fuente potencial de aceleración del crecimiento económico y aumentos permanentes en la productividad total de factores. Si bien es cierto que experiencias en tal sentido se encuentran por ahora limitadas a un reducido número de piases tecnológicamente avanzados, y aunque la literatura especializada manifieste dudas respecto al real significado de lo que se ha convencionado llamar la 'nueva economía', la revolución digital en curso viene despertando fuertes expectativas en nuestra región, tanto en la esfera del sector privado como en el ámbito del sector público. Ello se manifiesta en el gradual surgimiento de numerosas modalidades de ***e-mercados*** (expresión ésta con la que se podría intentar sintetizar una gran variedad de conceptos, tales como e-comercio, e-banca, e-negocios, e-gestión, e-tc), y también, en un creciente interés por implementar diversas variantes de ***e-gobierno*** (cuya versión más simple consiste en colocar datos e informaciones relativas al sector público en una pagina web, pero cuyas

variantes más sofisticadas llegar a incluir complejas y dinámicas interacciones entre agentes públicos y privados), al que se vinculan conceptos tales como e-democracia, e-ciudadanía, e-gobernabilidad, entre otros.

Los objetivos del ***e-gobierno*** son múltiples y corresponden a diversas dimensiones. Entre ellos cabe destacar: (i) reducir costos fijos y variables en la producción y provisión de bienes públicos; (ii) disminuir variados costos de transacción enfrentados por las personas físicas (en cuanto ciudadanos con derechos y obligaciones políticas; consumidores de bienes y servicios privados sujetos a regulación pública; beneficiarios de programas de transferencias o subsidios gubernamentales; consumidores de bienes y servicios públicos; clientes de diversas agencias estatales; funcionarios públicos; etc.) y por las empresas (en cuanto proveedoras de bienes y servicios privados al sector gobierno; consumidoras de bienes y servicios públicos; agentes regulados por agencias del Estado; constructoras y/u operadoras de obras de infraestructura; contribuyentes; etc.); (iii) simplificar procesos y procedimientos internos en agencias estatales pertenecientes a diferentes niveles de gobierno; (iv) promover una mayor cooperación y mejor coordinación inter-gubernamental con miras a elevar la eficiencia, eficacia, productividad y calidad de la gestión de los programas de recaudación, transferencia y gasto público; (v) aumentar la transparencia de las instituciones y políticas públicas, así como elevar la responsabilidad de las clases tecno-burocrática y política del Estado, con base en la evaluación de los resultados de su gestión; (vi) universalizar y democratizar el acceso ciudadano a todo tipo de información y conocimiento, contribuyendo a un mayor consumo de tales bienes públicos globales, con el propósito estratégico de facilitar la socialización, inclusión y participación ciudadana en procesos de elección colectiva cuyas decisiones afectan los intereses y destinos de la comunidad; (vii) construir e implantar un nuevo paradigma cultural de funcionamiento del sector público, donde las relaciones entre éste y la sociedad civil se apoyan crecientemente en las posibilidades ofrecidas por las TI, y donde las tareas de modernización y reforma del Estado.

Posibles focos de discusión

Revisión de experiencias nacionales de G2G (operaciones intra o entre-agencias de uno o más niveles de gobierno); G2P (operaciones entre agencias de cualquier nivel de gobierno y sus proveedores en sentido lato); G2C (operaciones entre agencias gubernamentales y ciudadanos en sentido lato); costos y beneficios; avances y resultados alcanzados; principales dificultades a superar [ausencia de una política de Estado; insuficiente volumen de recursos materiales, financieros y humanos; disparidad de acceso; insuficiente convergencia e integración de redes informáticas; inadecuación de marcos legal y regulatorio; actitudes y comportamientos]; aspectos comunes y específicos del e-gobierno en países con organización política federal o unitaria; posible futuro del e-gobierno en los países de la región.

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DISERTACION INAUGURAL

DEVELOPING COUNTRIES' ANTI-CYCLICAL POLICIES IN A GLOBALIZED WORLD

By
José Antonio Ocampo *

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The volatility and contagion characteristic of international financial markets, which have dominated emerging economies during the 1990s, have long historical roots.[1] Indeed, from the mid-1970s to the end of the 1980s, Latin America and other regions in the developing world experienced a long boom-bust cycle, the most severe of its kind since that of the 1920s and 1930s. The shortening but also the intensity of boom-bust cycles have been distinctive features of the recent decade. The latter is reflected, in the words of the Chairman of the Federal Reserve Board, in the fact that the "size of the breakdowns and required official finance to counter them is of a different order of magnitude than in the past".[2]

Viewed from the perspective of developing countries, the essential feature of instability is the succession of periods of intense capital inflows, in which financial risks significantly increase, facilitated and sometimes enhanced by pro-cyclical domestic macroeconomic policies, and the latter phase of adjustment, in which not only are these risks are exposed but also the pro-cyclical character of the measures adopted to "restore confidence" amplify the flow (economic activity) and stock (portfolio) effects of adjustment processes. An essential part of the solutions to these problems lies in strengthening the institutional framework to prevent and manage financial crises at the global level.[3] This paper looks, however, at the role of developing countries' domestic policies in managing the pro-cyclical effects of externally generated boom-bust cycles. It draws from an extensive recent literature on the subject [4] and from the experience of Latin America in the 1990s.[5] It is divided in seven sections. The first two look at the international asymmetries that lie behind and the specific macroeconomics of boom-bust cycles in the developing world. The following sections look at the exchange rate regime, liability policies, prudential regulation and supervision, and fiscal stabilization. The final section draws some conclusions.

I. INTERNATIONAL MACROECONOMIC AND FINANCIAL ASYMMETRIES

The dynamics of boom-bust cycles is deeply rooted in the operation of financial markets, a point that has been extensively recognized in the literature, but also in some basic asymmetries which characterize the world economy. These asymmetries have largely (though not exclusively) center-periphery dimensions. The first of them is basically macroeconomic. Put succinctly, whereas the center economies –particularly the largest economies among them-- are "business cycle makers", the developing countries (the "periphery", in this simple framework) are "business cycle takers". This reflects the fact that, broadly speaking, the center generates the global shocks (in terms of economic activity, financial flows, commodity prices and the instability of the exchange rate of major currencies), to which developing countries respond.

This asymmetry is closely associated to the fact that the center economies' national currencies (now regional in the case of most members of the European Union) are also international currencies. This gives them some degrees of freedom in terms of the use of national monetary policies to manage domestic business cycles, although certainly at the possible cost of exchange rate fluctuations in the current world of floating exchange rates among major currencies; the degrees of freedom are obviously greater for the country that has the major international currency (the United States) and more limited for the rest of the industrialized economies. Through the effects of monetary policies on economic activity and the exchange rates, the center economies generate externalities to the rest of the world that are not internalized by policy

[1]/ See, for example, in relation to Latin America, Bacha and Díaz-Alejandro (1982).
[2]/ Greenspan (1998).
[3]/ There is an extensive literature on these issues. See, for example, Eatwell and Taylor (2000), Eichengreen (1999) and Ocampo (1999a, 1999b).
[4]/ Among the many recent contributions to the analysis of this issue, see CEPAL/ECLAC (1998a, Part Three; 2000a, Ch. 8), Ffrench-Davis (1999), Furman and Stiglitz (1998), Helleiner (1997), Ocampo (1999b, ch. 5) and World Bank (1998), chapter 3.
[5]/ Latin America's experience is regularly analyzed in ECLAC's economic surveys. See, for example, CEPAL/ECLAC (1999) on the effects of the Asian crisis.

makers. These externalities are strongly felt in the developing world, which must adjust to them but lack the degrees of freedom that the ability to supply international currencies provides. Again, putting it succinctly, whereas the center is made of "policy making" economies (again, with variations among them), the periphery is largely "policy taking".

Indeed, developing countries are expected to behave in ways that generate "credibility" to financial markets, which implies, in particular, that they are expected to adopt pro-cyclical (austerity) policies during crises. This generates, in turn, economic and political economy pressures to also adopt pro-cyclical policies during booms. Non–financial agents and financial intermediaries resist restrictions which authorities may impose on their ability to spend or lend during booms, whereas authorities are only happy to have some breathing space after a period of austerity. Expressed in another way, not only are the incentives to adjust absent during booms, but the drastic application of austerity rules during crises distorts the incentives which economic agents and authorities face throughout the business cycle (why should you also adjust during booms?).

Viewed in historical terms, whereas the move away from the gold standard since the 1930s freed international-currency-issuing countries from adhering to the "rules of the game", adherence to those rules continued to be to a large extent a major feature of the periphery. "Depression economics", as one author has recently called it,[6] has been present all along in the non-international-currency-issuing countries. Its effects during crises have certainly been more sanguine in the last quarter of the twentieth century, due to the coincidence of slower growth at the center and larger but volatile international capital flows. The latter lifted, indeed, constraints on spending during booms, but only to make them more intense during the subsequent bust. Although access to multilateral financing in the post-war period may have helped to smooth out adjustment during crises, the counterpart of such financing has been, in any case, strict adherence to the "rules of the game".

The sharp distinction between "business cycle/policy takers" and "business cycle/policy makers" certainly goes a long way to summarize major features of the international economy today. However, it should be qualified in three important ways. First of all, to the extent that there are domestic policy alternatives, developing countries are not entirely "policy takers". This paper is precisely focused on such anti-cyclical policy alternatives. This does not eliminate, however, the basic assertion that current incentives in the world order push them in the opposite direction, towards pro-cyclical policies. Moreover, if authorities do indeed adopt such pro-cyclical policies, they help to amplify the world business cycles, and to that extent they are "business cycle makers". Finally, different developing countries have different degrees of access to international financial safety nets, depending on private assessments of creditworthiness (subject to error), international political and/or economic clout, and the corresponding access to private or official financing. This implies that those who have a more limited access (the poorest and the smallest countries) may face a disproportionate need for pro-cyclical domestic policy response to external shocks.

The basic macroeconomic asymmetries between "business cycle/policy makers" and "business cycle/policy takers" have as counterparts basic asymmetries in financial markets. Four must be singled out: (a) between the size of developing countries' domestic financial markets and the size of the speculative pressures they may face;[7] (b) the nature of the currencies in which external debt is denominated, which generates significant currency mismatches between assets and liabilities; (c) significant difference in the maturities supplied by domestic and international financial institutions, which implies that there would be significant maturity mismatches for debtors unable to access international markets (e.g., small and medium-size firms) and currency mismatches for those that can; and (d) the

[6]/ Krugman (1999).
[7]/ See, on this, the very interesting remarks of the Council on Foreign Relations Task Force (1999), ch. III.

thinness of domestic financial (particularly security) markets, which reduces the liquidity of financial instruments. Viewed as a whole, this implies that domestic financial markets in the developing world are significantly more "incomplete" that international financial markets, indicating that some financial intermediation must necessarily be done through international markets. It also implies that integration into international financial markets is integration between unequal partners.[8]

The associated risks can only be partly covered (e.g., currency risks of large non-financial intermediaries[9]) or partly corrected by domestic policy actions. Indeed, some of the policy actions that emerging economies can adopt to prevent risks merely reflect (or reproduce) rather than correct the basic asymmetries in financial systems. For example, domestic financial risks in the developing world have a large macroeconomic component, particularly those associated to fluctuations of exchange and interest rates. This could be managed by adopting stronger prudential regulations of domestic financial activities than minimum international (Basle) standards (see Section V below). However, this raises the costs of financial intermediation and probably restricts the development of new financial services, thus shifting financial asymmetries to another level, indeed increasing the incentives to use international financial intermediation. The same can be said of moving to a currency board regime or giving up the national currency altogether. While these moves certainly reduce or eliminate currency risks, they may merely shift the underlying risks to other areas. Particularly, they could make economic activity more volatile, given the additional restrictions on the adoption of anti-cyclical policies. We will return to this in Section III below. In a very deep sense, developing countries face country rather than currency risks; the latter are, in a sense, a mere manifestation of the former, which under certain conditions can generate additional difficulties (an overvalued exchange rate in an adjustable peg system, or outright monetary and financial mismanagement).

II. THE MACROECONOMICS OF BOOM-BUST CYCLES

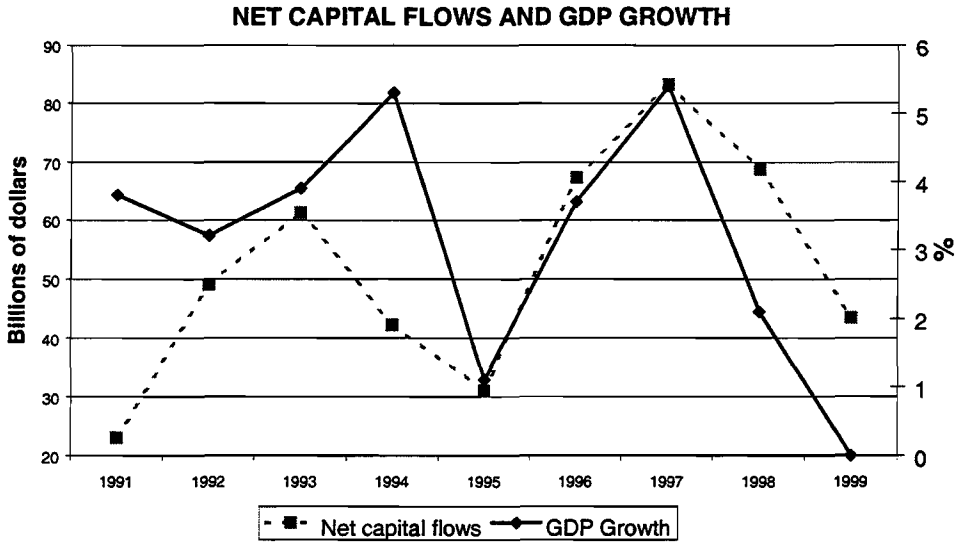
The association between capital flows –and, more particularly, the net resource transfer—and economic growth has been a strong feature of Latin America in the 1990s (and, for that matter, of the past quarter century), as the panel A in Figure 1 indicates. This fact highlights the central role played by the mechanisms by which externally-generated boom-bust cycles are transmitted in the "business cycle/policy taking" countries.

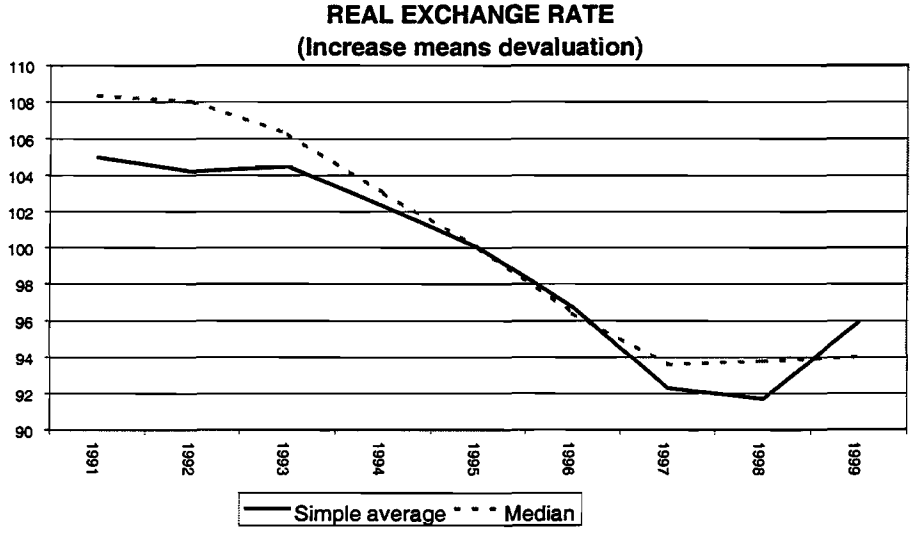
These mechanisms are well known. The boom encourages an increase in public and private spending, which will inevitably lead to an adjustment whose severity will bear a direct relationship to how excessive spending levels were, as reflected in accumulated liabilities, and to the degree of mistrust generated among market agents. Thus, temporary public sector revenues and readily accessible external credit during booms generate an expansion of public sector spending, which will be followed by a severe adjustment later on, when those conditions are no longer present. A private lending cycle is generated by shifts in the availability of external financing and the cyclical patterns of international interest rates and spreads; availability and spreads are associated, in turn, to significant asymmetries in risk evaluation during booms and crises. Private-sector debt overhangs accumulated during the boom will subsequently trigger a sharp contraction in lending, usually accompanied by deterioration in bank portfolios.

[8]/ CEPAL/ ECLAC (2000a, ch. 8); Studart (1996). Hausemann's (2000) concept of "original sin" captures the second and third of these asymmetries.

[9]/ The coverage should be provided by private financial agents, and it is likely to be limited. The government or the central bank can also provide some of the coverage, and indeed may help to develop a market for such risk-management instruments. However, they could merely "socialize" the macroeconomic risks involved, potentially increasing the corresponding fiscal and quasi-fiscal costs (see Section VI below).

Figure 1
LATIN AMERICA: EXTERNAL VOLATILITY AND REAL EXCHANGE RATE





Poor prudential regulation and supervision of financial systems, and a lack of experience of financial agents in evaluating risks will lead to a significant underestimation of risks, reinforcing the credit expansion during the boom. Both conditions are characteristics of periods of rapid financial liberalization. Nevertheless, even well regulated systems are subject to periodic episodes of euphoria, when risks are underestimated, as the experience of many industrialized countries indicates. Private-sector borrowing and spending sprees spur sharp upswings in the prices of certain assets (particularly financial instruments and real estate). This produces a wealth effect that in turn accentuates the boom in spending, but the reverse will hold when spending, borrowing and, consequently, asset prices fall. This process is reinforced by the greater liquidity that characterize fixed assets during periods of financial euphoria –i.e., the fact that

buyers are more readily available and thus financial decisions are more easily reversible without incurring in substantial losses-- and, on the contrary, their reduced liquidity during crises. The use of assets as collateral will facilitate the boom in private spending and borrowing, but it will then increase the vulnerability of the financial system during the subsequent downswing, when it becomes clear that the loans did not have enough backing. Asset prices will then plunge even further as debtors strive to cover their financial obligations and creditors seek to liquidate the assets received in payment for outstanding debts.

Capital account booms –as well as high export prices—will also induce an exchange rate appreciation, and strong pressures on exchange rate and interest rates during the ensuing busts. Exchange rate fluctuations have, in turn, significant wealth effects in countries with large net external liabilities. The capital gains generated by appreciation during booms further fuels the spending boom, whereas the capital losses generated by depreciation have the opposite effect and may weaken domestic financial intermediaries. This is true even if prudential regulations forbid them from holding currency mismatches in their portfolio, as the capital losses incurred by non-financial firms with mixed external and domestic liabilities transforms the currency risks of the former into domestic financial risks. Thus, the wealth effects of exchange rate variations are certainly pro-cyclical in debtor countries. The income effects may have similar signs, at least in the short run, as the extensive literature on the contractionary effects of devaluation indicates.[10]

The associated macroeconomic volatility is costly in both economic and social terms. In economic terms, it increases uncertainty, reduces the efficiency of fixed capital investment and leads economic agents to prefer "defensive" microeconomic strategies that avoid committing fixed capital in the production process. For all of these reasons, it discourages investment. The higher risk levels faced by domestic financial system biases lending to shorter maturities, reducing its ability to intermediate the savings-investment process and generating a lending structure that increases risks (see Section IV). If severe enough, the domestic financial crisis will generate losses that amount to the equivalent of large proportions of GDP. Exchange rate appreciation during booms may generate, in turn, "Dutch disease" effects on tradable sectors, which become permanent if significant learning processes are present.[11]

In social terms, there is growing evidence in Latin America of ratchet effects of employment and poverty (and probably income distribution) through the business cycle.[12] This is associated to permanent losses in human capital during crises: children who leave school and never return, workers who lose labor experience and connections as a result of un- or underemployment, small-sized firms that lose their assets and goodwill, etc. The recovery that follows may benefit other persons and firms than those who experienced difficulties during the crisis, thus generating permanent losses for the latter. There may also be ratchet effects on the quality of public sector services as the result of cycles in spending. Thus, for example, the loss of human capital and morale and growing disorganization of services during the Latin American debt crisis of the 1980s was not entirely reversed by recovery in the 1990s.

The most important policy implication of the high costs of externally-generated boom-bust cycles is that the developing country authorities need to focus their attention on crisis prevention, i.e., on

[10]/ See, in particular, Cooper (1971), Díaz-Alejandro (1988, ch. 1) and Krugman and Taylor (1978) for classic analyses of this topic.

[11]/ This is a characteristic of "Dutch disease" effects in their dynamic version. See Krugman (1990, ch. 7) and van Wijnbergen (1984).

[12]/ The aggregate unemployment rate of Latin America (and of several individual countries) shows such a pattern: a sharp increase during the "Tequila" crisis that had not been entirely reversed when the Asian crises hit and increased it again. The evolution of poverty in the region over the past two decades shows the same pattern: an increase in the 1980s that was not entirely reversed in the 1990s, despite the fact that by the end of decade per-capita GDP was above the 1980 level. The patterns of poverty in Argentina and Mexico through crisis and recovery show a similar performance, as reflected in the fact that by 1997 and 1998 poverty was not back to 1994 levels. See CEPAL/ECLAC (2000a, ch. 8; 2000b, ch. 1) and Lustig (1999).

managing booms, since in most cases crises are the inevitable result of poorly managed booms. Concentration of attention in crisis prevention recognizes, moreover, an obvious fact: that the degrees of freedom of the authorities may be greater during booms than during crises. The way crises are managed is not irrelevant, however. In particular, different policy mixes may have quite different effects on economic activity and employment, on the one hand, and on the domestic financial system, on the other.

The following sections of this paper argue for a mix based on four different sets of policies: (a) managed exchange rate flexibility cum capital account regulations to provide room for anti-cyclical monetary and financial policies; (b) strong "liability policies" to improve the debt profiles of the countries (which include but go beyond capital account regulations); (c) an anti-cyclical management of prudential regulation and supervision of domestic financial systems; and (d) fiscal stabilization. All policies have limited effects, given the reduced degrees of freedom that authorities face and the reduced effectiveness of some instruments in globalized markets. Thus, policy mixes in which these different elements support each other in their anti-cyclical task are called for. The specific emphasis will vary depending on the macroeconomic constraints and traditions of each particular country.

III. THE EXCHANGE RATE REGIME

In today's open developing economies, the exchange rate regime is subject to two conflicting demands, which are not easily reconcilable. These conflicts are closely associated to the more limited degrees of freedom that authorities face in a world of limited policy instruments and reduced policy effectiveness.

The first is a demand for stability. It comes from trade, but also from the capital account and from domestic price stability. With the dismantling of traditional trade policies, the real exchange rate has become a key determinant of international competitiveness.[13] Given the central role that exports play in the growth process, competitive real exchange rates are essential for sustained economic growth. Indeed, the structural deterioration in the growth/trade balance trade-off which Latin America experienced in the 1990s with respect to the three decades prior to the debt crisis (see Figure 2) may be explained by the combination of trade liberalization and the fairly broad real exchange rate appreciation trend which the region experienced during the past decade (Figure 1).[14]

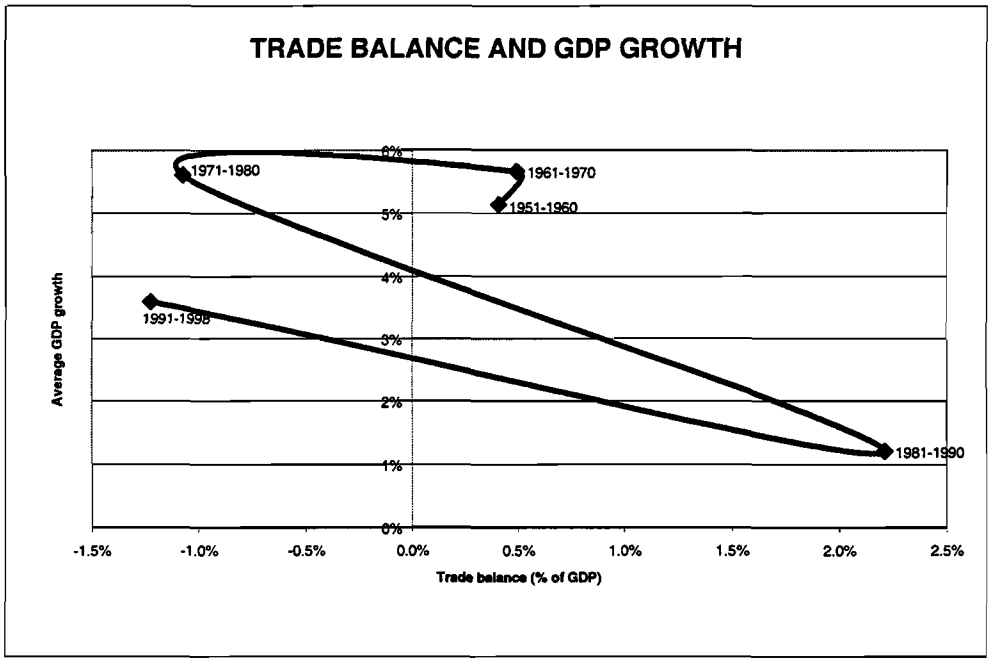
From the point of view of the capital account, a "hard peg" is seen as a useful instrument to avoid the pro-cyclical wealth effects of exchange rate fluctuations in countries with significant liabilities denominated in foreign currencies.[15] Finally, from the point of view of macroeconomic policy, it is associated to the need to anchor the price level as part of anti-inflationary programs or, more generally, to guarantee price stability, in small open economies. It should be emphasized that these two demands for stability may be inconsistent with that which comes from trade. Thus, an anti-inflationary program or hard pegs lead many times to overvalued exchange rates that run counter to the objective of international competitiveness.

[13]/ We will not deal here, however, with the literature on the long-run determinants of the real exchange rate. It suffices for our purposes that nominal exchange rates be relevant in the evolution of real exchange rates through the business cycle. This characteristic is clearly born out by the experience of Latin America in the 1990s. Thus, in particular, nominal appreciation pressures (relative to national inflation levels) were strong during the capital booms pre- and post-"Tequila", and were reflected in strong real appreciation; during the Asian crisis, nominal devaluations had very limited inflationary effects and, thus, strong real effects; and the Mexican devaluation of 1994-1995 had also strong real effect, though it was also inflationary. A way of posing these issues is that access and conditions of external financing are one of the determinants of the real exchange rate, alongside others (the terms of trade, the fiscal stance, relative productivity trends in tradables vs. non-tradables, etc.), but that the magnitude of external financing/real exchange rate link is not independent of the exchange rate regime.

[14]/ This deterioration of the growth/trade balance trade-off seems to be a feature of most of the developing world. See UNCTAD (1999, Part Two, ch. IV). For Latin America, see CEPAL/ECLAC (2000a, ch. 1).

[15]/ See, for example, Hausmann (2000) and Calvo (2000).

Figure 2



The second is a demand for flexibility. It also comes from both the trade and the capital account. On the trade side, exchange rate flexibility has been traditionally seen as a useful instrument to accelerate real exchange rate adjustments in the face of external shocks (terms of trade changes, exchange rate adjustments or growth trade of major trading partners, etc.). Also, boom-bust cycles in international capital markets generate a demand for flexible macroeconomic variables to absorb, in the short run, the positive and negative shocks they generate. Given the reduced effectiveness of some traditional policy instruments in open economies –particularly monetary policy—, the exchange rate plays an essential role in helping to absorb such shocks. This demand for flexibility explains the fairly broad trends towards greater exchange rate flexibility that characterizes the world economy since the breakdown of the dollar standard in the early 1970s. The Argentinean and Ecuadorean cases aside, this has also been the trend in Latin America in the 1990s and was particularly noticeable during the recent Asian crisis.

The relevance of these conflicting demands is not captured in the call by many analysts to adopt either of the two polar exchange rate regimes, either a totally flexible exchange rate or a currency board (or outright dollarization). Indeed, the case for polar regimes is a call to recognize that policy autonomy is quite limited in today's world and, thus, that any attempt to manage the conflicting demands on exchange rate policy should be given up. The "revealed preference" of authorities in the developing world is, on the contrary, to choose intermediate regimes of managed exchange rate flexibility (such as crawling pegs and bands, and dirty flotation), in an attempt to reconcile these conflicting demands.[16]

Currency boards certainly introduce built-in institutional arrangements that provide for fiscal and monetary discipline, but they reduce and, in the limit, eliminate the room for stabilizing monetary and credit policies –both of them necessary to prevent crises and to facilitate recovery in a post-crisis

[16]/ For recent defenses of intermediate regimes, see CEPAL/ECLAC (2000a), ch. 8, Frankel (1999) and Williamson (2000). For an interesting review of the recent controversy on exchange rate regimes, see Velasco (2000).

environment. It thus tends to generate stronger swings in economic activity and asset prices. In other words, the fiscal and monetary discipline characteristic of this exchange rate regime enhances the pro-cyclical features of "business cycle/policy taking" economies. Probably as a result of this, these arrangements are not speculation-proof, as the experience of Argentina in 1994-1995, Hong Kong in 1997 and, for that matter, of the gold standard in the periphery indicates.[17] More generally, they are not free from pro-cyclical, externally-induced pressure on interest rates. In this regime, adjustment to cyclical or structural overvaluation (if the economy gets "locked" in an overvalued exchange rate during the transition, or as a result of effective devaluation by major trade partners, or the appreciation of the currency to which the exchange rate is tied) is painful, as it relies on open deflation to operate. This process is very slow, as the experience of Argentina during the Asian crisis indicates. Structural overvaluation in a currency board regime may thus become a bet to low structural rates of growth (mixed with strong business cycles).

On the other hand, the volatility characteristic of freely floating exchange rate regimes increases the costs of trade transactions, thus reducing the benefits of international specialization, and may be subject to adverse "Dutch disease" effects during booms. Moreover, they run the risk of merely becoming a different way of transmitting boom-bust cycles, through the pro-cyclical wealth and (possibly) income effects of exchange rate variations outlined in the previous section. Flexibility certainly deters some short-term flows –particularly portfolio flows and short-term debt—, but it is unlikely to smooth out the medium-term capital account cycle. Rather, it could enhance it, as the significant capital gains and losses associated to real exchange rate cycles may further encourage "self-fulfilling" booms and busts.

Moreover, anti-cyclical monetary or credit policies under freely floating exchange rate regimes with open capital accounts enhance cyclical exchange rate fluctuations. Indeed, the key problem faced by the authorities during booms in economies with open capital accounts is that the capital market exerts downward pressure on interest rates, appreciation pressure on the exchange rate, or a combination of the two. In these cases, any attempt by policy-makers to counteract the upward trend in private and public spending by using contractionary monetary policies will only fuel the trend towards exchange rate appreciation. During crises, markets push for a mix of devaluation and interest rate hikes. Any attempt to avoid the latter by expansionary monetary policy will encourage stronger devaluation. Thus, if authorities consider that the exchange rate fluctuations generated by boom-bust cycles are too strong to start with, they may be encouraged to use monetary policy to smooth out such fluctuations. Thus, the "monetary autonomy" features of free floating, in the traditional sense of the term --i.e., the ability to adopt monetary policies on the basis of domestic factors alone--, may not materialize.

The ability of a flexible exchange rate regime to smooth out the effects of externally-generated boom-bust cycles thus depends on the capacity to effectively manage an anti-cyclical monetary and credit policy without enhancing pro-cyclical exchange rate patterns. This is only possible in managed exchange rate regimes cum capital account regulation. It is only in this case that we can speak of effective, though certainly limited, "monetary autonomy". During periods of euphoria, this means that macroeconomic policies must focus on mitigating upward pressures on private and public sector spending through contractionary monetary (classical open market operations, sterilized accumulation of international reserves, and higher reserve or liquidity requirements) or credit (caps on credit growth) policies, supported by capital account regulations that restrict the additional capital inflows induced by upward pressures on domestic interest rates. During crises, it means that the ability to effectively use monetary policy as an expansionary policy tool without generating excessive devaluation may require effective

[17]/ In the gold standard era, prices were more flexible, but price flexibility tended to generate additional domestic financial risks during crises (due to the rapid increase in real debts generated by deflation, which may be thought as equivalent today to very high real interest rates during the crisis). It also generated a strong short-term bias in domestic lending, associated to the need to reduce nominal portfolios rapidly during periods of contraction of monetary aggregates.

regulations to avoid capital outflows. To avoid credibility issues and guarantee effectiveness, the basic mechanisms of capital account regulation should be in place throughout the business cycle, and should be tightened or loosened depending on the phase of the cycle (see Section IV below).

Other features may support the choice of intermediate regimes, particularly in the smaller developing countries. First of all, the "law of one price" does not hold even in fairly small economies, as reflected in the fact that real exchange rate variability is only weakly dependent on the size of the economies, despite the greater relative weight of foreign trade in the smaller economies. [18] Secondly, the strong dependence of these economies on foreign trade makes profitability in a broader range of economic activities dependent on the real exchange rate. Thirdly, the stronger dependence of public-sector finances in these economies on external factors limits the room for anti-cyclical fiscal policies. Finally, the thinness of exchange rate markets make them subject to stronger volatility under free floating, and the thinness of domestic capital markets limits the chances for sterilized monetary operations. Thus, some exchange rate flexibility is useful (first feature) and may be a necessary anti-cyclical instrument (second and third features), but the thinness of markets eliminates the usefulness of free floating (fourth feature).

Although intermediate regimes thus provide the only framework for anti-cyclical policies in "business cycle/policy taking" countries, and thus some degree of "monetary autonomy", their scope is, in any case, limited. First, it depends on the effectiveness of capital account regulations as a macroeconomic policy tool, a point on which we will return below. Second, all intermediate ("dirty") options are subject to speculative pressures if they do not generate credibility in markets, and the costs of defending exchange rate from pressures is very costly in this context. Third, sterilized reserve accumulation during booms is also costly. Although the additional reserves may provide additional "self-insurance" during the ensuing crises, sterilization may generate significant quasi-fiscal losses.

The usefulness of this approach also depends on effective incentives for the authorities to behave in an anti-cyclical fashion. In this regard, the exclusive focus on inflation rate targeting characteristic of most independent central banks, or the incentives that governments face in post-inflationary environments, may generate strong "appreciation biases" that lead to asymmetric interventions. In particular, given the expected effects of the exchange rate on the price level, devaluation during crises is resisted more than appreciation during booms. Since both features are certainly characteristic of Latin America, it may explain the longer term trend to stronger currencies which characterized the region in the 1990s, which was only temporarily slowed down by the "Tequila" and Asian crises (see Figure 1, Panel B).

Available Latin American evidence is difficult to evaluate in the light of incomplete evidence on certain regimes (particularly, the absence of sustained clean floats—the closest example being Mexico since the Tequila crisis), frequent regime changes and the aforementioned policy biases. Figure 3 and 4 provide some evidence. Figure 3 indicates that a low degree of real exchange rate volatility has been characteristic of quite different exchange rate histories, including Argentina's currency board but also Costa Rica's crawling peg (cum highly publically-controlled domestic financial sector) and Peru's highly managed float. The highest volatility has been characteristic of Brazil, which tried, unsuccessfully, to defend an overvalued exchange rate inherited from the Real Plan. El Salvador, with a virtual peg, and Colombia, which had through most of the decade a system of exchange rate bands, have also experienced high real exchange rate volatility. On the other hand, there is only weak association between real exchange rate volatility and GDP volatility, and only a weak negative association between the first of these variables and GDP growth. Argentina, under the currency board regime, may be thought as an

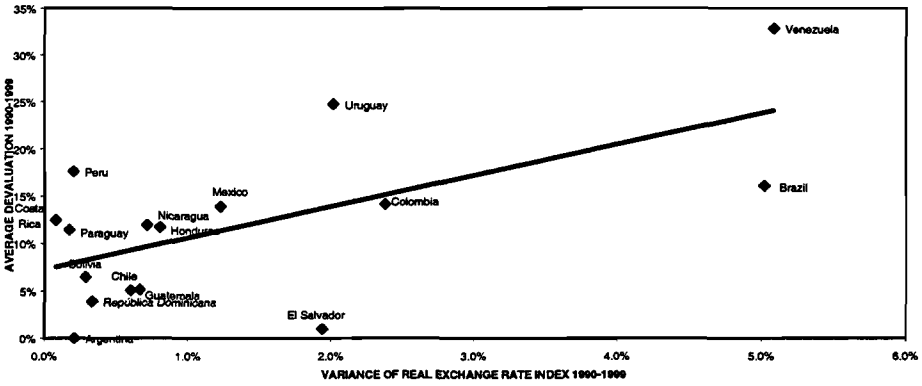
[18]/ See, for Latin America and the Caribbean, CEPAL/ECLAC (2000a, ch. 11).

example of lack of exchange rate flexibility generating high GDP volatility (the highest in the region after Venezuela).

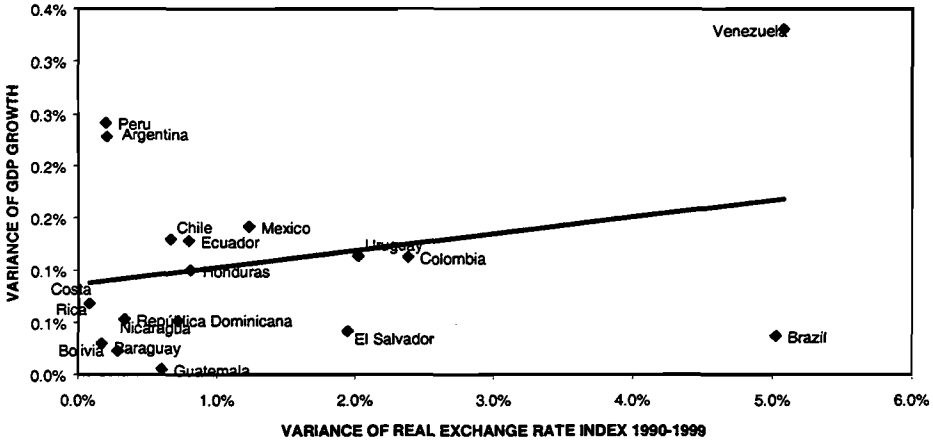
Generally speaking, authorities have found it difficult to undertake anti-cyclical monetary policies under all regimes. Broadly speaking, interest rate movements follow the external cycle in all countries: an increase during the Tequila crisis, a reduction during the capital boom that followed, and an increase during the recent international financial crisis (see Figure 4). The intensity of these cycles varies according to country and through time. Argentina under the currency board has not been immune to upward pressures on interest rates during crises –strong during the "Tequila" and somewhat weaker but repetitive during the recent crisis—and, as indicated, has experienced the strongest business cycle. The highest interest rates have been characteristic, however, of episodes in which the authorities have used contractionary monetary policy to avoid or slowdown devaluation pressures in the foreign exchange market. This is the case of Brazil from late-1997 to early 1999, Chile in the second semester of 1998, Colombia during most of 1998 and part of 1999, Mexico during the Tequila crisis, and Peru during the second semester of 1998 and most of 1999. All these episodes were very costly in terms of economic activity. The parallel movements of exchange and interest rates is striking in some countries, particularly in Mexico and Peru. True episodes of "monetary autonomy", in the sense that we have used this term above, have been rare, but have been more frequent in Chile and Colombia, the two countries that have used more actively capital account regulations as a complement to exchange rate policy.

Figure 3

MACROECONOMIC STABILITY:
A. AVERAGE DEVALUATION 1990-1999 vs.
VARIANCE OF REAL EXCHANGE RATE INDEX



B. VARIANCE OF GDP GROWTH 1990-1999 vs.
VARIANCE OF REAL EXCHANGE RATE INDEX 1990-1999



C. AVERAGE GDP GROWTH 1990-1999 vs.
VARIANCE OF REAL EXCHANGE RATE INDEX 1990-1999

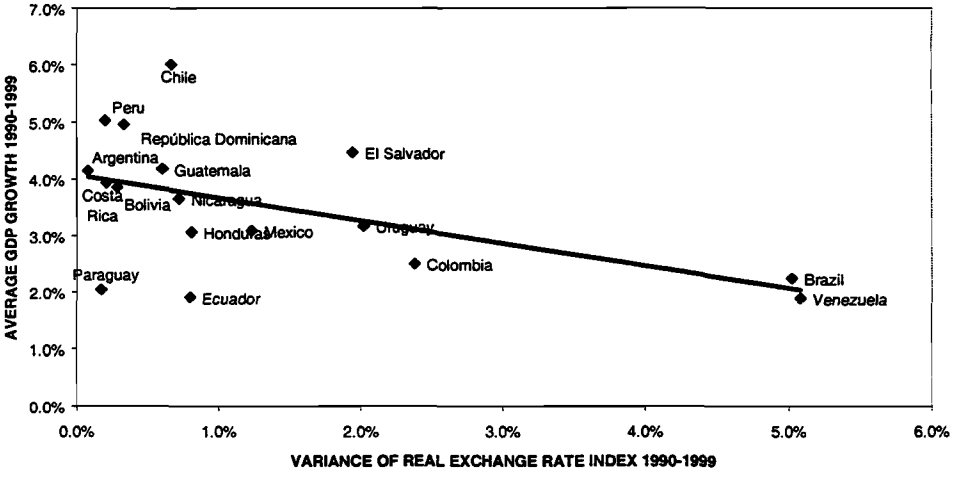
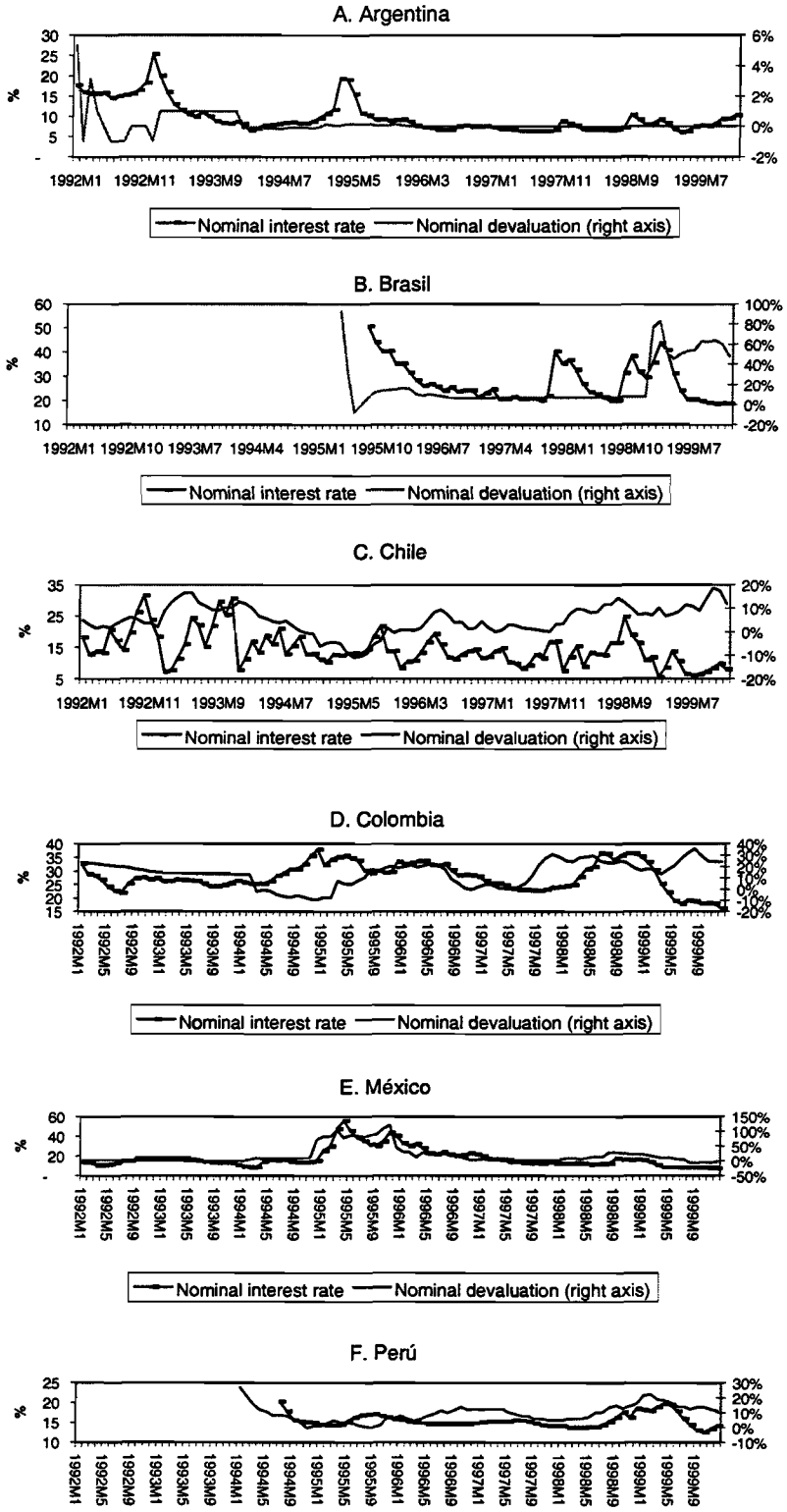


Figure 4

DEVALUATION AND DOMESTIC INTEREST RATES



IV. LIABILITY POLICIES

The accumulation of risks during booms will depend not only on the magnitude of domestic and private debts but also on their maturity structure. Capital-account regulations thus have a dual role, as a macroeconomic policy tool, which provides some room for anti-cyclical monetary policies, and as a "liability policy", to improve private sector external debt profiles. More direct liability policies should also be adopted to improve public sector debt profiles.[19]

Viewed as a macroeconomic policy tool, capital account regulations are aimed at the direct source of the boom-bust cycles: unstable capital flows. If they are successful, they will provide some room to "lean against the wind" during periods of financial euphoria, through the adoption of a contractionary monetary policy and reduced appreciation pressures. If effective, they will also reduce or eliminate the quasi-fiscal costs of sterilized foreign exchange accumulation. During crisis, they may also provide "breathing space" for expansionary monetary policies.

Viewed as a liability policy, capital account regulations recognize the fact that the market generously rewards sound external debt structures.[20] This is because, during times of uncertainty, the market responds to gross, rather than merely net, financing requirements, which means that the rollover of short-term liabilities is not financially neutral. Under these circumstances, a time profile that leans towards longer-term obligations will considerably reduce the level of risk. This indicates that an essential component of economic policy management during booms should be measures to improve maturity structures, of both the private and the public sector, and both external and domestic liabilities.

The greatest innovation in this sphere made during the 1990s was unquestionably the establishment of reserve requirements for foreign-currency liabilities in Chile and Colombia (see Box 1). The advantage of this system is that it creates a non-discretionary price incentive that penalizes short-term foreign-currency liabilities more heavily. The corresponding levy is significantly higher than the level that has been suggested for an international Tobin tax.[21]

[19]/ The emphasis on liabilities rather than balance sheets here recognizes the fact that they are the most important element of national balance sheet for short-term macroeconomic purposes, together with liquid assets.
[20]/ An excellent recent treatment of this issue is Rodrik and Velasco (1999).
[21]/ See Tobin (1978) and Eichengreen and Wyplosz (1996).

Box 1
Price-based capital account regulations in Chile and Colombia

Under the Chilean system, established in 1991, all loans were subject to a foreign-currency deposit in the central bank at a flat rate (that reached a peak value of 30%) for a specified period (initially three months, but later lengthened to 12). Under the Colombian system, created in 1993, this deposit requirement applied only to credits with maturities below a specified term (initially 18 months, but this was later lengthened to between three and five years); the amount to be deposited was inversely proportional to the term of the credit. Because of its greater complexity, this system was replaced by a simpler one in 1997 that was similar to the Chilean scheme, the main difference being that the deposit (originally 30% for 18 months) is made in the local currency and is therefore not protected from devaluation.

In both cases, the deposit may be replaced by the payment of a sum to the central bank equivalent to the opportunity cost, which means that it is exactly equivalent to a fixed cost for external borrowing (i.e., a Tobin tax). This levy is quite high, however, far higher than the level that has been suggested for an international Tobin tax: about 3% in the Chilean system for one-year loans during booms in the capital market; and an average of 13.6% for one-year loans in Colombia during 1994-1998 and 6.4% for three-year loans. The magnitude of the tax also tends to fluctuate endogenously as a function of certain macroeconomic variables (the external interest rate, in the Chilean case; that variable plus the domestic interest rate and devaluation expectations in Colombia). The management of this tax has been countercyclical, as it has been raised during boom years and lowered, indeed to zero rate in both countries, during the recent financial crisis.

In both countries, reserve requirements have been complemented by other regulations on capital flows. In Chile, all investments –including direct and portfolio investments– were subject to a one-year minimum stay requirement up to May 2000, and there are a number of rules regarding minimum sums and ratings for bond and ADR issues on the external market as well. In Colombia there are no restrictions on direct investment, but the operations of portfolio investors in the country and bond or ADR issues made by Colombian firms on foreign markets are subject to the direct control of the Superintendency of Securities. In Colombia trade loans are exempt from reserve requirements, but other types of regulations have been used to control this type of borrowing: minimum payment periods for imports of consumer and intermediate goods, and quantitative limits on the amount of export credit that is exempt from reserve requirements or eligible for a reduced reserve requirement.

The effectiveness of reserve requirements has been subject to a great deal of controversy. [22] There is fairly broad agreement on their effectiveness as a liability policy. In this regard, although there are many other variables that influence the indicators shown in Figure 5, they tend to confirm the observation that both countries have an above-average external debt profile. On the other hand, there are greater controversies about their effectiveness as a macroeconomic policy tool. Indeed, as indicated in the last section, neither country has been free from pro-cyclical macroeconomic policy patterns. However, judging from the solid evidence that exists with respect to the sensitivity of capital flows to interest rate spreads in both countries, reserve requirements do influence the volume of capital flows at given interest rates. This may reflect the fact that national firms' access to external funds actually is not independent of their maturities (in other words, the substitution effect between short- and long-term finance is imperfect), and that available mechanisms for evading or eluding these requirements are costly.[23]

[22]/ For documents which support the effectiveness of these regulations, see Agosin (1998), Agosin and Ffrench-Davis (1999), Le Fort and Budnevich (1997), Le Fort and Lehman (2000) Cárdenas and Barrera (1997), Ocampo and Tovar (1999) and Villar and Rincón (2000). For an opposite view, see de Gregorio, Edwards and Valdés (2000) and Valdés-Prieto and Soto (1998). There have also been explicit taxes on foreign-currency borrowing in other countries, notably Brazil. In Colombia, an attempt was made to set up this kind of system in early 1997, but the Constitutional Court ruled it unconstitutional.

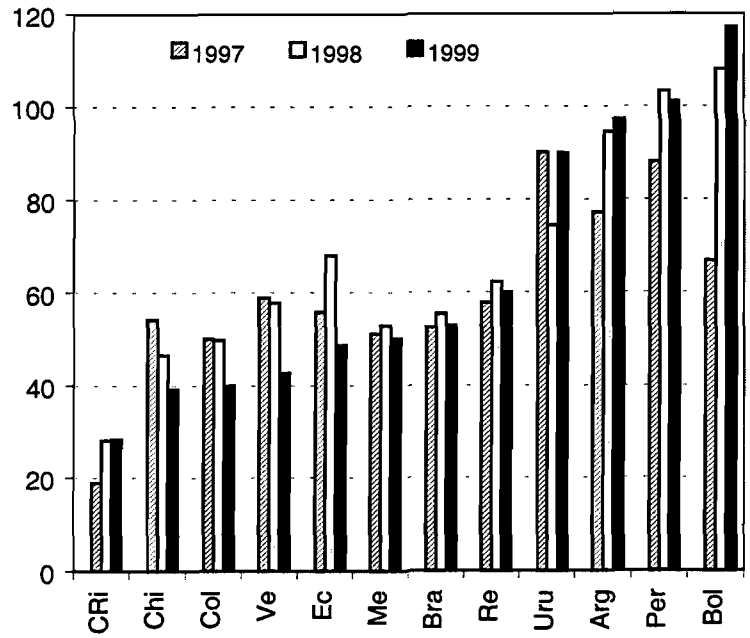
[23]/ Some of these mechanisms, such as the use of hedging, enable investors to cover some of the effects of these regulations, but in large part by transferring risks (and, more specifically, the risk associated to long-term financing) to other agents.

Alternatively, if higher reserve requirements induce new flows through their effect on interest rates, their ability to affect the latter should be seen as an indication that they are effective as a macroeconomic policy tool. In Colombia, where these regulations have been modified more extensively over the years, there is strong evidence that increases in reserve requirements have reduced flows [24] or, alternatively, have been effective in increasing domestic interest rates.[25]

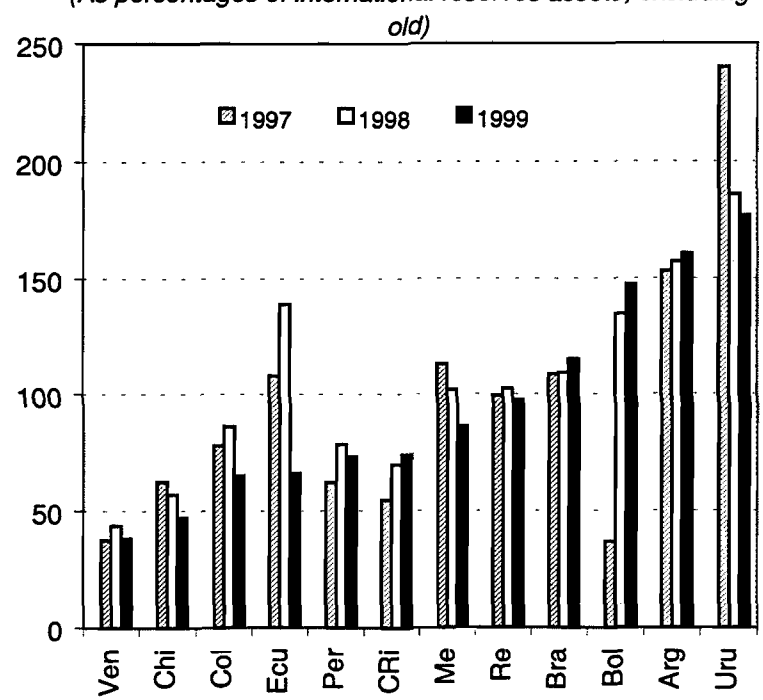
Some problems in the management of these regulations have been associated with changes in the relevant policy parameters. The difficulties experienced in this connection by the two countries have differed. In Chile, the basic problem has been the variability of the rules pertaining to the exchange rate, since the upper and lower limits of the exchange rate bands (in pesos per dollar) were changed on numerous occasions until abandoned in 1998. During capital account booms, this gave rise to a "safe bet" for agents bringing in capital, since when the exchange rate neared the floor of the band, the probability that the floor would be adjusted downward was high. In Colombia, the main problem has been the frequency of the changes in reserve requirements. Changes foreseen by the market have sparked speculation, thereby diminishing the effectiveness of such measures for some time following the requirements' modification. It is interesting to note that in both countries reserve requirements have been seen as a complement to, rather than as a substitute for, other macroeconomic policies, which have been certainly superior in Chile. In particular, the expansionary and contractionary phases of monetary policy have been much more marked in Colombia, and this country's fiscal position deteriorated through the decade.

[24]/ Ocampo and Tovar (1999).
[25]/ Villar and Rincón (2000).

SHORT TERM LIABILITIES TO BANKS
(As percentages of total external bank loans)



SHORT TERM LIABILITIES TO BANKS AND DEBT SECURITIES ISSUED ABROAD
(As percentages of international reserves assets, excluding old)



Source: Calculations based on data provided by the World Bank and the OECD.

The three basic advantages of this regime are its preventive nature, its simplicity and its non-discretionary character. Capital account regulations during booms, which have a preventive character, are certainly preferable to crisis-driven quantitative controls during crises. Indeed, such controls generate serious credibility issues and may be ineffective, as a tradition of regulation and supervision may be necessary to make them operative. Indeed, permanent regulation regimes that are tightened or loosened through the cycle are superior to the alternation of free capital mobility during booms and quantitative restrictions on outflows during crisises. However, simple quantitative restrictions that rule out certain forms of indebtedness (e.g., short-term foreign indebtedness, except trade credit lines) may also be simple and preventive in character, and may be simple to administer in underdeveloped regulatory regimes.

These direct regulations on the capital account can be partly substituted by prudential regulation and supervision as an alternative to capital account regulations. In particular, higher liquidity (or reserve) requirements for the financial system's foreign-currency liabilities can be established. Also, the rating of domestic lending to firms with substantial foreign liabilities can be reduced and the provisions associated to such loans increased. The main problem with these options is that they have no effect on the foreign-currency liabilities of non-financial agents and indeed may encourage them to borrow more abroad. Accordingly, it needs to be supplemented with other disincentives for external borrowing by those firms, such as tax provisions applying to foreign-currency liabilities (e.g., allowing only partial deductions for interest payments abroad), public disclosure of the short-term external liabilities of firms and regulations requiring rating agencies to give special weight to this factor.[26]

Price-based capital account regulations may thus be a superior alternative and simpler to administer than an equivalent system based on prudential regulations plus additional policies aimed at non-financial firms. Among its virtues, vis-à-vis prudential regulation and supervision, we should also include the fact that it is price-based (some prudential regulations, such as prohibitions on certain types of operations, are not) and non-discretionary (on the contrary, prudential supervision tends to be discretionary in its operation). Indeed, equivalent practices are used by private agents, such as the selling fees imposed by mutual funds on investments held for a short period, in order to discourage short-term holdings.[27]

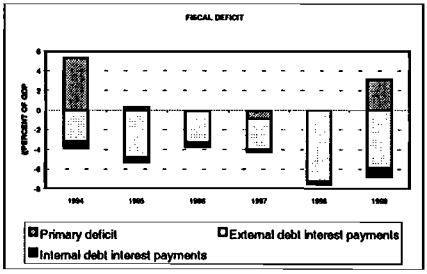
In the case of the public sector, direct control by the Ministry of Finance (in some cases by the central bank) is the most important liability policy, including control on borrowing by other public-sector agencies and autonomous sub–national governments.[28] Public sector debt profiles that lean too far towards short-term obligations may be manageable during booms, but may become a major destabilizing factor during crises. This remark is equally valid for external and for domestic public sector liabilities. The most straightforward reason for this is that residents holding short-term public sector securities have other options besides rolling over the public sector debt, including capital flight. This is even clearer if foreigners have access to domestic securities.

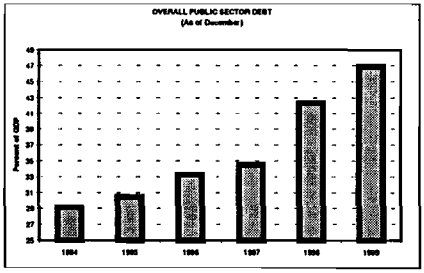
Thus, when gross borrowing requirements are high, the interest rate will have to rise in order to make debt rollovers attractive. Higher interest rates are also immediately reflected in the budget deficit, thereby rapidly changing the trend in the public-sector debt, as happened in Brazil during the recent crisis (see Figure 6). In addition, rollovers may be viable only if risks of devaluation or future interest rate hikes can be passed on to the government, generating additional sources of destabilization. Mexico's widely publicized move to replace in 1994 peso-denominated securities (Treasury Certificates or Cetes) by dollar-denominated bonds (Tesobonos), which was one of the crucial factors in the crisis that hit the country late in that year, was no doubt facilitated by the short-term profile of Cetes.[29] The short-term structure of Brazil's debt is also the

[26]/ For an analysis of this issue, see World Bank (1998), p. 151.
[27]/ J.P. Morgan (1998), p. 23.
[28]/ CEPAL/ECLAC (1998b), chapter VIII.
[29]/ See Sachs, Tornell and Velasco (1996) and Ros (2000).

reason why, since late 1997, fixed-interest bonds were swiftly replaced by variable-rate and dollar-denominated securities, which cancelled out the improvements that had been made in the public debt structure since the launching of the Real Plan. It is important to emphasize that, despite its fiscal deterioration, given her tradition of issuing public sector securities with a minimum maturity of one year, no substitution of similar magnitude was observed in Colombia during the recent crisis.

BRASIL


FISCAL DEFICIT
Primary deficit
External debt interest payments
Internal debt interest payments


OVERALL PUBLIC SECTOR DEBT
(As of December)

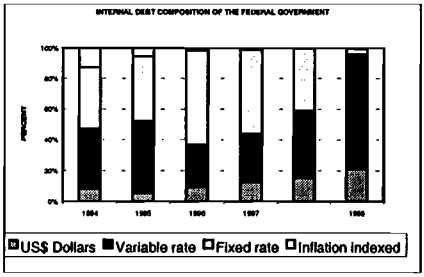
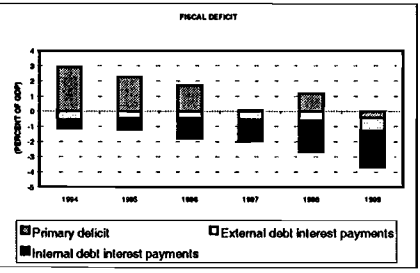
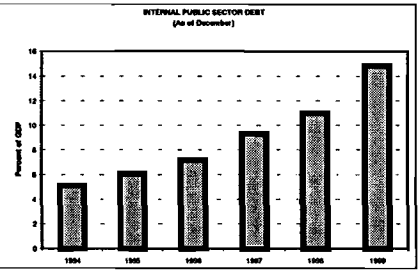
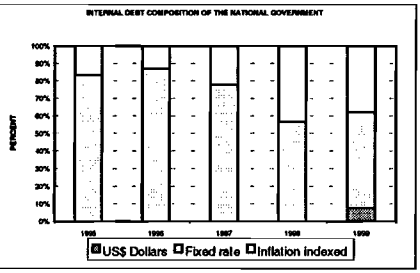

INTERNAL DEBT COMPOSITION OF THE FEDERAL GOVERNMENT
US$ Dollars
Variable rate
Fixed rate
Inflation indexed

Figure 6
FISCAL DEFICIT AND PUBLIC DEBT

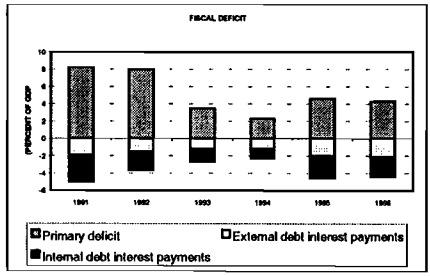
COLOMBIA

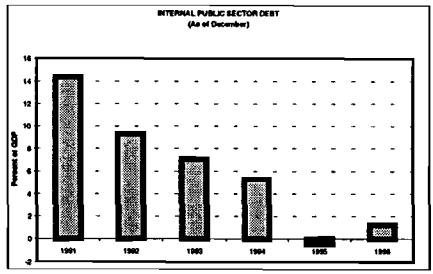


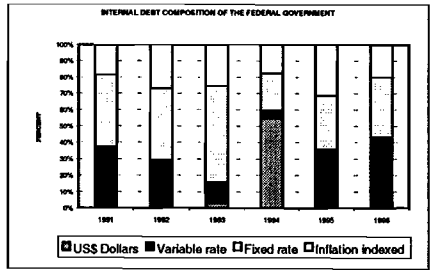




MEXICO







Thus, a sound maturity of the domestic public sector debt is an essential complement to a sound public and private external debt profile in terms of reducing the degree of vulnerability during crises. The improvements in Argentina's and Mexico's external debt profiles since the "Tequila" were generally regarded as a strength during the recent crisis. Similarly, Colombia's excellent external debt profile and the relatively sound maturity structure of its domestic public sector liabilities, in conjunction with its lower levels of indebtedness, were positively reflected in spreads during the recent crisis, despite its deteriorating fiscal position (the perception of significant "political risks" reversed, however, this situation in 2000).

The extent to which it will prove possible to issue longer-term domestic debt securities will depend on the depth of the local financial market, a characteristic that includes the existence of secondary debt markets to provide liquidity to those securities. For this reason, measures designed to deepen the countries' credit and capital markets play a crucial role in improving domestic debt profiles. This statement is also valid for an adequate development of long-term private capital markets. However, due to the lower risk levels and the greater homogeneity of the securities it issues, the central government has a vital function to perform in the development of longer-term primary and secondary markets for securities.

The development of such markets will not eliminate, however, the need for an active external liability policy, as deeper capital markets are also more attractive to volatile portfolio flows. Unfortunately, the tradeoffs are not simple in this regard, as external international portfolio flows may actually help to develop domestic capital markets. Thus, the authorities must choose between reduced volatility of external capital and the development of deeper, liquid domestic markets. The Chilean decision, to eliminate in May 2000, the one-year minimum maturity for portfolio flows, as well as the Colombian decision in 1996 to allow foreign investment funds to participate in the domestic market for public sector securities, may be understood as a choice for the second of these options at the cost of additional capital volatility. This is, in fact, what happened with portfolio flows in Colombia during the recent crisis.

V. ANTI-CYCLICAL PRUDENTIAL REGULATION AND SUPERVISION

One of the painful lessons that has been learned during recent decades in Latin America, as in the rest of the world, is just how costly financial crises are in terms of duration and cumulative loss of GDP.[30] Some of the largest costs have to do with the sharp reduction in the time horizon of firms experiencing difficulties, which is also associated to the fact that ownership is partly indeterminate during crises (i.e., the proportion of assets which will be finally owned by stock holders vs. lenders may be subject to significant uncertainties). The losses are not only of a short term character, as they involve physical assets of firms as well as intangibles (including human and social capital and firms' business reputation, along with the consequent loss of business contacts) that have taken years to build up. Moreover, these losses are incurred even if the firm manages to restructure and survive. Also, the credit system is paralyzed for long periods, thereby slowing the recovery of economic activity. There are, however, some striking exceptions in this regard (Mexico's recovery from the "Tequila" crisis and the revival of the Chilean economy in the second half of the 1980s both took place against the backdrop of steeply falling levels of lending activity following severe financial crises).

The fiscal and quasi-fiscal costs of bank rescues are also very high: 4 to 5% of GDP in relatively small crises, such as those of Colombia in the early 1980s and late 1990s; some 15% of GDP in severe ones, such as those that hit Mexico and Venezuela in the mid-1990s or South Korea in the late 1990s; and

[30]/ IMF (1998), chapter 4. On the situation in Latin America, see also Rojas-Suárez and Weisbrod (1996).

35% of GDP or more in full-blown crises, such as those that engulfed Argentina and Chile in the early 1980s or Indonesia in the late 1990s. Thus, one of the best fiscal investments that a country can make is to avoid a financial crisis. This means that the private risks assumed by financial intermediaries during economic booms incorporate a substantial component of public sector risk. This fact constitutes a powerful argument for intervening in financial systems in order to prevent the build-up of excessive risks during booms.

The origins of problems that erupt during financial crises are well known. Generally, they are the result of a rapid increase in lending and weak prudential regulation and supervision, a combination that becomes explosive under conditions of financial liberalization in the midst of an external capital boom. The underestimation of risks characteristic of environments of economic optimism is then mixed with inadequate practices for evaluating risks, both by private agents and by supervisory agencies.

This underscores just how important the sequencing of financial liberalization processes is and, in particular, how necessary it is to make such liberalization contingent upon the prior establishment of appropriate prudential regulation and supervision and the design of satisfactory information systems to guarantee a proper microeconomic operation of markets. As the learning process –by financial intermediaries, depositors and the authorities—is not instantaneous, the liberalization process needs to be gradual to guarantee that financial intermediaries have the time they need to learn to manage higher risks, depositors to learn how to use the new information channels, and the authorities to learn how to supervise the system more strictly and how to modify prudential regulations and reporting requirements on the basis of accumulated experience.

Prudential regulation should ensure, first of all, the solvency of financial institutions by establishing appropriate capital adequacy ratios relative to the risk assumed by lending institutions, strict write-offs of questionable portfolios and adequate standards of risk diversification. In developing countries, the corresponding regulations should take into account not only microeconomic, but particularly macroeconomic risks they face. In particular, due attention needs to be paid to the links between domestic financial risks and variations in interest and exchange rates. Due to the greater financial volatility that characterizes these countries, capital standards should probably be higher than those proposed by the Basle Committee on Banking Supervision of the Bank for International Settlements. On the other hand, strict regulations should be established to prevent currency mismatches (including those associated with hedging and related operations), to reduce imbalances in the maturities of assets and liabilities of financial intermediaries and the timely write-off of due loans.[31] Prudential regulation should be particularly strict with respect to the intermediation of short-term external credits.

In addition, prudential regulation needs to ensure adequate levels of liquidity for financial intermediaries, so that they can handle the mismatch between average maturities of assets and liabilities associated to the financial system's essential function of "transforming maturities", which generates risks associated to volatility in deposits and/or interest rates. This underscores the fact that liquidity and solvency problems among financial intermediaries are far more interrelated than traditionally assumed, particularly in the face of macroeconomic shocks. Reserve requirements, which are strictly an instrument of monetary policy, provide the liquidity in many countries, but their declining importance makes it necessary to find new tools. What is more, their traditional structure is not geared to the specific objective of ensuring financial intermediaries' liquidity. The most important innovation on this area is undoubtedly the Argentine system created in 1995, which sets liquidity requirements based on the residual maturity of financial institutions' liabilities (i.e., the number of days remaining before reaching

[31] For an interesting analysis of the problems created by these mismatches and their effects during recent crises, see Perry and Lederman (1998).

maturity).[32] These liquidity requirements –or a system of reserve requirements with similar characteristics– have the additional advantage that they offer a direct incentive to the financial system to maintain a better liability time structure.

Properly regulated and supervised financial systems are structurally superior in terms of risk management, generating incentives for financial intermediaries to avoid assuming unmanageable risks during booms. Nonetheless, they are incapable of internalizing all the collective risks assumed during such periods, which are essentially of a macroeconomic character and entail, therefore, coordination problems that exceed the possibilities of any one intermediary. Moreover, they have a pro-cyclical bias in the way they operate. In fact, it is during crises that, albeit with some delay, the excess of risk assumed during economic booms becomes evident. This ultimately makes it necessary to write-off loan portfolios –thereby reducing financial institutions' capital and, hence, their lending capacity. This, in conjunction with the greater subjectively perceived level of risk, is what triggers the "credit squeeze" that characterizes such periods.

This is why instruments need to be designed that will introduce a countercyclical element into prudential regulation and supervision. In particular, they should be strengthened during periods of financial euphoria, to take into account the increasing risks in which financial intermediaries are incurring. Higher reserve requirements and restrictions on credit growth during boom periods can perform this function. Within the realm of regulatory mechanisms, higher capital adequacy ratios and stricter standards for debt classification and write-offs should be adopted. It may also be wise to raise liquidity requirements during these periods, especially for short-term liabilities. Deposit insurance rates could also be increased. Ceilings on the reference price for financial and real estate assets that are to be used as collateral for loans could be imposed (e.g., a provision under which no more than a specified, decreasing proportion of an asset's commercial value may be used for this purpose).

During financial crises, although authorities must adopt clearly defined rules to restore confidence, the application of stronger standards should be gradual, to avoid a credit squeeze. Of course, in order to avoid moral hazard problems, authorities must never bail out the owners of financial institutions, guaranteeing that their net worth is written off if the institutions are intervened.

It must be emphasized that prudential regulation and supervision have limits and costs that cannot be overlooked. Stricter standards in developing countries to manage macroeconomic risks increase the costs of financial intermediation, reducing international competitiveness and creating arbitrage incentives to use international financial intermediation as an alternative. Some classic objectives of prudential regulation, such as risk diversification, may be difficult to guarantee when macroeconomic issues are at the root of the difficulties. Moreover, as indicated, prudential regulation involves some non-price signals, and prudential supervision is full of information problems and is a discretionary activity susceptible to abuse, indicating that the faculties of the authorities must be subject to strict limits and controls.

VI. COUNTERCYCLICAL FISCAL MANAGEMENT

Regardless of what exchange rate and capital account regime countries choose, fiscal policy provides always a useful anti-cyclical device. The importance of countering excess spending during booms became quite clear in Latin America during the debt crisis of the 1980s, as the over-expansion of externally-financed public expenditure during the preceding boom generated, in almost all countries, fiscal imbalances that ultimately proved to be untenable. The subsequent spending cuts greatly reduced the benefits of those public expenditures: investment projects were left unfinished or took much longer to

[32]/ Banco Central de la República Argentina (1995), pp. 11-12.

execute than planned, thereby raising their effective cost; the existing structure for the provision of public and social services became disjointed; reductions in real wages and job cuts created tension and difficulties with trade unions and with public-sector employees in general; valuable staff were lost and the entire civil service was disrupted. The significant costs associated with these events continued to burden Latin American countries in the 1990s, owing to the difficulty of rebuilding the State apparatuses.

The painful lesson learned by Latin America during the debt crisis was thus that the lack of fiscal discipline during booms is extremely costly. A greater degree of fiscal discipline was thus maintained throughout the 1990s, though a moderate increase in budget deficits characterized the recent crisis, and some countries (Brazil and Colombia, in particular) have faced severe fiscal problems.

Nonetheless, the return to a more orthodox policy stance has entailed the continued implementation of unmistakably pro-cyclical fiscal practices.[33] This is attributable to the tendency for public revenues to behave pro-cyclically –a characteristic that, far from having been mitigated, may have increased with structural reforms.[34] Under these conditions, setting fiscal targets independently of the business cycle implies that spending during booms is partly financed by temporary revenues. Given the inertia of current spending and pro-cyclical debt service patterns –a reflection of pro-cyclical interest and exchange rates—sharp fluctuations in public sector investment may be required, generating the costs and inefficiencies mentioned earlier.

Other pro-cyclical rules are associated to explicit or implicit guarantees granted to the private sector. A case in question are the implicit guarantees of financial risks, which are reflected in the rescue packages for both domestic financial intermediaries and private firms with large external liabilities. A second case is public sector guarantees to private sector investments in infrastructure (such as minimum revenue or profit guarantees, or explicit coverage of exchange rate risks). Guarantees have three elements in common: (a) they are not always transparent; (b) they encourage private spending during booms; it is, thus, during periods of euphoria that implicit public sector spending in the form of an equivalent insurance premium is actually incurred, indicating that accrued public-sector spending during these periods is underestimated; however, (c) disbursements (cash spending) are incurred during crises, increasing borrowing requirements and crowding out other public sector spending. They thus encourage pro-cyclical private and public sector spending in non-transparent ways.

It is, therefore, necessary for authorities to set fiscal targets in terms of some sort of definition of the structural budget deficit. This means, first of all, that countries need to design mechanisms to sterilize temporary fiscal revenues. The experience gained from the use of stabilization funds for commodities with significant fiscal impact –the National Coffee Fund in Colombia (the first of its kind), the copper and petroleum stabilization funds set up in Chile and, more recently, the petroleum stabilization funds used by Colombia and Venezuela– must be extended to broader fiscal stabilization funds. Argentina created the first fund of this kind in 1999, but its operation will be delayed by the prior commitments to gradually reach a structural fiscal balance.

Well-designed social safety nets to protect vulnerable groups during crises (about which a broad-based consensus has emerged in recent international debates) is another useful alternative, particularly if mixed with funds to finance them that are accumulated during booms. An essential advantage of social safety nets is that spending is intrinsically counter-cyclical. On the contrary, anti-cyclical management of other spending may be inefficient. As indicated earlier, stop-go public-sector investment policies are inefficient. More broadly, an excessive reliance on anti-cyclical public sector spending policies –rather

[33]/ See CEPAL/ECLAC (1998b).

[34]/ An important reason is the very higher short-term income elasticity of demand for imports. Since the tax component of imports (tariffs plus VAT) continues to be far in excess of the economy-wide average, and import-tax evasion is far below average, import volatility is reflected in tax revenues.

than a more balanced mix, which also relies on fiscal stabilization funds— may generate disequilibria between supplies of public and private goods during booms, with substantial distributive effects, as the recipients of goods and services provided by the public sector are not the same agents as those that benefit from private spending.

In any case, in order to avoid unsustainable trends in the public-sector debt, a counter-cyclical management of public finances during booms is essential in order to deal with crises. Setting annual target for the budget deficit without reference to the business cycle actually implies the existence of a narrow time horizon, a practice that reflects risk-aversion on the part of authorities, which may be justified by the painful history of fiscal destabilization in the past. This is why the development of suitable institutions for broadening that horizon, such as fiscal stabilization funds or properly designed social safety nets, is essential in order to preclude a return to the practices seen in the past.

These policies must be complemented with adequate mechanisms to manage public sector guarantees. With respect to financial risks, the liability and anti-cyclical regulatory policies analyzed in previous sections are the proper answer. In relation to other guarantees, it is necessary that the "insurance premium equivalent" of such guarantees be regularly estimated and budgeted, and the corresponding resources transferred to special funds created to serve as a backup in the event the corresponding contingencies become effective.

It should finally be emphasized that an anti-cyclical fiscal policy greatly facilitates a broad prudential regulation of booms. In particular, the counterpart of funds accumulated in fiscal stabilization funds should be increased accumulation of foreign exchange reserves and reduced currency appreciation. Such reserves also provide "self-insurance" against sharp cuts in foreign exchange availability and are the necessary counterpart to smoother fiscal adjustment during crises.

VII. CONCLUSIONS

Given existing asymmetries in the world economy, the volatility of capital flows generates strong pro-cyclical performance in the "business cycle/policy taking" periphery. An essential part of the solutions to this problem lies in strengthening the institutional framework to prevent and manage financial crises at the global level. This paper has analyzed, however, the room for domestic anti-cyclical policies in the developing world, which is a necessary counterpart of such international architecture.

The basic claim of the paper is that a mix based on managed exchange rate flexibility cum capital account regulations, strong "liability policies" to improve debt profiles, an anti-cyclical management of prudential regulation and supervision of domestic financial systems, and adequate anti-cyclical fiscal policies can provide some partial room for maneuver. All policies have, nonetheless, limited effects, given the more reduced degrees of freedom that authorities face in globalized markets. Thus, integrated strategies in which these different elements support each other in their anti-cyclical task are called for. The specific emphasis will vary depending on the macroeconomic constraints and traditions of each particular country.

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SESION 1

REGLAS MONETARIAS, REGLAS FISCALES Y FONDOS DE ESTABILIZACION: SU COORDINACION Y CONTRIBUCION A UNA ADECUADA GESTION MACROECONOMICA

STABILIZATION AND SAVINGS FUNDS FOR NONRENEWABLE RESOURCES — A CONCEPTUAL FRAMEWORK

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ABSTRACT

In some countries that are dependent on the export of oil and other nonrenewable resources, governments have established, or are considering setting up, nonrenewable resource funds (NRFs) to help in the implementation of fiscal policy. The paper provides a conceptual framework for the assessment of the possible role of NRFs in addressing the problems associated with reliance on nonrenewable resource revenues, and considers some of their operational implications.

STABILIZATION AND SAVINGS FUNDS FOR NONRENEWABLE RESOURCES— A CONCEPTUAL FRAMEWORK

I. INTRODUCTION

A country with large exhaustible resources such as oil can benefit substantially from them, but the revenues from exploiting these resources can pose significant challenges. Fiscal policymakers need to decide how expenditure can be planned and insulated from revenue shocks arising from the volatility and unpredictability of resource prices. Decisions also need to be made on the extent to which resources should be saved for future generations.

Some governments have set up, or are considering setting up, funds as a response to these challenges. These can take various forms, ranging from separate institutions with discretion and autonomy to funds that in practice amount to little more than a government account. The general justification for such funds is that some share of government revenues derived from the exploitation of a nonrenewable resource should be put aside for when these revenues decline, either because the price of the resource has fallen and/or because the resource has been depleted. *Stabilization* funds aim at reducing the impact of volatile revenue on the government and the economy. *Savings* funds seek to create a store of wealth for future generations.

This paper provides a preliminary conceptual framework for the analysis of nonrenewable resource funds (NRFs).[1] It does not aim to directly address the issue of what macroeconomic and fiscal policy should be for a country with large nonrenewable resource endowments, which is a major topic that has been extensively covered elsewhere.[2] While the focus is largely on oil-producing countries, much of the analysis is relevant to other nonrenewable resource-producing countries under appropriate circumstances.[3]

The paper is organized as follows. Section II discusses the role and objectives of NRFs in the context of the issues involved in managing nonrenewable resource revenues that have prompted the creation of such funds. It also outlines the basic rules of funds, and some alternative and complementary approaches. Section III considers selected operational issues of NRFs, including budget linkages, asset

[1] The paper draws substantially from a forthcoming IMF Occasional Paper (Davis, Ossowski, Daniel, and Barnett, 2001). The latter will include a review of selected country experience with NRFs. Fasano (2000) also discusses experience with NRFs.

[2] See, for example, Gelb (1988) and Engel and Meller (1993). Also, the paper does not discuss fiscal federalism issues that may arise in nonrenewable resource-producing countries.

[3] The discussion does not cover commodity price stabilization funds. These funds attempt to sever the link between domestic producer prices and fluctuations in world market prices, so that the income of domestic producers can be sheltered from external shocks. Also, it does not cover international commodity stabilization schemes.

management options, and governance, transparency, and accountability questions. Section IV provides some concluding remarks.

II. THE ROLE AND OBJECTIVES OF FUNDS FOR NONRENEWABLE RESOURCES

This section considers the particular implications of nonrenewable resource revenue for fiscal policy in nonrenewable resource-producing countries, and why this has led to arguments for the creation of funds. The more specific objectives of such funds are reviewed in this context, with a distinction drawn between short-term stabilization and long-run sustainability and intergenerational objectives. The use of market instruments for revenue stabilization is also briefly discussed.

A. Objectives of Nonrenewable Resource Funds

A country with large fiscal revenues derived from exploiting a nonrenewable resource such as oil, typically faces two main problems—that the revenue stream is uncertain and volatile, and that it will eventually dry up. NRFs are sometimes proposed to deal with both these problems. First, a fund may be seen as able to stabilize budgetary revenues. When the resource price is "high," the fund would receive resources, which it would then pay out to the budget when the price is "low." Second, a fund may be seen as a way to save some of the revenue generated by exploiting the finite stock of the resource, which can then provide income after it has been exhausted. Funds may also be set up for other reasons: to counteract real exchange rate volatility and "Dutch Disease," [4] for liquidity purposes, and on political economy grounds.

The general characteristic of such funds is that they are public-sector institutions, separate from the budget, that receive inflows related to the exploitation of a nonrenewable resource. Table 1 summarizes the main objectives and design features of selected funds.

B. Stabilization Funds

A volatile and uncertain fiscal revenue source renders fiscal management, budgetary planning, and the efficient use of public resources difficult. This is particularly the case when it makes up a large share of total revenue. The nonrenewable resource sector is an important source of foreign exchange and fiscal revenues in a number of countries, making them vulnerable to external variables largely beyond the control of policymakers and domestic agents (Table 2). The uncertainty and volatility of nonrenewable resource revenues is typically greater than for other kinds of revenue, mainly as a result of unpredictable and frequently large fluctuations in international commodity prices.

Faced with the volatility of nonrenewable resource revenues, policy makers in nonrenewable resource-producing countries are routinely confronted with complex questions. If resource revenues change, what should be the policy response in terms of adjustment or financing? Should a particular resource revenue variation be considered as permanent or transitory

[4] "Dutch Disease" refers to the tendency for large resource revenues to appreciate the real exchange rate which then damages the nonresource tradable sector.

Table 1

OBJECTIVES AND DESIGN FEATURES OF SELECTED FUNDS

Country/ State	Name	Stated Objective(s)	Date Established	Accumulation Rules	Withdrawal Rules	Compliance with Rules / Changes to Rules	Control
Alberta	Alberta Heritage Savings Trust Fund	Savings (pre-1997, also economic and social development)	1976	30 percent of resource revenues until 1983. 1984-87: 15 percent. Transfers discontinued thereafter.	Discretionary transfers to the budget.	Yes / Yes	Oversight Committee (members of parliament) and Provincial Treasurer.
Alaska	Alaska Permanent Fund	Savings	1976	50 percent of certain mineral revenues (increased from 25 percent in 1980).	Principal (inflation-adjusted since 1982) invested permanently. Use of earnings decided by Governor and Legislature. 1/	Yes / Yes	Independent Trustees, ultimately Governor and Legislature.
Chile	Copper Stabilization Fund	Stabilization	1985, activated in 1987	Based on discretionary reference price determined by the government. 2/	Transfers to the budget (and extrabudgetary lending) based on discretionary reference price determined by the government. 2/	Yes / No	Ministry of Finance, Central Bank, and state copper company (CODELCO).
Kuwait:							
GRF	General Reserve Fund	Stabilization and savings	1960	Residual budgetary surpluses.	Discretionary transfers to the budget.	... / ...	Minister of Finance, Central Bank governor, and other officials.
RFFG	Reserve Fund for Future Generations	Savings	1976	10 percent of all government revenue. 3/	Discretionary transfers to the budget (with National Assembly approval).	... / ...	Minister of Finance, Central Bank governor, and other officials.
Kiribati	Revenue Equalization Reserve Fund	Stabilization and savings	1956 4/	"When surplus permits," later apparently changed to 25 percent of all phosphate receipts.	Discretionary transfers to the budget with parliamentary approval.	No / Yes	Minister of Finance, Secretary of the Cabinet, and other officials.
Norway	State Petroleum Fund	Stabilization and savings	1990, activated in 1995	All government oil revenues.	Discretionary transfers to the budget to finance the nonoil deficit (approved by Parliament).	Yes / No	Ministry of Finance.
Oman:							
SGRF	State General Reserve Fund	Savings	1980	Since 1998, oil revenue in excess of budgeted amount.	Discretionary transfers to the budget.	... / Yes	Autonomous government agency.
CF	Contingency Fund	Stabilization	1990 (abolished in 1993)	Residual oil revenue after budget and SGRF allocations.	...	... / ...	...
OF	Oil Fund	Oil sector investment	1993	Since 1998, market value of 15,000 barrels per day.	...	... / ...	Ministry of Finance.
Papua New Guinea	Mineral Resources Stabilization Fund	Stabilization	1974 5/	Government mineral revenues.	Government discretion, though based on estimates of long-run prices.	... / Yes	Government.
Venezuela	Macroeconomic Stabilization Fund	Stabilization	1998	Since 1999, 50 percent of oil revenue above reference values, set by decree for 1999-2004. 6/	Transfers to the budget and other state entities based on reference values; also discretionary transfers. 6/	No / Yes	Parliament and the Executive.

Source: Davis, Ossowski, Daniel, and Barnett, 2001, *Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications*, IMF Occasional Paper (forthcoming).

1/ Fixed portion of the earnings distributed as cash to Alaskans; also used to inflation proof the principal (as required by the 1982 amendment) and to increase capital.

2/ If copper price is up to US$0.04 per pound above reference price, no deposit; 50 percent deposit between US$0.04 and US$0.06 per pound, and 100 percent thereafter. Withdrawals symmetric.

3/ Received 50 percent of GRF assets when established.

4/ Phosphate stock became exhausted in 1979.

5/ Expected to be wound up in 2001.

6/ Fifty percent (100 percent before 1999 change) of revenue above reference value to be deposited. Withdrawals, with congress approval, if (a) oil revenues in given year are lower than reference value or (b) the resources of the fund exceed 80 percent of annual average oil revenue in the 5 preceding years. Withdrawals under (b) were initially earmarked for debt repayment and capital expenditure. After 1999, these withdrawals are earmarked for social and investment spending and debt repayment. Fund balance at the end of the fiscal year must not be less than one-third of that at the end of the preceding year.

Table 2
NONRENEWABLE RESOURCE INDICATORS FOR SELECTED COUNTRIES WITH FUNDS

Country 1/	Nonrenewable Resource Revenue 2/	Nonrenewable Resource Exports 2/	Average Size of Nonrenewable Resource External Shock 3/
	(% total government revenue)	(% GDP)	(% GDP 4/)
Chile	8.6	10.1	1.7
Kuwait 5/	59.3	39.7	5.9
Norway	14.4	12.1	1.6
Oman	77.3	35.9	5.3
Papua New Guinea	11.4	27.9	3.4
Venezuela	58.2	19.1	4.9

Sources: Davis, Ossowski, Daniel, and Barnett, 2001, *Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications,* IMF Occasional Paper (forthcoming).

1/ The nonrenewable resource for Kuwait, Norway, Oman, and Venezuela is oil; for Chile, copper; and for Papua New Guinea, gold, copper, and oil.
2/ 1985–99.
3/ 1975–99.
4/ Average absolute value of the annual difference in the ratio of nonrenewable resource exports to GDP.
5/ Excludes 1991-1993.

Against this background, stabilization funds have been proposed to smooth out fluctuations in government revenue and help guide expenditure. A stabilization fund may be defined as a mechanism designed to reduce the impact of volatile revenue on the government and the economy. Its objectives may also include supporting fiscal discipline and providing greater transparency in the spending of revenue. Examples of stabilization funds include those in Chile (copper), Papua New Guinea (mineral resources), and Venezuela (oil).

Stabilization funds do not set formal restrictions to the conduct of overall fiscal policy. In particular, they do not directly affect spending. Moreover, stabilization funds on their own cannot reduce the revenue uncertainty and volatility facing the public sector as a whole. The objective of rendering budget revenue more predictable and stable is achieved by transferring the uncertainty and volatility (or a portion of them) to the fund. Changing the revenue stream accruing to the public sector as a whole might be achieved using commodity risk markets (see Section II.E).

1. Saving, dissaving, and the volatility of the revenue stream

A standard justification for stabilization funds is provided by the intuition that the government should save during resource booms and dissave during resource slumps. According to this argument, by saving revenues during upswings in a fund, governments can smooth expenditure adjustments upward or downward and reduce the need to cut spending in leaner times. This follows from the notion that government expenditure should be a function of permanent government income, and that therefore short-term fluctuations in revenue should have little impact on spending levels. The fund would save when the

prices of the commodity of interest are higher than their long-run equilibrium level or some other reference value, and draw down its resources when they are below that level.

Dissaving to smooth the downward adjustment of spending in response to a negative revenue shock or to completely insulate spending from such a shock should reflect the extent to which the revenue shock is permanent or temporary. If temporary, the government could dissave until revenue recovers (financing scope permitting). If permanent, dissaving should be used to smooth the downward adjustment in spending, but not to prevent expenditure adjustment. Spending that is not adjusted to a permanent shock could be unsustainable with the government continuously dissaving and eventually being forced to adjust. In particular, catastrophic negative price shocks that prompt major solvency reassessments (such as in the case of oil in 1986) may require large adjustments even in the presence of smoothing mechanisms.

A number of empirical studies suggest, however, that the prices of nonrenewable resources such as oil seem to have no well-defined time-invariant averages (Box 1). Shocks are persistent, and it may not be possible to distinguish clearly between transitory and permanent components, or to predict turning points in price cycles. Studies that do find evidence consistent with the existence of time-invariant long-run averages, conclude however that prices take a very long time to return to their average, and thus for practical purposes they may be of limited relevance.[5]

These characteristics of nonrenewable resource prices have significant practical consequences for stabilization funds. Prices that may not tend toward a "normal" or average level, or that may do so extremely slowly, and price changes that cannot be split easily into temporary and permanent components, pose complications to the intuitive idea that the fund should undertake additional saving in periods of "above average" prices and dissaving in periods of "below average" prices to avoid sharp adjustments in spending.

2. Adjustment costs

Even if it may not be possible to specify underlying resource prices, stabilization funds may be justified by the existence of substantial fiscal and macroeconomic adjustment costs associated with large and frequent changes in the level of expenditure. The sudden creation or enlargement of expenditure programs carries significant risks. A hasty undertaking of large-scale public spending programs may exceed the government's planning, implementation, and management capacity, with the result that it may be difficult to prevent wasteful spending. For example, the criteria for the selection of capital projects may become lax, leading to suboptimal investment decisions. The costs of new projects may also increase due to bottlenecks in the supply of some inputs.

Moreover, typically government expenditure proves difficult to contain or streamline following expansions, as spending programs become entrenched and take a life of their own. In particular, investment decisions are frequently irreversible and entail sizeable recurrent costs. The productivity of public investment would be affected if good capital spending programs are cut back, postponed, or abandoned. Drastic expenditure reductions in the face of negative external shocks (which may involve cuts in social spending and the government payroll, besides capital spending) may lead to social instability, discouraging investment and reducing future growth. Such reductions could involve, in particular, the abandonment of viable projects, where the return on some additional expenditure might be high.

[5] If mean reversion is slow, even if nonrenewable resource prices have a time-invariant long-run average, shocks will tend to seem permanent to countries with limited reserves of the nonrenewable resource.

Given the government's large influence on aggregate expenditure, there may also be macroeconomic costs associated with abrupt and unpredictable gyrations in expenditure or the nonresource fiscal balance. They include the costly reallocation of resources to accommodate changes in demand and relative prices, and the increased risks faced by investors in the nonresource sector, with attendant adverse effects on private investment and the growth of the nonresource economy. The capacity of the economy to absorb large increases in government spending also needs to be taken into account.

The operational objective of stabilization funds is the smoothing of the resources available to the budget on a recurrent basis. However, the costs of adjustment relate to the stabilization of expenditure. The linkage between the operations of the fund and the stabilization of expenditure and the nonresource fiscal balance will be taken up below.

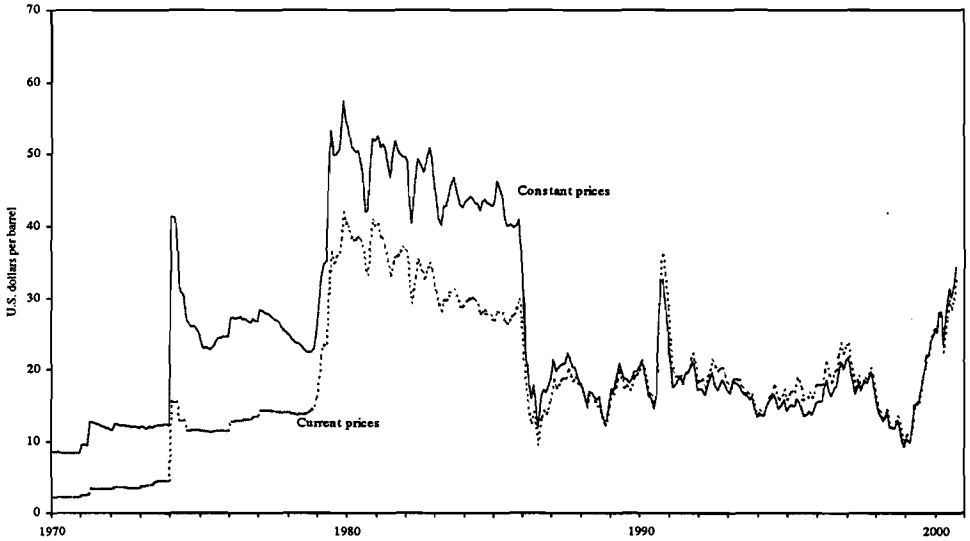
Box 1. Time-Series Properties of Oil Prices

There is a body of empirical evidence which suggests that oil prices do not have well-defined time-invariant averages. 1/ The evidence would seem to be relatively strong for data sampled at short intervals. Studies that have found evidence that oil prices may be stationary (typically using data sampled at longer intervals), also find that mean reversion is extremely slow—prices take a long time to revert to their long-run averages following a deviation.

Consequently, shocks are extremely persistent and may affect all expected future prices. Small yet long-lived price shocks would have different implications for the appropriateness of policy responses than very large long-lived price shocks. The evidence shows that oil prices exhibit a pattern of large fluctuations and substantial volatility (Figure 1). Research at the IMF suggests that one-third of the time the oil market will be faced with the prospect of a monthly price change greater than 8 percent (Cashin, Liang, and McDermott, 1999). At the oil prices currently prevailing, in any month there is a one-in-six chance that the oil price may drop by some US$2.50 a barrel. There is also little evidence of a consistent "pattern" to oil price cycles, as the probability of an end to an oil price slump (a period of absolute price decline) or boom (a period of absolute price rise) appears to be independent of the time already spent in the slump or boom (Cashin, McDermott, and Scott, 1999).

The notion that oil prices may not tend toward a time-invariant average or "normal" price (or that they may do so very slowly) may be counterintuitive. There may be a presumption that at higher oil prices production of oil and its substitutes should increase, and that oil output should decrease if prices are below marginal costs. This might give rise to the conjecture that oil prices might move randomly but within a "corridor" or band of prices with reflecting barriers. However, from an analysis of the long-run behavior of oil prices in real terms it is difficult to find such bands. Rather, the evidence would appear to be consistent with the view that unpredictable regime switches occur from time to time. In the last three decades, regime changes appear to have taken place in 1973, 1979-80, and 1986.

Figure 1. Crude Oil Prices, 1970-2000 1/



Sources: IFS; and staff estimates.
1/ Light crude (1984 to present, UK Brent; 1974-1984, North African Light; before that, Libyan Brega). Constant prices deflated by the manufacturing unit value at January 2000 prices.

1/ That is, oil prices appear to follow a nonstationary process. See, for example, Hausmann, Powell, and Rigobón (1993); Claessens and Varangis (1994); and Engel and Valdés (2000). The power of the tests used in these studies, however, is generally low.

3. Liquidity and self-insurance

Stabilization funds have also been linked to liquidity considerations. Countries with heavy reliance on volatile resource revenues will generally need to have substantial financing available. During downturns, governments could either borrow or run down their financial assets; which one to rely upon is mainly an asset management issue.

International lending to developing countries and primary commodity producers with heavy reliance on volatile resource revenues, however, tends to be procyclical. Some of these countries may find it difficult to ensure financing when the price of the resource falls sharply, at a time foreign resources may be most needed. They may also find other limits on their capacity to tap international capital markets, that may be difficult to predict. Countries that face such constraints in their borrowing capacity may place a premium on liquidity as such, and may wish to maintain a large stock of liquid financial assets, ideally in the form of external claims to avoid merely passing on the shock to the domestic private sector.

Thus, liquidity held by the stabilization fund could provide an element of self-insurance: resources accumulated during upswings could be drawn down during downswings. This argument is sometimes related to the enhancement of confidence and credibility that a fund may help achieve given the external vulnerability of some nonrenewable resource-dependent countries. The government, however, could in principle hold liquidity for precautionary purposes without recourse to a formal stabilization fund.

4. Real exchange rate volatility and Dutch disease

Large revenues from volatile nonrenewable resources have implications for the economy as a whole, not just for the fiscal sector. Nonrenewable resource shocks can affect the level of the real exchange rate through a number of channels including disposable income, wealth effects, pro-cyclical government spending on nontradables, and short-run monetary disequilibrium. There is evidence that the volatility of the real effective exchange rate is damaging to the nonresource sector and capital formation (Servén and Solimano, 1993). Moreover, an increase in resource revenues, particularly if perceived as permanent, may place upward pressure on the real effective exchange rate, with effects on the nonresource tradable sector (Gelb, 1988).

Fiscal policy can play a role in addressing these issues, particularly when the government receives substantial nonrenewable resource revenue. The basic fiscal response should be to smooth spending on nontradables when resource revenues vary. For the balance of payments as a whole, large resource current account receipts could be offset by capital account outflows. To the extent that nonrenewable resource receipts flow to the government, the latter and/or the central bank could build up external assets or repay foreign debt.

A fund might dampen real exchange rate volatility and the effects of Dutch Disease insofar as it might facilitate the placement of resources abroad during booms. This could also be achieved by the government or the central bank using the current receipts to increase foreign deposits or foreign exchange reserves respectively.

5. Funds and the political economy of government spending

The establishment of stabilization funds has sometimes been justified on wider political economy arguments. These funds have been seen as potentially helpful instruments when governments have difficulty in maintaining stable expenditures and may be prone to give in to pressures for additional spending when revenues are available.

First, governments, even if they see the case for increased financial savings when nonrenewable resource revenues are high, often face substantial political pressures to spend the higher revenues. Second, politicians may not fully appreciate the need to save in such circumstances, they may be short-sighted, or they may not be rewarded for thinking about long-term issues, and it could be argued that they should be constrained to do so, for instance, in the form of binding fiscal rules, to ensure more "responsible" behavior.[6] Third, governments may actually find it politically difficult to issue gross debt to finance spending and transfers to an NRF. For example, legislatures may be opposed to further issues of debt. By formally limiting the resources available, funds could help prevent large increases in spending during revenue upswings.

On the other hand, large (or rapidly growing) NRFs may themselves give rise to domestic spending pressures and exacerbate the problem of rendering longer-run saving abroad politically acceptable. This could happen, for example, if there is public perception that some of the resources in the fund could be "better" used to increase domestic expenditure, or reduce taxation.

6. Contingent stabilization funds

Stabilization funds often take the form of price- or revenue-contingent funds. Such funds are designed to accumulate resources when the resource price or revenue is "high" (exceeding some threshold) and to pay out when the price or revenue is "low" (falling below a second threshold). The thresholds are usually preannounced.

The aim of these funds is to smooth out fluctuations in the recurrent resources available to the budget, by reducing or eliminating the uncertainty and volatility of resource-related revenues flowing into the budget. This could allow budgetary spending to be insulated from changes in the resource price—which is implicitly assumed to deviate from its long-run average only temporarily—or a more limited smoothing of expenditure adjustment to price shocks.

Contingent rules may determine that resources should be deposited in the fund if the export price or revenue exceeds some reference value. The reference value may be fixed in nominal terms, or it may be changed on a discretionary basis. Alternatively, the reference value may be calculated on the basis of a formula which may be linked to past observations and/or may include forecasts of future prices. If prices or revenues are lower than the reference values used for determining withdrawals, the fund may use these resources to make transfers to the budget or for other purposes. In addition, the required accumulation and permissible depletion of resources may also be made dependent on the size of the fund at the time.

The accumulation of assets in the fund may be subject to a cap determining the fund's maximum size. The rules would also need to specify whether the fund can borrow (typically this is not the case) or needs to keep a minimum balance, and whether its capital may be used as explicit collateral for government debt operations.

Their simplicity notwithstanding, contingent funds with fixed or backward-looking rules may prove difficult to design and operate.[7] As discussed above, it may not be possible to specify long-run averages for prices or revenues with any degree of confidence, or they may display only very weak tendencies to revert to "normal" levels, and shocks are persistent. Under such circumstances, a contingent

[6] Fiscal rules may constrain expenditure, the deficit, or they may restrict the ability to borrow. As discussed in Kopits and Symansky (1998), fiscal rules can have both advantages and disadvantages.
[7] See Claessens and Varangis (1994), and Hausmann (1995).

fund could face the prospect of either accumulating funds indefinitely or being rapidly exhausted. Indeed, shock persistence in commodity prices may explain why many domestic price stabilization schemes and international commodity stabilization agreements for producers collapsed or were terminated in the 1980s and 1990s due to their financial unsustainability.

Even if a long-run average price could be established from historical data, this would not necessarily imply that deviations will be temporary in the future, that this average price will not change, or that the size of the shocks will not be overwhelming. Thus, the time-series properties of the resource price may change, making the fund unsustainable.[8] These factors may help explain why in some funds with these characteristics the rules have tended to change over time, and/or the actual operation of the fund has included an element of discretion not contemplated in the rules.

The accumulation and drawdown rules might be related to resource futures prices. Futures prices are, however, quite volatile (although somewhat less so than spot prices) and, like other forecasts of resource prices, contain large ex-post errors.[9]

Contingent funds can render the recurrent resources available to the budget more predictable and stable by transferring uncertainty and volatility to the fund. This has implications for the liquidity that the fund may need to hold, in the absence of other financing sources, to function as a stabilization mechanism for the recurrent resources available to the budget (Arrau and Claessens, 1992).

The performance of a stabilization fund is likely to be related in part to the size of the volatility faced by the government. In countries where the share of volatile resource revenue in total revenue is high, funds—and contingent funds in particular—may be more difficult to operate than in countries with a more diversified fiscal revenue base and where the impact of fluctuations in resource revenue is lower.

7. Stabilization funds and the fungibility of resources

A clear distinction needs to be drawn between the operational objectives of stabilization funds and overall policy goals. The *operational* objective of stabilization funds is the stabilization of recurrent resources available to the budget, and funds may be helpful in shielding the budget from revenue uncertainty and volatility. But the fund's rules do not deal with spending or deficits at the government level. The basic *policy* objective, however, is the stabilization of public finances. Therefore, the issue is whether the fund effectively constrains government spending or the nonresource deficit.

Since a stabilization fund does not directly affect spending and thus savings, the implicit mechanism whereby a fund would lead to higher savings during "good" times is via a liquidity constraint. By placing some of the resource revenue receipts out of reach of the budget, the government would not be able to finance more expansionary expenditure plans.

In the absence of liquidity constraints, however, resources are fungible. The government could borrow or run down assets to finance higher expenditure leaving government savings unchanged even if the fund were to operate in accordance with its rules and budget revenue were stabilized. Thus, if there is insufficient control of expenditure or deficits outside the fund, the advantages of operating a fund that stabilizes resources available to the budget would be limited. Indeed, governments will probably find

[8] For example, a technological change may alter the equilibrium demand and/or supply of the resource.

[9] Research indicates that crude oil futures prices provide forecasts that are, in general, superior to those obtained from alternative techniques for short-term horizons. For longer periods, their accuracy diminishes markedly; however, even for those horizons the futures forecasts are no worse, and are often better, compared with those obtained from alternative techniques (Kumar, 1992).

borrowing particularly easy when the resource price is high and the fund's assets are burgeoning.[10] [11] The achievement of actual expenditure smoothing therefore requires *additional fiscal policy decisions* besides the operation of a fund.

C. Savings funds

1. Exhaustibility of the revenue stream

Government revenue derived from exploitation of nonrenewable resources differs from other revenue in that it partly represents a depletion of wealth. When a significant share of government revenue is derived from the exploitation of such resources, intergenerational equity and fiscal sustainability require consideration of the finite nature of the resources and of the prospective evolution of government net wealth, as analysis based solely on indicators of fiscal balance could be misleading. In particular, government wealth can be seen as the sum of net financial and resource wealth. Thus, if all the revenue from nonrenewable resources were to be consumed, this would leave less wealth, and less consumption opportunities for future generations. This would generally be considered undesirable on intergenerational equity grounds.

How much revenue from nonrenewable resources should be saved rather than consumed is a complex question that has been the subject of substantial research.[12] In general, sustainable government consumption is related to the permanent income out of government net wealth (inclusive of resource wealth). This relationship would need to take into account factors such as population growth and technological change. It is also difficult to estimate in practice, with any degree of confidence, such variables as the future price of the nonrenewable resource, the amount of the endowment, and the cost of extracting it, especially when these factors may vary substantially and frequently.

Nevertheless, long-run fiscal sustainability considerations would generally imply saving a portion of today's nonrenewable resource revenue, and setting normative limits on the nonresource fiscal deficit.[13] This approach would both stabilize usable revenue and provide for the accumulation of financial resources that make up for the depletion of the natural resource, thereby helping implement fiscal policies that are set within a longer-term framework.

Savings with the objective of preserving net government wealth are different from the financial savings designed to smooth expenditure adjustment discussed above. The former represents an economic concept of saving, that is, the excess of current revenue over current expenditure, and the theory is mute as to whether it should be invested in public works or held as financial assets, and thus if the government should run an overall surplus or deficit. Savings in order to smooth expenditure adjustment, however, relates to financial savings. For example, if a government runs high economic savings, but spends massively on public investment during "good" times and fails to build up financial assets, this may not help it finance expenditure adjustment during "bad" times.

[10] If the fund were allowed to spend directly or to lend, this would further impair any ability of the fund to generate financial savings.

[11] Regulations could be put in place to rule out the use of the fund's capital as explicit collateral for government borrowing. It may be more difficult, however, to preclude the use of the resources as implicit collateral.

[12] See, for example, Tersman (1991), Liuksila, García, and Bassett (1994), and Engel and Valdés (2000).

[13] Countries that have just discovered large nonrenewable resource endowments may be justified in consuming the initial revenue from the resource if it is below the estimated permanent income from the resource.

2. Savings funds

The objective of saving part of the revenue arising from the depletion of exhaustible resources has led in some cases to the consideration or implementation of savings funds, on the grounds that such funds might help promote saving and the proper use of revenues. For instance, a main reason for the creation of funds with mainly a saving objective such as those in Alaska, Kuwait, Oman (oil), and Kiribati (phosphates) was the desire to create a store of wealth so that future generations might benefit from part of the proceeds of the non-renewable resources extracted in the current period (see Table 1).

Savings funds have frequently relied on non-contingent rules. In revenue-share funds, the accumulation rule may stipulate that revenues amounting to some pre-specified share of resource revenues or of total revenues be deposited in the fund independently of resource market and overall fiscal developments. Alternatively, a fixed nominal contribution to the fund may be specified. The aim is to put away some resources to gradually build up a store of wealth so that future generations might benefit from part of the proceeds of nonrenewable resources extracted in the current period. An ancillary aim may be to reduce the reliance of the budget on a particularly volatile source of receipts.

Revenue-share savings funds may also have stabilization objectives. When withdrawals are allowed to finance the budget, for instance during resource price downturns, recessions, or catastrophic events, the fund's operations also include short-term purposes.

The case for a savings fund is subject to conceptual issues analogous to those discussed in the context of stabilization funds. In particular, in the absence of liquidity constraints, savings funds would not necessarily lead to higher savings, as the government can finance spending in other ways. As long as the government can borrow to finance its transfers to the fund, the usefulness of placing floors on how much the fund should save on a gross basis would be limited, because net indebtedness would not be constrained. The problem of determining a long-run average price also remains.

If a savings fund spends on investment items, financial savings are reduced. A fund dedicated to this end and managed separately from other public-sector spending decisions could also lead to inefficiency. This is discussed further in Section III.A.

D. Financing Funds

In a financing fund the operational rules are designed so that it effectively finances the overall budget balance. The Norwegian State Petroleum Fund (SPF) operates on this basis. Under the rules in place, the budget is required to transfer to the SPF net oil revenues. In turn, the SPF finances the budget's nonoil deficit through a reverse transfer. In practice, this amounts to the fund financing the overall budget balance. If the budget is running an overall surplus, the latter is transferred to the fund; if the budget is in deficit, the latter is financed by the fund. The assets held in the account may be managed according to separate investment guidelines (as in Norway), or jointly with other resources of the Treasury.

A financing fund provides an explicit and transparent link between fiscal policy and asset accumulation, and addresses fungibility issues. Changes in the assets held by the fund correspond to those in the overall net financial asset position of the government, which is driven by the overall fiscal balance. The fund accumulates assets to the extent that there are actual surpluses in government finances. Thus, net allocations to the fund, together with the income earned by the fund's assets, give an indication of the trajectory of financial wealth, because this arrangement rules out financing the accumulation of resources in the fund through borrowing. Fiscal surpluses are required, however, for a financing fund to become operational if its initial funding is not to be financed through borrowing.

The establishment of a financing fund, effectively little more than a government account, may be related to political economy considerations. The fund may help make explicit the intertemporal implications of expenditure choices without the potential cost of budget fragmentation (see Section III.A). For example, an increase in expenditure would automatically lead to lower deposits into the fund, or a greater withdrawal from the fund, with computable consequences for fiscal solvency and the returns on government assets in future years. At the same time, this type of fund may provide little "disciplining" effects, since the flows in and out of the fund depend on resource revenue and policy decisions of the authorities embodied in the nonresource fiscal stance.

E. Alternative Approaches

The objectives of stabilization, saving for the future, or investing abroad to sterilize large foreign exchange inflows, could be achieved through implementation of a sound fiscal policy within the context of an overall budget strategy. If the appropriate fiscal response to a higher nonrenewable resource price were to increase public savings, the government could achieve it in the context of such a framework, and with any financial saving comprising part of the total financial resources available to the government. Similarly, when prices fall and the appropriate response is to dissave, this could be done by borrowing or running down total financial assets. An overall fiscal policy could also be geared toward saving for the future or placing resources abroad to sterilize large foreign exchange inflows.

The formulation of an overall fiscal policy may be aided by a medium-term expenditure framework which can help limit the extent of short-run expenditure responses to rapidly changing resource revenues. Multi-year expenditure planning can also allow a better appreciation of the future spending implications of present policy decisions, including the recurrent costs of capital spending (Potter and Diamond, 1999).

Stabilization funds on their own cannot reduce the uncertainty and volatility of nonrenewable resource revenues facing the public sector as a whole. In this context, however, there may be a role for the use of contingent financial instruments such as options and futures contracts to deal with the external exposure and transfer risk to international financial markets. Recourse to contingent markets might permit prices (or price ranges) for nonrenewable resource deliveries in future periods to be "locked in." As a result, budgeting could become more realistic and certain. Hedging could also provide some protection against substantial price falls. In practice, however, there may be limitations to the extent to which future production might be hedged.[14] In addition, the undertaking of hedging operations requires an appropriate institutional framework, to minimize possible governance and transparency risks.

III. NONRENEWABLE RESOURCE FUNDS: SELECTED OPERATIONAL ISSUES

The establishment of an NRF requires decisions as to its integration within the fiscal framework and its asset management strategy. Governance, transparency, and accountability issues also need to be addressed. These topics are briefly reviewed in this section.

[14] For very large producers, hedging a substantial amount of future output may either not be possible, or may distort market prices. Moreover, liquidity in contingent markets tends to be concentrated in the 1–2 year range. Credit constraints can also be an important factor in limiting large-scale excess to certain types of contingent markets by less creditworthy countries.

A. The Fund and the Budget

If a decision is taken to establish a fund, it should be integrated within the budget process in a coherent manner. Proper integration of the fund and the budget helps maintain a unified control of fiscal policy and avoid problems in expenditure coordination, such as duplication of expenditure or capital spending decisions made without taking into account their impact on future recurrent spending. It also facilitates a consistent prioritization across all government operations.

This would suggest preference for institutional arrangements that maintain a unified control over expenditure, avoiding the emergence of two "budgets," namely the traditional budget and a separate expenditure program financed by the fund. The separation of spending programs could lead to fiscal management problems. How would spending priorities be set? Which expenditures would be financed by the fund and which by the budget? Therefore, to address the risks that funds might pose in terms of fragmentation of policymaking and loss of overall fiscal control, it would be important to ensure that spending decisions are taken within the context of the budget and that expenditure is included in the budget in a comprehensive way.

The need for legitimacy and contestability of budgetary resources provides additional reasons why it would be preferable for the resources in the fund to be spent through the normal budgetary approval process. Public resources should be raised and spent in accordance with public demands and for the highest (marginal) value. The legitimacy of the budget is enhanced by legislative approval of the annual appropriation law. This therefore suggests that any off-budget spending that is allowed should remain subject to parliamentary scrutiny and consideration.

An extrabudgetary fund may be set up as a separate entity with authority to undertake off-budget expenditure. Arrangements may also include the fund having its own direct sources of revenue. A rationale for this design is the notion that potential overspending might be prevented by keeping resources off-budget. Also, such an approach may be justified as one means to "get around" an inefficient and/or corrupt system and deliver more effectively the desired spending policies.

This approach may lead to coordination problems with the budget. Moreover, if spending is undertaken without parliamentary approval and adequate oversight, it could result in nontransparent off-budget practices and give rise to governance concerns. In addition, it remains doubtful on practical grounds whether, if the overall budget system is poor, a better sub-system can be established to deal with windfall proceeds. In a number of cases the oversight of the fund's spending has not been fully adequate, and public resources have been misallocated.

If a separate NRF with spending authority is considered, a separate appropriation bill for the fund should be submitted for parliamentary approval. Budget formulation and reporting should focus on a consolidated presentation (inclusive of the operations of the fund), and all the expenditures should be executed by the Treasury.

B. Asset Management Issues

An NRF could, over time, hold an important share of the public sector's financial assets. The management of the fund's capital is therefore a key component of the strategy for the fund. Strategies for managing NRF assets have varied among countries (Table 3).

1. Asset management strategy

An asset management strategy would need to be defined for the fund, including prudential investment rules, targeting desired levels of risk, liquidity, and return. The fund's financial operations should be designed to avoid disrupting financial markets and macroeconomic stability. Equally important, the strategy would need to take into account the main objectives of the fund, and in particular the relative emphasis placed on stabilization and savings, in the context of the government's overall asset management strategy.

Consideration would need to be given to the appropriate time-horizon. For example, the liquidity and maturity of "risk-free" assets would be a relevant consideration. Similarly, decisions as to whether to hold equities in the portfolio might depend on whether the fund's objectives are seen as mainly related to long-term savings or short-term stabilization. The currency composition of the assets would also be important.

Table 3
ASSET MANAGEMENT OF SELECTED FUNDS

Country/State	Foreign/Domestic Asset Split	Operational Management	Level of Assets 1/ (In percent of GDP)
Alberta	Mainly domestic.	Treasury's Investment Management Division.	10
Alaska	Mainly non-Alaskan, including foreign.	Alaska Permanent Fund Corporation (special private corporation).	105 2/ 3/
Chile	Mainly foreign.	Central bank.	...
Kuwait:			
GRF	Domestic and foreign.	Kuwait Investment Authority (since 1982), autonomous government body.	...
RFFG	Mainly foreign.	Kuwait Investment Authority (since 1982), autonomous government body.	...
Kiribati	Foreign.	Reserve Fund Investment Committee.	800 3/
Norway	Effectively foreign. Held as local currency account at central bank, which manages a counterpart portfolio of foreign assets.	Central bank, using private investment managers.	19
Oman			
SGRF	Almost entirely foreign.	Autonomous government agency.	12
OF	Mostly foreign.	Ministry of Finance.	4
Papua New Guinea	Held as local currency account at central bank.	MRSF Board.	0
Venezuela	Foreign.	Central bank.	0.2

Sources: Davis, Ossowski, Daniel, and Barnett, 2001, *Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications,* IMF Occasional Paper (forthcoming).

1/ End-1999.
2/ In percent of gross state product.
3/ End-1998.

The asset management strategy should reflect a consolidated portfolio of the government. In addition, the fund's short-term asset operations should be consistent with, and coordinated with, the debt management operations of the Ministry of Finance, the Treasury's management of the government's cash flow, and the financial assets already held as part of the government's balance sheet. In some cases, difficult choices may need to be made between assets held in the fund and outstanding gross government debt.

A strong case may exist for placing the fund's accumulated resources abroad. Investing them in domestic non-government financial assets would transmit resource revenue volatility to the economy. In downturns, the withdrawal of domestic deposits could have a contractionary effect on the economy (unless offset by open market operations), while investment in domestic financial assets and monetization of the fund's flows during upturns could fuel aggregate demand.[15] Also, the protection of the competitiveness of the nonresource tradable sector may be a policy objective, which could be helped by the sterilization of savings.

2. Domestic investment issues

The fund's resources might be used to undertake domestic investment in physical assets rather than sterilized abroad. Countries with pressing infrastructural needs or with perceived opportunities for productive domestic investment are particularly likely to consider this option. Such a strategy could also aim at enhancing the competitiveness (and promote the growth) of the nonresource tradable sector; in effect, part of the resource wealth would be given up for the prospect of higher nonresource wealth. There is, however, a danger that such spending may rise to an unsustainable level, or that too quick an increase may result in poor quality projects.

There are a number of reasons to suggest that an NRF should not undertake domestic capital expenditure directly. First, investment should be guided by overall policy considerations (including medium-term recurrent implications), rather than by the availability of resources in the fund. Second, a perception that resources are readily available for domestic uses could create incentives for rent-seeking and make the fund prone to abuse. Third, it may be difficult to assess the effects of the domestic use of resources on aggregate demand and competitiveness if the spending is off-budget. Finally, an NRF with stabilization objectives may need to build up liquid assets to preserve its precautionary objective for budget financing.

C. Governance, Transparency, and Accountability

The rules and operations of an NRF should be transparent and free from political interference. Lack of transparency would hamper legitimacy and undermine public support for the fiscal policy objectives that are related to the fund's operations. It would also allow incentives for lobbying for resources and pressures to increase spending with positive nonrenewable resource shocks. Therefore, stringent mechanisms should be put in place to ensure accountability and prevent the misuse of resources.

This requires regular and frequent disclosure and reporting on the principles governing the fund and its operations. Regular reporting on the flows into and out of the fund during the year and the allocation of the resources under the fund's supervision should be submitted to the legislature and made widely available to the public.

[15] These arguments, however, may not apply in the case of perfect capital mobility and highly developed domestic financial markets, and when the operations of the fund are small relative to the size of the domestic financial market.

To ensure propriety in the fund's activities it would be advisable to have the fund's activities audited by an independent agency to supplement the internal audit of the fund. Such an audit should include both financial and performance audit and, if relevant, the procedures for the choice of external managers for the fund. Audit and reporting should cover evaluation of the performance of the fund.

IV. CONCLUDING REMARKS

Countries that rely on oil and other nonrenewable resources for a substantial share of their revenue face the key problems that the revenue stream is volatile and uncertain, and that the resource is exhaustible. Some countries have turned to NRFs to help address the challenges that these characteristics of nonrenewable resource revenues pose for fiscal policy.

Stabilization funds seek to shield the budget from revenue volatility and uncertainty, by smoothing out fluctuations in budget revenue. Rules for when resources should be put aside and in what amount, however, are likely to be difficult to establish. Moreover, in the absence of liquidity constraints, stabilization funds provide no direct mechanism to stabilize expenditure. Since resources are fungible, governments could bypass the operation of funds by financing spending in other ways. Expenditure smoothing therefore requires additional fiscal policy decisions. Savings funds, designed to create a store of wealth for future generations, face some of the same problems. "Financing" funds, which are designed to finance the fiscal deficit and receive the surplus, address fungibility issues and provide a link between fiscal policy and asset accumulation, but they do not attempt to deal directly with the problems posed by the volatility of revenues.

NRFs that are not well integrated with the budget can complicate fiscal management, lead to an inefficient allocation of government resources, and contribute to lack of transparency and governance problems. An NRF may also spend excessive amounts of the resources it receives, or use them inappropriately. Therefore, if a decision is taken to set up an NRF, it is crucial that it be properly designed.

The establishment of NRFs may be considered on political economy grounds. An NRF might facilitate political acceptance of the idea of saving part of a windfall, or it might focus attention on the exhaustibility of the resources, in the face of spending pressures. Thus, in certain circumstances, by limiting the resources available to the budget, NRFs could help prevent large increases in spending. On the other hand, large or rapidly growing NRFs may themselves give rise to expenditure pressures.

Whether the political economy arguments for NRFs outweigh the potential disadvantages will need to be considered on the basis of the situation in each country. This decision should reflect two considerations. First, NRFs should not be seen as a simple solution to a complex problem; rather, the question should be asked as to whether they might help facilitate implementation of a sound overall fiscal policy. Second, if an NRF is to be established, then it should be designed appropriately, otherwise it may well do more harm than good. Key features of a well-designed fund would include: coordination of the fund's operations with those of the rest of the public sector, in the context of a sound fiscal policy; effective integration with the budget; an appropriate asset management strategy; and mechanisms to ensure transparency and accountability.

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OPTIMAL FISCAL STRATEGY FOR OIL EXPORTING COUNTRIES

By
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Optimal Fiscal Strategy for Oil Exporting Countries

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Abstract

This paper develops simple guidelines for fiscal policy in oil producing countries, focusing on three issues: intergenerational oil distribution, precautionary saving, and adjustment costs. The paper presents a framework to analyze how the revenue generated by an exhaustible source of wealth that belongs to the government should be distributed between current and future generations. This framework is used to show the strengths and limitations of existing answers, which motivates a new approach for dealing with this question. The paper derives simple, closed form approximations to the optimal level of government expenditure when an important part of government revenue is generated by an uncertain and exhaustible natural resource such as oil. Price uncertainty, budget uncertainty, and the (possibly asymmetric) costs of adjusting expenditure levels are considered.

Key words: optimal fiscal policy, stabilization fund, intergenerational oil distribution, precautionary saving, adjustment costs, exhaustible natural resources, optimal government expenditure, price uncertainty, budget uncertainty, oil exporting countries

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1 Introduction

Conducting appropriate fiscal policy may be particularly difficult when a large share of government revenue comes selling a government owned exhaustible natural resources such as oil. Large and unpredictable fluctuations in international oil prices may make the determination of appropriate expenditure levels particularly difficult. In addition, since oil wealth is exhaustible, intergenerational equity considerations must also be taken into account. This is the case of the oil exporting countries where most of the government's revenue comes from oil and gas production.

This paper develops guidelines for fiscal policy in countries where the government owns an uncertain and exhaustible income stream. Figuring out optimal fiscal policy is a complex exercise that usually requires the use of numerical simulations and solutions—a black box from a policy-making perspective with slim chances of actually being applied. In this paper we provide explicit, closed *approximations* to the optimal solution of an otherwise standard problem. Our objective is to derive a set of simple and intuitive rules that can be easily applied by policymakers.

We focus on three different issues. First, we study the problem of intergenerational distribution of state-owned exhaustible resources. For that purpose we present a framework in which the problem can be analyzed and evaluate the strengths and limitations of existing answers. We then propose a new approach to tackle the issue.

Second, we study the need for savings due to the uncertain nature of future income, what is known as *precautionary saving*. We consider the impact of two sources of uncertainty on optimal consumption, namely future income uncertainty and uncertainty about income during the budget year under consideration. We propose correction factors to be applied to the certainty equivalence solution that leave consumption close to the optimal level.

Third, we study the process of expenditure adjustment in presence of (asymmetric) quadratic adjustment costs. Given adjustment costs we derive the speed at which adjustments should be made. We also provide guidelines to help elicit from policymakers the size of adjustment costs.

The policy guidelines derived in this paper often call for important savings in the near future, both due to intergenerational considerations, since wealth is front loaded, and because of precautionary saving. One way of implementing these guidelines is establishing a stabilization fund. This paper discusses how the results we develop can be used to implement a such a fund.[2]

Policy prescriptions for optimal government expenditure may vary considerably with the stochastic process assumed for the price of oil. For this reason this paper undertakes a detailed evaluation of the quality of out-of-sample forecasts of a large number of time series models that have been proposed for commodity prices. We find that most models perform substantially worse

[2] A detailed discussion of this topic would constitute another paper altogether. For this reason we concentrates on how a stabilization fund can be used to implement optimal fiscal policy prescriptions.

and none significantly better than a geometric random walk where the forecast of future prices is equal to the current price.

This paper studies fiscal strategy from a normative point of view. Our purpose is to develop a set of rules that can improve welfare assuming a particular set-up. The paper does not study problems of fiscal policy sustainability,[3] since we assume throughout that the government intertemporal budget constraint is always satisfied, thereby ruling out Ponzi schemes.

The paper is organized as follows. Section 2 presents a framework to discuss the intergenerational oil distribution problem. Section 3 discusses the intuitions behind the design of optimal fiscal policy. Section 4 evaluates two existing approaches to the problem of intergenerational distribution and proposes a new one. Section 5 characterizes the stochastic process of oil prices. Section 6 derives policy guidelines based on precautionary saving and adjustment costs. Section 7 discusses the role of stabilization funds. Finally, section 8 concludes.

2 Framework

In this section we provide an organizing framework to analyze the following question:

> *How should the revenue generated by an uncertain source of wealth that belongs to the government, such as oil in the case of oil exporting countries, be spent and distributed between current and future generations?*

An answer to this question has important policy implications, since it brings with it a prescription for optimal fiscal policy, providing guidelines for managing variables such as government deficits, government expenditures, taxes, the current account and stabilization funds.

The standard economic framework for analyzing the normative question we are concerned with is the following one:

(a) Choose a Social Welfare Function (SWF).

(b) Decide the set of policy instruments available to the government and the constraints it faces.

(c) Choose a set of assumptions (and constraints) for private sector behavior.

(d) Find the values of the policy instruments considered in (b) that maximize the SWF specified in (a) subject to the behavioral assumptions made in (c). We refer to this problem as the *Optimal Consumption Problem.*

[3]See., e.g., Liuksila et al. (1994) for a discussion about fiscal sustainability in oil producing countries.

The SWF we select, the policy instruments we consider and the behavioral assumptions we make will determine the optimal consumption path and, in doing so, the optimal fiscal policy. Next we discuss each of these choices in detail.

2.1 Social Welfare Function

Typically a SWF is a function of the instantaneous utility of consumption of current and future generations. When specifying a SWF we specify the relative importance of current and future consumption, and the consumption goods considered in the instantaneous utility. In doing so we set a key ingredient to determine both how much future generations benefit from oil wealth and how much redistribution of private wealth across generations takes place.

2.1.1 Instantaneous Utility Function

This function, also called *felicity function*, measures the utility derived from consumption during a given time period.

We assume that there are two separate consumption goods, one provided by the government and another by the private sector. We refer to the consumption good provided by the government as *publicly provided good*, or *public good* for short, even though for the questions at hand we do not need to emphasize the fact that many of these goods are, to some extent, non rival in consumption. What matters in our setting is that it has to be provided by the government, thereby providing a rationale for taxation.

Denoting per capita consumption of these goods by c_G and c_P we have that the instantaneous utility function, u, is of the form:

$$u = u(c_G, c_P). \tag{1}$$

The function u is increasing in both c_G and c_P, with decreasing *marginal* utility. Also, both goods are complements in consumption, that is, the marginal utility of consuming the private good increases with the level of consumption of the public good.

A standard functional form for u is the Constant Elasticity of Substitution (CES) utility function:

$$u(c_G, c_P) = \left[\frac{c_G^{1-\gamma}}{1-\gamma} + k\frac{c_P^{1-\gamma}}{1-\gamma}\right]^{1/(1-\gamma)}. \tag{2}$$

Where $k \geq 0$ and $\gamma > 0$.[4] The parameters k measures the relative importance of both consumption goods, while $1/\gamma$ captures the elasticity of substitution between both goods.

[4]For $\gamma = 1$ we may define, by continuity, $u(c_G, c_P) = \log(c_G) + k\log(c_P)$.

For simplicity we assume that c_G is determined by the government's current expenditure level. A more realistic assumption, which we may explore in future versions of this paper, is that it also depends on past government expenditures.[5]

2.1.2 Social Welfare Functions

A typical SWF (at time 0) is (the expected value of) a function of the instantaneous utilities of present and future generations:

$$\mathcal{W} = \mathrm{E}_0[W(u_0, u_1, u_2, ...)]. \tag{3}$$

Where E_0 denotes the expected value, conditional on the distributions of unknown quantities (such as future oil prices) based on information available at time $t = 0$ and u_0, u_1, u_2, ... denote the instantaneous utilities at times 0, 1, 2, ... The function W is increasing in all its arguments. It also exhibits decreasing marginal returns in all its arguments.

The quantities $u_0, u_1, u_2, ...$ in (3) may also be interpreted as the utilities of a representative consumer in consecutive years (instead of generations).

The most commonly used SWF are the following:

Utilitarian SWF

A SWF W is *utilitarian* (or of the Bentham-Ramsey type) if it is a weighted sum of the utility of present and future generations:

$$W(u_0, u_1, u_2, ...) = \sum_{t \geq 0} \beta^t N_t H(u_t). \tag{4}$$

The parameter β denotes the subjective discount rate. This value is close to but smaller than one; the smaller it is, the larger the degree of impatience in the SWF.

N_t denotes the population at time t. The social welfare function grows in proportion to the population. We will assume that $N_t = (1+n)^t$, so that the population grows at a constant rate n.

The function H is a standard utility function, increasing, with decreasing marginal utility. A particularly useful case of (4) is:

$$H(u) = u^{1-\rho}/(1-\rho), \tag{5}$$

with $\rho > 0$.[6] This is the Constant Elasticity of Substitution (CES) utility function: $1/\rho$ denotes the elasticity of substitution of consumption at different moments in time. Furthermore, if there is

[5] This requires distinguishing between government expenditures on the public good and government investments that produce a future flow of the public good.

[6] If $\rho = 1$ we define $H(u) = \log(u)$.

uncertainty about future incomes, ρ is the coefficient of relative risk aversion (CRRA).

Rawlsian SWF

In this case the social welfare function to be maximized is the (expected value of the) utility of the generation with smallest utility:

$$W(u_0, u_1, u_2, ...) = \mathrm{E}[\min(u_0, u_1, u_2, ...)]. \tag{6}$$

2.1.3 Incorporating Adjustment Costs

Changes in government expenditures may have consequences that are not captured by the Social Welfare Functions described above. A drastic reduction in government expenditures may lead to political instability, discouraging investment and reducing future growth. A sudden increase in government expenditures may increase the likelihood of having badly managed government projects because of the lack of adequate supervision. It may also increase the costs of projects because of bottlenecks in the supply of certain inputs.

The SWFs described so far can be extended to capture the effect mentioned above by adding an *adjustment cost* to the instantaneous utility in equation (4):

$$W(u_0, u_1, u_2, ...) = \sum_{t \geq 0} \beta^t N_t \left[H(u_t) - A(c_{G,t}, c_{G,t-1}) \right]. \tag{7}$$

Where $A(c_{G,t}, c_{G,t-1})$ captures the costs of adjusting per capita government expenditures from $c_{G,t-1}$ to $c_{G,t}$.

Some possible functional forms for A are the following:

$$A(c_{G,t}, c_{G,t-1}) = k(c_{G,t} - c_{G,t-1})^2, \tag{8}$$

$$A(c_{G,t}, c_{G,t-1}) = k(\log(c_{G,t}) - \log(c_{G,t-1}))^2, \tag{9}$$

$$A(c_{G,t}, c_{G,t-1}) = k \max(0, c_{G,t-1} - c_{G,t}). \tag{10}$$

Both (8) and (9) correspond to quadratic adjustment costs, while (10) describes the case where only *reductions* in per capita government expenditures are costly. In all cases the parameter k determines the magnitude of adjustment costs.

The examples given above assume that adjusting the consumption of the public good is costly. If adjusting per capita levels of consumption of the *private* good is also costly, the adjustment cost functions should depend on *total* per capita consumption.

2.2 Policy Instruments

A variety of policy instruments may be available to governments when implementing fiscal policies. Savings and debt, taxation, investment, and stabilization funds are among those most relevant for the problem considered in this paper.

2.2.1 Privatization

The government of an oil exporting country could consider the possibility of privatizing the state-owned oil monopoly, as was done, for example, recently in Argentina.[7] In this paper we rule out this possibility. One reason for doing so is that the government may be unable to commit credibly not to expropriate the privatized firm. Yet even if oil is fully privatized, the fiscal authority still faces the problem of how to distribute the proceeds across generations. What privatization does is reduce uncertainty with respect to initial wealth, besides likely efficiency gains which go beyond the scope of this paper.

Even though we do not consider privatization in the set of feasible policy instruments, we extensively use the *possibility* of future privatization as a convenient short-cut to derive approximations to the solution of the optimal consumption problem under uncertainty.

2.2.2 Savings

Governments can hold financial assets to finance future expenditures. We denote the gross real interest rate accrued per period for these savings by R, and assume that it is known and constant over time.

2.2.3 Debt

Governments incur debt to finance current consumption, investment and interest payments on previously incurred debt. The interest paid varies over time, both due to international and local factors. Nonetheless, interesting insights can be obtained even if the simplifying assumption of a fixed real interest is made. This assumption is justified by noting that oil prices are considerably more volatile than interest rates. Furthermore, we ignore any difference between the interest rate paid on debt and that accrued to savings, and denote both gross rates by R.

The following equation describes the evolution of government financial assets, when savings and debt at a gross interest rate of R are possible:

$$F_{G,t+1} = R(F_{G,t} + Y_{G,t} - C_{G,t}). \tag{11}$$

[7] It should be noted, though, that oil is not one of Argentina's main exports.

Where $F_{G,t}$ denotes government financial assets accumulated at the beginning of period t, $Y_{G,t}$ denotes government income during period t (assumed to accrue at the beginning of the period), and $C_{G,t}$ denotes government expenditures during period t, which are equal to private consumption of the public good, and which are also assumed to be made at the beginning of the period.

There typically is a limit to government debt, say as a fraction of GDP. This limit may vary over time, responding both to local and international factors. A closely related constraint which is often mentioned is an upper limit on the current account deficit, also as a fraction of GDP.

2.2.4 Taxes and Transfers

The government may collect taxes and may also transfer assets to its citizens.

Taxes can be used to finance the current production of public goods, current public investments and interest payments on government debt. For a given level of current expenditures on consumption goods, the government should raise taxes (or give transfers) that help achieve the optimal mix of the public and private consumption good. For example, if in a given year the government's income is very high compared with the private sector's income, as could be the case for a country rich in government owned natural resources, a government transfer to the private sector may be needed to provide the appropriate mix of public and private consumption goods.[8]

Another reason for raising taxes is to transfer income across generations (intergenerational transfers). If future generations are expected to be much better off than the current generation, a society may wish to subsidize current consumption by borrowing against taxes that will be paid by future generations.

Taxes may also be used to improve the distribution of income within a generation. Since all the models considered in this paper have one agent representing each generation, this motive will not be considered.

Denoting taxes raised in period t by Γ_t, and interpreting transfers as negative taxes, we have that (11) generalizes to:

$$F_{G,t+1} = R(F_{G,t} + Y_{G,t} + \Gamma_t - C_{G,t}). \tag{12}$$

2.2.5 Government Expenditures

The government spends money to produce the public good and to finance investments that will enable future production of the public good. Here the "public good" can be interpreted, among other things, as education, health and defense.

[8]Such transfers do happen in practice, for example, by extending the scope for government expenditures. Of course, this is not necessarily efficient.

Government expenditures face an intertemporal budget constraint, that is they must eventually be financed through taxes or other sources of government income. This budget constraint, as of period 0, states that the present value of government incomes must equal the present value of government expenditures, that is:

$$F_{G,0} + \sum_{t \geq 0} R^{-t}[Y_{G,t} + \Gamma_t] = \sum_{t \geq 0} R^{-t} C_{G,t}. \tag{13}$$

2.2.6 Stabilization Funds

A stabilization fund saves and spends money with the objective of stabilizing a specific aggregate variable, such as overall government expenditures or government expenditures financed from the profits generated by a government owned primary commodity such as oil. The fund is held in liquid assets and incentives must be put in place to prevent the assets from being spent due to political pressures.

A well designed stabilization fund should be closely related to the solution of a problem of the sort posed at the beginning of this section. The savings/spending rule should be such that, in combination with other sources of government savings/credit, it implements the optimal fiscal strategy. Furthermore, a government may value liquidity *per se*, in which case having a stabilization fund may be desirable even if the government's net financial position is negative.

2.3 Private Sector

An important issue regarding private sector behavior is whether there is a bequest motive or not. The assumption of no bequest motive (or, more generally, of a weak bequest motive) is implicit in the intergenerational equity question central to this paper, for otherwise no government intervention would be needed to ensure that future generations benefit government owned wealth. If current generations do not care for their descendants, the private sector will not save for future generations and, given the opportunity to do so, will spend all the government owned wealth.[9]

The private sector also participates in the production of goods and services in markets which are assumed competitive. These goods and services may be consumed locally or exported. The private sector also has access to international finance for investment projects within the country.

The private sector also maximizes a welfare function, which even though qualitatively similar to the SWFs considered earlier in this section, may differ in some fundamental ways. An important difference we will encounter in most cases is that the time horizon considered by private agents is considerably shorter than that considered by the government's SWF. This is due to our assumption that private agents do not want to leave inheritance to their descendants.

[9]Strictly speaking this assumes no uncertainty about an individuals life span. If individuals do not know when they will die, they may die with positive net assets but this effect is typically small and will be neglected.

We will see in Section 4 that the interaction between the objectives posed by the government's SWF and the private sector's behavior may lead to surprising results. For example, if it wishes, the government may use fiscal policy to have the currently alive private sector care for future generations.

3 Intuitions

In this section we describe some simple intuitions underlying policy prescriptions for fiscal policy. As discussed in Section 4, these intuitions often follow from particular cases of the framework presented in Section 2.

3.1 Consumption Smoothing

Individuals dislike variations in consumption and are generally willing to sacrifice some welfare to avoid such fluctuations. For this reason, in the absence of income uncertainty, optimal fiscal policy often requires that per capita consumption levels remain constant over time. With income uncertainty this intuition needs to be modified, and current consumption levels are equal to *permanent income*, so that, *in expectations* or *on average* consumption is constant over time (Friedman [1957]).

For example, after discovering a new exhaustible natural resources, say natural gas in Qatar, consumption should increase by the annuity value of the corresponding increase in wealth. The country acts *as if* it deposited in a bank abroad the present discounted value of the profits it expects to make from selling the natural resource, and spends every year the interest payments it receives. Consumption should increase immediately after the natural gas is discovered, if the country can borrow against future incomes there is no reason to wait until production begins. Thus the current account deteriorates immediately after the discovery of natural gas and recuperates once actual production begins.

As we shall see in Section 4, the main assumption underlying consumption smoothing in the case without income uncertainty is that $\beta R = 1$, where we recall that β denotes the subjective discount rate and R the gross interest rate. Even though it may be argued that in the long run βR will be close to one, in the short and medium run (e.g., over the next couple of decades) there is no reason why this should be the case. If $\beta R < 1$, which may be interpreted as society being relatively impatient, per capita consumption falls over time at a constant rate. Alternatively, if $\beta R > 1$, per capita consumption grows at a constant rate.

The extension of the consumption smoothing intuition to the case with uncertain income—certainty equivalence—assumes that the instantaneous utility function is quadratic. This assumption is popular precisely because it preserves this intuition, even though it has some unappealing

properties, such as a degree of risk aversion that *increases* with consumption levels and the implication that the optimal consumption path does not depend on the variance of income.

Another intuition that follows from consumption smoothing with uncertain income is that the government should react differently to transitory and permanent changes in income. A transitory positive shock to income should increase consumption only by the annuity value of the income shock. By contrast, a permanent increase should be met by a one-for-one reduction of consumption. For example, the increase in the price of oil following the invasion of Kuwait by Iraq in August of 1990 was clearly transitory. By the time the oil price had returned to its pre-invasion levels (in mid 1991), the rule described above can be used to spend the windfall generated by the price increase.

More generally, if income follows an autoregressive process with first order correlation ψ, which therefore also captures the degree of persistence of income shocks, the fraction of the current shock to income that should be spent is $(R-1)/(R-\psi)$.[10] The case $\psi = 0$ corresponds to i.i.d. (and therefore transitory) shocks while $\psi = 1$ corresponds to the case where income follows a random walk (permanent shocks).

In practice it is often not easy to determine the extent to which a change in income is permanent or transitory. Most shocks can be thought of as having both a permanent and a transitory component. In Section 6 we review recent econometric developments that can be used to accomplish this decomposition, concluding that a geometric random walk appears as a sensible description for the oil price.

Furthermore, because oil is an exhaustible resource, even permanent price shocks have only a transitory effect on income. The transitory component of the shock is more important the shorter the expected duration of the resource.

3.2 Precautionary Saving

A fundamental intuition underlying savings behavior is that an increase in risk should increase current savings and decrease current consumption. This is known as the *precautionary saving* motive, see Leland (1968). The *consumption smoothing* intuition does not incorporate this idea, since it prescribes that the current annuity value of expected wealth should be spent every year, regardless of the degree of uncertainty associated with this wealth.

To capture the precautionary savings motive, we must consider more realistic instantaneous utility functions than the quadratic case. This typically comes at the price of not having an explicit expressions for optimal consumption,[11] and numerical methods must be used to determine the optimal plan (as in Zeldes [1989], Deaton [1991] and Carroll [1992]).

[10] See, for example, Flavin (1981).

[11] Caballero (1990) finds a particular case where an explicit expression for optimal consumption can be derived. Yet he assumes constant *absolute* risk aversion, which also has unappealing properties.

¿From a policy perspective, these numerical procedures have limited applicability. Implementing solutions is cumbersome and the results are not as transparent as the political process requires. In this paper we derive approximations to the optimal consumption plan that are closed-form and can be easily interpreted. Their simplicity should be a great advantage in terms of applicability.

We consider two sources of uncertainty: the usual income uncertainty and what we call *budget uncertainty*, which attempts to capture the uncertainty that governments face when designing next year's budget. In particular, we consider the effect of not knowing the income level that will prevail during the coming year. This type of uncertainty is different from the one that originates the standard precautionary savings because it focuses on the level of prices only one period ahead.[12]

3.3 Adjustment Costs

In the presence of adjustment costs as those described in section 2.1.3 (convex adjustment costs) governments typically adjust their per capita expenditures slower than they would in the absence of such costs. For example, following the discovery of gas reserves, the government should increase its spending on the public good only slowly until it achieves its new and, in the absence of income fluctuations, constant level. The larger the adjustment costs, the slower the process by which consumption increases and the higher the steady state level of consumption.

Below we derive a closed-form solution for a partial adjustment model in which the adjustment coefficient is a function of the size of the adjustment cost (that could be asymmetric). Moreover, we present a procedure by which this adjustment cost can be approximated.

3.4 Separability of the Investment Problem

Under the assumptions we made for the private sector, namely that there are no constraints to international borrowing, we have that all projects with positive net present value can and will be financed. Of course, this result stops holding, say, when moral hazard or adverse selection problems limit the availability of credit for local entrepreneurs. If the government faces fewer informational asymmetries than international lenders, there may be a role for government support of investment projects.

3.5 Tax Smoothing

In a fundamental result, Barro (1974) provided conditions under which the optimal consumption path does not depend on how the government finances its expenditures (debt vs. taxes). This result is known as *Ricardian equivalence*. When taxes are distorting, Ricardian equivalence does

[12] Of course, if producing countries sell part of their oil using future and forward contracts, the budget uncertainty will be less important.

not hold and all sources of finance should be used in such a way that the marginal distortion they introduce is the same over time and across financing instruments. This result is referred to as "tax-smoothing", see, for example, Barro (1979).

4 Intergenerational Redistribution

In this section we discuss the problem of how to distribute oil wealth across generations. We analyze the degree to which two well known approaches to optimal fiscal policy correspond to particular cases of the framework developed in Section 2 and offer a new approach to deal with this problem.

4.1 Benchmark Model

The following model will be a useful benchmark throughout this section.

(a) **Social welfare function**: Utilitarian with constant elasticity of substitution across time $(1/\rho)$. The initial population is normalized to one and grows at a constant rate n. The time horizon is infinite and there is no income uncertainty. Then (4) becomes:

$$\mathcal{U} = \sum_{t=0}^{\infty} \beta^t (1+n)^t u_t^{1-\rho}. \tag{14}$$

The instantaneous utility has consumption of the public and private goods as separate arguments and the elasticity of substitution between both consumption goods is constant $(1/\gamma)$ as in (2).

(b) **Policy Instruments**: The government is the only provider of the public good, which it finances with taxes, debt and proceeds from the sales of the government owned natural resource (oil in what follows). Oil income in period t is denoted by $Y_{G,t}$; it is known with certainty and determined exogenously.

The government collects taxes and makes transfers to the private sector without generating any distortions in doing so. The government may also save and borrow at the international gross rate R. The only constraint it faces in setting taxes and borrowing is its intertemporal budget constraint (13). Initially it holds financial assets equal to $F_{G,0}$.

(c) **Private Sector**:

Consumers live for one period and have no bequest motive; it follows that the private sector holds no assets or debt. Private sector production in period t is exogenous and equal to $Y_{P,t}$.

Total production in period t is denoted by Y_t and equal to $Y_{G,t} + Y_{P,t}$. In general, we denote aggregate variables by upper case letters, and per capita variables by lower case letters.

Constant elasticity of substitution between both goods implies that in the solution to the problem posed above the ratio of their consumption levels remains constant over time (see Lemma A.1 in the Appendix):

$$\frac{c_{G,t}}{c_{P,t}} = k^{1/\gamma}. \tag{15}$$

Denoting

$$c_t \equiv c_{G,t} + c_{P,t}$$

we have that u_t is proportional to c_t (Lemma A.1), so that we may write (14) as:

$$\mathcal{U} = \sum_{t \geq 0} \beta^t (1+n)^t c_t^{1-\rho}. \tag{16}$$

We denote society's initial wealth by:

$$\mathcal{W}_0 \equiv F_0 + \sum_{s \geq 1} R^{-s} [Y_{G,s} + Y_{P,s}]. \tag{17}$$

We define:

$$\begin{aligned} \alpha &= (1+n)[\beta R]^{1/\rho}, \\ \tilde{\alpha} &= \frac{\alpha}{R}, \end{aligned}$$

and assume $\tilde{\alpha} < 1$.

In the Appendix (Proposition A.1) we show that the solution to this problem is given by:

$$c_0 = (1-\tilde{\alpha}) R \mathcal{W}_0, \tag{18}$$

$$c_{t+1} = [\beta R]^{1/\rho} c_t. \tag{19}$$

If $\beta R = 1$, the right hand side of (18) is society's *permanent (total) income* (Friedman, [1957]), that is, it is the highest per capita consumption level that can be maintained indefinitely.

Equation (15) determines how c_t is split between consumption of the private and public good, thereby determining government expenditures.

The evolution of total financial assets can be determined as follows: F_1 is calculated using the dynamic budget constraint (11), the expression for C_0 given above and the (exogenously given) values of F_0 and Y_0. The dynamic budget constraint can then be used recursively to obtain $F_2, F_3, \ldots$.

The current account is given by (see Proposition A.1 in the Appendix):

$$CA_t = (2 - \frac{1}{R})(Y_t - C_t) + (1 - \frac{1}{R}) F_t. \tag{20}$$

The absence of bequests and the assumption that individuals live for one period imply that the private sector will accumulate no assets. Hence $F_{G,t} = F_t$ and the current account surplus is equal to the government's total (including interest receipts) surplus. Furthermore, optimal per capita taxes, τ_t, are equal to:

$$\tau_t = c_{P,t} - y_{P,t}. \tag{21}$$

4.1.1 Examples

Example 4.1 (Constant Non-oil Production) *We assume no population growth ($n = 0$), $R = 1.06$, $\beta R = 1$,[13] and no initial financial assets ($F_0 = 0$). The optimal mix of the public and private goods requires that the former represent 20% of total consumption.*[14]

Initial oil production, which accrues to the government, accounts for 80% of GDP, while the remaining 20% is produced by the private sector. Oil production remains constant (in real terms) for 25 periods, moment at which oil reserves are exhausted. Production in the non-oil sector remains constant indefinitely.

Figure 4.1 shows the evolution of consumption, financial assets (as a fraction of non-oil GDP), and the current account (also as a fraction of non-oil GDP). The first two series are divided by 100 and 50, respectively. It can be seen that consumption remains constant and equal to the annuity value of initial wealth (both from the oil and non-oil sectors). During the "boom years" of oil production, assets are accumulated (by the government) to maintain a level of consumption above production once oil is exhausted. During the boom years we also observe a positive and, due to interest payments, increasing current account surplus, which turns into a constant deficit once oil is exhausted. Since oil revenues can finance more than the optimal level of the public good, the government transfers a fixed amount (not shown in the figure) to every generation.

It is interesting to note that if $\beta R < 1$ (impatient individuals), the consumption path will be downwards sloping instead of constant, since individuals want to consume more and save less today. If this effect is large enough, there may be no initial current account surplus, as individuals spend more than the sum of their private income and the current oil income. ∎

Example 4.2 (Increasing Non-oil Production) *Assume now that, instead of remaining constant, non-oil production grows 2% per period forever. The remaining assumptions are the same as in the previous example.*

Figure 4.2 shows the evolution of the same three variables considered in Figure 4.1, with the same normalizing constants. It also shows the path of optimal taxes (as a fraction of non-oil GDP). Consumption is constant, at a level 12.3% higher than in Figure 4.1, reflecting the fact that non-oil

[13] This assumption makes the value of ρ irrelevant in this problem.

[14] This is equivalent to having $k^{1/\gamma} = 4$.

production increases over time, instead of remaining constant, as in the case of Figure 4.1. Assets increase during the years when oil is produced and are depleted thereafter, eventually approaching a constant (and negative) fraction of GDP. There is an increasing current account surplus during the boom years and a slightly decreasing current account deficit after oil is exhausted.

In contrast with Example 4.1, in this case taxes, as a fraction of non-oil GDP, do not remain constant. Initially the private sector receives large government transfers. These transfers decrease steadily, and individuals must begin paying taxes in period 67. From then onwards taxes increase significantly, so as to pay back the debt incurred by the government during the oil boom. ∎

Example 4.2 shows that the Benchmark Model (BM) may lead to significant wealth transfers from future to current generations. The government may borrow against incomes from future generations to increase current consumption. It is interesting to note that the model has this implication even in the absence of oil wealth, as long as per capita private sector production increases over time. Since such large intergenerational transfers are rarely observed, this raises the issue of whether the BM provides an adequate criterion for deciding how to spend the revenue generated by oil production. We return to this issue in section 4.3.

4.1.2 Incorporating a Bequest Motive

The expressions derived in the BM up to equation (20) also hold when individuals have a bequest motive. In this case the government chooses taxes and production of the public good so that private consumption chosen by individuals corresponds to the optimal value. The only difference is that now the private sector will have non-zero financial assets, so that optimal tax rates will differ from those obtained in (21). In particular, if the private sector's bequest motive is the same as the one implicit in the Social Welfare Function, so that the problem at hand is equivalent to that of an infinite horizon representative agent, the path of taxes is not determined. Any path consistent with the intertemporal budget constraint achieves optimal fiscal policy (Ricardian equivalence). Alternatively, if taxes are distortionary, tax-smoothing considerations will imply a unique optimal path for taxes.

4.2 Permanent Oil Income Model

The BM prescribes that permanent *total* income should be constant over time. Since this may lead to large wealth transfers across generations, it may be better to focus on permanent *oil* income instead:

> *"Because most export revenue from oil and natural gas accrues to the public sector, the central government usually decides through the budgetary process how much of this*

revenue will be saved and consumed. To make this decision based on intergenerational equity considerations, it is necessary to determine the permanent rent available from hydrocarbon exploitation. This rent represents the level of public consumption that can be currently enjoyed without increasing the country's debt and depleting its wealth."[15]

This approach can be rationalized within the framework of Section 2 as follows:

(a) **Social welfare function**: The difference with the BM is that the instantaneous utility function only depends on consumption of the public good.[16]

(b) **Policy Instruments**: The difference with the BM is that the government cannot collect taxes.

(c) **Private Sector**: The private sector does not appear, at least explicitly, in the problem.

The Permanent Oil Income Model (POIM) considers the problem of spending the government owned oil as if it were totally unrelated to the private sector's consumption of private goods. The solution to the problem is obtained by substituting total initial *government* wealth for total wealth in (17):

$$\mathcal{W}_{G,0} \equiv F_{G,0} + \sum_{s \geq 0} R^{-s} Y_{G,s}. \tag{22}$$

We then have:

$$C_{G,0} = (1-\tilde{\alpha}) R \mathcal{W}_{G,0}, \tag{23}$$

$$c_{G,t+1} = [\beta R]^{1/\rho} c_{G,t}. \tag{24}$$

If $\beta R = 1$, the right hand side of (23) (divided by period 1 population) is *permanent oil income*, that is, the highest per capita consumption level from oil resources that can be maintained indefinitely, thereby justifying the name of the model.

The POIM can be used to rationalize the often mentioned criterion of intergenerational fairness according to which oil wealth (either in absolute or per capita terms) should be kept constant. Equations (23) and (24) imply that per capita government wealth, which in this model corresponds to oil wealth, remains constant along the optimal consumption path only if $\beta R = 1$.[17] If $\beta R < 1$, it is optimal for society to deplete oil wealth as time goes by. It also follows from (23) and (24) that *total* oil wealth remains constant along the optimal consumption path only if $\beta R(1+n)^{\rho} = 1$. If $n > 0$ this requires a relatively impatient society, since $\beta R < 1$.

[15] Quoted from Fasano (1999, p. 1).

[16] That is, it corresponds to the particular case of (2) where $k = 0$.

[17] To derive this result evaluate (23) at t and $t+1$, instead of $t = 0$, and equate the corresponding ratio to that obtained from (24).

An advantage of the POIM, compared with the BM, is that it avoids intergenerational wealth transfers of non-oil assets. It does so by assuming that private income and consumption of the private good do not interact at all with the government's income and consumption of the public good. Next we present two unattractive consequences of this limitation, one that can be accommodated with a straightforward extension of the model and one that cannot.

A first limitation is that the mix of privately and publicly produced goods will usually be suboptimal. The optimal path of the POIM determines the level of consumption of the public good without taking account of consumption of the private good chosen by consumers. This objection can be accommodated by assuming that consumers live for one period and have no bequest motive, and introducing a limited role for taxation: in every period the government sets taxes/transfers so as to ensure that the optimal mix of the public and private consumption goods is provided. That is, if we denote by $\hat{C}_{G,t}$ the consumption of the public good derived from the POIM, total consumption during period t will satisfy:

$$C_t = \hat{C}_{G,t} + Y_{P,t},$$

where we have used the fact that consumers do not save.

A second example of the limitations of the POIM is illustrated by the following example. Assume that private income and oil income are perfectly negatively correlated.[18] When oil income is high, private income is low and viceversa, so that total income (GDP) remains constant over time. Consumers live one period and do not save. The (certainty-equivalence version of the) POIM implies that only consumption of the *public* good will be smoothed out over time, so that total consumption will be high in years with high private income and low in years with low private income. Even though this is the optimal solution within this framework, common sense suggests that all generations would be better off if the government smoothed *total* consumption. Before knowing whether oil income or private income will be high during their lifetime, a generation prefers receiving its total permanent income for sure to receiving the sum of permanent oil income and private income. Also note that the private sector cannot mitigate this limitation since, having ruled out taxation for intergenerational purposes, improvements of the sort described above are not possible. We conclude that in this example there exists a consumption path that is better (as measured by the BM) for all generations than the solution from the POIM. Furthermore, ex-ante, this improvement involves no intergenerational transfers on average.

4.2.1 Examples

Example 4.3 (Constant Non-oil Production) *We solve the POIM under the parameter values of Example 4.1. Since non-oil income is constant over time, the solution to the BM does not require*

[18] This example is used to make a point, the assumptions do not hold in practice but the validity of the point does.

intergenerational wealth transfers. It follows that the solution to the POIM is the same as that of the BM. Disregarding consumption of the private good when choosing the optimal consumption path is of no consequence in this case.

The equivalence between both optimal paths breaks down if we assume $\beta R < 1$. In this case, the increasing consumption path prescribed by the BM will be steeper than the one prescribed by the POIM. ∎

Example 4.4 (Increasing Non-oil Production) *We modify the previous example by assuming that non-oil GDP grows at 2% per period. Optimal consumption of the public good is constant and total consumption increases over time at the same speed as private income. The optimal consumption path is the path of private income shifted by the permanent oil income. The optimal consumption path differs significantly from that obtained in Example 4.2. The government accumulates financial assets while oil is extracted, but asset accumulation is considerably less than in the solution to the BM, since the government is not allowed to use taxes to make intergenerational wealth transfers.* ∎

It follows from both examples above that if oil wealth is front loaded and individuals are not very impatient, the country should save part of the resource proceeds. The counterpart of these savings is a persistent fiscal and current account surplus for some time. This is the main conclusion in Alier and Kaufman (1999), who work with a model that has the SWF of the Benchmark Model but assume constant and exogenous taxes, thereby avoiding intergenerational wealth redistribution. The latter assumption makes their problem equivalent to our POIM, with identical policy prescriptions and limitations.[19]

4.3 A New Approach

Both models discussed in the previous subsections have serious shortcomings. The Benchmark Model allows for intergenerational wealth transfers which we do not observe even in the absence of oil wealth. On the other hand, the POIM avoids intergenerational transfers by ruling out government policies that benefit all generations (as viewed from the BM). The Benchmark Model's SWF is more appealing than that of the POIM, since individuals benefit both from consumption of the private and public goods. Regarding instruments, the BM has more than we would like, while the POIM eliminates unattractive instruments (intergenerational wealth transfers) at the cost of ruling out appealing policy alternatives.

The challenge therefore is to limit the policy instruments available to the government in the BM in such a way that the attractive properties of both models can be recovered. We propose

[19]Their generations live for two periods, yet no additional insight is gained from this assumption. Also, the mix of public and private good provided is typically not optimal.

the following approach. Add to the BM the restriction that no generation can be worse off than it would have been in the absence of oil wealth, where the counterfactual with no oil wealth should be determined by positive considerations.

The approach we propose, which we describe as *conditionally normative*, does not undo what society would have done in the absence of oil. Instead it spreads the wealth of oil across generations optimally, not by giving every generation the same amount of the public good, as in the simplest POIM, but by choosing among all possible policies that are Pareto improving, the one that increase the SWF the most. The additional constraint imposed by the Conditionally Normative Model (CNM) on the BM ensures that no intergenerational transfers of non-oil related wealth take place while allowing for an efficient allocation of oil wealth.

Denote instantaneous utility in period t by u_t, and instantaneous utility in the absence of oil income by u_t^*. Applying the CNM in period 1 requires choosing a among all possible consumption paths that satisfy $u(c_t) \geq u_t^*$, $t \geq 0$, the one that maximizes the SWF considered in the BM. If there is income uncertainty, then the constraint becomes $\mathrm{E}_0[u(c_t)] \geq \mathrm{E}_0[u_t^*]$, where E_0 denotes expectations based on information available in period 0.

4.3.1 Examples

We consider three examples to illustrate the CNM.

Example 4.5 (Constant Non-Oil Income) *Assume that non-oil GDP remains constant over time and $\beta R = 1$ (see Example 4.1). In this case the three approaches considered in this paper, the BM, the POIM and the CNM, imply the same constant path for consumption.* ∎

Almost any departure from the simple case described above will result in different consumption paths for the three models. The following two examples consider changes in future non-oil income.

Example 4.6 (Increasing Non-Oil Income) *Figure 4.3 shows the consumption path associated with the three models when non-oil income grows 2% per period, for the first 50 periods, and remains constant thereafter.*[20] *Optimal (total) consumption in the BM is constant. In the POIM it grows together with non-oil income, the difference between both series being equal to the annuity value of oil wealth. Optimal consumption in the CNM is constant during the first 18 periods and follows the path of non-oil income thereafter.*

Compared with the POIM, those living in the first 12 periods are better off under the CNM while those living thereafter are worse off. Since marginal utility of consumption in the absence of oil is higher during the initial periods, the CNM spreads the oil wealth among those living in these periods.

[20]The remaining parameter values are: $R = 1.04$, $\beta R = 1$, $n = 0$, oil wealth is 100 and initial non-oil income is 30.

Those that benefit the most are those that would have been poorest without oil wealth—generations that expected relatively high private incomes do not benefit at all. ∎

Example 4.7 (Decreasing Non-Oil Income) *Figure 4.4 shows what happens when non-oil income* decreases *by 2% during the first 50 periods, and remains constant thereafter.*[21] *The behavior of the optimal consumption path in the BM and POIM are qualitatively similar to those described in the previous example. In the case of the CNM, optimal consumption decreases initially, being equal to non-oil income during this phase. Eventually (period 13 in the figure) it stops decreasing and remains constant thereafter. By contrast with Example 4.6, in this case the optimal consumption path of the CNM is fiscally more conservative than that of the POIM. It prescribes not spending oil related wealth during early years, saving it to help those who expect to be worse off in the future. Only in period 13 the CNM recommends to begin spending oil wealth to help maintain the highest consumption level compatible with the restriction of not leaving any generation worse off than it would have been without oil. It is also interesting to note that in this example the consumption path of the Benchmark Model is the one that is most conservative from a fiscal point of view. It taxes heavily the initial generations to finance a constant level of consumption for everybody.* ∎

The following general result for the optimal consumption path under CNM is presented in the Appendix (Propositon A.2). It assumes no income uncertainty and $\beta R = 1$. Under these assumptions, the optimal consumption path for the CNM can be found as follows: First, the generations are ordered according to their utility in the non-oil scenario. Next, oil wealth is used to raise the income of the poorest generation until it equals that of the second poorest. If this does not exhaust the oil wealth, the income of the two poorest generations is raised until it equals that of the third poorest. And so on until no oil wealth remains to be distributed. If oil wealth is large enough so that the income of all generations can be brought to the level of the richest generation (in the scenario without oil), the constraint that differentiates the CNM from the BM is not be binding and both optimal consumption paths are the same (constant, equal to the annuity value of total wealth). Otherwise, the richest generations do not benefit from the oil wealth.

5 Oil Related Uncertainty

Characterizing the stochastic process that oil prices follow and evaluating the possibility of forecasting them are key ingredients when designing optimal fiscal policy rules for oil producing countries. For instance, recommendations regarding both the decision to adjust or finance a given price (terms of trade) shock and the design of an optimal oil stabilization fund depend of what is expected to happen with future prices, including their distribution. If each and every shock is regarded as

[21] The remaining parameter values are those of Figure 4.3.

having permanent effects and there are no adjustment costs in fiscal policy, then countries should completely lean towards adjustment. This section analyzes the ability of time series models to forecast future oil prices. We exclude large structural models both because replicating out-of-sample forecasts often is impossible and because their forecasting ability typically is worse than that of time series models.[22]

Before presenting and discussing results we mention an important limitation of this section. What matters for fiscal planning is government income uncertainty, which corresponds closely to oil income uncertainty in the cases considered in this paper. Since this chapter considers price uncertainty, we are implicitly assuming a constant rate of extraction (given by OPEC). In reality the correlation between oil production and oil prices is likely to be negative, so that we may be overestimating the importance of shocks. Unfortunately, we do not have enough data on non-oil income to work with this variable directly (and the data we have show strange patterns).

5.1 Previous Literature

In this subsection we present a short review of the recent literature of oil price forecasts based on time-series models. It is understood throughout that models under consideration are for the *logarithm* of the oil price.

The benchmark model to forecast oil prices (as well as other commodity prices) at medium run horizons, say 1 or 2 years, is a random walk, with and without drift. In this case the best prediction of future prices is the spot price (probably plus a drift). Furthermore, every shock to prices is permanent, affecting all expected future prices. The intuition for having this simple process follows from thinking about oil as an asset. Arbitrage prevents the existence of predictable price jumps for they offer an opportunity of making (potentially) unlimited profits. A drift reflects a fixed broad opportunity cost of maintaining the asset.[23]

The idea that oil prices follow a random walk, however, is at odds with the presumption that production of both oil and its substitutes should increase at higher oil prices. At the same time, oil production should decrease if prices are below marginal costs. By contrast, if prices follow a random walk, they could increase without bound and/or approach arbitrarily close to zero.[24] Despite this notion, it is not easy to reject the random walk hypothesis. Researchers have either used extremely long samples to find mean reversion or have had to resort to less standard approaches, where by "standard approaches" we mean the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests.

[22] See Powell (1990) and Pindyck (1999).

[23] This opportunity cost could be negative if there is a low storage cost, a low real interest rate and good business opportunities for those who have oil in storage (convenience yield).

[24] Furthermore, it can be shown that, with probability one, they eventually do one of the two.

For example, with several years of data, Videgaray (1998) finds mean reversion after allowing for a structural break in 1973.[25] Pindyck (1999) rejects the random walk null hypothesis using an ADF unit root test only after considering more than 70 years of data. Interestingly, he concludes that even with 120 years of data, permanent shocks do exist (although their size is considerably smaller than that of the transitory shocks). Finally, Bessembinder et al. (1995) find evidence of mean reversion using the future prices term structure.

The difficulty in rejecting the random walk hypothesis has led to more sophisticated models to describe oil prices. Rather than assuming reversion to a constant trend, Pindyck (1999) proposes a model in which both the constant and the trend are, in turn, non observable mean reverting stochastic processes. He estimates this model with a long sample of annual data using a Kalman Filter, and predicts prices 20 years ahead. Although no formal tests are provided, the forecasts appear to be better than those of a fixed trend AR(1) process. Of course, there is always the question of whether it is valid to use pre 1973 data to forecast future prices given the large structural break that took place at that time.

Schwartz (1997) also presents Kalman Filter estimates and formally compares the forecast capability of three alternative models for future and forward prices using high frequency data spanning 11 years. He considers a one factor model in which the (logarithm of the) oil price follows an AR(1) process, a two factor model in which the convenience yield is stochastic, and a three factor model in which a stochastic interest rate is also included. The estimation procedure he uses takes into account that the spot price, the convenience yield and the interest rate are not perfectly observable—thus the need of the Kalman Filter. The results he obtains indicate that including a second factor (the convenience yield) improves substantially the forecast capability of the model.

A simple random walk, an AR(1), and the models presented in Pindyck (1999) and Schwartz (1997) can be thought of as special cases of the following model:

$$p_t = \alpha_t + \delta_t \text{Trend}_t + \psi_t p_{t-1} + \varepsilon_t$$

where p_t is the log of the real oil price, α_t, δ_t and ψ_t are possibly stochastic parameters, Trend_t is a time trend and ε_t is a stochastic stationary shock.

A random walk with drift assumes α_t constant, $\delta_t = 0$, and $\psi_t = 1$ (as well as ε white noise). An AR(1) assumes a constant α_t, a constant $\psi_t < 1$ and (possibly) a positive δ_t.

More interestingly, Pindyck (1999) considers that both α_t and δ_t follow unobservable AR(1) stochastic processes with uncorrelated innovations. These processes are meant to represent reduced forms for the effects of demand, cost of extraction and available reserves shocks. Prices then would revert to a changing trend (level). Also, Schwartz (1997) considers the possibility that in his two

[25] He uses the Perron (1989) test which basically augments the standard Augmented Dickey-Fuller test to take into account structural breaks in levels and/or slope of a series.

factor model ψ_t follows a stochastic process (possibly mean reverting) with innovations that can be correlated with innovations of the current spot price. The economic interpretation of this model is that the convenience yield follows a process itself. The intuition for why this variable affects current spot prices is simple: If oil represents an asset, then the current and future spot prices are linked through the current interest rate, storage costs and the convenience yield. Thus, for a given future spot price, a higher convenience yield will increase the current spot price.

We will use these alternative models below to evaluate the extent to which oil prices can be forecast.

5.2 Revisiting the Random Walk Hypothesis

A key issue that we face is the question of to what extent future oil price changes can be predicted. In one extreme, it is possible to think that oil prices follow a simple random walk. If that were the case, then the best prediction for all future periods is the current value, while the standard deviation of this prediction grows linearly with time. In the other extreme, one could think of oil prices following a stationary process, where it is possible to forecast future prices with greater precision.

In order to evaluate the forecastability of oil prices we present below three group of tests: standard ADF and PP, Variance Ratio, and non-linear adjustment. In all cases we consider quarterly observations of the log of the real price of Brent oil (using the US WPI as the deflator).

5.2.1 ADF and PP Tests

Augmented Dickey-Fuller and Phillips-Perron tests are the standard procedures to evaluate whether a series follows a stationary process. Intuitively, these tests measure the strength of the forces that tend to move the series back to a constant trend after suffering a shock. If the strength of these forces is *low*, then one concludes that the process is non stationary (that there is no mean reversion).

Table 5.1 presents the results for three alternative samples of quarterly data: 1957.I–1999.II, 1974.I–1999.II, and 1986.I–1999.II, and two specifications with and without trend. The test shows that when the larger sample is considered, the process appears to be non stationary. In contrast, the shorter samples, particularly 1986.I–1999.II, suggest a stationary process.

This evidence shows that when one excludes large changes in regime, oil prices appear to be stationary. However, when these regime shifts are considered, price shocks tend to have relevant permanent effects. In terms of forecastability, these results show that assuming a stationary process is a valid procedure as long as one assumes that the current regime will prevail with probability one. More generally, however, one could improve the forecast by considering and modeling the transitory or permanent components of a shock.

5.2.2 Variance Ratio Test

The second type of test we consider to evaluate whether oil prices follow a non-stationary process is the Variance-Ratio (VR) Test. This test makes use of the linearly increasing volatility of a non-stationary process and evaluates whether the standard deviation measured at different horizons increases as predicted under the null of random walk. Furthermore, it gives a measure of the relative importance of transitory and permanent shocks.

In particular, the VR test calculates a statistic $J(s)$, $s = 1, 2, ..., S$ that has the following properties.[26] As the sample size becomes large and s increases the ratio $J(s)/s$ should converge to zero if the true process is stationary. If it does not converge to zero the process is non-stationary. Moreover, the value to which $J(s)$ converges represents the standard error for long term forecasts. These properties hold as long as the sample size is large and s is considerably smaller than this sample size.

Figures 5.1 and 5.2 present the results of VR tests for the log of the oil price for two samples: 1957.I–1998.IV and 1974.I–1998.IV. In both cases the statistic $J(s)/s$ does not converge to zero, showing that the shocks to the true process probably have some permanent effects. The size of these effects appears clearly smaller than the standard deviation of the innovations of a simple random walk estimated for each sample. This fact shows that shocks also have some transitory effects on prices, suggesting that it should be possible to do better, in terms of forecasting, than with a random walk.

One important limitation of these results is that the sample sizes we consider are not very large compared to s. In order to evaluate how this issue may affect the results the figures also present the results of a Montecarlo experiment considering a sample of equal size to what we consider in the calculations. These Montecarlo experiments are based on 1000 replications of a process that has the same standard deviation and parameters as the true data.

The results of these experiments show that, indeed, the small sample affects the performance of the test (for the sample sizes we consider). The statistic $J(s)/s$ for a true random walk decreases instead of converging to a flat value. At the same time, a true AR(1) does not converge to zero for the values of s we consider (although it does not converge to a positive value either). These results, however, do not change our general interpretation of the process. Because the sample statistic decreases faster than for the random walk, we conclude that shocks do not have full permanent effects. And because it tends to converge to a positive value, we conclude that shocks do not have transitory effects only.

[26] See Hamilton (1994) for further details.

5.2.3 Non-linear Adjustment

One potential explanation for finding evidence of non-stationarity when the true process is actually stationary is the existence of non-linearities in the adjustment process. It could be the case, for example, that oil prices follow a random walk within certain range. Outside this range, however, there could be forces that bring oil prices back. The intuition that prices cannot permanently be below marginal costs and that above certain threshold oil substitutes enter the market is in line with this interpretation.

More generally, oil prices may be viewed as the sum of two processes, with the relative importance of both processes dependent on the price level. Prices follow a unit root or even an explosive process for small deviations from a stationary trend, but the process becomes mean-reverting for large deviations. This is the case, for example, of exponential and logistic smooth-transition autoregressive (ESTAR and LSTAR) models. In this case it is assumed that mean-revering forces appear gradually as the actual oil price deviates from its long run equilibrium value.[27] Threshold autoregressive models (TAR) are another type of models in which the transition from unit-root to mean-reverting occurs suddenly at a fixed threshold.

In order to test the hypothesis of linearity in the oil price process we follow the procedures described in Michael et al. (1997). In particular, we test the null hypothesis of linearity against a smooth-transition model by using OLS to estimate the model:

$$p_t = \beta_{00} + \sum_{j=1}^{k}(\beta_{0j}p_{t-j} + \beta_{1j}p_{t-j}p_{t-d} + \beta_{2j}p_{t-j}p_{t-d}^2) + \varepsilon_t$$

for alternative values of d. The null hypothesis is $\beta_{1j} = \beta_{2j} = 0$ $(j = 1, ..., k)$. Linear adjustment is rejected if for any of the values of d the p-value of this test is insignificant.

Table 5.2 presents the p-values that result from testing the null hypothesis of linearity of log real oil prices using different samples and three alternatives values for d. It also shows the value of k, the lags required to have white-noise innovations in each case. The results show that the linear adjustment hypothesis is rejected only in the sample 1974-1999 using $k = d = 1$. We find one rejection in three as relatively weak evidence in favor of non-linear adjustments. In what follows we focus mainly on linear models, but keep as a competing alternative the non-linear model with $d = 1$.

5.3 Evaluation of Alternative Models

The usefulness of a forecasting model has to be measured out of sample. Ultimately it is the ability to forecast future unknown prices that should discriminate among competing models. In

[27] See Michael et al. (1997) for an application to non-linear adjustment of real exchange rates towards PPP values.

this subsection we evaluate the out of sample forecast capabilities of 12 alternative linear models, a non-linear model, market future prices, and market forecasts.

We consider two alternative samples, one starting in 1974 and the other starting in 1986, and calculate the root mean square error (RMSE) of forecasts at 1 and 2 year horizons proceeding as follows. We estimate repeatedly each model using quarterly data (and weekly data in one case) ending in the second quarter of the years 1994 to 1998 and forecast out of the estimating sample. Then we compute the RMSE using the forecast errors at 1 and 2 years horizons. For each model we have 5 one-year ahead and 4 two-year ahead forecast errors.

The linear models we consider (for the logarithm of the real price of oil) are the following:

1. A random walk without drift.
2. A random walk with drift.
3. An ARIMA(2,1,2). This model is the equivalent of a random walk augmented by a stationary process for the error term ε_t.
4. Same as above with a dummy variable that take the value 1 during the invasion of Kuwait in 1991.
5. An AR(1) without drift (assuming that the process is stationary).
6. The permanent value of a Beveridge and Nelson decomposition of the series.[28]

Models 7 through 11 consider an AR(1) model with stochastic first-order autocorrelation, ψ_t, which is estimated using the Kalman Filter. The models differ in the assumptions they make on the process followed by ψ_t and whether they include a linear trend or not for the price process.

7. The price process has no trend and ψ_t follows a random walk with innovations orthogonal to those of the price process.
8. As 7 but with a trend in the price process.
9. The price process has no trend and ψ_t follows an AR(1) process with innovations that are orthogonal to oil price innovations (this model resembles model 2 of Schwartz, 1997).
10. As 9 but with a trend in the price process.

[28]The Beveridge and Nelson decomposition identifies that permanent component of a series as the long run value at which the series would tend if there are no further shocks. It predicts future prices using a rolling ARIMA model ([2,1,2] in this case).

11. Both the constant and the trend parameters of the price process follow AR(1) processes with innovations that are orthogonal to oil price innovations and between them (this model is based on Pindyck, 1999).

12. As 7 but using weekly data to estimate the model (this model is based on Schwartz, 1997). The forecast is also weekly and we average the forecasts to calculate MRSEs. The data we consider in this model is slightly different because prices are not deflated.

We also consider three other forecasts in the out-of-sample evaluation. We estimate repeatedly the non-linear ESTAR model discussed above with the same quarterly data and forecast prices one and two year ahead using the estimated model. Finally, we consider the one-year ahead future price from Bloomberg (for June delivery) and the average surveyed one year ahead forecast informed by the June issue of *Consensus Forecast.*[29]

Table 5.3 presents the results of this exercise. Notwithstanding the fact that the RMSE are calculated with small samples, the results show that more sophisticated models do not have a better out-of-sample performance. Indeed, the models with stochastic autoregressive parameter are clearly outperformed by a simple random walk. The model with stochastic trend and constant appear to be as good as the random walk. Overall, only the ARIMA models (with and without dummies for the Kuwait invasion) appear to perform somewhat better than the random walk without drift. When we use the longer sample to estimate each model the best performance corresponds to the ARIMA model without dummies. For the short sample the best performance corresponds to the ARIMA model with dummies. Yet if we consider both samples jointly, it is hard to argue than any model does significantly better than the random walk without drift.[30] Furthermore, this model appears to be only marginally less accurate than surveyed forecasts.

6 Precautionary Saving and Adjustment Costs

In this section we present some useful approximations to the optimal consumption plan explicitly considering that future income is uncertain and that there are adjustment costs. In order to simplify matters we consider one issue at a time and a setup in which in absence of uncertainty and adjustment costs, the POIM is a correct description of the problem. This description also corresponds to the BM and the CNM when $\beta R = 1$ and non-oil GDP is constant in per capita terms. Furthermore, given the results of section 5, we consider as our baseline case that oil price follows a geometric random walk. In the appendix we present the approximations for the AR(1) case.

[29]In the latter two cases prices are nominal and refer to West Texas prices.

[30]We also calculated the RMSE of 5-year-ahead forecasts using samples that ended in 1991 Q2 for both a .random walk and a AR(1) process. The results (not reported) show a smaller RMSE for the random walk.

6.1 Income and Budget Uncertainty

Income uncertainty—the risk about future income realizations—can be incorporated easily into consumption models. If the instantaneous utility is quadratic, we have certainty-equivalence, and the results obtained in Section 4.2 need to be modified only slightly. For example, equations (18) and (19) become:

$$c_0 = (1-\tilde{\alpha})R\mathrm{E}_o[\mathcal{W}_0], \tag{25}$$

$$\mathrm{E}_t[c_{t+1}] = [\beta R]c_t, \tag{26}$$

where E_t denotes expectations based on information available in period t. That is, all that changes is that uncertain quantities are replaced by their expected values. Of course, as mentioned in Section 3.2, this solution has the awkward property that current savings do not depend on the variance of future income.

In the more appealing case of a CES instantaneous utility, there does not exist a simple expression for c_0. The solution has to be found resorting to numerical methods. We propose instead an approximation to the optimal solution that is transparent and easily implementable. Of course, because it is an approximation it does not correspond exactly to the optimal solution.

Our procedure is based on a counterfactual experiment in which consumption decisions are made knowing that oil risk is diversified away in the near future, say that the oil industry will be privatized. This procedure allows us to simplify the consumption problem by collapsing all future periods in a single period and treating the overall problem as a two-period problem. Furthermore, assuming that the variance of oil price shocks is small, we can write a closed-form solution for consumption as a function of that variance and initial conditions.

More precisely, consider the period t optimal consumption decision knowing that the oil industry will be privatized in period $t+1$. Because in period $t+1$ all income uncertainty is resolved, from that moment onwards the consumption problem is trivial: under the assumption $\beta R = 1$ the solution is to consume the sum of the annuity values of the privatization proceeds and the financial assets available at that time. Assume, further, that oil risk is fully diversifiable in the world economy, so that the privatization proceeds equal the expected NPV of oil GDP conditional of the oil price observed in $t+1$. As of period t, the privatization proceeds is a random variable that depends on the oil price process. Moreover, it depends on the expected path of future oil prices.

Consider now the comparison of the optimal consumption decision of period t, knowing the oil price of that period, both under certainty equivalence (CE) and the optimal consumption level (given the actual volatility of the price process). The plan under CE corresponds to the POIM solution. The difference between the two consumption levels measures the precautionary savings motive.

So far we have assumed that period t oil prices are known at the beginning of the period, when consumption decisions are taken. However, when deciding next year's budget, policymakers do not know the level of oil prices that will finally prevail. This information problem corresponds to budget uncertainty. Although it is closely related to income uncertainty, it represents a different source of uncertainty. In order to derive closed-form solutions for the effects of budget uncertainty we consider that at the moment of writing the budget the price of oil at time 0, P_0, is not known but assumed to follow a log-normal distribution with known mean and variance. This distribution captures all the information available to the government about the price of oil during the budget year being considered. Only from period 1 onwards does the (real) price of oil follows a geometric random walk with drift. The possibility of setting the parameters for the initial price allows us to depart from the pure random walk assumption, thereby allowing the incorporation of some degree of mean reversion.

Besides the counterfactual experiment of privatizing, we use approximations to obtain closed-form solutions for consumption. In particular, we consider a first order Taylor approximation around the case in which the variances of both shocks to future prices and the current year (budget year) price are zero.

6.1.1 Correction Factors

Assume that oil prices follow the process:

$$\log P_t = a + \psi(\log P_{t-1}) + v_t \tag{27}$$

where $a/(1-\psi)$ represents the unconditional expectation of $\log P$ if $\psi < 1$ or the drift of the process if $\psi = 1$, and v_t is an i.i.d. zero Normal shock with variance σ_v^2. Assume further that oil production starts at a level Q_0, growths at a constant rate g, and lasts for T periods, when the resource is exhausted.[31]

Then production at time t is:

$$Q_t = \begin{cases} Q_0(1+g)^t & \text{if } t \leq T \\ 0 & \text{if } t \geq T+1, \end{cases} \tag{28}$$

while period t income, Y_t, is given by $P_t Q_t$.

Moreover, assume that the initial price P_0 is unknown when the government has to determine its initial consumption. In particular, P_0 has mean $\mu_{P,0}$ and variance $\sigma^2_{P,0}$. Thus, initial income Y_0

[31] Given initial reserves $\tilde{Q}_0$, initial extraction Q_0, and growth rate g, the duration of the resource is

$$T = \frac{\log(1+g+Q_0)/Q_0}{\log(1+g)}.$$

has mean $\mu_0 = \mu_{P,0}Q_0$ and variance $\sigma_0^2 = \sigma_{P,0}^2 Q_0^2$. Finally, assume that initial population is N_0 and growths at rate n.

Denote by $c_0(\sigma_v^2, \sigma_0^2)$ the optimal period 0 per capita consumption level considering both types of uncertainty.[32] In the Appendix (Lemma B.1) we show that if σ_v^2 and σ_0^2 are small, this solution can be approximated by:

$$c_0(\sigma_0^2, \sigma_v^2) \simeq [1 - \Delta_{BU} - \Delta_{IU}]\, c_0(0,0), \tag{29}$$

with

$$\begin{aligned} \Delta_{BU} &= -\frac{c^1(0,0)}{c_0(0,0)}\sigma_0^2, \\ \Delta_{IU} &= -\frac{c^2(0,0)}{c_0(0,0)}\sigma_v^2. \end{aligned}$$

Where $c_0(0,0)$ is initial consumption if there were no uncertainty and the superscripts denote derivatives with respect to argument j ($j = 1, 2$).

In general, both correction factors comprise two components. One captures the precautionary motive and, as expected, is positive, so that resulting consumption is smaller than it would have been in the absence of this motive. The second component corresponds to an income effect due changes in initial wealth associated with variations in σ_0 and σ_v. For example, if the price of oil follows a geometric random walk and the mean of the innovations v_t does not vary with σ_v, the present discounted value of oil income grows with σ_v at a rate $\frac{1}{2}\sigma_v^2$. On the other hand, if the drift of the random walk $-\frac{1}{2}\sigma_v^2$ the negative drift cancels the effect of volatility on wealth and there is no income effect. Choosing between both alternatives is equivalent to deciding whether $\mathrm{E}_t[P_{t+1}] = P_t$ or $\mathrm{E}_t[\log P_{t+1}] = \log P_t$, both cannot hold due to Jensen's inequality. Since forecasts based on the former are more precise and income effects can be much larger than what common sense would suggest,[33] we ignore income effects in what follows.[34]

Define φ as the present discounted value of future income $\sum_{t=0}^{T-1} \beta^t Y_{t+1}$. In the appendix we show that the correction factors Δ_{BU} and Δ_{IU} are given by:

$$\begin{aligned} \Delta_{BU} &= \frac{1}{2}(1+\rho)\frac{\beta(r-n)^2}{(1+n)N_0^2 c_0(0,0)^2}\left.\frac{\partial \mathrm{Var}_0\left(Y_0 + \mathrm{E}_1[\varphi]\right)}{\partial \sigma_0^2}\right|_{\sigma_v=\sigma_0=0}\sigma_0^2, \\ \Delta_{IU} &= \frac{1}{2}(1+\rho)\frac{\beta^3(r-n)^2}{(1+n)N_0^2 c_0(0,0)^2}\left.\frac{\partial \mathrm{Var}_0\left(Y_0 + \mathrm{E}_1[\varphi]\right)}{\partial \sigma_v^2}\right|_{\sigma_v=\sigma_0=0}\sigma_v^2. \end{aligned}$$

Where ρ is the coefficient of relative risk aversion. Both correction factors are proportional to the coefficient of relative prudence, $1 + \rho$.[35]

[32] c_0 also depends on μ_0 and F_0, but since these parameters remain constant in what follow they are omitted.

[33] Consumption after applying the correction factors cam be much *larger* than under certainty equivalence!

[34] Expressions that include the income effect may be found in Proposition B.1 in the Appendix.

[35] See Kimball (1990).

The expression $c_0(0,0)$ that appears in both correction factors corresponds to optimal consumption when there is no income uncertainty and is therefore calculated using consumption smoothing. Since $c_0(0,0)$ is increasing in F_0 we shall have that both correction factors are decreasing in initial financial assets.

In the case of a geometric random walk the correction factors can be written as follows (Proposition B.2 in the Appendix considers the case where $\psi < 1$):

$$\begin{aligned}
\Delta_{BU} &= \frac{1}{2}(1+\rho)\frac{R}{(1+n)}\left\{1+\frac{1-\beta(1+g)}{1-\beta^{T+1}(1+g)^{T+1}}\left[\frac{F_0}{\mu_0}\right]\right\}^{-2} CV_0^2, \\
\Delta_{IU} &= \frac{1}{2}(1+\rho)\frac{\beta(1+g)^2}{(1+n)}\left\{\frac{1-\{\beta(1+g)\}^T}{[1-\beta(1+g)]\frac{F_0}{\mu_0}+1-\{\beta(1+g)\}^{T+1}}\right\}^2 \sigma_v^2,
\end{aligned}$$

where $\mathrm{CV}_0^2 = \sigma_{P,0}^2/\mu_{P,0}^2$.

If next year's budget were written knowing the price of oil on December 31st of this year, and all income uncertainty were summarized by the assumption that the price of oil follows a geometric random walk, we would have $\mathrm{CV}_0 = \sigma_v$. The fact that budgets are written some months before December suggests that $\mathrm{CV}_0 > \sigma_V$. On the other hand, selling a significant fraction of next year's oil production in futures markets reduces CV_0. It follows that assuming $\mathrm{CV}_0 = \sigma_V$ provides a convenient benchmark for practical applications.

6.1.2 Examples

In order to evaluate the importance of precautionary savings in the context of oil producing countries we present four examples. The first one presents a baseline case. The other three present comparative statics.

Example 6.1 (Precautionary Saving Correction Factors) *We assume no population growth ($n = 0$), one inhabitant, no output growth ($g = 0$), $R = 1.05$, $\beta R = 1$, $\rho = 3$, $Q_0 = 100$, $\mu_{P0} = 25$, $\sigma_v = 0.25$, $\sigma_{P,0} = 6.25$, $T = 50$, and $F_0 = 2,500$ (equivalent to one year of production).*

With these parameters the results are as follows. From an income of 2,500, the certainty equivalence consumption is 2,411. The correction factors due to precautionary motives are $\Delta_{BU} = 11.9\%$ and $\Delta_{IU} = 10.7\%$. Thus, optimal consumption is 1,868. ∎

Given the role of volatility in the solutions proposed, the correction factors increase linearly with the variance of the shocks to the price process. Thus, precautionary saving increases at rate 0.5 with volatility.

Example 6.2 (Precautionary Saving and Shocks Persistence) *Figure 6.1 shows the correction factors Δ_{BU} and Δ_{IU} for different levels of the AR(1) coefficient of the oil price process and*

the parameters of the baseline example. In this case ψ ranges from 0.9 to 1. When $\psi < 1$ we use the formulae described in the Appendix. In all these cases we disregard any income effects arising from volatility by directly applying the correction factors to the zero variance consumption.

The results show that precautionary saving increases sharply with the persistence of shocks. When ψ is around 0.9, correction factors are almost one-tenth of what they are in the case of a random walk. Furthermore, this difference is clearly non-linear. When ψ is around 0.95, correction factors are about one-fourth of what they are when $\psi = 1$. ▮

This key role for shock persistence in determining the importance of precautionary saving has been noted before (see, e.g., Skinner, 1988). It follows from the high sensitivity of wealth uncertainty to the degree of persistence in shocks, particularly in the neighborhood of a random walk.

Example 6.3 (Precautionary Saving and Financial Assets) *Figure 6.2 shows the correction factors Δ_{BU} and Δ_{IU} for levels of initial financial assets F_0 and the parameters of the baseline example. We have scaled F_0 by initial production, so it ranges from -4 to 4.*

As expected, financial assets accumulation makes less important precautionary saving. Because a larger portion of future consumption is secure when a country has more financial assets, precautionary saving decreases with F_0. In the example at hand, the correction factors drop by almost one third when financial assets increase from zero to four years of income. A similar pattern arises if one assumes that $\psi = 0.9$, although in this case correction factors are considerably smaller. ▮

Example 6.4 (Precautionary Saving and Resource Duration) *Figure 6.3 shows the correction factors Δ_{BU} and Δ_{IU} for different time horizons for resource exhaustion and the parameters of the baseline example. T varies from 5 to 105.*

The results show that the correction factors increase quickly with T to stabilize around $T = 40$. The opposite happens if $\psi = 0.9$ (case not reported). The intuition for the result is the following. Given an extraction rate, a longer duration represents a higher initial reserve level of the resource. This, in turn, represents higher total wealth, and less initial financial assets relative *to total wealth. Thus, a longer duration produces an effect that is similar to having less financial assets. When $\psi < 1$, a longer duration has two effects. One the one hand, it produces the same effect of reducing the share of financial assets in total wealth. On the other hand, because $\psi < 1$, income that is very far in the future is almost secure income, having the same effect of a higher F_0. Figure 6.4 shows the correction factors for different T assuming the "intermediate" case $\psi = 0.99$. In this case the correction factors increase with T between 10 and 20-25 and decrease thereafter.* ▮

In deriving precautionary saving correction factors we have so far assumed that there is only one source of income, namely oil production. A more realistic representation of oil exporting countries should incorporate natural gas extraction. In order to do so we assume that the price of gas is linear

in the price of oil, that the price of oil follows a geometric random walk, and that both natural resources have their particular and known extraction path. In Proposition B.4 in the Appendix we derive expressions for the correction factors in this case. Based on these expressions one can show that having a second income source related to oil prices produces relatively minor changes in the correction factors.

6.2 Adjustment Costs

When adjustment costs are present, optimal consumption may not be equal to frictionless optimal consumption. Adjusting per capita government expenditures may have welfare consequences that go beyond those captured by standard utility functions. A drastic reduction in government expenditure may lead to political instability, discouraging investment and reducing future growth. A sudden increase in government expenditure may deteriorate the quality of management of government projects because of the lack of adequate supervision. It may also increase the costs of new projects because of bottlenecks in the supply of some inputs. In this section we analyze the effects of a specific form of adjustment costs, namely quadratic costs.

6.2.1 Quadratic Adjustment Costs

In order to derive practical implications from the existence of adjustment costs we study an approximation to the standard consumption problem (without income uncertainty) augmented with quadratic adjustment costs. In particular, assume that the problem with adjustment costs is represented by the following problem:

$$\max_{c_t} \sum_{t\geq 0} \beta^t (1+n)^t \left\{ \frac{c_t^{1-\rho}}{1-\rho} - k(l_t - l_{t-1})^2, \right\} \tag{30}$$

subject to the budget constraint

$$\sum_{t\geq 0} R^{-t} C_t = \mathcal{W}_0, \tag{31}$$

where l_t is the log of the optimal level of per capita consumption in period t and k captures the importance of adjustment costs. Asymmetric adjustment costs can be incorporated by considering two possible values for k, one for consumption reductions (k^-) and one for consumption increases (k^+).

Proposition C.1 in the Appendix shows that this problem can be approximated by solving

$$\min_{l_t} \sum_{t\geq 0} \tilde{\beta}^t \left[(l_t - l^*)^2 + \tilde{k}(l_t - l_{t-1})^2 \right], \tag{32}$$

subject to no budget constraint, with

$$\tilde{k} = \frac{2k}{\rho [c^*]^{1-\rho}},$$

where c^* denotes the solution to the problem above when $k = 0$ (see Proposition A.1) and $l^* = \log c^*$.

The second term in (32) captures the costs of adjusting while the first term corresponds to the welfare costs associated with deviating from the optimal expenditure level in the absence of adjustment costs.

As k, the constant $\tilde{k}$ can take two values, one for expenditure reductions, $\tilde{k}^-$, and another for expenditure increases, $\tilde{k}^+$.

Proposition C.2 in the Appendix shows that there exist constants α^- and α^+, both between zero and one, such that a good approximation for the logarithm of optimal consumption at time 0 incorporating adjustment costs, l_0, consists of adjusting *partially* toward $l^* \equiv \log c^*$. Thus:

$$l_0 - l_{-1} = \alpha(l^* - l_{-1}),$$

where α can take two values, one if consumption increases (α^+) and another when it decreases (α^-). The constants α^+ and α^- are decreasing functions of $\tilde{k}^+$ and $\tilde{k}^-$. The fraction of adjustment prescribed is larger when adjustment costs matter less. The adjustment speed also increases with ρ, since larger values of ρ imply a smaller elasticity of substitution of consumption over time and therefore a stronger incentive to smooth expenditure.

6.2.2 Eliciting Adjustment Costs

A key parameter in determining the velocity of the adjustment process is the size of adjustment costs. In Proposition C.3 in the Appendix we show that if a policymaker is indifferent between

- the adjustment cost associated this period with an *increase* in per capita expenditure of $100 \times s_a$ percent

and

- the welfare improvement, in the absence of adjustment costs, associated with a $100 \times s_{na}$ percent increase in per capita expenditure

then her value of $\tilde{k}$ is given by

$$\tilde{k}^+ \simeq \frac{2s_{na}}{\rho s_a^2}.$$

A similar comparison, with a *decrease* in per capita expenditure in the first statement, leads to an analogous expression for $\tilde{k}^-$.[36]

It is recommended that the value of s_{na} in the exercise described above be chosen neither too large (because the approximations involved become less precise) nor too small (because it is harder to make the comparison that is required). Suggested values are in the range from 0.05 to 0.20.

[36]The question in the second statement continues being posed in terms of an *increase* in per-capita expenditure.

6.2.3 Examples

Example 6.5 (Adjustment Costs) *Figure 6.5 shows how α varies with s_{na} when s_a is set at 0.20. The remaining parameter values are $n = 0$, $\beta = 1/1.05$ and $\rho = 3$. For an s_{na} of 0.04, the recommended partial adjustment is approximately 70%. For an s_{na} of 0.40, this value falls to 40%.*

Partial adjustment rates are almost insensitive to population growth rates. For instance, if $s_{na} = 0.04$ in this example, changing the population growth rate from $n = 0$ to $n = 0.04$ decreases the partial adjustment from 70 to 69%. Variations of β within a reasonable range also have a negligible impact.

Changes in the coefficient of risk aversion have a larger impact. Figure 6.6 shows how α varies with ρ. Considering $\rho = 1$ instead of $\rho = 3$ decreases the adjustment coefficient from 70 to 50%. ∎

7 Stabilization Funds

A stabilization fund is an asset accumulation account that has the objective of stabilizing a particular variable such as government spending. For this purpose, stabilization funds have a set of rules defining when income should be saved or spent, raising or decreasing the amount of resources at the fund correspondingly.

As mentioned in section 2, a correctly defined stabilization fund should result in a consumption (expenditure) pattern closely related to the optimal solution of the problem at hand. The rules should be such that, in combination with other sources of fiscal saving and credit, they implement the optimal fiscal strategy. This puts important restrictions on fiscal policy decisions apparently unrelated to the commodity under consideration (oil and gas in this case). The reason is simple: if the government undoes what the stabilization recommends, the country will not get the benefits from the (optimal) fiscal strategy. And since money is fungible, the temptation to undo the restrictions on expenditures imposed by the stabilization fund will often be large. For instance, if expenditures out of oil wealth are stabilized completely, but fiscal expenditures continue to follow a pattern that is positively correlated with oil prices (e.g., due to procyclical access to financing in the international capital market), there will be no welfare gain from having a fund. The objective, at the end, is to stabilize expenditure, not a particular form of income. Thus, changes in the stabilization fund should represent the sum of all government incomes and expenditures, that is, the overall net fiscal asset position.

Stabilization funds in commodity producing countries are usually based on a price contingent rule: the fund accumulates resources so long as the current commodity price is above certain threshold and spends if it is below a second threshold. These thresholds are preannounced and usually follow a simple formula, such as the average of the last x years plus/minus a constant. The simplicity of this type of fund is very appealing. However it also imposes a very rigid structure

which often leads to a solution far from optimal.[37] Behind this type of rule is the notion that policymakers are able to distinguish transitory from permanent price shocks. Given the evidence revisited in section 5, this clearly is a very strong assumption.

There are a few studies that have designed optimal stabilization funds using numerical procedures and the POIM as the benchmark problem. For example, Arrau and Claessens (1991), Kletzer, Newbery and Wright (1990), and the collection of papers in Engel and Meller (1993) design optimal funds under alternative assumptions. However, extending the POIM to incorporate precautionary motives may have unappealing consequences, since this model ignores the path of private income, and therefore its correlation with oil income. In deriving the approximation for precautionary saving presented in this paper we have assumed that this correlation is zero (private income is constant). This clearly is a strong assumption that should be relaxed in future research.[38]

To illustrate this point we refer to an example discussed in section 4.2 in which oil and non-oil income were assumed to be perfectly negatively correlated. The precautionary motive suggests that the government should, on average, spend less in every period than it would in the certainty-equivalence case. Yet these additional savings serve no purpose in this case, since there is no uncertainty in *total* income. In general, when private sector income is ignored, as in the POIM, precautionary saving could differ significantly from what they would be if uncertainty in total income were considered.

The stabilization fund that follows the set of prescriptions derived in this paper is not different from an otherwise standard stabilization fund used in several countries. The only key difference is that the set of rules is relatively more complex, which allows for the implicit solution to be closer to the optimal one. In principle, the stabilization fund in this model corresponds to financial assets F_t, and the set of rules may include intergenerational distribution, budget and income uncertainty and adjustment costs. Thus, if fiscal policy follows the strategy we recommend here, it will implicitly act as a stabilization fund. Of course, this fund could be explicitly setup, easing transparency and accountability. The rules for operating the fund will be the counterpart of the proposed fiscal strategy.

One important issue regarding actual implementation of the optimal fiscal strategy is the treatment of fiscal investment. The model presented here does not include an explicit role for investment and assumes that all positive NPV projects are developed (probably by the private sector). However, at the same time, we have excluded any secondary source of credit for the government in order to obtain the expected results from the proposed fiscal strategy. In this setup the results of the model can be associated to the maximum non-oil sector deficit that should be financed by

[37]For a criticism of the Chilean Copper Stabilization Fund along these lines see Basch and Engel 1993).

[38]The CNM is an attempt to incorporate non-oil income into the analysis, but it does so without considering the effects of uncertainty.

surpluses in the oil sector.[39] Furthermore, all saved resources (the stabilization fund itself) are kept in international liquid assets.

A second interpretation, equally valid from a theoretical perspective, is to consider that what the fiscal sector saves can be denominated either in international or domestic assets. In this case, F_t will include both external resources and the stock of investment. If money is invested in profitable investment projects, marginal projects will yield a risk-adjusted rate of return equal to the international interest rate. Furthermore, in this case the results of the model should be thought of as the maximum consumption financed with oil revenues (equivalently, the maximum current non oil fiscal deficit, excluding investment).

It is also possible to design simultaneous stabilization funds, each one representing different saving motives. For example, following the issues studied in this paper, one could implement an intergenerational distribution fund, a precautionary saving fund, and an adjustment cost fund. Each fund could obey its specific saving rule, facilitating transparency. In general, both the intergenerational and precautionary fund will have positive assets, whereas the adjustment cost could have negative average assets.[40]

Yet there are important shortcomings of setting up simultaneous funds for this arrangement may jeopardize the overall fiscal strategy. For example, having a large positive amount in a particular fund and negative in others may generate wrong incentives in the political process.

8 Concluding Remarks

This paper has presented a set of rules for fiscal policy in oil producing countries incorporating three different issues: intergenerational distribution of oil wealth, optimal saving due to precautionary behavior, and speed of adjustment in the presence of adjustment costs. Instead of using complex numerical procedures, the paper derives closed-form solutions that approximate the optimal solution. Although actual optimal policy prescriptions are unknown, numerical procedures are capable of solving particular problems using intensive computer resources. However, these procedures are seldom used in practice by policymakers. Our approach has obvious advantages regarding transparency and implementation possibilities. Indeed, the set of prescriptions can be programmed in a spreadsheet and the results are known in real time.

The proposed prescriptions are calculated as approximations to the optimal solution using as starting point certainty equivalence, i.e., when the permanent oil income (POI) solution is the appropriate one, and the assumption that risk will be diversified away one period ahead. The proposed solutions can be thought of as a set of corrections to the POI solution that brings this

[39] Excluding oil extraction costs.

[40] For example, if negative adjustment costs are larger than positive adjustment costs.

particular result closer to the optimal one. Of course, because they are approximations, they do not represent the optimal solution itself. Our current research is intended to evaluate how accurate are these proposed approximations, both the expansion around the certainty equivalence solution and the assumption of one-period-ahead diversification.

The paper has derived fiscal prescriptions both under the assumption that the oil price follows a geometric random walk process and a AR(1) process (in logs). However, the evidence revisited and new econometric evidence provided show that the geometric random walk assumption appears to be a more sensible representation. Yet it should be stressed that the framework we developed makes use of this assumption only partially. In the proposed setup, budget uncertainty allows us to include next year expected future price (more precisely, its mean and variance) which could be different from the actual current price. The random walk assumption is binding only two periods into the future.

Another important assumption behind the approach followed here to study the effects of uncertainty is that the POIM is an adequate description of the problem faced by the government. This is equivalent to assume that non-oil income is uncorrelated with oil (and gas) income. Future research should incorporate the possibility of a non-zero correlation between both types of income.

For simplicity, the proposed fiscal strategy was developed assuming an annual frequency, since we made the implicit assumption that the government could not revise the budget during the budget year.[41] This assumption can be easily relaxed reinterpreting the data frequency conveniently. Furthermore, without changing frequency, the model could be used during the current fiscal year if new information becomes available and the political process allows for adjustments in the budget. Yet such an exercise would necessarily have to be of the once-and-for-all type, since recurrent revisions would modify the model (or, at least, the appropriate data frequency).

Finally, the proposed approach has implicit a stabilization fund which could be explicitly setup for transparency and accountability purposes. There are two key ingredients for this fund to work properly. First, it should follow a set of accumulation rules that implement the proposed fiscal strategy. And second, it imposes strong restrictions to other forms of government financing so that what the fund accumulates actually reflects changes in the net fiscal asset position.

[41]The are good political economy arguments to maintain this procedure. In particular, there could be important asymmetries in the way the political process reacts to positive and negative shocks.

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APPENDICES

A Benchmark and Conditionally Normative Models

Lemma A.1 *Maximizing the felicity function*

$$u(c_P, c_G) = \left(\frac{c_P^{1-\gamma}}{1-\gamma} + k \frac{c_G^{1-\gamma}}{1-\gamma} \right)^{1/(1-\gamma)}$$

subject to the budget constraint $c_P + c_G = c$ *yields*

$$c_P = \frac{1}{1+k^{1/\gamma}} c \qquad \textit{and} \qquad c_G = \frac{k^{1/\gamma}}{1+k^{1/\gamma}} c.$$

Moreover, the felicity function, evaluated at the optimum, is given by:

$$u(c_P, c_G) = \left(\frac{(1+k^{1/\gamma})^{\gamma}}{1-\gamma} \right)^{1/(1-\gamma)} c.$$

Proof Straightforward calculus. ∎

Lemma A.2 *Solving the problem*

$$\max_{c_{G,t}, c_{P,t}} \frac{1}{1-\rho} \sum_{t \geq 0} \beta^t (1+n)^t u_t^{1-\rho} \tag{33}$$

subject to the intertemporal budget constraint:

$$\sum_{t \geq 0} R^{-t} [C_{G,t} + C_{P,t}] = \mathcal{W}_0$$

with

$$u_t = \left(\frac{c_{P,t}^{1-\gamma}}{1-\gamma} + k \frac{c_{G,t}^{1-\gamma}}{1-\gamma} \right)^{1/(1-\gamma)}$$

and $C_{j,t} = c_{j,t} N_t$ $(j = C, G)$, $N_t = (1+n)^t$, *is equivalent to solving*

$$\max_{c_t} \frac{1}{1-\rho} \sum_{t \geq 0} \beta^t (1+n)^t c_t^{1-\rho}$$

subject to the intertemporal budget constraint:

$$\sum_{t \geq 0} R^{-t} C_t = \mathcal{W}_0$$

where $C_t = C_{G,t} + C_{P,t}$, $c_t = C_t / N_t$.

Proof From Lemma 1, the optimal choices of $c_{P,t}$ and $c_{G,t}$ must satisfy

$$u(c_{P,t}, c_{G,t}) = \left(\frac{(1+k^{1/\gamma})^{\gamma}}{1-\gamma}\right)^{1/(1-\gamma)} c_t.$$

Substituting this expression for u_t in (33) completes the proof. ∎

Proposition A.1 *Consider the intertemporal consumption allocation problem*

$$\max_{c_t} \frac{1}{1-\rho} \sum_{t\geq 0} \beta^t (1+n)^t c_t^{1-\rho}$$

subject to the intertemporal dynamic budget constraint

$$F_{t+1} = R[F_t + Y_t - C_t], \tag{34}$$

where $C_t = c_t N_t$, $N_t = (1+n)^t$, $Y_t = Y_{P,t} + Y_{G,t}$, and $N_0 = 1$. Initial assets (F_0) and the complete future stream of income, $Y_0, Y_1, Y_2, \ldots$ are known at time 0.

Then optimal per capita consumption at time 0 is

$$c_0 = (1-\tilde{\alpha})\mathcal{W}_0$$

and the optimal consumption path satisfies

$$c_{t+1} = [\beta R]^{1/\rho} c_t, \tag{35}$$

$$C_{t+1} = \alpha C_t, \tag{36}$$

where $\alpha = (1+n)[\beta R]^{1/\rho}$; $\tilde{\alpha} = \alpha/R$, and

$$\mathcal{W}_0 \equiv F_0 + \sum_{s\geq 0} R^{-s}[Y_{G,s} + Y_{P,s}].$$

Furthermore, the period t current account of this economy is given by

$$CA_t = \left[2 - \frac{1}{R}\right](Y_t - C_t) + \left[1 - \frac{1}{R}\right] F_t. \tag{37}$$

Proof We first derive the slope of the consumption path and then the initial consumption level. Using $N_t = (1+n)^t N_0$ and $C_t = c_t N_t$ it is possible to rewrite the objective function as

$$\max_{C_t} \frac{1}{(1-\rho)N_0^{1-\rho}} \sum_{t\geq 1} [\beta(1+n)^{\rho}]^t C_t^{1-\rho}.$$

Using the dynamic budget constraint $F_{t+1} = R[F_t + Y_t - C_t]$ the problem becomes

$$\max_{F_t} \frac{1}{(1-\rho)N_0^{1-\rho}} \sum_{t\geq 0} [\beta(1+n)^{\rho}]^t [F_t + Y_t - \frac{F_{t+1}}{R}]^{1-\rho}.$$

The FOC for F_t is:

$$[\beta(1+n)^{\rho}]^t(1-\rho)[F_t+Y_t-\frac{F_{t+1}}{R}]^{-\rho}-[\beta(1+n)^{\rho}]^{t-1}(1-\rho)[F_{t-1}+Y_{t-1}-\frac{F_t}{R}]^{-\rho}\frac{1}{R}=0,$$

which leads to (36). Dividing both sides of (36) by $N_{t+1}=(1+n)^{t+1}$ yields (35).

The initial consumption level is found substituting the slope of the consumption path in the budget constraint. Successively replacing financial assets F_s in the dynamic budget constraint for period s and assuming that $\lim_{t\to\infty} R^{-t}F_t = 0$ (no Ponzi or sustainability condition) one gets the standard present value budget constraint:

$$\mathcal{W}_0 \equiv F_0 + \sum_{s\geq 0} R^{-s}Y_s = \sum_{s\geq 0} R^{-s}C_s.$$

Using (34) recursively leads to $C_t = \alpha^t C_0$, which we substitute in the present value budget constraint to obtain

$$\mathcal{W}_0 = \sum_{s\geq 0} \tilde{\alpha}^s C_0,$$

which implies that

$$C_0 = c_0 = (1-\tilde{\alpha})\mathcal{W}_0.$$

Lastly, by definition, the current account is the difference between income, which equals domestic production plus interests earned abroad, and expenditures, which equals total consumption. Earned interest accrues at the end of the period. Thus,

$$CA_t = Y_t + \frac{R-1}{R}[W_t + Y_t - C_t] - C_t,$$

which after rearrangement yields (37). ∎

Proposition A.2 *Assume that there is no uncertainty, no bequest motive and $\beta R = 1$. Also assume that the solution under the Benchmark Model leaves at least one generation worse off than it would be in the absence of oil wealth (and redistributive policies).*[42] *Then the consumption path that implements the CNM obtains from the following algorithm:*

1. *Order the generations according to their utility under the assumption that oil reserves are zero, that is, that the only source of income is private.*[43] *In what follows, generation* 1 *is the poorest generation, generation* 2 *the second poorest, and so on.*

2. *Set $k = 1$.*

[42] Otherwise the solution to the CNM is equal to the solution to the BM, since the additional constraint imposed by the CNM is not binding. That is, the solution to the CNM differs from that for the BM either if non oil income of future generations grows without limit, or if oil wealth is not enough to raise every generation's income above the income of the richest—in the absence of oil wealth—generation.

[43] Since there is no bequest motive and no uncertainty, there will be no intergenerational saving.

3. *Use oil wealth to raise the income of generation k until it equals that of generation $(k+1)$ or until it is exhausted, whichever happens first.*

4. *If 3 does not exhaust the oil wealth, increase k by 1 and return to 3. Otherwise, the resulting distribution of oil wealth solves the CNM.*

Proof The algorithm ends because we assumed that the solution to the BM violates the constraints of the CNM. The remainder of the proof is straightforward. ∎

B Precautionary saving

The following results consider the setup described in section 6.1.1.

Lemma B.1 *Denote by $c_0(\sigma_0^2, \sigma_v^2; F_0, \mu_0)$ the solution for optimal per capita consumption as a function of initial financial assets and parameters characterizing the distribution of future income. In what follows F_0 and μ_0 remain fixed and are therefore omitted. Assuming $c_0(\sigma_0^2, \sigma_v^2)$ has continuous second order partial derivatives, we have that*

$$c_0(\sigma_0^2, \sigma_v^2) = [1 - \Delta_{BU} - \Delta_{IU}]\, c_0(0,0) + \mathcal{O}(\sigma^4), \tag{38}$$

with

$$\Delta_{BU} = -\frac{c^1(0,0)}{c_0(0,0)}\sigma_0^2, \tag{39}$$

$$\Delta_{IU} = -\frac{c^2(0,0)}{c_0(0,0)}\sigma_v^2. \tag{40}$$

Where the superscripts denote derivatives with respect to argument j ($j = 1, 2$), $\sigma = \max(\sigma_v, \sigma_0)$, and $\mathcal{O}(\sigma^4)$ denotes a term of order σ^4.

Proof By continuous second order partial derivatives we mean that c_0^{11}, c_0^{22} and c_0^{12} are well defined and continuous. The result then follows from taking a first order Taylor expansion of $c_0(\sigma_0^2, \sigma_v^2)$ around $(0,0)$. ∎

Corollary B.1 *Assume that an increase in uncertainty (that is, either an increase in σ_0 or σ_v) does not affect initial wealth,*[44] *so that $c_0^{CE}(\sigma_0^2, \sigma_v^2) = c_0^{CE}(0,0)$, where c_0^{CE} denotes optimal per capita consumption under certainty equivalence and the arguments are the same as in the preceding proposition. Then*

$$c_0(\sigma_0^2, \sigma_v^2) = [1 - \Delta_{BU} - \Delta_{IU}]\, c_0^{CE}(\sigma_0^2, \sigma_v^2) + \mathcal{O}(\sigma^4), \tag{41}$$

with Δ_{BU}, Δ_{IU} and $\mathcal{O}(\sigma^4)$ defined above.

[44] This holds, for example, when the price of oil follows a geometric random walk with drift such that $\mathrm{E}_t[P_{t+1}] = P_t$.

Proof Trivial. ∎

Definition B.1 *Given a stochastic process Y_t, $t = 0, 1, 2, ...$ for income, we denote*

$$\varphi = \sum_{t=0}^{T-1} \beta^t Y_{t+1}.$$

Proposition B.1 *For any stochastic income process Y_t that is identically zero from period $T+1$ onwards:*

$$c_0(0,0) = \frac{r-n}{RN_0}\left\{F_0 + \mu_0 + \beta \mathrm{E}_0[\varphi]\Big|_{\sigma_v=\sigma_0=0}\right\}. \tag{42}$$

We also have:

$$c_0^1(0,0) = \frac{\beta^2(r-n)}{N_0}\frac{\partial \mathrm{E}_0[\varphi]}{\partial \sigma_0^2}\Bigg|_{\sigma_v=\sigma_0=0} - \frac{(1+\rho)\beta(r-n)^2}{2(1+n)N_0^2 c_0(0,0)}\frac{\partial \mathrm{Var}_0\left(Y_0 + \beta \mathrm{E}_1[\varphi]\right)}{\partial \sigma_0^2}\Bigg|_{\sigma_v=\sigma_0=0}, \tag{43}$$

where E_0 and Var_0 are with respect to the distribution of Y_0, assuming $\sigma_v = 0$, and

$$c_0^2(0,0) = \frac{\beta^2(r-n)}{N_0}\frac{\partial \mathrm{E}_0[\varphi]}{\partial \sigma_v^2}\Bigg|_{\sigma_v=\sigma_0=0} - \frac{(1+\rho)\beta^3(r-n)^2}{2(1+n)N_0^2 c_0(0,0)}\frac{\partial \mathrm{Var}_0\left(\mathrm{E}_1[\varphi]\right)}{\partial \sigma_v^2}\Bigg|_{\sigma_v=\sigma_0=0}, \tag{44}$$

where E_0 and Var_0 are with respect to the distribution of P_1, conditional on P_0 and assuming $\sigma_0 = 0$.

Furthermore, under the additional assumption that certainty equivalent consumption does not vary with σ_0^2 and σ_v^2, the first terms on the right hand side of (43) and (44) are zero.[45]

Proof The derivation of (42) is straightforward. Since the derivations of (43) and (44) are similar, we only provide the latter. We may assume $\sigma_0 = 0$ for this derivation and proceed in the following 3 steps:

1. Since all income uncertainty is diversified in period 1, per capita consumption thereafter remains constant; we denote it by $\bar{c}(\sigma_v^2)$.[46] This allows us to express $\bar{c}(\sigma_v^2)$ as a function of $c_0(\sigma_v^2)$ and $\mathrm{E}_1[\varphi]$. Based on this expression we find $\mathrm{E}_0[c_0(\sigma_v^2)]$ and $\mathrm{Var}_0[c_0(\sigma_v^2)]$.

2. Implicitly differentiating (a Taylor expansion of) the standard first order condition we obtain an expression for $c_0^2(0,0)$ in terms of $\mathrm{E}_0[c_0(\sigma_v^2)]$ and $\mathrm{Var}[c_0(\sigma_v^2)]$ (and their derivatives).

3. Substituting in 2 the expressions derived in 1 concludes the proof.

[45] The first terms in (43) and (44) capture wealth effects associated with changes in σ_0^2 and σ_v^2, respectively. The second terms correspond to precautionary saving.

[46] Dependence on σ_0 is omitted since it is assumed equal to zero.

Next we spell out the details. Since all income uncertainty is eliminated in period 1, optimal consumption at that point in time will be equal to certainty equivalent consumption, so that (42) implies that

$$\bar{c}(\sigma_v^2) \equiv c_1 = \frac{r-n}{RN_1}\{F_1 + \mathrm{E}_1[\varphi]\}.$$

Substituting the budget constraint (34) and rearranging terms leads to:

$$\bar{c}(\sigma_v^2) = \frac{r-n}{1+n}\left[\frac{F_0+Y_0}{N_0} - c_0(\sigma_v^2) + \frac{1}{RN_0}\mathrm{E}_1[\varphi]\right].$$

It follows that:

$$\bar{\mu} \equiv \mathrm{E}_0[\bar{c}(\sigma_v^2)] = \frac{r-n}{(1+n)N_0}\left[F_0 + Y_0 + \beta\mathrm{E}_0[\varphi] - N_0 c_0(\sigma_v^2)\right], \tag{45}$$

$$\bar{\sigma}^2 \equiv \mathrm{Var}_0[\bar{c}(\sigma_v^2)] = \frac{(r-n)^2}{(1+n)^2 N_0^2}\beta^2\mathrm{Var}_0(\mathrm{E}_1[\varphi]). \tag{46}$$

The usual Euler equation for this problem is:

$$u'(c_0(\sigma_v^2)) = \mathrm{E}_0[u'(\bar{c}(\sigma_v^2))],$$

which, after taking a second order Taylor expansion on the right hand side around $\bar{\mu}(\sigma_v^2)$, becomes

$$u'(c_0(\sigma_v^2)) \simeq u'(\bar{\mu}(\sigma_v^2)) + \frac{1}{2}u'''(\bar{\mu}(\sigma_v^2))\bar{\sigma}^2(\sigma_v^2).$$

Implicitly differentiating the latter (approximate) identity with respect to σ_v^2, evaluating at $\sigma_v^2 = 0$ and noting that $\bar{\mu}(0) = c_0(0)$ and $\bar{\sigma}^2(0) = 0$ leads to

$$u''(c_0(0))c_0^1(0) \simeq u''(c_0(0))\bar{\mu}'(0) + \frac{1}{2}u'''(c_0(0))\frac{\partial\bar{\sigma}^2}{\partial\sigma_v^2}(0), \tag{47}$$

where $\bar{\mu}'$ and $\partial\bar{\sigma}^2/\partial\sigma_v^2$ denote the derivatives of $\bar{\mu}$ and $\bar{\sigma}^2$ with respect to σ_v^2. Substituting (45) and (46) in (47) and rearranging terms leads to (44). ∎

Corollary B.2 *Under the same assumptions (and notation) of the preceding proposition, in the case where certainty equivalent consumption does not depend on σ_0^2 and σ_v^2, we have:*

$$\Delta_{BU} = \frac{1}{2}(1+\rho)\frac{\beta(r-n)^2}{(1+n)N_0^2 c_0(0,0)^2}\frac{\partial\mathrm{Var}_0\left(Y_0 + \mathrm{E}_1[\varphi]\right)}{\partial\sigma_0^2}\bigg|_{\sigma_v=\sigma_0=0}\sigma_0^2, \tag{48}$$

$$\Delta_{IU} = \frac{1}{2}(1+\rho)\frac{\beta^3(r-n)^2}{(1+n)N_0^2 c_0(0,0)^2}\frac{\partial\mathrm{Var}_0\left(Y_0 + \mathrm{E}_1[\varphi]\right)}{\partial\sigma_v^2}\bigg|_{\sigma_v=\sigma_0=0}\sigma_v^2. \tag{49}$$

Proof Follows directly form (39), (40) and the preceding proposition. ∎

Lemma B.2 *Assume that* $\log P_t$ *follows a first order autoregressive process:*

$$\log P_t - \mu = \psi(\log P_{t-1} - \mu) + v_t, \tag{50}$$

with $-1 < \psi \leq 1$ *and the* v_t*'s i.i.d. normal with zero mean and variance* σ_v^2*. Let* $Q_t = Q_0(1+g)^t$*,* $t \leq T$ *and* $Y_t = P_t Q_t$*.*

Then

$$\mathrm{E}_1[P_{t+1}] = \begin{cases} P_1 \exp[\frac{1}{2}\sigma_v^2 t] & \text{if } \psi = 1, \\ P_1 \exp\left[(1-\psi^t)(\mu - \log(P_1)) + \frac{1}{2}\sigma_v^2 \frac{1-\psi^{2t}}{1-\psi^2}\right] & \text{if } \psi < 1. \end{cases}$$

We also have

$$\mathrm{E}_1[\varphi] = \begin{cases} Y_1 \frac{1-[\beta(1+g)\exp\frac{1}{2}\sigma_v^2]^T}{1-[\beta(1+g)\exp\frac{1}{2}\sigma_v^2]} & \text{if } \psi = 1, \\ Y_1 \sum_{t=0}^{T-1}[\beta(1+g)]^t \exp\left[(1-\psi^t)(\mu - \log(P_1)) + \frac{1}{2}\sigma_v^2 \frac{1-\psi^{2t}}{1-\psi^2}\right] & \text{if } \psi < 1. \end{cases} \tag{51}$$

Proof Applying (50) recursively leads to

$$\log(P_{t+1}) - \mu = \psi^t(\log(P_1) - \mu) + \psi^{t-1}v_2 + \psi^{t-2}v_3 + \ldots + v_{t+1}.$$

Taking exponentials on both sides and then expectations, and using the assumption of independent v's, leads to

$$\mathrm{E}_1[P_{t+1}] = \exp[\mu(1-\psi^t) + \psi^t \log(P_1)]\Pi_{i=1}^t \mathrm{E}[\exp(\psi^{t-i}v_{i+1})]$$

Using the well known expression for the moment generating function of a normal distribution, evaluating the resulting geometric sums and rearranging terms completes the the derivation of $\mathrm{E}_1[P_{t+1}]$. Deriving the expressions for $\mathrm{E}_1[\varphi]$ now is straightforward. ∎

Lemma B.3 *Let* v *be a Normal random variable with zero mean and variance* σ^2 *and define* $w = \sum_{i=1}^n c_i \exp[a_i v]$*, where the* c_i*'s and* a_i*'s are constants. Then:*

$$\left.\frac{\partial \mathrm{Var}[w]}{\partial \sigma^2}\right|_{\sigma^2=0} = \left[\sum_{i=1}^n c_i a_i\right]^2. \tag{52}$$

Proof Using the moment generating function of a Normal random variable we obtain

$$\begin{aligned} \mathrm{E}[w] &= \sum_i c_i \exp\left[\frac{1}{2}a_i^2\sigma^2\right], \\ \mathrm{E}[w^2] &= \sum_i c_i^2 \exp[2a_i^2\sigma^2] + 2\sum_{i<j} c_i c_j \exp\left[\frac{1}{2}(a_i + a_j)^2\sigma^2\right]. \end{aligned}$$

It follows that

$$\mathrm{Var}[w] = \sum_i c_i^2 \left(e^{2a_i^2\sigma^2} - e^{a_i^2\sigma^2}\right) + 2\sum_{i<j} c_i c_j \left(e^{\frac{1}{2}(a_i+a_j)^2\sigma^2} - e^{\frac{1}{2}(a_i^2+a_j^2)\sigma^2}\right).$$

Differentiating the above expression with respect to σ^2 and evaluating at $\sigma^2 = 0$ leads to (52). ∎

Proposition B.2 *Assume that the logarithm of the price process follows follows a first order autoregressive process:*

$$\log P_t - \mu = \psi(\log P_{t-1} - \mu) + v_t,$$

with the v_t's i.i.d. normal with mean μ_v and variance σ_v^2. We ignore the income effect associated with changes in σ_0 and σ_v. The remainder of the setup is the same as in section 6.1.1.

Then, if $\psi = 1$ the correction factors are given by:

$$\Delta_{BU} = \frac{1}{2}(1+\rho)\frac{R}{(1+n)}\left\{1 + \frac{1-\beta(1+g)}{1-\beta^{T+1}(1+g)^{T+1}}\left[\frac{F_0}{\mu_0}\right]\right\}^{-2} CV_0^2, \tag{53}$$

$$\Delta_{IU} = \frac{1}{2}(1+\rho)\frac{\beta(1+g)^2}{(1+n)}\left\{\frac{1-\{\beta(1+g)\}^T}{[1-\beta(1+g)]\frac{F_0}{\mu_0} + 1 - \{\beta(1+g)\}^{T+1}}\right\}^2 \sigma_v^2, \tag{54}$$

where $CV_0 = \sigma_0/\mu_0$.

If $\psi < 1$ the correction factors are given by:

$$\Delta_{BU} \simeq \frac{1}{2}(1+\rho)\frac{R}{(1+n)}\left\{\frac{\sum_{s=0}^{T}[\beta\psi(1+g)]^s \exp[(1-\psi^s)(\mu - \log\mu_{P,0})]}{\frac{F_0}{\mu_0} + \sum_{s=0}^{T}[\beta(1+g)]^s \exp[(1-\psi^s)(\mu - \log\mu_{P,0})]}\right\}^2 CV_0^2, \tag{55}$$

$$\Delta_{IU} \simeq \frac{1}{2}(1+\rho)\frac{R}{(1+n)\psi^2}\left\{\frac{\sum_{t=1}^{T}[\beta\psi(1+g)]^t \exp[(1-\psi^t)(\mu - \log\mu_{P,0})]}{\frac{F_0}{\mu_0} + \sum_{s=0}^{T}[\beta(1+g)]^s \exp[(1-\psi^s)(\mu - \log\mu_{P,0})]}\right\}^2 \sigma_v^2. \tag{56}$$

Proof We derive (55), of which (53) is a particular case.[47] The derivation of (54) and (56) is analogous. From (49) it follows that to derive (55)) it suffices to calculate $c_0(0,0)$ and $\partial\mathrm{Var}_0\left(\mathrm{E}_1[\varphi]\right)/\partial\sigma_v^2$ evaluated at $\sigma_0^2 = \sigma_v^2 = 0$.

From (42) and a slight modification of (51), evaluated at $\sigma_0 = \sigma_v = 0$, we have:

$$c_0(0,0) = \frac{r-n}{RN_0}\left\{F_0 + \mu_0 + \mu_0\sum_{t=0}^{T-1}[\beta(1+g)]^{t+1}e^{(1-\psi^{t+1})(\mu-\log(P_0))}\right\}$$

and hence

$$c_0(0,0) = \frac{r-n}{RN_0}\left\{F_0 + \mu_0\sum_{s=0}^{T}[\beta(1+g)]^s e^{(1-\psi^s)(\mu-\log(P_0))}\right\}. \tag{57}$$

[47] Strictly speaking, L'Hopital's rule must be invoked to go from (55) to (53).

Next we determine $\partial \mathrm{Var}_0\left(\mathrm{E}_1[\varphi]\right)/\partial\sigma_v^2$ evaluated at $\sigma_v^2 = 0$. Substituting $\psi(\log(P_0) - \mu) + v_1$ for $\log(P_1) - \mu$ in (51) leads to

$$\mathrm{Var}_0\left(\mathrm{E}_1[\varphi]\right) = (1+g)^2 Y_0^2 \mathrm{Var}_0\left[\sum_{t=0}^{T-1} c_t e^{a_t v_1}\right]$$

with

$$\begin{aligned} c_t &= [\beta(1+g)]^t e^{(1-\psi^{t+1})(\mu-\log(P_0))+\frac{1}{2}\sigma_v^2\frac{1-\psi^{2t}}{1-\psi^2}}, \\ a_t &= \psi^t. \end{aligned}$$

It now follows from (52) that

$$\left.\frac{\partial \mathrm{Var}_0\left(\mathrm{E}_1[\varphi]\right)}{\partial\sigma_v^2}\right|_{\sigma_v=\sigma_0=0} = (1+g)^2 Y_0^2 \left[\sum_{t=0}^{T-1}[\beta\psi(1+g)]^t \exp[(1-\psi^{t+1})(\mu - \log\mu_{P,0})]\right]^2. \tag{58}$$

Substituting (57) and (58) into (49) and rearranging terms completes the proof. ∎

Proposition B.3 *Assume the price of oil follows a geometric random walk with variance of innovations σ_v^2 and drift such that $\mathrm{E}_t[P_{t+1}] = P_t$.*[48] *Then the expressions (53) and (54) are also valid in this case.*

Proof Similar to that of the preceding proposition. The main difference ins that in this case the first term on the right hand side of (43) and (44) is not being ignored, since it is equal to zero. ∎

Proposition B.4 *Consider the setup described in section 6.1.1 with two income sources (oil and gas), with extraction rates Q_t^O and Q_t^G, respectively. Assume that the price of oil, P_t^O, follows a geometric random walk with drift such that $\mathrm{E}_t[P_{t+1}^O] = P_t^O$ and the price of gas, P_t^G, satisfies $P_t^G = \alpha_0 + \alpha_1 P_t^O$. Then*

$$c_0(0,0) = \frac{r-n}{RN_0}\left\{F_0 + \frac{1-[\beta(1+g^O)]^{T^O+1}}{1-[\beta(1+g^O)]}\mu_0^O + \frac{1-[\beta(1+g^G)]^{T^G+1}}{1-[\beta(1+g^G)]}\mu_0^G\right\}, \tag{59}$$

where g^O and g^G denote the growth rates of oil and gas extraction, T^O and T^G the period where oil and gas reserves are exhausted, and μ_0^O and μ_0^G oil and gas income estimated for year 0.

We also have

$$\left.\frac{\partial \mathrm{Var}_0(Y_0 + \beta\mathrm{E}_1[\varphi])}{\partial\sigma_0^2}\right|_{\sigma_v=\sigma_0=0} = \left\{f^O\frac{1-[\beta(1+g^O)]^{T^O+1}}{1-\beta(1+g^O)} + f^G\frac{1-[\beta(1+g^G)]^{T^G+1}}{1-\beta(1+g^G)}\right\}^2, \tag{60}$$

[48] This assumption, which is equivalent to having a drift equal to $-\frac{1}{2}\sigma_v^2$, ensures that changes in σ_0 and σ_v induce no income effects.

where $f^O = Q_0^O/(Q_0^O + \alpha_1 Q_0^G)$, $f^G = 1 - f^O$ *and* Var_0 *is with respect to the distribution of* Y_0, *assuming* $\sigma_v = 0$, *and*

$$\left.\frac{\partial \mathrm{Var}_0(\mathrm{E}_1[\varphi])}{\partial \sigma_v^2}\right|_{\sigma_v=\sigma_0=0} = \left\{ Q_1^O \frac{1-[\beta(1+g^O)]^{T^O}}{1-\beta(1+g^O)} + \alpha_1 Q_1^G \frac{1-[\beta(1+g^G)]^{T^G}}{1-\beta(1+g^G)} \right\}^2 (P_0^O)^2. \tag{61}$$

where Var_0 *is with respect to the distribution of* P_1 *conditional on* P_0, *assuming* $\sigma_0 = 0$.

Expressions (60) and (61) can be used to calculate $c_0^1(0,0)$ *and* $c_0^2(0,0)$ *so as to apply Corollary B.2 to find an approximation for* $c_0(\sigma_0^2, \sigma_v^2)$. ∎

Proof The derivation of (59) is similar to that of (42) because of linearity of the expectations operator. Since the proofs of (61) and (60) are similar, we only provide the latter.

Linearity of the expectations operator and (51) lead to

$$\mathrm{Var}_0(Y_0 + \beta \mathrm{E}_1[\varphi]) = \left\{ Q_0^O \frac{1-[\beta(1+g^O)]^{T^O+1}}{1-\beta(1+g^O)} + \alpha_1 Q_0^G \frac{1-[\beta(1+g^G)]^{T^G+1}}{1-\beta(1+g^G)} \right\}^2 \sigma_{P,0}^2. \tag{62}$$

Since

$$\begin{aligned} \sigma_0^2 &= \mathrm{Var}[Y_0] \\ &= \mathrm{Var}[P_0^O Q_0^O + (\alpha_0 + \alpha_1 P_0^O) Q_0^G] \\ &= \mathrm{Var}[P_0^O Q_0^O + \alpha_1 P_0^O Q_0^G] \\ &= [Q_0^O + \alpha_1 Q_0^G]^2 \sigma_{P,0}^2, \end{aligned}$$

the expression obtained in (62) leads to

$$\mathrm{Var}_0(Y_0 + \beta \mathrm{E}_1[\varphi]) = \left\{ f^O \frac{1-[\beta(1+g^O)]^{T^O+1}}{1-\beta(1+g^O)} + f^G \frac{1-[\beta(1+g^G)]^{T^G+1}}{1-\beta(1+g^G)} \right\}^2 \sigma_0^2. \tag{63}$$

Differentiating the latter identity with respect to σ_0^2 yields (60). ∎

C Adjustment Costs

Proposition C.1 *Consider the optimal consumption problem with certain income:*

$$\max_{c_t} \sum_{t \geq 0} \tilde{\beta}^t \left[u(c_t) - k(l_t - l_{t-1})^2 \right], \tag{64}$$

$$s.t. \quad \sum_{t \geq 0} \beta^t C_t = \mathcal{W}_0, \tag{65}$$

where β *denotes the subjective discount rate, which is assumed equal to the inverse of the gross interest rate* ($R\beta = 1$), *population in period* t *is* $N_t = (1+n)^t$, $\tilde{\beta} = \beta(1+n) < 1$, C_t *denotes period*

t consumption, $c_t = C_t/N_t$, $u(c) = c^{1-\rho}/(1-\rho)$ *for* $\rho > 0$, $\rho \neq 1$ *and* $\log c$ *for* $\rho = 1$, $l_t = \log(c_t)$ *and* $\mathcal{W}_0$ *denotes initial wealth.*

Denote by c^* *the solution the problem above when* $k = 0$ *(see Proposition A.1) and let* $l^* = \log c^*$. *Then solving (64) subject to (65) is equivalent to solving*

$$\min_{l_t} \sum_{t\geq 0} \tilde{\beta}^t \left[(l_t - l^*)^2 + \mathcal{O}((l_t - l^*)^3) + \tilde{k}(l_t - l_{t-1})^2\right], \tag{66}$$

subject to no budget constraint, with

$$\tilde{k} = \frac{2k}{\rho[c^*]^{1-\rho}}. \tag{67}$$

Proof Taking a second order Taylor expansion around c^* for $u(c_t)$ in (64) and noting that, due to the budget constraint (65), the term in the objective function that is linear in $c_t - c^*$ adds up to zero, we have that the problem is (approximately) equivalent to solving

$$\max_{c_t} \sum_{t\geq 0} \tilde{\beta}^t \left[\frac{1}{2}u''(c^*)(c_t - c^*)^2 - k(l_t - l_{t-1})^2\right] \tag{68}$$

subject to no budget constraint.

A second order Taylor expansion for $\exp[l_t]$ around l^* yields:

$$\begin{aligned} c_t - c^* &= e^{l_t} - e^{l^*} \\ &\simeq c^*(l_t - l^*)\left[1 + \frac{1}{2}(l_t - l^*)\right], \end{aligned}$$

so that

$$(c_t - c^*)^2 \simeq [c^*]^2(l_t - l^*)^2.$$

Substituting this approximation in (68) leads to (66) and (67). ∎

Proposition C.2 *Given values of* l_{-1} *and* l^* *consider the problem*

$$\min_{l_t} \sum_{t\geq 0} \tilde{\beta}^t \left[(l_t - l^*)^2 + \tilde{k}(l_t - l_{t-1})^2\right], \tag{69}$$

with $\tilde{\beta} < 1$. *Define*

$$\alpha = \frac{1 - \tilde{k}(1-\tilde{\beta}) + \sqrt{1 + 2\tilde{k}(1+\tilde{\beta}) + \tilde{k}^2(1-\tilde{\beta})^2}}{1 + \tilde{k}(1+\tilde{\beta}) + \sqrt{1 + 2\tilde{k}(1+\tilde{\beta}) + \tilde{k}^2(1-\tilde{\beta})^2}}. \tag{70}$$

Then the optimal logarithm of per capita consumption in period 0, l_0, *is determined by*

$$l_0 - l_{-1} = \alpha(l^* - l_{-1}). \tag{71}$$

We also have that $0 < \alpha < 1$, *in fact:*

$$\frac{1}{\tilde{k}+1} \leq \alpha \leq \frac{\sqrt{1+4\tilde{k}} - 1}{2\tilde{k}}. \tag{72}$$

Proof This is a well known result, see, for example, Rotemberg (1982) for a considerably more general case. The lower and upper bounds for α in (72) follow from showing that α is increasing in $\tilde{\beta}$ and evaluating α at $\tilde{\beta} = 0$ and $\tilde{\beta} = 1$. ∎

Corollary C.1 *Since there is no income uncertainty, the two preceding propositions can be easily extended to the case of* asymmetric *quadratic adjustment costs, so that:*

$$\textit{Cost of adjusting from } l_{-1} \textit{ to } l_0 = \begin{cases} k^+(l_t - l_{t-1})^2, & \textit{if } l_t > l_{t-1}, \\ k^-(l_t - l_{t-1})^2, & \textit{if } l_t < l_{t-1}. \end{cases}$$

Now there will be two values for $\tilde{k}$, $\tilde{k}^+$ and $\tilde{k}^-$, depending on whether per capita consumption increases or decreases. Both of them can be obtained from an expression analogous to (67). The optimal policy continues being of partial adjustment, but the speed of adjustment now depends on whether per capita consumption increases (α^+) or decreases (α^-). Expressions for α^+ and α^- are obtained by substituting $\tilde{k}^+$ and $\tilde{k}^-$ in (70).

Proof Straightforward. ∎

Proposition C.3 *In the setting of the preceding corollary, being indifferent between*

- *the adjustment cost associated this period with an* increase *in per capita expenditure of* $100 \times s_a$ *percent*

and

- *the welfare improvement, in the absence of adjustment costs, associated with a* $100 \times s_{na}$ *percent increase in per capita expenditure*

implies that

$$\tilde{k}^+ \simeq \frac{2s_{na}}{\rho s_a^2}. \tag{73}$$

A similar comparison, with a decrease *in per capita expenditure in the first statement, leads to an analogous expression for $\tilde{k}^-$.*

Proof The welfare loss associated with the first statement is equal to ks_a^2, where we are using the equivalence result in Proposition C.1.

Let $c > c_0$ denote the two per capita consumption levels mentioned in the second statement, and l and l_0 their logarithms. Then

$$\begin{aligned} u(c) - u(c_0) &\simeq u'(c_0)(c - c_0) \\ &= u'(c_0)\left[e^l - e^{l_0}\right] \\ &\simeq u'(c_0)e^{l_0}(l - l_0) \\ &= u'(c_0)c_0 s_{na}. \end{aligned}$$

It follows that

$$ks_a^2 \simeq u'(c_0)c_0 s_{na}.$$

Using (67) to substitute $\tilde{k}$ for k in the expression above (and, strictly speaking, assuming $c_0 = c^*$) leads to (73). ∎

TABLE 5.1

ADF AND PP TESTS

	1957.I–1999.II	1974.I–1999.II	1986.I–1999.II
ADF no trend	−1.77	−2.60*	−3.42**
ADF with trend	−1.69	−3.83**	−3.52***
PP no trend	−1.65	−2.56	−3.93***
PP with trend	−1.52	−4.57***	−4.25***

Note: *, **, and *** = significant at 10, 5, and 1% respectively.

TABLE 5.2

P-VALUES NON-LINEAR ADJUSTMENT TEST

	1957.I–1999.II	1974.I–1999.II	1986.I–1999.II
$d = 1$	0.12 (1)	0.02 (1)	0.10 (1)
$d = 2$	0.56 (1)	0.14 (1)	0.19 (2)
$d = 3$	0.40 (1)	0.40 (1)	0.12 (2)

Note: In parenthesis the value of k that yields white noise.

TABLE 5.3

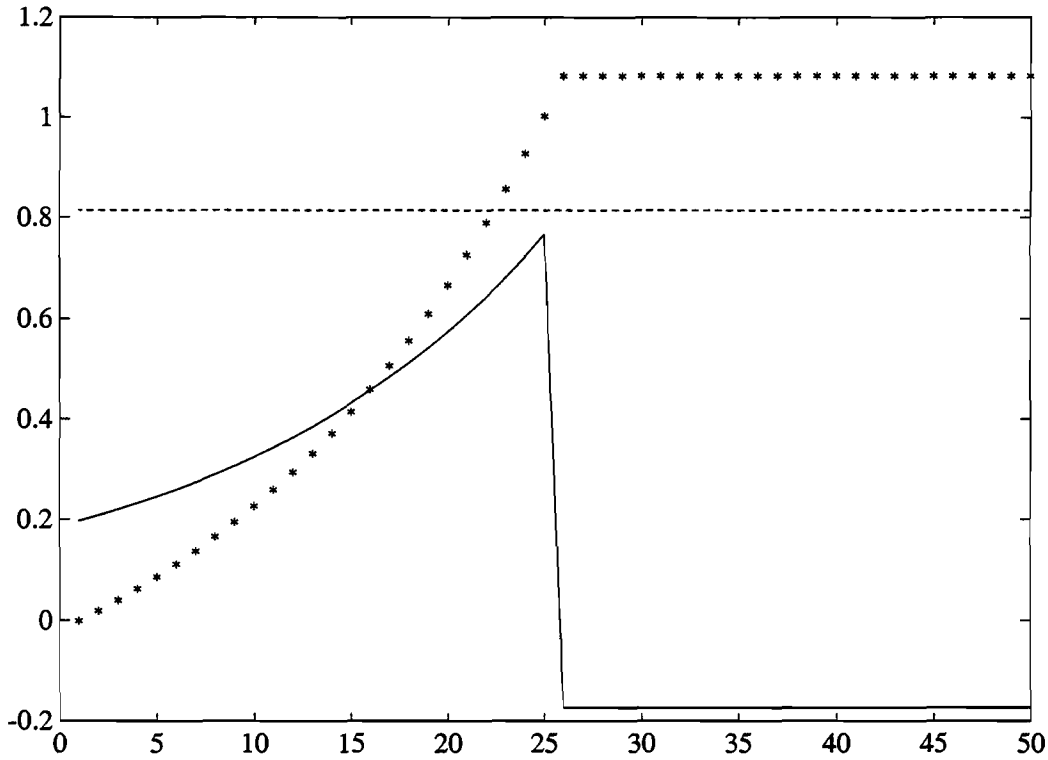
ONE AND TWO YEAR AHEAD FORECAST RMSE

		Short sample		Long sample	
		1 year	2 years	1 year	2 years
1	Random walk, no drift	15.6%	20.4%	15.6%	20.4%
2	Random walk, with drift	17.2%	20.3%	16.0%	22.5%
3	ARIMA(2,1,2)	17.0%	21.8%	12.7%	13.3%
4	ARIMA(2,1,2), with dummy	13.8%	16.2%	16.3%	23.6%
5	AR(1)	18.2%	21.6%	25.5%	21.6%
6	BN Decomposition	15.0%	21.0%	17.1%	21.6%
7	Kalman ψ_t RW, no trend	22.7%	34.6%	15.8%	21.2%
8	Kalman ψ_t RW, with trend	39.1%	77.0%	27.7%	48.3%
9	Kalman ψ_t AR, no trend	18.5%	28.1%	16.7%	20.4%
10	Kalman ψ_t AR, with trend	30.7%	61.7%	19.0%	24.5%
11	Kalman α_t and δ_t AR	–	–	15.0%	21.0%
12	Kalman ψ_t RW weekly data	23.1%	22.3%	–	–
13	ESTAR $d = 1$	18.5%	22.2%	19.9%	21.1%
14	Future Prices	22.0%	–	22.0%	–
15	Survey Data	14.0%	–	14.0%	–

Note: Root mean square error of one and two year ahead forecasts of a rolling sample with one year increment. One year includes 5 forecast points whereas two year includes 4 forecast points. Short sample refers to 1986.I-1999.II whereas long sample refers to 1974.I-1999.II. Model **11** has problems in converging in the small sample.

FIGURE 4.1

Consumption, current account and financial assets with constant non-oil production

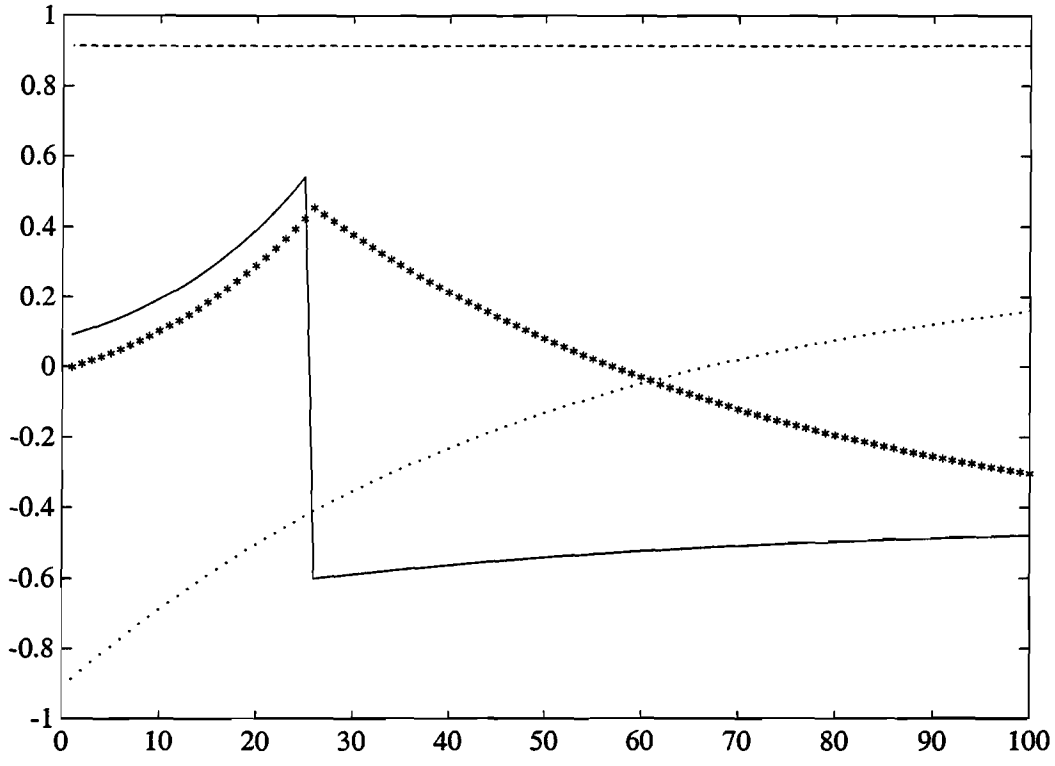


Note to Figure 4.1: The figure shows the optimal paths of normalized consumption (- - -), normalized financial assets (***) and the current account as a fraction of GDP (—) under the assumptions of the benchmark model.

The following assumptions are made: no population growth ($n = 0$), $R = 1.06$, $\beta R = 1$, no initial financial assets ($W_1 = 0$), the optimal mix of the public and private goods requires that the former represent 20% of total consumption, initial oil production, which accrues to the government, accounts for 80% of GDP, while the remaining 20% is produced by the private sector. Oil production remains constant (in real terms) for 25 periods, moment at which oil reserves are exhausted. Production in the non-oil sector remains constant indefinitely.

FIGURE 4.2

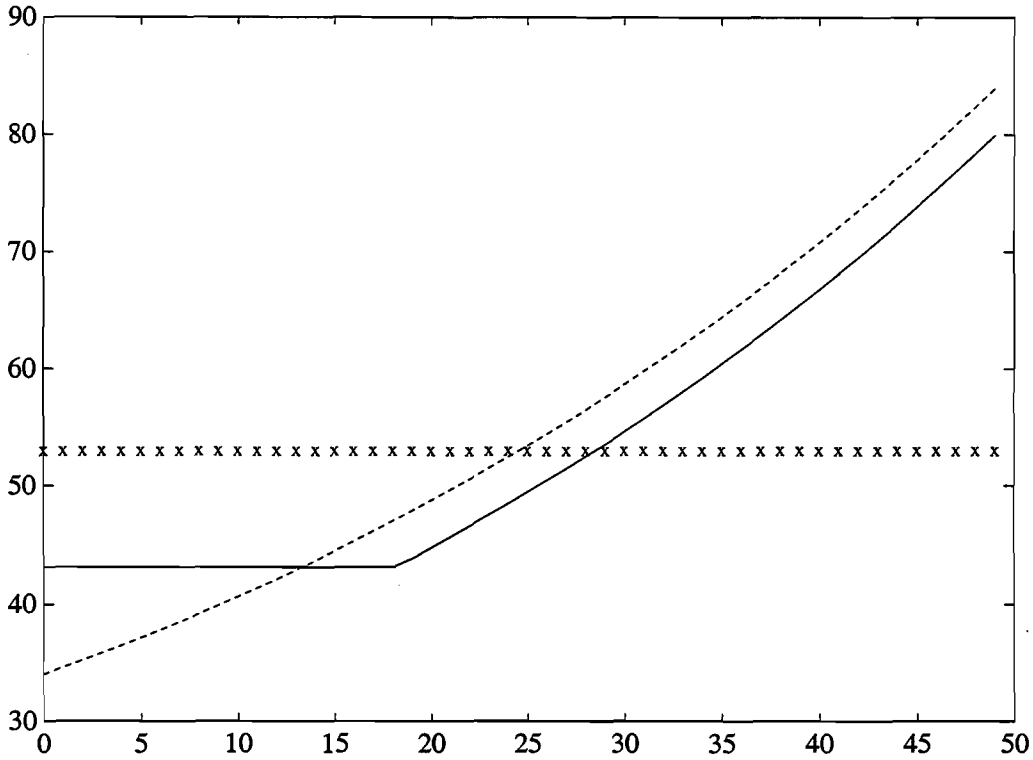
Consumption, current account, financial assets and taxes with increasing non-oil production



Note to Figure 4.2: The figure shows the optimal paths of normalized consumption (- - -), normalized financial assets as a fraction of non-oil GDP (***), the current account as a fraction of GDP (—) and taxes as a fraction of non-oil GDP (···) under the assumptions of the benchmark model. The normalizing constants and the parameters are the same as in Figure 4.1, with the exception that non-oil production increases at an annual rate of 2%.

FIGURE 4.3

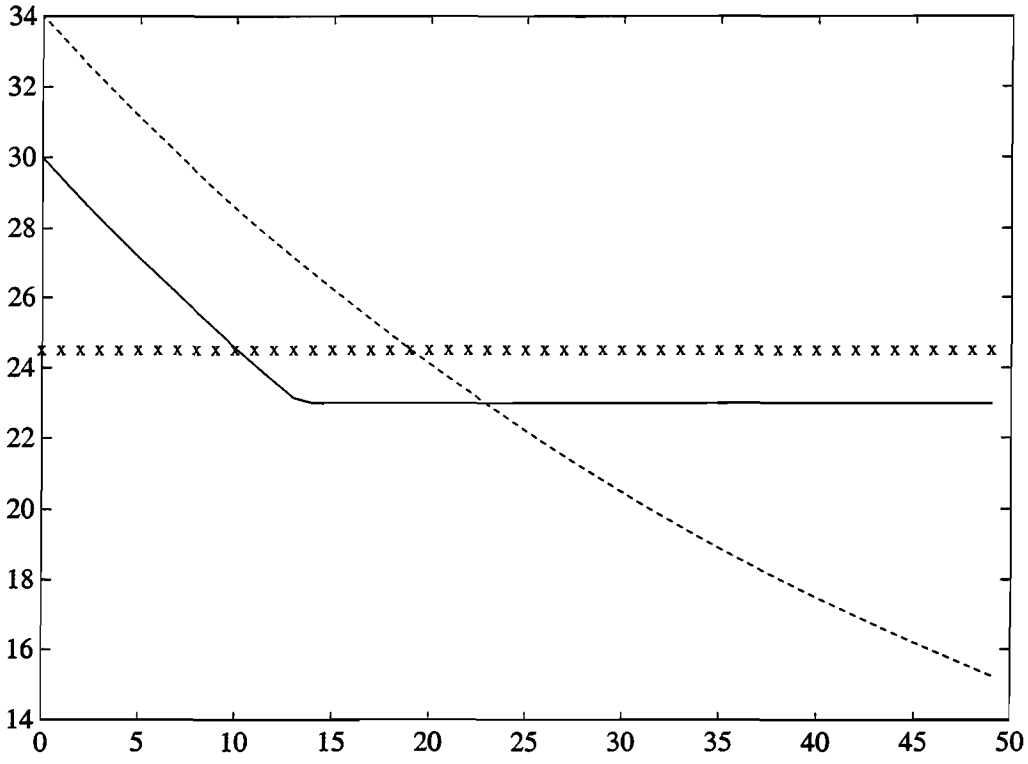
Optimal Consumption Path for Alternative Models with Increasing Non-Oil GDP



Note to Figure 4.3: The figure shows the optimal paths of consumption for the Benchmark Model (xxx), the Permanent Oil Income Model (- - -) and the Conditionally Normative Model (—). Parameter values: no population growth; $R = 1.04$, $\beta R = 1$, initial oil wealth: 100; initial non-oil GDP: 30; non-oil GDP grows 2% per period for 50 periods and then remains constant forever.

FIGURE 4.4

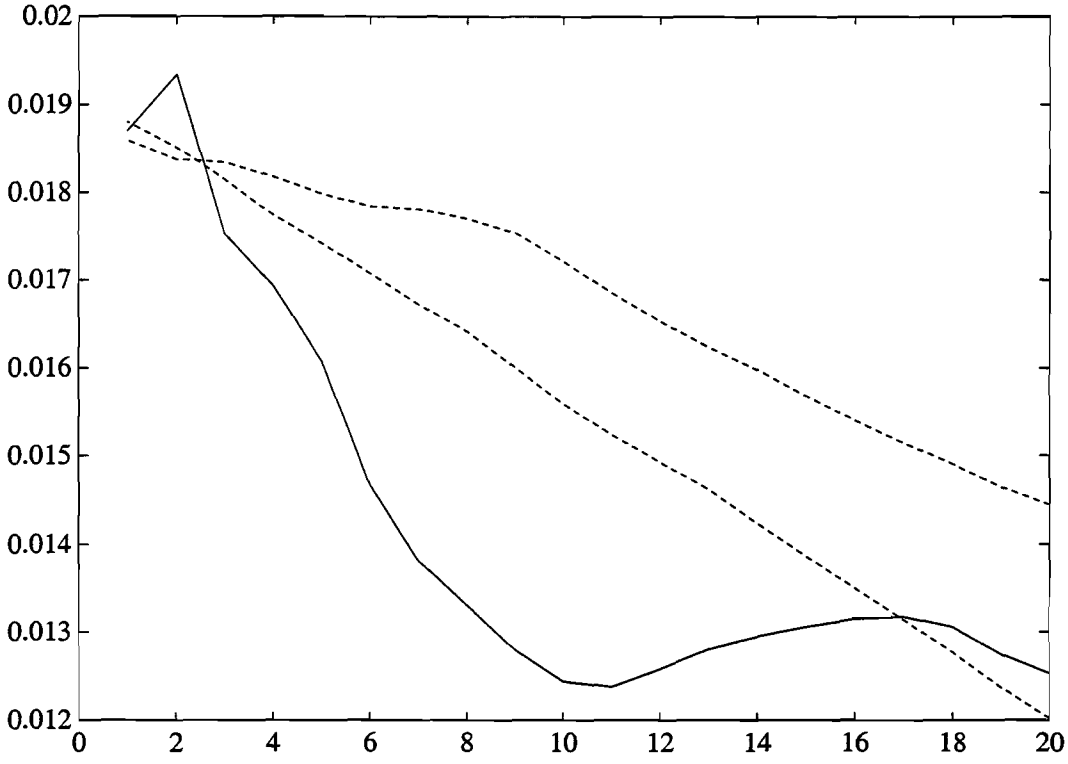
Optimal Consumption Path for Alternative Models with Decreasing Non-Oil GDP



Note to Figure 4.4: The figure shows the optimal paths of consumption for the Benchmark Model (xxx), the Permanent Oil Income Model (- - -) and the Conditionally Normative Model (—). Parameter values: the only difference with Figure 4.3 is that non-oil GDP *decreases* 2% per period during the first 50 periods.

FIGURE 5.1

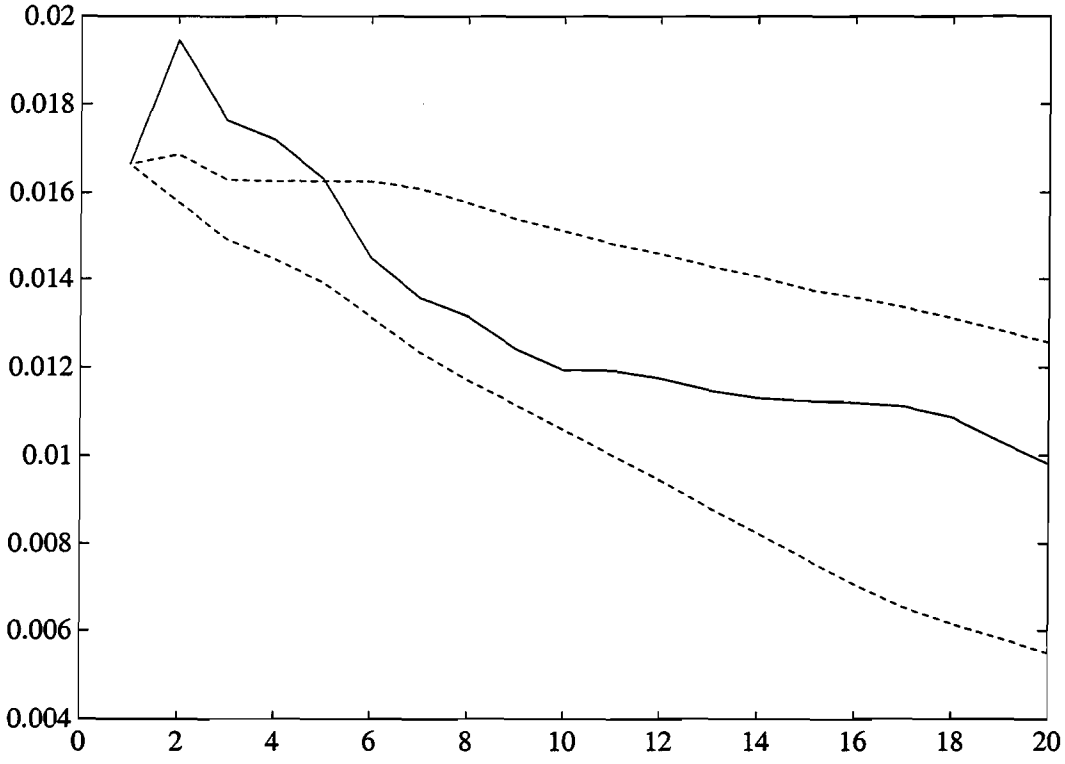
Variance Ratio Test: 1957–1998



Note to Figure 5.1: The figure shows the results of the Variance Ratio tests for the sample 1957–1998 [solid line (—)]. The dashed lines (- - -) show the results of a Montecarlo exercise (with 1000 replications) assuming that the true process is a geometric random walk and a AR(1) with autoregressive coefficient equal to the sample estimate.

FIGURE 5.2

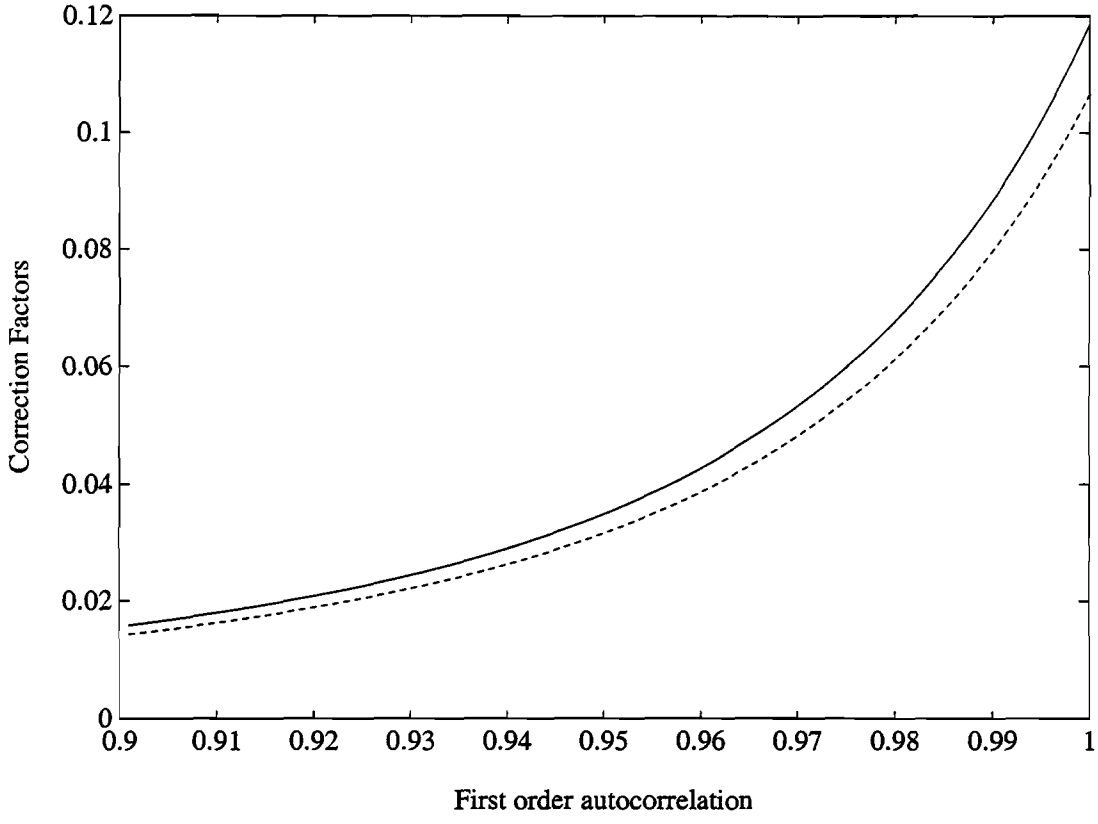
Variance Ratio Test: 1974–1998



Note to Figure 5.2: The figure shows the results of the of the Variance Ratio tests for the sample 1974–1998 [solid line (—)]. The dash lines (- - -) show the results of a Montecarlo exercise (with 1000 replications) assuming that the true process is a geometric random walk and a AR(1) with autoregressive coefficient equal to the sample estimate.

FIGURE 6.1

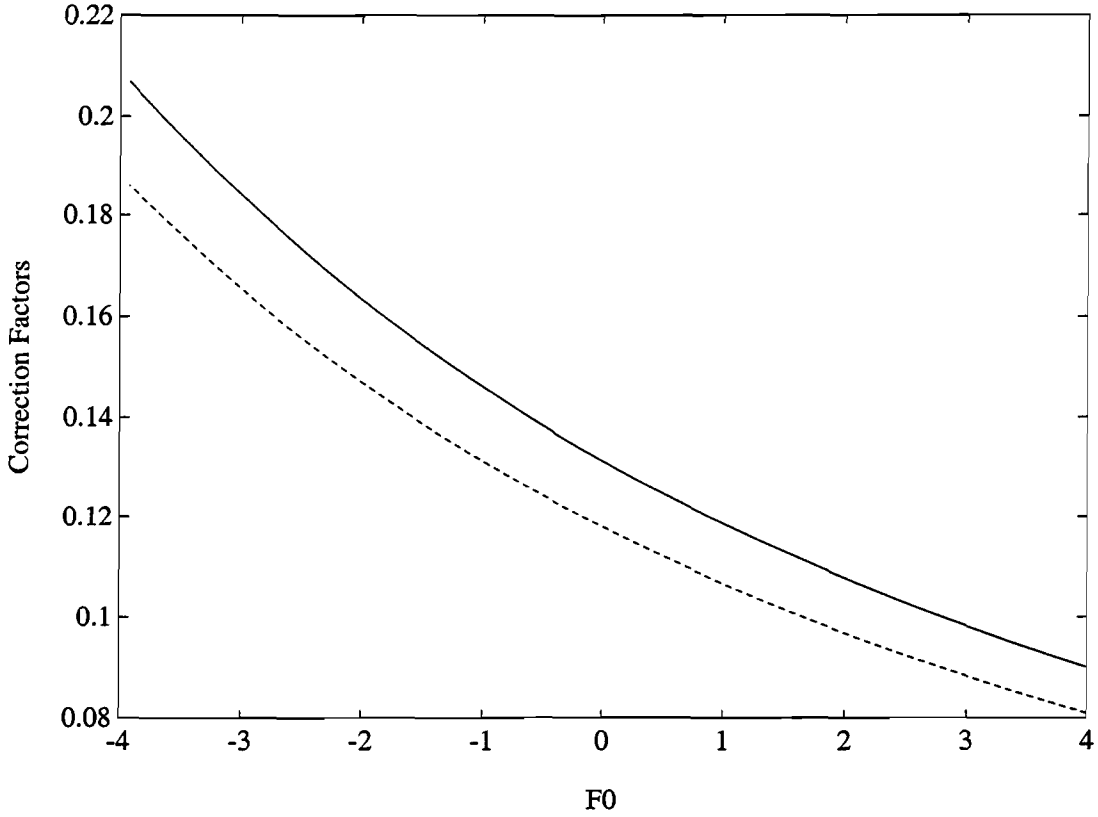
Correction Factors and Shock Persistence



Note to Figure 6.1: The figure shows the correction factors Δ_{BU} (—) and Δ_{IU} (- - -) for different autoregressive coefficients ψ. The rest of the parameters correspond to those of example 6.1.

FIGURE 6.2

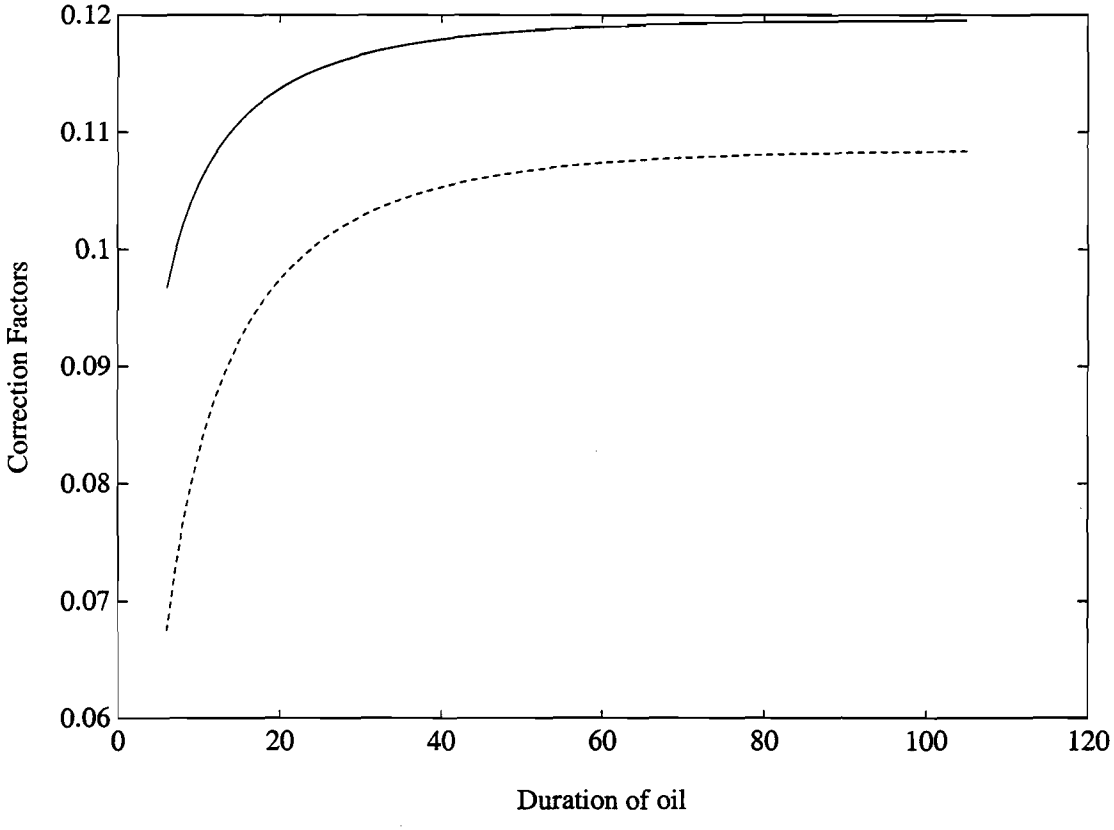
Correction Factors and Initial Financial Assets



Note to Figure 6.2: The figure shows the correction factors Δ_{BU} (—) and Δ_{IU} (- - -) for different levels of initial financial assets (scaled by expected income in the first year). The rest of the parameters correspond to those of example 6.1.

FIGURE 6.3

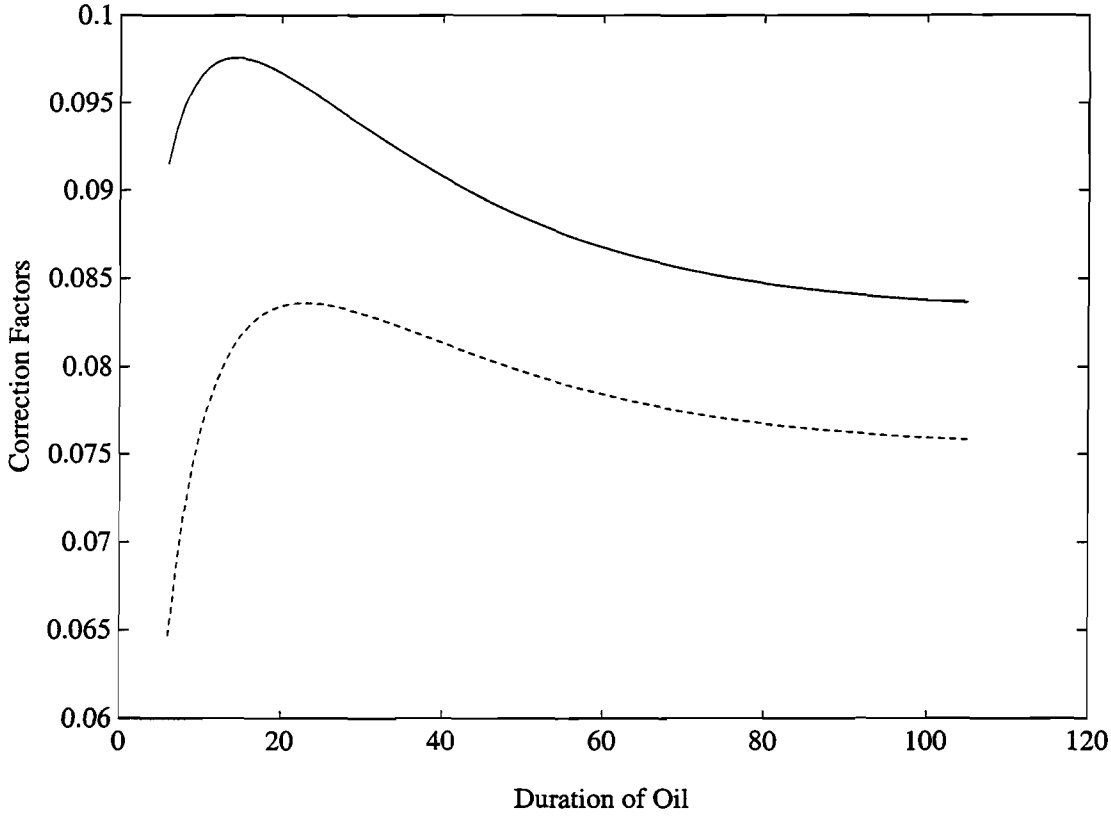
Correction Factors and Resource Duration



Note to Figure 6.3: The figure shows the correction factors Δ_{BU} (—) and Δ_{IU} (- - -) for different resource duration T. The rest of the parameters correspond to those of example 6.1.

FIGURE 6.4

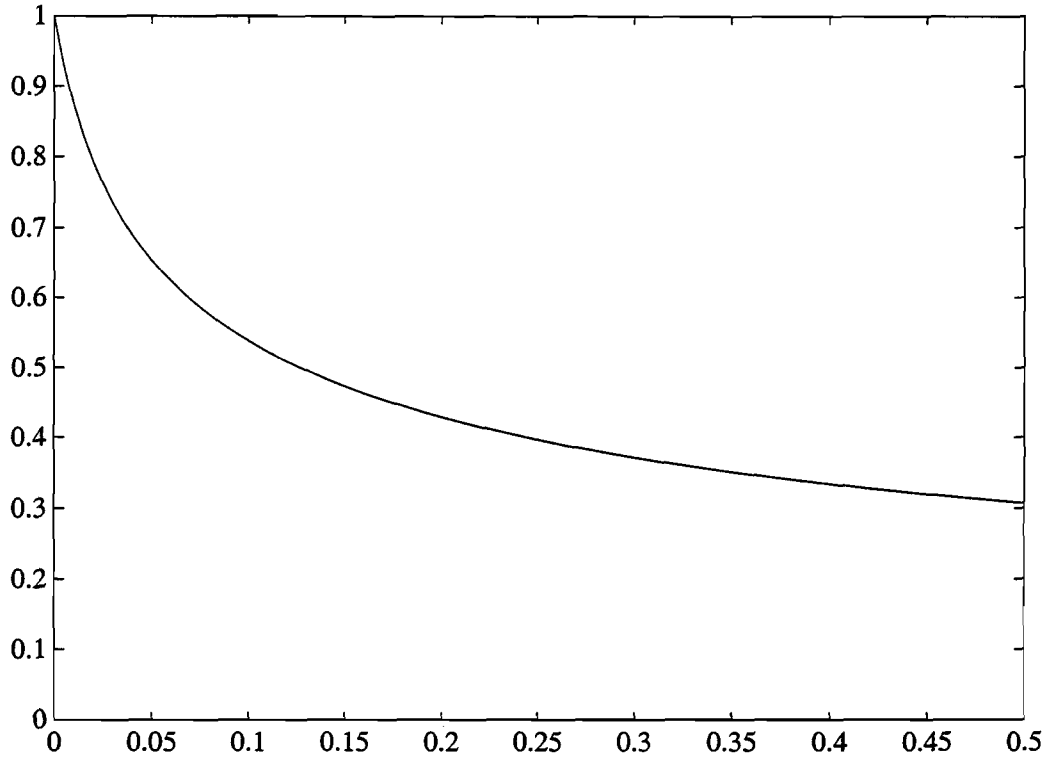
Correction Factors and Resource Duration



Note to Figure 6.4: The figure shows the correction factors Δ_{BU} (—) and Δ_{IU} (- - -) for different resource duration T and $\psi = 0.99$. The rest of the parameters correspond to those of example 6.1.

FIGURE 6.5

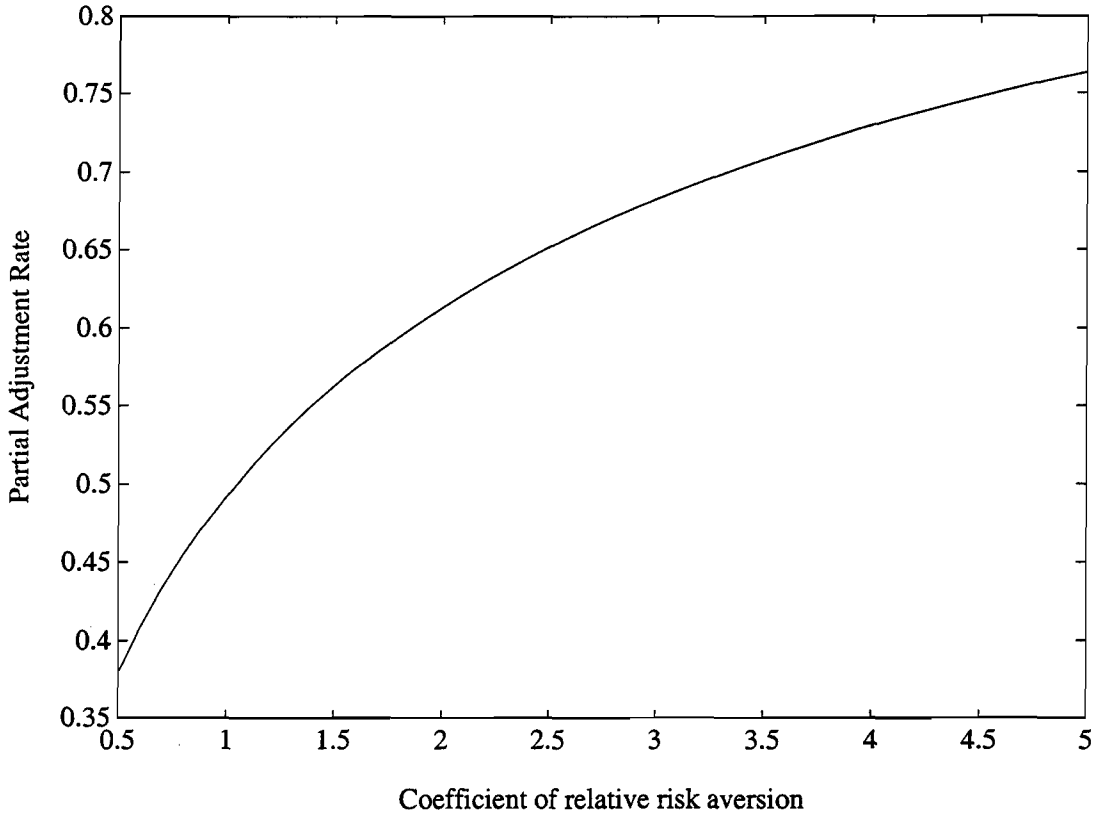
Partial Adjustment Coefficient and Adjustment Cost



Note to Figure 6.5: The figure shows the partial adjustment coefficient for different values of the adjustment cost (s_{na}) for an adjustment (s_a) of 0.20 The rest of the parameters correspond to those of example 6.5.

FIGURE 6.6

Partial Adjustment Coefficient and Risk Aversion



Note to Figure 6.6: The figure shows the partial adjustment coefficient for different values of the coefficient of relative risk aversion (ρ) assuming $s_{na} = 0.04$ and $s_a = 0.20$. The rest of the parameters correspond to those of example 6.5.

COORDINACIÓN DE POLÍTICAS MONETARIA Y FISCAL BAJO INSTITUCIONES QUE LIMITAN SU ACTUACIÓN

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* Banco de México. Las opiniones expresadas y errores cometidos son completamente atribuibles al autor y no necesariamente son compartidas por la institución en que labora. Versión preliminar. Se agradecen todos los comentarios a: rgamboa@banxico.org.mx

Este artículo analiza la coordinación que deben tener los responsables de las políticas monetaria y fiscal ante reglas o instituciones que impongan restricciones al uso discrecional de alguna de estas políticas. El artículo presenta los instrumentos y objetivos de cada una de estas políticas, en ausencia de restricciones. De la revisión de la literatura y, concentrándose en la estabilización macroeconómica de corto plazo, en este trabajo se establece la asignación de objetivos que corresponde a cada autoridad. Posteriormente, se analizan los efectos que tiene cada una de estas políticas sobre la otra, con base en el caso de México. Derivado de los efectos que tiene una política sobre los instrumentos o los objetivos de la otra, se desprende la necesidad de que se coordinen los responsables. En la tercera sección, se revisan algunas instituciones que constriñen a la política monetaria y lo que ello implica para la mejor actuación de la política fiscal, y viceversa. En particular, se revisan regímenes cambiarios y las reglas que establecen límites al déficit o la deuda. Se concluye con una evaluación de las alternativas más viables en la actualidad.

1. Instrumentos y Objetivos de las políticas

Blanchard y Fischer (1989) señalan que la política fiscal tiene como instrumentos para realizar su operación el nivel de gasto público y cómo se financia éste, ya sea con impuestos, préstamos o imprimiendo billetes. Por su parte, la política monetaria tiene control sobre la oferta de dinero, y a través de ésta, determina las tasas de interés y el tipo de cambio. Se podría agregar a la lista de instrumentos de política fiscal la composición del gasto del gobierno (Frenkel y Razin, 1987, y Alesina y Perotti, 1997).

Con los instrumentos antes mencionados, la política fiscal tiene como posibles objetivos: cubrir los servicios y proveer los bienes que no ofrecen los privados minimizando las distorsiones que requiera su financiamiento; mejorar la distribución del ingreso; estabilizar la economía; promover el crecimiento económico (Tanzi, ¿?); contribuir a alcanzar un nivel de déficit de cuenta corriente o de ahorro interno, así como un cierto tipo de cambio real.

Por su parte, entre los objetivos que en la literatura se han señalado para la política monetaria se encuentran: el mantener un nivel de precios o de inflación; controlar la expansión de la demanda agregada de acuerdo a la capacidad productiva del país; asegurar un tipo de cambio determinado, ya sea como un valor dado o una banda dentro de la cual éste se puede mover libremente; así como procurar que se logre un equilibrio u objetivo en la cuenta corriente o en el ahorro interno.

La tarea fundamental de todo gobierno es proveer bienes y servicios que el sector privado no aportaría, cuando menos en una cantidad suficiente. La intervención del sector público puede contribuir a que se alcance una producción eficiente de bienes en aquellas funciones en que existen fallas de mercado. Generalmente, el gobierno debe recurrir a impuestos que alteran las decisiones tomadas por los agentes. Dichas distorsiones en la recaudación de impuestos representan un costo para la sociedad al que el gobierno tiene que agregar los recursos utilizados para producir y distribuir un bien o servicio para decidir si conviene a la sociedad que el Estado lo provea o si el beneficio colectivo es mayor dejándolo a un privado o careciendo de éste. De lo anterior, la autoridad fiscal debe evaluar cuáles son aquellas funciones que debe atender el sector público y determinar la forma menos distorsionante en que debe financiarse.

Las autoridades fiscales deben recoger el mandato de la sociedad en cuanto a la redistribución del ingreso que debe efectuar. Para ello, debe adecuar el diseño de los impuestos y la selección de sus

programas de gasto. Generalmente, la redistribución del ingreso es posible sólo a costa de un sacrificio en la eficiencia con el que opera la economía.[1]

La estabilización económica consiste en procurar que las variaciones en el nivel del ingreso no sean muy pronunciadas. La intervención pública en esta función se basa en dos fallas de mercado que son, en orden cronológico, 1) la falta o el exceso de crecimiento de la demanda agregada, lo que hace que difiera el valor del empleo del costo de oportunidad para los trabajadores de estar desempleados; y, 2) la ausencia de mercados que aseguren a la población en contra de dichas fluctuaciones. Aunque economistas muy respetados no creen en la primer falla, es decir, en el desempleo involuntario, esta función se desarrolló precisamente para enfrentar dicho problema.

El esquema utilizado para entender y evaluar las acciones de política que deben tomarse es el keynesiano, el cual sigue siendo el más utilizado por los encargados de las políticas económicas, y recientemente, después de un profundo estudio de sus bases microeconómicas, también por los investigadores del campo de la estabilización económica. Más abajo, cuando se aborde la coordinación entre la política fiscal y monetaria, estudiaremos en detalle el modelo keynesiano aplicado a una economía abierta, es decir, el Mundell-Fleming.

La cuarta meta señalada para la política fiscal es la promoción del crecimiento económico, lo cual se logra, presumiblemente si la autoridad fiscal se aboca al primero de los objetivos, es decir, procurando incrementar la eficiencia con que opera la economía; en particular, orientando sus políticas a hacer más rentable el ahorro y la inversión, eliminando distorsiones que encarecen el costo de uso de capital, reducen el rendimiento que puede tener un ahorrador y aminoran el sesgo que la sociedad tiene a objetivos inmediatos.

En línea con lo que se mencionó anteriormente, frecuentemente los encargados de las políticas públicas postulan como uno de sus objetivos el incrementar el ahorro interno para lo cual, además de promover las acciones señaladas en el párrafo anterior, conviene elevar el ahorro del gobierno. De la identidad de cuentas nacionales se deriva que la inversión interna debe financiarse con ahorro privado, ahorro público o ahorro externo. Como se mencionará más adelante, no es conveniente confiar una cantidad importante del financiamiento de la inversión al sector externo, por lo que hay que procurar que se eleve el ahorro interno. El sector público puede tomar medidas que obliguen o incentiven a que el sector privado eleve su ahorro. Summers (1988) revisa la evidencia empírica y concluye, sin embargo, que la forma más efectiva que tiene un gobierno para elevar el ahorro interno es elevando el ahorro público. Aunque teóricamente es posible que los agentes del sector privado tomen al ahorro gubernamental como un sustituto del suyo, y por tanto, reduzcan en un punto su ahorro por cada punto de incremento en el gubernamental, empíricamente esta compensación es significativamente menor que uno.

El ahorro externo (el déficit en cuenta corriente) simplemente refleja la diferencia entre las oportunidades de inversión y el ahorro del país y por tanto no está justificado restringirlo, sin embargo, en la práctica los encargados de política procuran limitarlo. Es importante evitar que el nivel de endeudamiento externo del país alcance niveles que lo acerquen a un punto de insostenibilidad, es decir, cuando un país no es capaz de cumplir con sus obligaciones. Suponiendo que los agentes involucrados en ambos lados de las transacciones son racionales, dicho punto se alcanzaría sólo si las políticas públicas reflejan oportunidades de inversión más rentables de lo que pueden ser o si éstas reducen el ahorro interno. En tal sentido, un elevado déficit de cuenta corriente prende un foco rojo sobre lo adecuado de las políticas. Sin embargo, la capacidad de pago del país deudor no es suficiente para determinar la sostenibilidad de los flujos externos. En particular, si los acreedores externos dudan de la voluntad que tengan los futuros encargados de las políticas públicas en pagar la deuda del país o si los prestamistas internacionales adjudican a un país la misma capacidad de pago que tiene otro país que atraviesa por una

[1] Existen varias funciones en las que tener una mejor distribución del ingreso va aparejada con una mayor eficiencia, como por ejemplo, en la educación de jóvenes y niños con falta de recursos, quienes carecen de acceso al financiamiento para llevar a cabo un proyecto rentable con el cual pueden mejorar el nivel de ingreso que tienen sus padres.

situación difícil, se puede registrar una repentina y drástica disminución en los flujos de inversión al país. Los cambios súbitos en los flujos de ahorro externo son la razón de más peso para limitar el déficit de cuenta corriente. En conclusión, un moderado déficit de cuenta corriente para países con escasez relativa de capital parece ser un objetivo de política adecuado. La política fiscal puede reducir el ahorro externo sustituyéndolo por ahorro interno.[2] Cuando se aborde la coordinación entre las políticas fiscal y monetaria seremos más explícitos acerca de cómo estas políticas pueden disminuir el déficit en cuenta corriente.

Por lo que concierne a la política monetaria, su instrumento le confiere particular relevancia sobre el nivel de precios. Si bien es cierto que el nivel de precios depende de otros factores y políticas (entre las que destaca la fiscal), ningún otro factor puede alterarlo en cualquier momento y en una magnitud similar. El que el control sobre el nivel de precios y su incremento, la inflación, requiera del control de la oferta monetaria hace que éste sea un objetivo natural de la política monetaria. Más adelante abordaremos cómo es que la política fiscal influye en la determinación del nivel de precios, por ahora baste decir, que la autoridad monetaria requiere considerar los factores que determinan la demanda por dinero y aquellos de la oferta que no están bajo su control para determinar la inflación. La demanda de dinero se determina por el nivel de transacciones que la gente quiera realizar, la cantidad que quiera guardar en sus bolsillos o bajo el colchón para hacer frente a gastos futuros o imprevistos, así como por los sustitutos que existan para realizar transacciones o acumular activos. La oferta de dinero, que puede no estar bajo el control de la autoridad monetaria, es la que se deriva de los medios de pago que pueden poner las instituciones financieras a los agentes para realizar transacciones y ahorrar, tales como el coeficiente de reservas a montos prestados y los dispositivos para realizar transacciones sin requerir efectivo.

Si los precios de la economía muestran cierto grado de inflexibilidad para ajustarse de tal forma que la oferta siempre iguale a la demanda, los cambios en la oferta de dinero tienen un impacto sobre variables reales. En el modelo keynesiano, que abordaremos más adelante, los salarios no se ajustan al cambio en la oferta monetaria, por lo que un productor puede contratar más trabajadores ante el incremento en precios. El mismo resultado se obtiene si los agentes económicos tienen cierta expectativa de lo que hará la autoridad monetaria y ésta procede de manera distinta. Un incremento en la oferta de dinero superior al esperado por los agentes fijadores de precios podría ser confundido por un incremento en el precio relativo de cada bien, por lo que se elevaría la producción de todos los bienes. Cualquiera que sea la historia, (salarios inflexibles por el tiempo de contratación, problemas de información sobre lo que hará la autoridad, que resulte difícil o poco práctico cambiar precios), empíricamente se observa que cambios en la oferta de dinero tienen impacto sobre el nivel de empleo y producción de la economía. Así que cuando se analice más adelante la coordinación entre las políticas fiscal y monetaria se supondrá que la política monetaria tiene impacto sobre la economía.

La tasa de interés es una variable que afecta a la demanda agregada. Bajo las condiciones descritas en el párrafo anterior, aun la tasa real se afecta con variaciones en la oferta de dinero, de tal forma que al aumentar la oferta de dinero las tasas de interés tienden a descender. Una reducción en la tasa de interés tiene impacto sobre la cantidad demanda de bienes y servicios, debido a que resulta menos costoso comprar artículos a crédito y porque se requiere una rentabilidad más baja para que un proyecto de inversión se realice. Así que un aumento de la oferta de dinero generará una mayor demanda por bienes y servicios que, por lo señalado en el párrafo anterior, se verá correspondida con más oferta.

Como se mencionó anteriormente, las tasas de interés afectan el nivel de inversión. Dependiendo de la rentabilidad que puedan pagar los proyectos que se realicen, se darán los incentivos para que la gente ahorre. Por medio de estos canales, así como por el flujo de ahorro externo que se genere, la política monetaria incide sobre el ahorro interno.

[2] Otras políticas que pueden reducir el ahorro externo sin compensarlo por ahorro interno reducen la inversión por lo que se consideran menos deseables y no se abordan en este artículo. Posiblemente, la justificación para establecer dichos controles a los flujos de capital externo es que estos últimos llegan al país inducidos por alguna imperfección en el mercado, en cuyo caso, lo que debería procurarse es eliminar la falla.

A través de los cambios en la tasa de interés, la política monetaria tiene efectos sobre la posición que guarda el país respecto al sector externo. Los capitales internacionales, en ausencia de barreras a su movimiento, son sensibles al rendimiento que puedan obtener en cada rincón del mundo. Así, incrementos en el interés que se les pague en el país atraerán a los capitales externos en mayor o menor medida dependiendo del grado de apertura de la economía a este flujo. De esta forma, la política monetaria contribuye a determinar el nivel de ahorro externo que hay en la economía. Adicionalmente, el movimiento de capitales tiene un impacto sobre otras variables, dependiendo del régimen de tipo de cambio con que opere la economía. Más al respecto, a continuación.

Como se puede apreciar de lo mencionado anteriormente, existen varios objetivos que ambas políticas pueden perseguir. Lo anterior reduce el análisis de la coordinación entre políticas al estudio de aquellos objetivos en los cuales ambas políticas tiene influencia. Por ejemplo, el régimen cambiario determina el tipo de política monetaria que se puede seguir. Con una paridad fija con una moneda extranjera, la política monetaria debe abocarse a defender dicha paridad, y si existe libre movilidad de capitales, no se puede tener independencia monetaria ni siquiera en el corto plazo. Por otra parte, la expansión de la demanda agregada presiona el nivel general de precios, por lo que ambas políticas afectan esta variable. Finalmente, el objetivo de un nivel de ahorro externo puede ser alcanzado por ambas políticas, si bien por canales distintos. En resumen, ambas políticas tienen efectos sobre el nivel de actividad (y de precios) y el ahorro externo (y el interno), por lo que serán los objetivos sobre los cuales se enfoca la sección de coordinación de políticas y, posteriormente, el análisis sobre las limitantes de política.

Antes de pasar a dicho análisis es importante reconocer que existen objetivos que deben ser exclusivos de los responsables de una de estas políticas que sin embargo tienen influencia sobre los instrumentos u objetivos de la otra. En dichos casos, la coordinación consiste en que los responsables de las políticas consideren entre sus objetivos reducir al máximo las consecuencias nocivas que puedan tener sus acciones para el desempeño de las otras autoridades. En vista de los dos argumentos anteriores, en la siguiente sección se revisan los canales a través de los cuales la política fiscal afecta a la monetaria, para continuar con la influencia en sentido contrario y poder elaborar acerca de la coordinación que debe existir entre ambas políticas.

2. Interacción de la política fiscal y monetaria

2.1. Efectos de la política fiscal sobre la monetaria

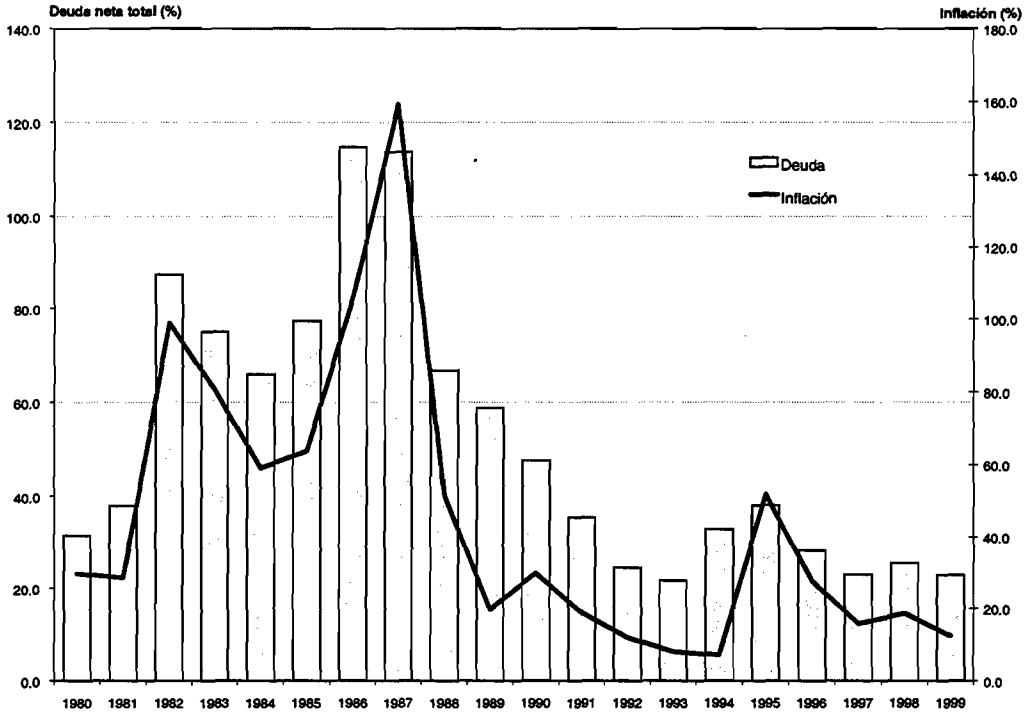
La postura fiscal puede, evidentemente, estropear el desempeño de la política monetaria cuando las finanzas públicas no son sostenibles. Esto es, cuando el déficit público es considerable y se requieren fuentes de ingreso adicionales para que los acreedores estén dispuestos a refinanciar la deuda del gobierno. Bajo estas condiciones, una alternativa para el gobierno es recurrir a la emisión de moneda para cerrar su brecha fiscal (Sargent y Wallace, 1981). Al incrementarse el circulante se genera una elevación del nivel general de precios, impidiendo que se alcance el objetivo de inflación.[3] De hecho, no es necesario que se materialice la mayor emisión de circulante para que se genere incertidumbre en los mercados financieros; basta con que en los mercados se desconfíe de la capacidad de pagos del gobierno para que disminuya la demanda por dinero, y con ellos se presione el nivel general de precios a la alza. Adicionalmente, se elevan las tasas de interés y, eventualmente, se rechaza el refinanciamiento de la posición deudora del gobierno, lo que dificulta la propia operación del banco central. Esta inestabilidad reduce el ingreso que el gobierno puede derivar del impuesto inflacionario y, si no hay posibilidad de

[3] Edwards y Tabellini (1991) encuentran evidencia en países en desarrollo de que los déficit públicos se asocian con mayores niveles de inflación e impuesto inflacionario.

refinanciar la deuda pública, el gobierno se podría encontrar en la necesidad de no cumplir el pago de su deuda. Al renegar de sus compromisos financieros, el mercado de deuda pública se colapsa, puesto que desaparece la motivación de los inversionistas para prestar al deudor soberano. Con ello, el banco central podría perder el instrumento por medio del cual realiza sus operaciones de mercado abierto. Además, el incumpliento del gobierno afecta al sector privado, pues el sistema se queda sin una referencia "libre de riesgo"; el mercado secundario de capitales pierde liquidez, al quedarse sin uno de sus sectores más importantes; y se pierde una referencia importante para juzgar las expectativas de inflación. En resumen, con finanzas públicas insostenibles, la política monetaria es incapaz de alcanzar sus objetivos de estabilidad de precios y desarrollo del sistema financiero. En el caso de México, en aquellas situaciones en las que se ha tenido una deuda elevada, la necesidad de recurrir a la emisión monetaria puede explicar el que se hayan tenido inflaciones elevadas como se puede apreciar en la Gráfica 1. Es decir, la solvencia fiscal es una condición necesaria para tener un bajo nivel de inflación.

Gráfica 1

Deuda neta total del sector público económica amplia vs. inflación



Por lo anterior, los bancos centrales se ven presionados a llevar a cabo una política más laxa ante mayores emisiones de deuda pública, de tal forma que el costo para el gobierno no sea mayor. En dicha situación, las decisiones de las autoridades gubernamentales se imponen sobre las de las autoridades monetarias, directa o indirectamente. El predominio de la política fiscal sobre la monetaria no es un asunto que ataña sólo a los países en desarrollo. En los Estados Unidos, durante los años 60 y 70 se presentó la coincidencia de crecientes déficit públicos e inflaciones, lo que llevó a muchos a sostener que la Reserva Federal no es independiente.[4] Aun los bancos centrales autónomos se ven afectados por la política fiscal, como se verá más adelante. En Alemania, donde el Bundesbank es una institución que goza de mayor

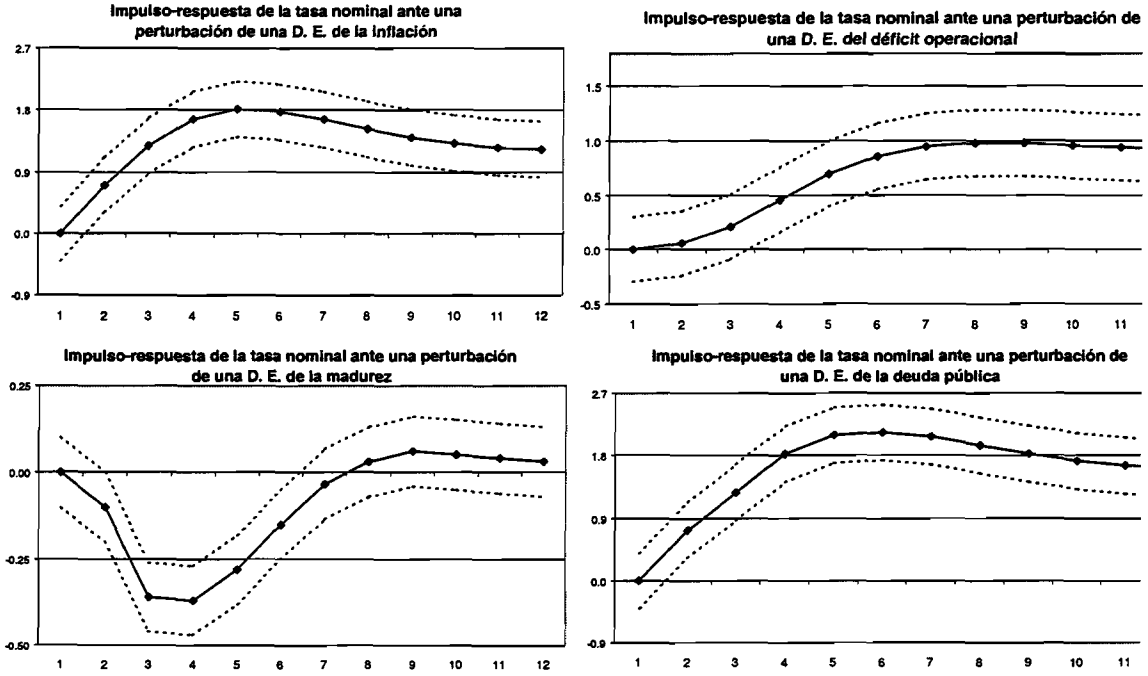
[4] Véanse, por ejemplo, a Dwyer (1982), Hamburger (1981) y Nikasnen (1978). Después de lo ocurrido en los 80 y bajo las condiciones de los 90, se acepta que en estos momentos la Reserva Federal determine libremente la política monetaria.

prestigio que el Gobierno Federal, el banco central endurece su postura obligando al gobierno a regresar a las políticas fiscales sostenibles cuando se desvía de tal postura (Schieber, 1995).

Aun en aquellos casos en que no peligra la sostenibilidad de la posición fiscal, un mayor déficit tiene implicaciones sobre la estabilidad de precios; puesto que representa financiamiento que eleva el saldo de la deuda pública neta. Generalmente, un mayor endeudamiento se otorga a tasas de interés más elevadas debido a que lo otorgan acreedores que requieren mayor rendimiento y a que la probabilidad de que el gobierno repudie su deuda se incrementa (si bien ésta es muy baja en estas circunstancias).[5] Lo anterior dificulta la operación de los bancos centrales. Como ejemplo, se muestran los resultados de un vector de cointegración entre la tasa de interés real, la inflación, el déficit y la deuda pública, así como la madurez promedio de la deuda, para México entre 1990 y 2000. La Gráfica 2 muestra las funciones de impulso respuesta sobre la tasa de interés. Como se puede apreciar, un incremento en la deuda pública o el déficit público tiene asociado un aumento significativo de la tasa de interés real.

Gráfica 2.

Funciones de Impuso-Respuesta



Los bancos centrales que operan determinando el nivel de la tasa de interés tendrán que elevarla, puesto que la tasa que es compatible con su nivel objetivo de inflación es mayor (Taylor, 1995).[6] Como se mencionó más arriba, frecuentemente los bancos centrales se ven presionados a realizar la operación contraria, para disminuir el costo de financiamiento de la deuda.[7]

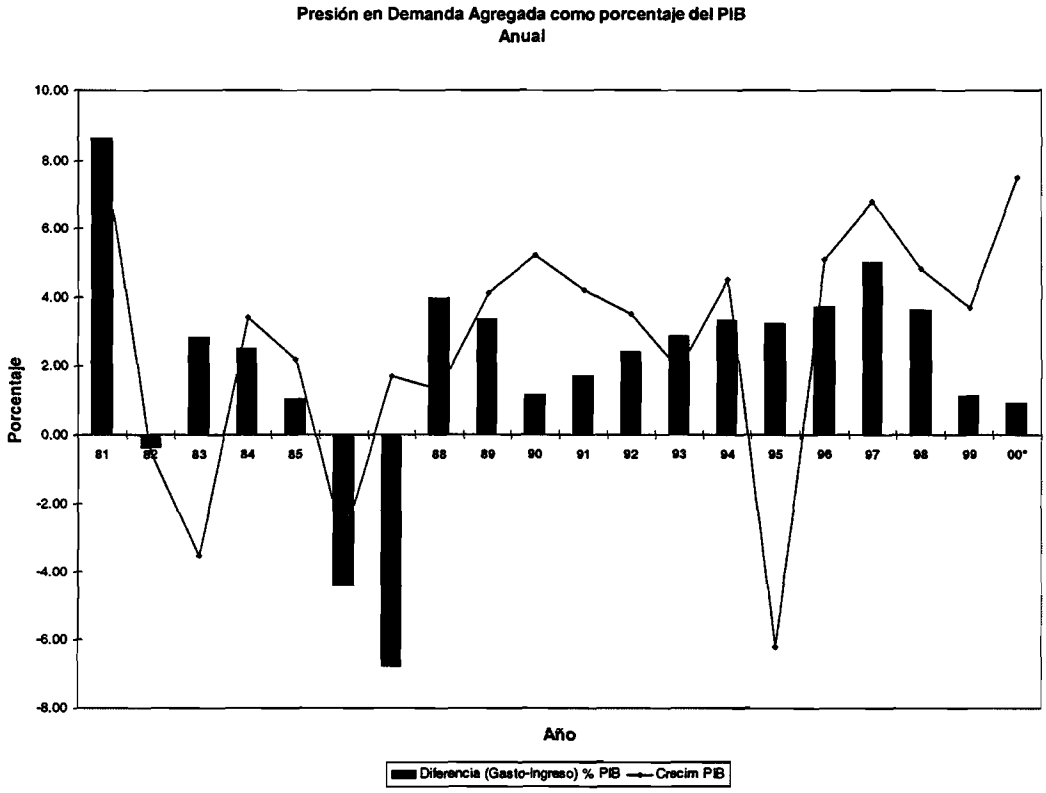
[5] Caselli, Giovannini y Lane (1998) encuentran para los países de la OCDE que los mayores niveles de deuda y mayores déficit primarios se asocian con tasas de interés más elevadas.

[6] El Banco de México opera con un mecanismo de señales que afectan pero no determinan el nivel de tasas, por lo que en caso de un mayor déficit, las tasas se ajustarían a la alza sin intervención del instituto emisor.

[7] Un alza de tasas disminuye el precio de mercado de la deuda ya colocada a tasa fija, circunstancia que el gobierno puede aprovechar para disminuir su endeudamiento. Pero si el gobierno está en posición de recomprar su deuda, seguramente no requerirá presionar a la autoridad monetaria para que disminuya el costo financiero de su deuda.

Asimismo, la política fiscal activa puede llevar a una elevación de precios. Un mayor déficit tiende a expandir la actividad económica, si los individuos no anticipan que tendrán que pagar la deuda generada en el futuro (o no serán ellos quienes la atenderán o, cuando lo hagan, enfrentarán un menor costo). Los proveedores de bienes y servicios del gobierno tendrán un mayor ingreso que gastarán, dando mayor ingreso a otros individuos, y así sucesivamente, hasta que se llega a un nuevo equilibrio, en el que la economía tiene un nivel de ingreso superior. Al elevarse la producción, se demandarán mayores salarios (si antes de esto no había trabajadores desempleados), lo que requiere que los productores carguen precios más elevados. Así, la presión de demanda agregada generada por una expansión fiscal puede llevar a la elevación del nivel general de precios, ocasionando con ello una desviación del objetivo de inflación. Por ejemplo, en México se ha visto que la presión sobre la demanda agregada generada por el sector público ha tendido a acrecentarse cuando el nivel de ingreso está creciendo y a contraerse al mismo tiempo que cae el ingreso (Gráfica 3).

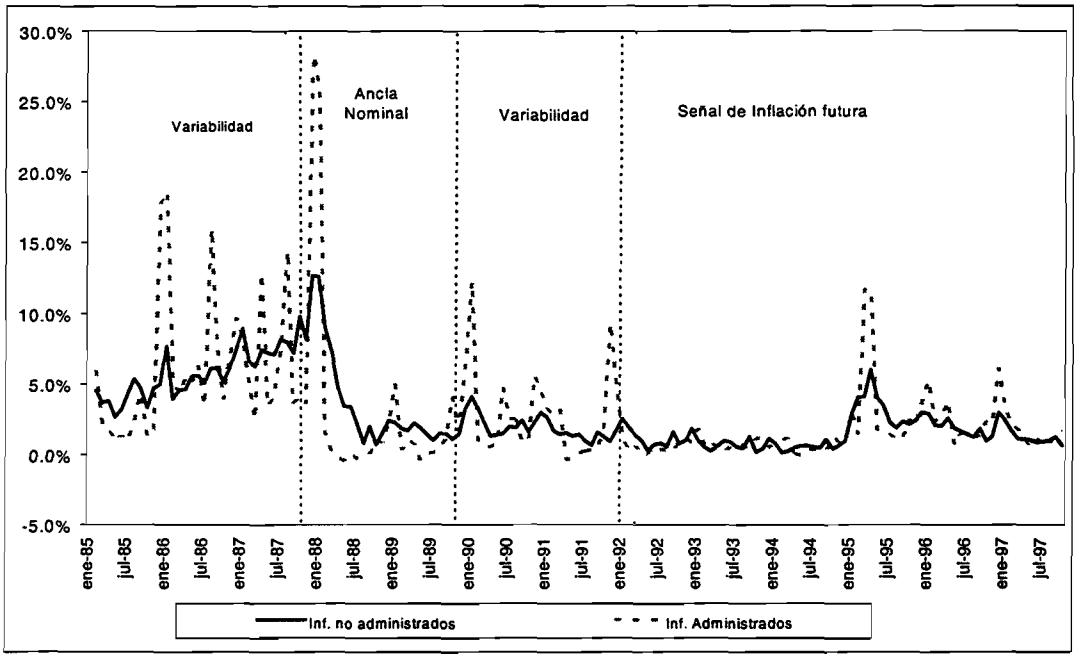
Gráfica 3



La determinación de precios administrados afecta a la inflación medida en el corto plazo. Lo anterior puede ocurrir porque los ajustes en estos precios son poco frecuentes (y por tanto considerables), con lo que se eleva el nivel de precios medido en el mes o meses en los que se dan los aumentos. Otra razón por la cual los aumentos en precios públicos tienen impacto sobre el nivel de precios, es porque constituyen una señal de la inflación esperada por las autoridades. En la medida en que se quieran compensar rezagos en precios, los aumentos por encima de la inflación esperada generarán un nivel general de precios mayor al objetivo. Como puede apreciarse en la Gráfica 4, en México la determinación de precios por el sector público, durante el periodo que ésta fue una práctica que involucró a una

proporción significativa de los bienes vendidos, generó una respuesta en la determinación de precios por parte de los fijadores de precios privados.[8]

Gráfica 4



También a nivel macroeconómico, la política de gastos e ingresos del sector público tiene impacto sobre otras variables que para algunos bancos centrales son el objetivo o el instrumento de la política monetaria. Por ejemplo, en una economía abierta con movilidad de capital, la política fiscal expansiva, al repercutir en un mayor nivel de tasas de interés, puede generar un influjo de inversión que aprecie a la moneda. La apreciación tiene un impacto directo sobre el precio de los bienes comerciables que representan una parte considerable de la canasta de consumo.

Cabe señalar que también se ha visto que una expansión fiscal genere efectos macroeconómicos contrarios a los establecidos anteriormente. En lugar de que el aumento en el gasto público eleve el consumo y la inversión privada, el sector privado puede reaccionar disminuyendo estos gastos (Alesina y Perotti, 1997, Drazen y Bertola, 1993, Giavazzi y Pagano, 1996). Asimismo, se han observado mayores déficit acompañados de depreciaciones cambiarias (Cantor y Driskill, 1996). La respuesta de la autoridad monetaria deberá ser consecuente con el resultado de la política fiscal sobre la economía, el cual depende de su estructura y situación particular.

Por lo que hace a la operación cotidiana, la programación financiera del gobierno puede afectar la liquidez del mercado, debido al tamaño de sus operaciones. El manejo de la caja del gobierno puede poner en un día una basta cantidad de recursos en el sistema, o los puede extraer al cobrar impuestos, con lo que las tasas de interés podrían presentar fuertes variaciones. Asimismo, al colocarse la deuda pública puede registrarse un fuerte aumento en las tasas de interés al absorberse la liquidez del sistema. Por lo anterior, es muy importante que la autoridad monetaria esté al tanto de la operación de la autoridad fiscal, de tal forma que pueda esterilizar el impacto de las operaciones diarias del gobierno (Sundararajan, Dattels y Blommestein, 1997). Para obviar la necesidad del flujo de información entre las autoridades, el

[8] Véase Gamboa (1997).

Banco de México lleva la cuenta de la Tesorería de la federación y es el agente colocador de deuda del gobierno.

2.2 Impacto de la Política Monetaria sobre el Déficit Público

Por su parte, la política monetaria tiene varios efectos sobre la variable que determina el resultado fiscal, el déficit público. El déficit público es la medida que utilizan los analistas para determinar la postura fiscal, la presión de la autoridad fiscal sobre la economía, la absorción del crédito que hace el sector público y la sostenibilidad de la política fiscal. Es discutible lo adecuado de la medición que el déficit provea de todas estas cuestiones. Por ejemplo, por lo que se describe abajo y estima en la sección 4, está claro que el déficit no depende solamente de la autoridad fiscal y, por lo tanto, no necesariamente refleja su postura. Sin embargo, el déficit es la medida más objetiva y por ello la más consultada.[9]

Cuando la política monetaria incrementa las tasas de interés como instrumento para controlar la inflación, tiene dos efectos directos sobre el déficit: un efecto pago de intereses y otro efecto valor de la deuda (Dahan, 1998). Si el gobierno es un deudor neto, el efecto de mayores tasas de interés[10], por una parte, implicará que el costo financiero de la deuda pública doméstica se incremente. El efecto sobre el déficit dependerá de la cantidad de deuda emitida a tasa flotante, y del monto de nuevas colocaciones que se tengan que hacer. Por otra parte, al elevarse las tasas de interés, el valor de mercado de la deuda a tasa fija disminuirá. Desafortunadamente, el déficit se mide en términos de caja, cuando menos en México, por lo que estas ganancias de capital no lo reducen. La única forma en que el gobierno podría aprovechar la disminución en precios sería recomprando su deuda, pero, en ese caso, quizá lo más conveniente sería no emitir más deuda o reducir los impuestos.

Por otra parte, las acciones de política monetaria pueden tener un efecto sobre el tipo de cambio, ya sea directamente, como cuando se defiende explícitamente una paridad contra una moneda extranjera, o indirectamente, a través de movimientos en las tasas de interés y su impacto en el flujo de capitales. Al depreciarse el tipo de cambio, el pago de intereses en moneda extranjera es más elevado, lo que tiende a incrementar el déficit. Asimismo, las importaciones de bienes y servicios del sector público son más costosas. Por otra parte, los ingresos que tiene el sector público por venta de bienes en el exterior (como el petróleo en el caso de México) y las transferencias internacionales (como las ayudas que reciben algunos países en desarrollo) incrementan los ingresos del gobierno.

Finalmente, los bancos centrales autónomos determinan la política monetaria con la finalidad de alcanzar un nivel objetivo de inflación. La variación en la inflación, también afecta al déficit. La inflación afecta al gasto público en bienes y servicios, a la recaudación tributaria, al pago de intereses, al valor de la deuda pública, y, desde luego, a la recaudación proveniente de la emisión de moneda.

Frecuentemente, los contratos entre el gobierno con sus proveedores de bienes y servicios se establecen por un periodo de tiempo prolongado con base en una inflación esperada. En la medida en que la inflación observada sea más elevada (baja) que la esperada, el gobierno tendrá que hacer un menor (mayor) gasto real en esas contrataciones. Lo anterior se conoce como el efecto Patinkin, y, como se muestra en la sección 4, está presente en México (Cardoso, 1998). Sin embargo, la reducción del déficit es sólo de corto plazo y presenta en contraparte mayores déficit en el largo plazo, debido a que tanto empleados como proveedores del gobierno se cubrirán ante sorpresas inflacionarias posteriores, cobrando una prima de riesgo en sus contratos. Por otra parte, en los países desarrollados de la OCDE, los gobiernos realizan política fiscal anticíclica, expandiendo el gasto público cuando la economía está en recesión

[9] Su objetividad depende de que se incluyan todos los gastos e ingresos públicos. Restricciones legales o disposiciones contables hacen que se excluyan, en ocasiones, algunos rubros de gasto o ingreso.

[10] Suponiendo que al elevar la tasa de interés de corto plazo, se eleve el nivel de tasas de toda la curva afectando las tasas que paga el gobierno a todos los plazos.

(principalmente a través del seguro de desempleo). En esos países se observa entonces que mayores niveles de inflación asociados con menores niveles de gasto público.

A su vez, los ingresos públicos también cambian con la inflación. La relación más citada entre la inflación y el déficit público es el efecto Olivera-Tanzi (Tanzi, 1978). Dicho efecto establece una correlación positiva entre el déficit y la inflación como consecuencia de que los ingresos tributarios reales se deterioran porque las tasas impositivas se determinan en términos nominales y los pagos de impuestos anuales. En consecuencia, al fijarse las tasas y al haber un retraso entre el pago de impuestos y el momento en que se generan los ingresos gravables, los ingresos públicos en términos reales caen. Para evitar este deterioro, se indexan las tasas impositivas a la inflación y se requiere que se presenten anticipos de declaración con una frecuencia mayor a un año. En México se tiene un alto grado de indexación en el sistema fiscal, por lo que el efecto Olivera-Tanzi es reducido. Por su parte, en países con niveles bajos de inflación y sistemas progresivos de impuestos, una inflación mayor a la esperada por el gobierno, generalmente conlleva mayores niveles de recaudación en el impuesto al ingreso. Lo anterior se debe a que al no estar indexadas las tasas marginales del impuesto al ingreso, con la inflación, muchos contribuyentes caen en estratos más elevados de lo que se preveía y deseaba (Auerbach, 2000).

El tercer efecto de la inflación sobre el déficit proviene de la relación existente entre la inflación y la tasa nominal de interés. A mayores niveles de inflación, mayores tasas nominales de interés; lo que eleva el déficit público en la medida de que haya deuda que pague tasa flotante y sobre las nuevas colocaciones. Además, en la medida que mayores niveles de inflación apunten a una mayor volatilidad en la inflación, las tasas de interés subirán en proporción a la prima de riesgo que requieran los ahorradores para cubrirse de este riesgo. El efecto de las tasas sobre el déficit se presenta independientemente de que la inflación sea esperada o anticipada. El pago se incrementará todavía más si la inflación esperada hacia el futuro es todavía mayor. Cabe señalar, que también en este caso, al elevarse las tasas de interés, el precio de la deuda denominada a tasa fija disminuye, y si el gobierno puede recomprarla, puede realizar la ganancia de capital.

Finalmente, el efecto más importante de la inflación sobre las cuentas públicas es a través del ingreso proveniente de la emisión de moneda. La emisión de dinero, además de inflación, genera ingreso para el banco central que éste puede transferir al gobierno. En los casos en los que las autoridades fiscales dictan a las monetarias la política que deben seguir, la transferencia es automática. Con los bancos centrales autónomos, el resultado financiero de la operación independiente de la autoridad monetaria, es normalmente canalizado al gobierno central. Un arreglo posible para evitar presiones de la autoridad fiscal a la monetaria, es que el resultado financiero del banco central no se traslade al gobierno.[11] Aunque cabe señalar que la presión normalmente proviene del efecto que la política monetaria tiene en el nivel de actividad, el cual está presente aun en el caso de que no haya transferencia de recursos del banco central al gobierno.

El último punto señalado en el párrafo anterior se refiere al efecto que la política monetaria tiene sobre el nivel de ingreso, el cual, a su vez, tiene un impacto sobre el déficit. Al incrementarse el nivel de ingreso, los ingresos tributarios también se elevan, tanto por el mayor nivel de actividad como por la estructura progresiva del impuesto al ingreso. El gasto público se incrementa en la medida que ciertos servicios públicos tienen una mayor demanda. En países desarrollados, sin embargo, el gasto público se emplea con fines anticíclicos, y lo común es ver que el gasto público se reduzca cuando hay mayor crecimiento económico.

La inflación, tanto la esperada como la no esperada, generalmente eleva el déficit público. El ingreso por emitir circulante se incrementa inicialmente pero, para mantener niveles similares de ingreso, se va necesitando cada vez de mayores inflaciones, hasta que se deteriora el ingreso inflacionario. El efecto Patinkin, de disminuir los gastos en términos reales, se compensa posteriormente con un mayor costo vía la prima de riesgo inflacionario que cargan los que venden al gobierno. La mayor recaudación

[11] Como en Suiza.

del impuesto al ingreso al pasar los individuos a tasas marginales de ingreso más elevadas, no se da en países como México en que los tasas impositivas están indexadas. Por el contrario, el incremento en la inflación sí tiene, aun bajo un sistema indexado, algún efecto Olivera-Tanzi, y las tasas de interés nominales siempre se elevan. Por lo tanto, la mejor contribución que puede hacer la política monetaria al déficit público, es alcanzar baja inflación.

3. Estabilización Macroeconómica y Déficit de Cuenta Corriente

Como se mencionó en la sección anterior, la contribución más significativa que ambas políticas pueden hacer para que la economía crezca a sus niveles más altos de manera sostenida, es no incurriendo en posturas insostenibles. Es decir, ni la deuda pública se vuelve imposible de pagar con fuentes no inflacionarias de ingreso, ni la inflación llega a niveles elevados y crecientes.

En caso de que se cumpla lo anterior, tanto la política fiscal como la monetaria afectan al nivel de actividad económica y pueden ser utilizadas para estabilizar sus fluctuaciones.[12] Esto es, una política monetaria laxa o un mayor déficit público conllevan un mayor nivel de ingreso y/o mayor nivel de precios. El ingreso se incrementa cuando la demanda se encuentra por debajo del ingreso potencial. Es decir, mientras la demanda agregada esté a un nivel menor que aquel para el cual la oferta se vuelve inelástica y los precios tienden a incrementarse. Estímulos que se dan cuando dicho nivel se ha rebasado se traducirán en inflación y no en mayor empleo.

Sin embargo, como se mencionó anteriormente, ambas políticas también tienen repercusiones sobre el flujo de capitales externos.[13] La política fiscal proactiva presiona las tasas de interés a la alza con lo que se presenta un flujo de capitales externos hacia el país, mientras que una política monetaria contractiva tiene el mismo efecto sobre tasas y flujo de capitales externos. Por otra parte, al afectar el nivel de ingreso, dichas políticas tienen un impacto en el mismo sentido sobre el nivel de importaciones.

A continuación se presenta una versión del modelo Mundell-Fleming que se utiliza en este artículo aplicada para el caso de una economía pequeña. El análisis del modelo se hace tanto bajo el régimen de tipo de cambio fijo como el de tipo de cambio flexible. Posteriormente, se hace presenta el análisis de instrumentos y objetivos bajo ambos regímenes.

El sistema se compone de tres ecuaciones: la IS que determina el equilibrio entre oferta y demanda en el mercado de bienes, la LM que determina el equilibrio en el mercado de dinero y la ecuación de equilibrio en el sector externo, BP, que iguala la cuenta corriente con la entrada de capitales (cuenta de capitales más variación en reservas internacionales). Se supone que los precios domésticos son fijos y que estos tres componentes de la demanda agregada determinan el nivel de ingreso.

La IS muestra una relación negativa entre el nivel de ingreso y la tasa de interés, además de que de que depende del tipo de cambio, de tal forma que una depreciación de éste requiere de un menor ingreso o una mayor tasa de interés para que se restaure el equilibrio.

[12] En este artículo se utiliza el marco conceptual del modelo Mundell-Fleming. Dicho modelo tiene varias limitaciones entre las que destacan su ausencia de bases microeconómicas, que tiene importantes implicaciones en cuanto a la razón por la cual los agentes acumulan dinero que no produce rendimiento, que se carece de restricciones intertemporales, las expectativas de los agentes no son consistentes con lo que puede suceder en el futuro y no se define cómo se resuelven las diferencias entre gasto e ingreso. Sin embargo, quizá la falla más grande de este modelo es que no permite hacer una evaluación del bienestar de los consumidores bajo regímenes alternativos. Por lo anterior, resulta evidente que se tiene que extender este análisis a un modelo de maximización intertemporal.

[13] El análisis de este artículo se limita a considerar el caso de libre flujo de capitales, que se considera el caso más relevante para las economías contemporáneas.

La LM tiene una pendiente positiva cuando se le gráfica en el espacio de ingreso-tasa de interés. Esto es así, porque un aumento en el ingreso eleva la demanda por dinero, y para restaurar el equilibrio, dada una oferta de dinero fija, la tasa de interés tiene que incrementarse para disminuir dicha demanda.

Por último, la BP muestra una relación positiva entre el ingreso y la tasa de interés, debido a que un incremento en el ingreso genera un déficit en la balanza comercial que requiere ser compensado por una entrada de capitales que se logra atrayéndolos con mayores tasas de interés (con relación a la tasa de interés en el mercado internacional, que se supone fija). El tipo de cambio también afecta esta relación, debido a que una apreciación del mismo genera un déficit comercial, partiendo de un punto de equilibrio, que tiene que ser compensado con entradas de capital.

El efecto que tendrán en este modelo las políticas monetaria y fiscal dependerá del régimen de tipo de cambio que se tenga. A continuación se esbozan dichos efectos bajo el régimen de tipo de cambio fijo y posteriormente, bajo tipo de cambio flexible.[14]

Bajo tipo de cambio fijo, una expansión monetaria se traduce en una salida de capitales del país. La autoridad monetaria defiende la paridad para que dicha salida no se refleje en una depreciación por lo que vende reservas internacionales, con lo que disminuye la oferta de dinero (suponiendo que la intervención no es esterilizada). Por lo que se regresa al mismo punto del cual se partió. Desde luego que si los capitales externos no responden más que a variaciones considerables de la tasa de interés, no habrá entrada de capitales, y la expansión monetaria se traducirá en un déficit en balanza comercial que se debe compensar con un uso de reservas internacionales que reduce la oferta de dinero. En este caso, se regresa a un punto de ingreso similar al del que se partió pero a una mayor tasa de interés. Por su parte, la política fiscal expansiva eleva las tasas de interés, con lo que se da una entrada de capitales. Para evitar una apreciación, la autoridad monetaria adquiere dichos capitales externos incrementando la oferta de circulante, con lo que se alcanza un nuevo equilibrio a un mayor nivel de ingreso y, generalmente, un mayor nivel de tasas de interés.

Por el contrario, bajo tipo de cambio flexible la efectividad de la política monetaria es muy elevada y la de la política fiscal prácticamente nula. Un incremento en la oferta de dinero que haga descender la tasa de interés se traduce en una salida de recursos del país que deprecia la moneda. La depreciación implica un mejoramiento de la balanza comercial, y con ello se tiene una mayor demanda por bienes producidos en la economía y la IS se ubica en un punto con un mayor nivel de ingreso. Adicionalmente, la depreciación de la moneda hace que el equilibrio de balanza de pagos pueda ser alcanzado con un mayor nivel de ingreso. Por el contrario, un mayor gasto público o menores impuestos incrementan tanto el ingreso, y por tanto las importaciones, como las tasas de interés. El efecto final depende del grado de movilidad de capitales externos. Con relativamente baja movilidad, el deterioro en la balanza comercial no alcanza a ser compensado con entradas similares de capitales, por lo que se da una devaluación, que contribuye a que el nivel de ingreso sea mayor. Con mayor movilidad de capitales, la entrada de recursos es mayor que el déficit generado en la balanza comercial, por lo que se aprecia el tipo de cambio y el mercado de bienes está en equilibrio a un menor nivel de ingreso.

En este modelo se pueden vincular los dos objetivos antes mencionados de control de la expansión de la demanda agregada y de flujo de ahorro externo con las dos políticas que se analizan. Mundell (1968) estudió cuál de las dos políticas debía de dirigirse a alcanzar cada uno de los objetivos bajo tipo de cambio fijo. El concluyó que la política monetaria debía dirigirse al objetivo externo y que la política fiscal era la más indicada para perseguir el equilibrio en el mercado interno.

Para entender la lógica del procedimiento de Mundell, se puede presentar el análisis en el espacio de las acciones de política fiscal (gasto público) y monetaria (tasa de interés). El equilibrio en el mercado interno se logra cuando incrementos en el gasto público se ven acompañados de incrementos en la tasa de interés, de tal forma que esto modere el crecimiento de los otros componentes de la demanda

[14] Una exposición más detallada se puede encontrar, por ejemplo, en (Caves, Frankel y Jones, 1993).

agregada. El equilibrio en el sector externo también se requiere que aumentos en el gasto público que deterioran la cuenta corriente, se vean compensados con incrementos en la tasa de interés que atraiga capitales externos y también modere el crecimiento de los otros componentes de la demanda agregada. El equilibrio en el mercado interno tiene una menor sensibilidad a la tasa de interés debido a que el objetivo de ahorro externo se facilita con el flujo de capitales. Es decir, la ecuación de equilibrio interno será más inelástica que la de equilibrio externo, si la tasa de interés se gráfica en el eje de las absisas.

Del análisis anterior, lo primero que hay que notar es que ningún tipo de política es generalmente suficiente para alcanzar ambos objetivos. Es decir, se requiere de la coordinación de ambas políticas si es que se quieren alcanzar los dos objetivos. Bajo la situación estudiada por Mundell, la política monetaria tiene ventaja comparativa respecto a la fiscal para alcanzar el objetivo de ahorro externo, debido precisamente al efecto adicional que tiene un cambio en tasas de interés sobre el flujo de capitales. Partiendo de un punto de desequilibrio, por ejemplo, en el que la demanda agregada esté presionando los precios a la alza y de excesivo déficit en la balanza comercial, la política fiscal debería tratar de reducir el crecimiento de la demanda agregada con un menor gasto, mientras que la política monetaria debería disminuir el déficit en balanza de pagos con mayores tasas de interés. De esta forma, si la política monetaria se adelanta y alcanza su objetivo antes que la fiscal (en un punto para el cual las tasas de interés son excesivamente elevadas respecto al punto en que se alcanzan ambos objetivos), ésta puede de cualquier manera buscar su objetivo, lo que moverá a la economía a un punto de superávit externo, que llevará a la autoridad monetaria a bajar las tasas. Es decir, la asignación de objetivos mencionada hace que, sin importar el punto del cual partan las autoridades, se converja al objetivo. Por el contrario, la asignación de política monetaria al equilibrio interno y fiscal al externo es inestable. Si partiendo del mismo desequilibrio en ambos sectores que se mencionó anteriormente, la política monetaria logra el objetivo de equilibrio en el mercado interno, las autoridades fiscales encontrarán que tienen que hacer frente a un superávit externo, lo que les llevará a asumir una postura expansiva, que acerbará el desequilibrio del mercado interno.

La asignación de políticas es la contraria bajo tipo de cambio flexible. Mientras que el equilibrio en el mercado interno sigue requiriendo que al aumentar el gasto público se incrementen las tasas de interés, el equilibrio u objetivo de ahorro externo se ve modificado. Con tipo de cambio flexible un aumento en el gasto público incrementa el ingreso y la tasa de interés. Ambos factores tienden a apreciar el tipo de cambio, lo que requiere de una disminución en las tasas de interés para que se vuelva a presentar el equilibrio. Es decir, ahora por el contrario, si se grafican ambos equilibrios en el espacio gasto público-tasa de interés, el equilibrio en el mercado interno tendrá una pendiente positiva y el externo, negativa. En este caso, en la asignación de acuerdo a ventajas comparativas corresponde a la política monetaria el equilibrio interno y a la política fiscal es externo. De esta forma, iniciando nuevamente con una situación de inflación y déficit externo excesivo, la política monetaria incrementa las tasas de interés y la fiscal, disminuyendo el gasto. Nuevamente, si la política monetaria alcanza su objetivo antes que la fiscal, ésta podrá continuar, contrayendo el gasto, si persiste el déficit, o incrementándolo en la situación opuesta. La asignación contraria puede resultar inestable, si la política monetaria procura estimular las exportaciones netas haciendo descender las tasas. Dicha asignación puede resultar estable si la autoridad fiscal hace lo contrario, sin embargo, con alta movilidad de capitales, el camino hacia el equilibrio es menos directo, por lo que con un poco de incertidumbre, es posible que las autoridades desistan de sus políticas (Genberg y Swoboda, 1987). Además, como menciona Boughton (1988) empíricamente se ha visto que la política monetaria es poco efectiva para alterar el déficit en cuenta corriente, principalmente porque el efecto de las tasas de interés tiene efectos en sentido contrario sobre la balanza de pagos, puesto que una alza reduce la demanda por importaciones y atrae capitales externos.

A continuación se utiliza este marco conceptual para hacer algunos comentarios sobre el efecto que tiene para la economía el que se utilicen reglas que restan flexibilidad a cualquiera de estas políticas. El análisis, como se ha visto, depende del régimen de tipo de cambio que se tenga. Lo anterior, además de provenir de una amplia y respetable vena de la literatura económica, se debe a la estrecha relación entre el

tipo de cambio y la política monetaria (sobre todo bajo libre movilidad de capitales). A continuación se analizan las instituciones que limitan la actuación de la política monetaria, bajo el apartado de tipo de cambio fijo, y el que limita la política fiscal, bajo tipo de cambio flexible. Sin embargo, debe recordarse antes de pasar a lo que sigue que, en general, una política no basta para alcanzar los dos objetivos, por lo que se necesitará de cierta flexibilidad en ambas políticas si se quieren lograr ambos objetivos.

3.1. Política Monetaria Restringida. Tipo de Cambio Fijo

La política monetaria más restringida es cuando la economía opera bajo una moneda extranjera o se adopta un consejo monetario que garantiza que la paridad respecto a la moneda extranjera no cambie. Dicha situación, en términos de lo descrito anteriormente corresponde a la de tipo de cambio fijo.

Como se mencionó anteriormente, en esos casos la asignación adecuada de funciones corresponde a la política fiscal el equilibrio en el mercado interno y a la política monetaria el alcanzar el equilibrio externo. Primeramente, respecto al equilibrio en el sector externo, los países con escasez relativa de capital, como los de América Latina, tienden a los déficit en cuenta corriente, más que a los superávit. Por lo que siendo realista el objetivo de ahorro externo es asimétrico, requiriéndose sólo que el déficit de cuenta corriente no sea demasiado grande (por ejemplo, menor al 4 o 5 por ciento del PIB). Como se mencionó anteriormente, un déficit más grande requeriría de una política monetaria restrictiva que hiciese aumentar las tasas de interés para que aumente el flujo de ahorro externo.

La política fiscal en dichos casos debe procurar estabilizar el nivel de ingreso, para lo cual debería ser fuertemente cotracíclica. En general se puede decir que la política fiscal no es tan flexible como lo requeriría este papel de estabilización. La política monetaria generalmente no se determina en procesos políticamente tan complicados como la fiscal. En varios países, ésta se delega a autoridades independientes, las cuales tiene cierto grado de capacitación técnica y si bien no están exentas del escrutinio del público (lo cual es necesario), su permanencia en el trabajo no es tan inestable como las de las autoridades fiscales. Blinder (1997) sostiene que la política fiscal tiene muchas características que la hacen similar a la monetaria y que por tanto debería delegarse a autoridades independientes, como las monetarias, después de que se les especifiquen cuáles son las preferencias de la sociedad en cuanto a la distribución del ingreso, la promoción de la inversión y las tasas de interés. Pero mientras tal institución no surja, la política fiscal carecerá de la oportunidad para se utilizada discrecionalmente para estabilizar la economía.

Lo anterior nos deja con mecanismos automáticos para realizar la estabilización del ingreso. Los países europeos incrementan sus déficit entre 0.3 y 0.8 puntos del PIB ante caídas de 1 por ciento en el ingreso (OECD, 1993). Esta estabilización automática la logran gracias a que los impuestos tienden a incrementarse con el nivel de ingreso y a que el gasto público en seguridad social, en particular, por el seguro de desempleo tiende a incrementarse cuando cae el ingreso nacional. Por el contrario en América Latina tenemos que en general, el déficit no tiene correlación con el ingreso, y en crisis, la correlación es inclusive negativa (Gavin y Perotti, 1997). Además de la dependencia del ahorro externo, una causa por la que se tienen estos resultados es que no se tienen instituciones que eleven el gasto público cuando el ingreso se cae y defiendan la acumulación de un fondo cuando este se incrementa, como el seguro de desempleo en Europa. Atkinson (1999) señala al establecerse el estado de bienestar en Europa, éste era apreciado por sus características macroeconómicas. Gran parte de las variaciones en el ingreso de los gobiernos latinoamericanos procede de las fluctuaciones en bienes de exportación. Fondos de estabilización como los sugeridos por Engel y Valdés (2000) podrían reducir la prociclidad del gasto público.

En el Cuadro 1 se muestra la correlación entre el gasto del gobierno como proporción del PIB y el crecimiento del PIB. La muestra no es muy grande, pero de los países existentes, la mitad tiene la correlación negativa requerida y entre ellos se encuentra Panamá, que de acuerdo a Velasco (2000) no tiene una política fiscal que se distinga por su disciplina.

Cuadro 1

	Coeficiente de Correlación entre el Gasto del Gobierno como % del PIB y el Cambio% en el PIB real	Años considerados para el cálculo
Argentina	0.3699	91-97
Bulgaria	-0.1678	91-98
Estonia	-0.5058	93-98
Hong Kong	-0.5517	93-94, 97-99
Lituania	0.7798	93-98
Panamá	-0.5303	91-97

Fuente: PIB e IP: IFS

Gasto: GFS excepto Hong Kong (Census and Stat Dept)

A propósito de la disciplina, el propósito de los regímenes que limitan la actuación de las autoridades monetarias es impedir que éstas apliquen su discreción. Pero como se mencionó anteriormente, frecuentemente se utiliza a la inflación como una fuente de ingreso por parte del gobierno. En otras ocasiones, la autoridad fiscal dicta a la autoridad monetaria qué es lo que debe hacer. Bajo estas circunstancias, la limitación de la política monetaria sólo sirve para quitarle una fuente de financiamiento políticamente menos costosa a la autoridad fiscal, que es la que en realidad requiere de disciplina.

Para inducir disciplina a la autoridad fiscal limitar la actuación de la autoridad monetaria no siempre es suficiente, y por el contrario, dicha limitación puede ganarle tiempo a una autoridad fiscal que tiene un sesgo hacia los déficit. Gavin y Perotti (1997) y Tornell y Velasco (1998 y 2000) muestran que tanto en América Latina como en Africa los regímenes de tipo de cambio fijo tienden menores déficit públicos que los países con tipo de cambio flexible. La razón que aducen Tornell y Velasco es que los déficit se manifiestan inmediatamente en mayores inflaciones mientras que bajo tipo de cambio fijo la inflación tarda en manifestarse, lo que da menos espacio para operar a las autoridades cuando se actúa bajo tipo de cambio flexible.

Precisamente porque la disciplina fiscal no se garantiza abdicando de la política monetaria es que el tratado de Maastricht y el Pacto para la Estabilidad y el Crecimiento aplicados a los países de la Unión Monetaria Europea agregan límites tanto al déficit público como al endeudamiento público. La conveniencia de estos límites se verá en la siguiente sección.

3.2. Tipo de Cambio Flexible

Bajo este régimen pueden presentarse diversas formas de actuación para la autoridad monetaria. Al no estar ligada la paridad a una referencia externa la autoridad monetaria debe fijar otra ancla nominal.

Entre las que más se mencionan están los agregados monetarios (seguidos en Suiza y Alemania), los objetivos de inflación (seguidos por Nueva Zelandia, Chile, Canadá, Israel, Reino Unido, Suecia, Finlandia, Australia, España antes de la Unión Monetaria Europea, Brasil y, próximamente, México) y el nivel de ingreso nominal (sugerido por algunos académicos). Mishkin (2000) señala que dada la inestabilidad que se ha registrado en la relación entre los agregados monetarios y la inflación, los países que establecen objetivos de agregados monetarios en realidad gozan de amplia credibilidad en cuanto a su aversión a la inflación, lo que les permite utilizar su discreción siempre que ésta sea requerida. Para los países latinoamericanos, incluyendo a Chile, ésta no es una opción. Por lo que a continuación se analiza el otro régimen, más reciente, que se aplica en varios países.

3.2.1. Objetivos de inflación

Al concentrarse el banco central en la estabilidad de precios, la política monetaria tiene la misión de que no se estimule a la economía cuando ello lleva a mayores niveles de inflación. En la división de responsabilidades, el buen desempeño de la autoridad monetaria requiere que la inflación no sea elevada, lo que implica, entre otras cosas, que la economía no crezca por encima de su potencial.

Bajo objetivos de inflación, la autoridad monetaria recurrirá a medidas proactivas cuando la economía se encuentra en una recesión. Al buscar la estabilidad de precios, la política monetaria resulta naturalmente contracíclica, pues ésta se vuelve laxa en recesiones (cuando los precios están menos presionados) y restrictiva cuando se crece por encima del nivel potencial (y se presionan los precios a la alza) (Fischer, 1996). Al ser responsable de la estabilización de la inflación, la autoridad monetaria tiene que informar al público de todos aquellos eventos que afecten su objetivo. Uno de los factores que afecta a la demanda agregada y puede presionar el objetivo de inflación es la política fiscal. Por ello los países que operan bajo objetivos de inflación tienen el mismo incentivo para buscar de ésta no sea procíclica que los países con consejo monetario. El Cuadro 2 presenta las correlaciones entre el gasto como proporción del PIB y el crecimiento para los países con objetivo de inflación. Nuevamente, no se tienen muchas observaciones, pero es claro que hay un mayor número de correlaciones negativas que en el Cuadro 1.

Cuadro 2

	Coeficiente de Correlación entre el Gasto como % del PIB y el Cambio% en el PIB real	Año de adopción del inflation target	Años considerados para el cálculo
Australia	-0.4492	1994	94-98
Brasil		1998	
Canadá	-0.6166	1991	91-99
Chile	-0.8681	1991	91-98
España	-0.9453	1994	94-99
Finlandia	-0.6525	1993	93-97
Israel	-0.3343	1991	91-98
Nueva Zelandia	-0.5416	1990	94-98
Reino Unido	-0.1960	1992	92-98
Suecia	-0.5056	1993	93-98

Fuente

	PIB	IP	Gasto
Australia	IFS	IFS	GFS
Brasil	IFS (90-98) Banco Central de Brasil (99)	IFS	GFS (90-94) Banco Central de Brasil (97-99)
Canadá	IFS	IFS	GFS (90-95) Dep of Finance of Canada (96-98)
Chile	IFS	IFS	GFS
España	IFS	IFS	Ministerio de Economía de España
Finlandia	IFS	IFS	GFS
Israel	IFS	IFS	GFS
Nueva Zelandia	IFS	IFS	Statistics New Zeland
Reino Unido	IFS	IFS	GFS
Suecia	IFS	IFS	GFS

Como se mencionó anteriormente, una característica de los países latinoamericanos es sus políticas procíclicas. Con la adopción del objetivo de inflación, el Banco Central de Brasil y el Banco de Mexico han señalado en sus reportes de inflación las presiones que causa la política fiscal sobre la inflación debida a la presión en demanda agregada, con lo que es de esperarse que disminuya el grado de prociclidad. Al menos en 1999 en Brasil el gasto público creció en 0.15 puntos del PIB cuando el PIB apenas registró crecimiento. En México, en los últimos años se ha registrado una presión en demanda agregada considerablemente menos procíclica que en años anteriores, como se mostró en la gráfica 2.

Además de la ventaja comparativa que tienen las autoridades monetarias bajo tipo de cambio flexible hay otra razón para asignarles la estabilización de la economía interna. Cuando la información disponible no permite juzgar en qué situación está la economía, dependerá de los incentivos que tienen las autoridades para explicar la decisión que se tome. Generalmente, la autoridad fiscal tiende a abogar por un estímulo a la economía mientras que el banco central, atribuye un mayor costo a la inflación. Con la clara determinación de responsabilidades, la autoridad monetaria independiente puede velar porque se preserve la estabilidad de precios y que la política acordada por las autoridades repercuta en un nivel de ingreso sostenible. Mientras que la autoridad fiscal controla que el déficit de cuenta corriente se encuentre en niveles sostenibles. Sin embargo, bajo instituciones que limitan la actuación de las autoridades fiscales no está del todo claro si estas autoridades pueden llevar a cabo dicho objetivo.

3.2.2. Limitantes a la Actuación de la Política Fiscal

Entre las instituciones que limitan la actuación de la política fiscal se encuentran tanto límites cuantitativos como regulaciones del proceso de presupuestación. Para el presente análisis nos concentramos en los límites cuantitativos. Estos pueden ser tanto restricciones constitucionales como leyes menores, desde luego que entre más alto sea el rango de la Ley más difícil será cambiarla, lo que compromete en mayor medida a las autoridades a cumplir con el mandato. En cuanto a la forma que toman dichos límites, pueden ser tanto restricciones sobre el flujo de endeudamiento, reglas que prohiben cierto déficit, o que actúan sobre el saldo de endeudamiento, límites al monto que puede llegar a tener la deuda.

La evidencia empírica, casi toda basada en los estados que integran a los Estados Unidos de Norteamérica, sugiere que dichas reglas promueven una amplia actividad por parte de las autoridades para darle la vuelta a las restricciones (Von Hagen, 1991). Sin embargo, Poterba (1996) encuentra que dichas maniobras son relativamente menos importantes que las acciones para cortar gasto o elevar impuestos que toman las autoridades sujetas a tales restricciones. En consecuencia, suponemos que tales restricciones sí tienen efecto.

Como se puede apreciar, dichas restricciones son asimétricas: se oponen a una mayor acumulación de deuda, no a su descenso. Por otra parte, como se mencionó al abordar el objetivo de ahorro externo, éste también es asimétrico, en contra de una acumulación de deuda externa. En consecuencia, aún bajo reglas que limitan el déficit o un nivel de deuda pública, será posible que la autoridad fiscal contraiga el gasto, moviéndose hacia un superávit presupuestal. Tal movimiento es precisamente el necesario para reducir un déficit en cuenta corriente. Es decir, las restricciones a la política fiscal no impiden que ésta contribuya a alcanzar el objetivo que prevalece en los países con carencia relativa de capital.

4. Conclusión

De la asignación de políticas a los objetivos en los cuales tienen ventaja comparativa surge la conclusión en el sentido de que la restricción a la política monetaria con una política fiscal independiente es potencialmente más perjudicial que la restricción fiscal con una política monetaria más independiente. Lo anterior debido a que limitar la actuación de la política monetaria evita que se alcance el objetivo de un déficit de cuenta corriente moderado y deja el peso de la estabilización macroeconómica a la política fiscal, la cual carece de flexibilidad y en América Latina ha operado para exacerbar los desequilibrios en lugar de reducirlos. Por el contrario, la política monetaria que opera bajo objetivos de inflación tiende naturalmente a estabilizar la economía, mientras que las restricciones a la política fiscal no le impiden limitar un déficit de cuenta corriente potencialmente peligroso.

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SESION 2

LA POLITICA FISCAL, MONETARIA Y CAMBIARIA EN LOS "PROGRAMAS DE ESTABILIDAD Y CRECIMIENTO" DEL AREA DEL EURO: LECCIONES PARA LA INTEGRACION REGIONAL EN AMERICA LATINA Y EL CARIBE

LOS EFECTOS DEL EURO EN LAS RELACIONES FINANCIERAS ENTRE AMÉRICA LATINA Y EUROPA

(Versión preliminar)

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Introducción

La creación y la entrada en vigor del euro a partir del 1 de enero de 1999 constituye uno de los mayores acontecimientos económicos de fines del siglo XX. Etapa decisiva de un largo proceso de integración económica, la materialización de la Unión Monetaria Europea introduce importantes transformaciones en las relaciones monetarias y financieras internacionales. El peso económico de la zona de emisión –es decir los once países que constituyen hasta el momento el "Euroland"- y la voluntad de las autoridades europeas de no impedir el proceso de internacionalización de la nueva moneda llevan a pensar que la irrupción del euro puede traducirse en sustantivas modificaciones del sistema monetario internacional (SMI).

América Latina no es la región que presenta vínculos más estrechos con la zona euro. Además, el dólar es la divisa de referencia indiscutible en la región latinoamericana. No obstante, el peso no desdeñable de los lazos económicos que existen entre numerosos países latinoamericanos y el viejo continente y el interés por el proceso de construcción de la Unión Monetaria Europea están en la base de una reflexión que se desarrolla en dos planos diferentes.

Por un lado, la trayectoria europea hacia la unión monetaria es, desde hace varios años, una fuente de experiencia para América Latina. Aun cuando no es posible trasplantar una experiencia que es en gran medida única, el análisis de la secuencia lógica y de los criterios de convergencia adoptados por la Unión Europea puede ser de gran utilidad para los diversos agrupamientos regionales latinoamericanos (Capítulos del SELA, 1998; Giambiagi, 1999; Heyman, 1999; Irela, 1999; Levy Yeyati y Sturzenegger, 1999a; Zalher, 1999). El interés por el proceso europeo se ve reforzado, además, en un contexto en el que el principio hasta hace poco dominante de "un país, una moneda" es cada vez más cuestionado (Alesina y Barro, 2000). A partir de ello, las opciones a medio y largo plazo para los países latinoamericanos parecen polarizarse, más allá de la diversidad de regímenes cambiarios existentes en la región, entre la perspectiva de una dolarización total y la de la participación en una unión monetaria regional, lo cual refuerza el interés por la experiencia europea (García Herrero et Glöckler, 2000).

Por otro lado, los probables efectos directos e indirectos de la creación del euro en las relaciones económicas entre Europa y América Latina comienzan a suscitar un interés creciente. La tarea de analizar en términos prospectivos el impacto de la nueva moneda europea en otras regiones del mundo es compleja. El euro tendrá, en primer lugar, efectos en los propios países de la unión monetaria europea que no son fáciles de elucidar y que serán en gran medida determinantes para que la nueva moneda gane terreno en las transacciones internacionales (por ejemplo, los efectos del euro en el desarrollo de los mercados financieros de la eurozona). Además, los efectos del euro en terceros países dependerán del alcance del proceso de internacionalización de la nueva moneda. Esta es la dimensión que, sin pretender abordar todos los aspectos de este vasto tema, será privilegiada en este trabajo. Más precisamente, la atención se concentrará en los efectos del euro en las relaciones financieras entre Europa y América Latina[2].

Esta elección parece justificada. Como ya ha sido puesto en evidencia, el impacto del euro en las relaciones euro-latinoamericanas transitará, más que por los canales comerciales, por los canales financieros (Levy Yeyati y Sturzenegger, 1999c). La mayor parte de los países latinoamericanos se caracteriza, en efecto, por un alto grado de apertura financiera que incrementa su vulnerabilidad respecto de los cambios en la direccionalidad de los flujos internacionales de capitales. Además, el desarrollo de las funciones financieras del euro constituirá, muy probablemente, la dimensión decisiva del proceso de internacionalización de la moneda única europea.

[2] Este trabajo es un primer borrador de un estudio más extenso que se encuentra en proceso de elaboración.

La historia monetaria demuestra que los procesos de emergencia de las divisas clave -es decir las monedas de uso internacional- son lentos, ya que se encuentran sometidos a inercias. Estas inercias son particularmente fuertes en lo que respecta a las funciones de unidad de cuenta y de medio de pago de la moneda. En cambio, la internacionalización de un divisa de referencia puede avanzar más rápidamente a nivel de sus funciones financieras. En el caso del euro, esto fue avizorado en algunos análisis anteriores al nacimiento de la moneda europea. En efecto, diversos trabajos han puesto el acento en la posibilidad de una utilización importante del euro en las operaciones financieras y en el impacto decisivo que esto puede tener en la evolución del SMI (Bergstein, 1997; Mc Cauley, 1997; Portes y Rey, 1998). Una mayor utilización del euro por parte de los agentes privados en las operaciones de financiación (colocaciones y empréstitos) puede ser la vía a través de la cual se avance hacia un SMI cada vez más bilpolar.

Los dos primeros años de existencia del euro parecen confirmar estos análisis. La etapa inicial de la nueva moneda se caracteriza por una significativa expansión de las emisiones de obligaciones internacionales en euros y por la emergencia de la divisa europea como moneda de endeudamiento (Detken et Hartmann, 2000; BCE, 2000; BIS, 2000).

América Latina ha participado de manera importante en la expansión del mercado de obligaciones en euros. Este fenómeno constituye una faceta del proceso de intensificación de las relaciones financieras entre Europa y América Latina (caracterizado también por el auge de las inversiones extranjeras directas de origen europeo y por la creciente implantación de los bancos europeos en América Latina), claramente perceptible desde los años 90.

Las implicaciones de este proceso a mediano y largo plazo son numerosas. En este trabajo se tratará principalmente uno de los aspectos menos abordados hasta el presente : las repercusiones en los regímenes cambiarios de América Latina. Esto supone considerar las perspectivas de la divisa europea a nivel de la función de unidad de cuenta. Esta función no se limita a la "tarificación" del comercio internacional; ella también tiene que ver con el uso de las monedas internacionales como anclas para la política monetaria y cambiaria (Bénassy–Quéré y Cœuré, 2000). A partir del análisis de las condiciones de generalización del uso del euro como moneda de anclaje única o en el marco de canastas de monedas, se examinarán las perspectivas de los países latinoamericanos en este plano.

El trabajo está organizado en tres partes. En la primera se evalúan en términos generales los primeros pasos del euro y su potencial de internacionalización, con el fin de formular hipótesis sobre los escenarios previsibles a nivel de la evolución del SMI. En la segunda se profundiza el análisis de los factores que incidirán en la internacionalización de la divisa europea y se aborda la cuestión de los efectos del euro en las relaciones euro-latinoamericanas, poniendo énfasis en la dimensión financiera. En la tercera parte se estudian, a partir de un análisis econométrico realizado para 93 economías, los determinantes reales y financieros de las opciones adoptadas por los países en desarrollo en materia de anclaje de facto y se exploran de modo prospectivo los canales de generalización de la utilización del euro como ancla monetaria en América Latina. En la conclusión se resumen los principales resultados de este estudio.

I. El euro y el SMI

La aparición del euro en la escena internacional marca el inicio de una nueva era de las relaciones monetarias y financieras internacionales. La profundización del proceso de integración que se inició en los años 50 y el nacimiento del euro constituyen un paso decisivo en el largo camino hacia un mercado europeo verdaderamente único. Al mismo tiempo, dado el peso económico de "Euroland" y la voluntad que emana de las autoridades europeas, el advenimiento del euro abre la posibilidad de aparición de una nueva moneda internacional capaz de competir con el dólar. El escenario que parece más plausible, a saber una creciente pero lenta bipolarización del SMI, va a generar muy probablemente una mayor volatilidad de las tasas de cambio. A menos que las autoridades estadounidenses y europeas implementen una cooperación monetaria reforzada que, por el momento, no se perfila en el horizonte.

1. El euro, moneda internacional: consideraciones generales

Si se comparan los pesos relativos de Estados Unidos y de la zona del euro en la economía mundial, se advierte que ambos son similares en términos de PIB y de población, como se indica en el cuadro 1.

Cuadro 1
Peso en la economía mundial de Estados Unidos y de la Zona Euro

	Población	PIB	Capitalización bursátil		Apertura externa
	(1)	(2)	(2)	% PIB	(3)
Europa (11)	291.09	6 457.66	4 223.13	65.40	15.90
Estados Unidos	270.30	8 230.40	13 451.35	163.44	12.09
Japón	126.41	3 782.96	2 495.76	65.97	11.09

(1) millones de habitantes, (2) miles de millones de dólares, (3) exportaciones/PIB en %
Fuente: World Bank , datos para el año 1998

Al mismo tiempo, se percibe que la zona euro tiene un peso superior al de Estados Unidos en el plano del comercio internacional. En cambio, el peso financiero de Estados Unidos es ampliamente superior, si se adopta el criterio de la capitalización bursátil. Estos datos estadísticos de base pueden conducir a considerar que el euro dispone de un importante potencial para incrementar su participación, como moneda de uso internacional, en la economía mundial.

A esto se agrega un factor no desdeñable: la posición de las autoridades europeas con respecto a la internacionalización del euro. A sabiendas que la historia y la teoría económica muestran que el progreso en el uso internacional de una moneda no puede ser sino gradual, los responsables europeos no buscan promover activamente la internacionalización del euro. No obstante, a diferencia de Japón, que siempre se ha resistido a la perspectiva del uso internacional del yen (considerando que esto podía perturbar la conducta de la política monetaria del país), las autoridades europeas no se oponen a una internacionalización creciente del euro. Su posición es que la estrategia en materia de política monetaria es suficientemente robusta para enfrentar las implicancias de una internacionalización creciente de la moneda europea (Duisemberg, 2000). Se trata, por lo tanto, de una posición "neutra" que, de hecho, favorece la creciente utilización internacional del euro.

2. El euro en el escenario internacional: un comienzo difícil

Contrariamente a las previsiones de la mayoría de los especialistas, el euro se debilitó sustancialmente en la primera etapa de su existencia, perdiendo casi 30% de su valor en menos de dos años. Tres grupos de factores han jugado a favor de la baja del euro.

En primer lugar, factores económicos: la brecha coyuntural entre la economía estadounidense, que se ha caracterizado por una fase de prosperidad excepcional, y la zona euro, cuyo ciclo de crecimiento comenzó más tarde y ha sido menos fuerte. Una de las consecuencias de esta situación es un diferencial de tasas de interés favorable al dólar.

En segundo lugar, factores financieros, de naturaleza más estructural. Mientras que los Estados Unidos son importadores netos de capitales, la zona euro experimenta salidas netas de capitales de largo plazo (inversiones de cartera e inversión extranjera directa) ampliamente superiores a sus excedentes en cuenta corriente desde 1994. El euro es, en sus comienzos, una moneda de endeudamiento, mucho más que una moneda de colocaciones. Esta es una característica distintiva del actual proceso de internacionalización del euro que será analizada más adelante.

En tercer lugar, factores institucionales. La implementación de la UEM no ha clarificado la situación en materia de gobernabilidad económica de la zona euro. En muchos planos, persiste la incertidumbre y, desde el punto de vista de los inversores extranjeros, la política del Banco central europeo adolece de falta de visibilidad.

La debilidad del euro va acompañada de una mayor volatilidad de la paridad dólar–euro, por dos razones principales. Por un lado, la volatilidad entre las monedas europeas, suprimida por la creación del euro, se ha transferido a las relaciones entre éste y las terceras monedas. Por otro lado, las autoridades monetarias europeas no tienen un objetivo explícito en materia cambiaria y parecen cada vez más incitadas a practicar un « bening neglect » en la medida en que el grado de apertura exterior de la zona euro es menor que el de sus países miembros considerados individualmente.

3. El rol internacional del euro y el SMI

Una apreciación significativa del euro, que se insinúa desde fines del 2000, parece probable. En efecto, varios de los factores que explican su debilidad en el momento de su creación, podrían jugar en sentido contrario en el futuro próximo.

La brecha coyuntural se está invirtiendo entre Estados Unidos y la zona euro: ésta debería conocer un ritmo de crecimiento más rápido que la economía estadounidense en 2001, con incrementos de productividad más importantes.

La salida de capitales de largo plazo de la zona euro debería reducirse: estas salidas han sido, en parte, el resultado del shock creado por el nacimiento del euro, que ha servido de catalizador de un movimiento de diversificación de las carteras europeas y de intensificación de la internacionalización de las empresas del viejo continente. Así, en el futuro inmediato debería verificarse, por un lado, una desaceleración del proceso de compra de acciones en los mercados no europeos por parte de los residentes de la zona euro. Por otro lado, no es descabellado pensar que el saldo negativo de las inversiones directas netas, ligado al proceso de globalización de las empresas europeas, se vuelva neutro o positivo, como consecuencia de una aceleración de la reestructuración industrial y bancaria en el espacio europeo.

Asimismo, el tamaño y la liquidez de los mercados financieros de la zona euro van a seguir aumentando. Entre los principales motivos cabe mencionar el nivel relativamente elevado del ahorro en Europa y las crecientes necesidades de financiamiento de sus empresas. Además, la zona euro debería devenir más atractiva para los inversores extranjeros si la coyuntura económica sigue mostrándose

promisoria y si el diferencial de tasas de interés con Estados Unidos se reduce o se invierte. De hecho, durante los últimos meses del 2000 comenzó a advertirse que las entradas netas en concepto de títulos de deuda aumentan puesto que los inversores europeos parecen menos ávidos de papeles extranjeros, en tanto que los no residentes mantienen sus posiciones en obligaciones y activos monetarios de la zona euro. Paralelamente, aumentan las compras netas de acciones europeas por parte de los no residentes (Nehls–Obégi y Ripert, 2000).

La mayor parte de los economistas parecen estar de acuerdo para prever una apreciación gradual del euro. Sin embargo, importantes fuentes de incertidumbre persisten en el corto y mediano plazo. Una de ellas tiene que ver con el comportamiento de la economía estadounidense: su desaceleración se producirá en la forma de un « soft landing »? En caso de no ser así, no se debe excluir la posibilidad de una crisis financiera en Estados Unidos que podría suscitar una caída brutal del dólar, con fases alternadas de alza o de baja de la paridad dólar–euro debidas al desfasaje coyuntural entre las dos zonas monetarias y a cambios bruscos en las expectativas de los mercados financieros.

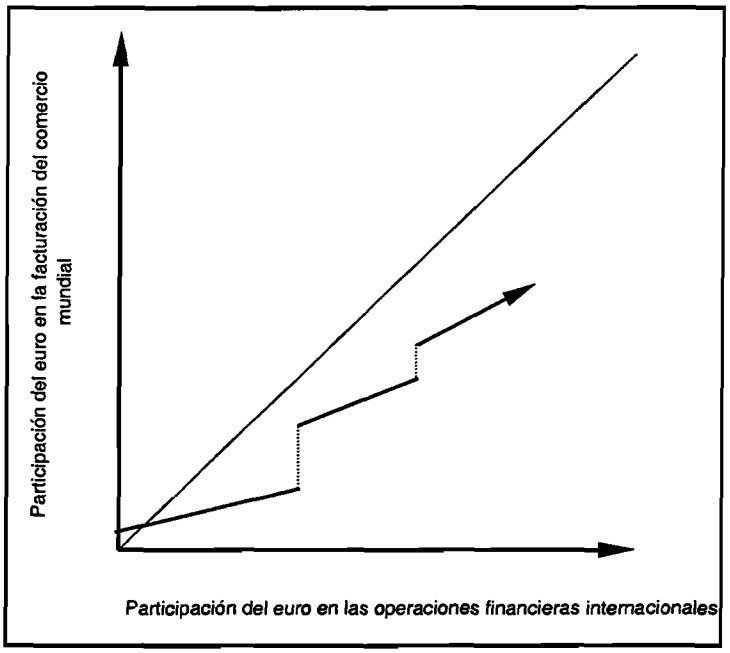
Otra fuente de incertidumbre a mediano plazo tiene que ver con el alcance de la actual fase de crecimiento de la economía europea y con su capacidad para acercarse a la tasa de crecimiento potencial de la economía estadounidense. La mayor parte de los estudios sobre este tema muestran que la tasa de crecimiento tendencial de la zona euro se sitúa entre 2,5% y 3%, mientras que la de Estados Unidos está próxima de 4%. Aun cuando la tasa de ahorro interno más elevada y el saldo corriente habitualmente excedentario de la zona euro (a pesar del déficit coyuntural del 2000) tienden a debilitar al dólar, la persistencia del diferencial en materia de crecimiento potencial juega en contra del fortalecimiento del euro en el largo plazo.

A pesar de que se trata de cuestiones diferentes, la evolución de la tasa de cambio del euro y las perspectivas en el plano del rol internacional de la moneda europea no están exentos de vínculos. En efecto, si el euro se deprecia de modo permanente y se instala un clima de desconfianza sobre su paridad, su utilización podría verse desalentada y esto podría incidir contra su afirmación como una de las divisas clave del SMI.

Como quiera que sea, numerosos autores preconizan un auge previsible del euro como moneda internacional. La mayor parte de estos trabajos subraya que el rol financiero del euro (es decir como moneda de endeudamiento y de préstamo) va a desarrollarse mucho más rápidamente que su función comercial internacional (es decir como moneda de facturación del comercio internacional). Precisando este razonamiento, algunos señalan que el progreso del euro « comercial » podría producirse en « escalera », con saltos cualitativos, que deberían traducirse en una aceleración del proceso de internacionalización de la divisa europea (de Boissieu, 2000) (gráfico 1). Sin embargo, desde esta perspectiva también se argumenta que un excesivo retraso en el desarrollo de la función comercial del euro podría conspirar contra la afirmación de su rol financiero: una moneda internacional « completa » no debería conocer una divergencia excesiva ni demasiado durable entre sus roles financiero y comercial.

Gráfico 1

Evolución teórica de la internacionalización del euro



Fuente: de Boissieu (2000)

En definitiva, es posible distinguir al menos tres escenarios sobre la evolución del SMI en el mediano–largo plazo. En primer lugar, un SMI que sigue siendo hegemonizado durablemente por dólar, lo cual supone que los avances iniciales constatados a nivel de la función financiera del euro –que se analizan en la próxima sección– son seguidos de retrocesos y que la moneda europea no logra afirmarse de modo definitivo en este plano. En segundo lugar, el escenario totalmente opuesto: la función financiera del euro se afirma y el rol comercial se desarrolla a un ritmo más rápido que el previsto; esto correspondería a un duopolio dólar–euro cada vez más simétrico. Por último, el escenario que parece más plausible, habida cuenta de los primeros pasos del euro en la escena internacional y de las enseñanzas de la teoría económica: un duopolio cada vez menos asimétrico. Ahora bien, la bipolarización lenta pero creciente del SMI supone también que se desarrolle el rol del euro como moneda de anclaje en los regímenes cambiarios de terceros países.

En el marco de este escenario, parece claro que no predominará una menor volatilidad de las tasa de cambio. Al contrario, como lo sugieren los teóricos del papel del leadership (como Kindleberger), la asimetría y la existencia de una moneda claramente hegemónica son condiciones favorables a la estabilidad. Como lo muestra la experiencia histórica, la coexistencia de dos monedas dominantes (caso de la libra esterlina y el dólar en los años treinta) puede ser desestabilizador e inducir efectos desfavorables para los terceros países.

En efecto, si se formula la hipótesis de la existencia de tres escenarios posibles en función del anclaje de las monedas de terceros países a las divisas clave del sistema (flotación generalizada, en la que ninguna moneda está anclada al dólar o al euro; sistema hegemónico, en el que todas las monedas salvo el euro están ancladas al dólar; y un sistema bipolar, en el que tanto Estados Unidos como la zona euro realizan la mitad de su comercio con los países de sus bloques monetarios respectivos), y se analiza la reacción de la tasa de cambio euro–dólar a un shock comercial que afecta la cuenta corriente bilateral Euroland / Estados Unidos, se advierte que el sistema hegemónico, menos estable que el de flotación generalizada, es a su vez mucho menos volátil que el SMI bipolar (Bénassy–Quéré y Coeuré, 2000).

Así, el actual sistema, intermedio entre el hegemónico y el bipolar, o un SMI que correspondería al escenario de mediano–largo plazo que privilegiamos, es decir cada vez más bipolar pero asimétrico, supone una elevada volatilidad entre las dos principales monedas internacionales.

Antes de examinar de modo más detallado los primeros pasos del proceso de internacionalización del euro, conviene señalar que, en el marco de una creciente bipolarización del SMI, se pueden avizorar dos configuraciones respecto de la paridad euro–dólar. Por una parte, una configuración « pesimista » de « competencia » entre el dólar y el euro, en la que las autoridades monetarias estadounidenses y europeas siguen privilegiando exclusivamente sus objetivos domésticos y no cooperan entre sí, lo cual acentuaría la inestabilidad de la paridad bilateral. Por otra parte, una configuración «optimista» de «cooperación» monetaria reforzada: las autoridades estadounidenses y europeas consideran que la estabilidad monetaria internacional es un bien público y se conciertan para intervenir y controlar la evolución de las paridades, al tiempo que se avanza en la coordinación de las políticas macroeconómicas. En esta configuración la volatilidad de la paridad euro–dólar disminuiría.

La primera configuración parece la más probable. Mientras el SMI se encuentre en la actual situación intermedia, es difícil imaginar que los Estados Unidos acepten sacrificar la prioridad acordada a sus objetivos domésticos. Por otro lado, las insuficiencias de la arquitectura institucional de la UEM, incluida la ausencia de un poder político unificado, hacen difícil pensar que Europa pueda defender una política macroeconómica coherente en el plano internacional.

II. La internacionalización del euro y América Latina: la importancia de la dimensión financiera

El impacto de la creación del euro en las relaciones monetarias internacionales dependerá en gran medida del grado de internacionalización de la moneda única europea. Conviene entonces comenzar por distinguir los diferentes usos, privados y públicos, de las monedas a escala internacional, para luego presentar las condiciones de internacionalización de una moneda tal como son enunciadas y analizadas en la literatura económica. Esto permitirá utilizar estos elementos de análisis para evaluar en qué medida el euro es susceptible de devenir una moneda de uso internacional. Por último, se examinan los canales a través de los cuales transitarán los principales efectos directos e indirectos del proceso de internacionalización del euro en América Latina.

1. El marco teórico

1.1. Una tipología del uso internacional de las monedas

Se puede distinguir, según la tipología propuesta por Krugman (1991), seis tipos de usos internacionales de una moneda en función de un doble criterio: por un lado, las tres funciones tradicionales de las monedas y, por el otro, el uso privado y público de las monedas a escala internacional (cuadro 2).

Cuadro 2

Los diferentes usos internacionales de una moneda

Función	Utilización privada	Utilización pública
Medio de cambio	*Medio de pago / moneda vehicular*	*Moneda de intervención*
Unidad de cuenta	*Moneda de fijación de precios / de facturación*	*Moneda de referencia*
Reserva de valor	*Moneda de colocación y de financiamiento*	*Moneda de reserva*

Fuente: a partir de Krugman (1991)

Una moneda internacional es utilizada por los no residentes como medio de cambio en los intercambios comerciales y en los movimientos de capitales. Los agentes privados utilizan una moneda internacional como vehículo, es decir como un intermediario de cambio entre dos monedas de segundo rango. De esta manera, las transacciones entre Brasil y Tailandia se escinden en dos momentos: real/dólar y dólar/baht. Por su parte, las autoridades monetarias utilizan igualmente las monedas internacionales como medio de pago en sus intervenciones en los mercados cambiarios.

Una moneda internacional sirve, en segundo lugar, como unidad de cuenta para los agentes privados en la facturación de sus transacciones internacionales comerciales o financieras. Esta función es diferente de la de medio de pago en la medida en que una transacción puede ser denominada en una moneda y luego pagada en otra (distinción entre moneda de facturación y medio de pago). Las autoridades monetarias hacen igualmente uso de la función de unidad de cuenta en la implementación de sus políticas cambiarias cuando deciden anclar sus monedas a una moneda internacional de referencia. Esto tiene que ver con la problemática de los regímenes cambiarios.

Como reserva de valor, una moneda internacional es utilizada por los agentes privados con el objetivo de preservar el valor de sus activos. Estos efectúan colocaciones de sus activos denominados en diferentes monedas internacionales, en el marco de estrategias de optimización de la relación riesgo/rendimiento. Por su lado, las autoridades monetarias manejan la composición de sus reservas internacionales en función tanto de sus objetivos de optimización de la relación riesgo/rendimiento, como de la naturaleza de sus intervenciones en el mercado cambiario.

Estos diferentes usos internacionales de las monedas son separables pero interdependientes. Por ejemplo, la decisión, adoptada por las autoridades monetarias, de priorizar ciertas divisas en la composición de las reservas internacionales (función de reserva de valor) puede estar en parte condicionada por la elección de un anclaje respecto de esas monedas (función de unidad de cuenta).

El grado de utilización de una moneda internacional por un país puede ser muy diferente de acuerdo con las funciones precedentes: de esta manera, el dólar puede ser elegido como moneda de anclaje por las autoridades monetarias, en razón del peso aplastante de los mercados financieros estadounidenses, a pesar de que las operaciones comerciales del mismo país se denominan en otras monedas. Asimismo, es posible jerarquizar estas funciones; v.gr. la función de medio de pago internacional es a menudo considerada como la más importante (Bourguinat, 1985).

1.2. Las condiciones de internacionalización de una moneda

Según Bourguinat (1987), deben retenerse dos criterios:

- Estabilidad – previsibilidad de la moneda;
- Aceptabilidad – liquidez: para ser internacional una moneda debe ser aceptada universalmente; la moneda debe ser "vehicular" en el sentido que ella es utilizada por los otros países, en transacciones que no implican una relación directa con el país emisor.

Tavlas (1991) propone dos criterios complementarios:

- El país emisor de la moneda internacional debe tener un peso importante en el comercio internacional, lo que refuerza la utilización de esta moneda por los otros países.
- El país emisor de la moneda internacional debe disponer de mercados financieros libres, amplios y profundos, garantizando la condición de liquidez y permitiendo así que su divisa juegue un rol de reserva de valor para los actores privados y públicos.

Estas condiciones son necesarias pero insuficientes para explicar los motivos por los que los operadores internacionales privilegian una moneda como divisa clave. Algunos autores ponen el acento en el rol de los costos de transacción, los fenómenos de economía de escala, de externalidades positivas (Kenen, 1992) y los efectos de red (Aglietta & Deusy – Fournier, 1994). Estos enfoques permiten mostrar la existencia de procesos de autoreforzamiento y de inercia en el uso internacional de las monedas. Desde este punto de vista, el progreso del euro como moneda internacional debería ser gradual. En otras palabras, el dólar debería mantener su supremacía durante un largo período.

2. El proceso de internacionalización: diferentes perspectivas según las funciones del euro

Cuando surge oficialmente el euro, el dólar es, de lejos, la principal moneda internacional. La moneda estadounidense representa en 1999 más de 60% de las reservas internacionales de los bancos centrales, contra algo más de 12% en el caso del euro (el yen aparece claramente distanciado, con apenas algo más del 5%). El dólar es también el medio de pago más utilizado, con más de 85% de las transacciones en los mercados cambiarios. En lo que respecta a la facturación de las transacciones comerciales, el dólar también juega un rol decisivo, ya que representa alrededor del 45% del total. Por el contrario, las diferencias son menos importantes cuando se abordan las funciones financieras de las monedas. En el momento de la creación del euro las emisiones de obligaciones internacionales son denominadas en dólares a nivel de 38% del total, mientras que la parte de la moneda europea es de 24%. Por otra parte, la moneda europea representa una proporción similar a la del dólar en la repartición por monedas de la cartera de títulos de los agentes privados.

Como lo veremos, se puede esperar que el rol internacional del euro se desarrolle más rápidamente para las operaciones financieras que para las otras operaciones.

2.1. La utilización privada del euro como medio de pago y moneda vehicular

Aun cuando la zona euro tiene, como ya se vio, una participación mayor que Estados Unidos en las exportaciones mundiales de bienes y servicios, la adhesión al euro como medio de pago/moneda vehicular será un proceso lento. De hecho, las modificaciones en las prácticas de denominación de los intercambios toman generalmente un largo período de tiempo. En este sentido, según un estudio reciente del Banco central europeo (1999), cuatro factores podrían cuestionar, aunque ciertamente a largo plazo, el uso preponderante del dólar como medio de pago/moneda vehicular.

En primer lugar, todos los mercados en los cuales se utiliza el euro como medio de pago/moneda vehicular experimentarán una baja en los costos de transacción, lo que incrementará la probabilidad de la

utilización del euro en este plano. En particular, los no residentes que deseen cubrirse contra el riesgo de cambio deberían encontrar nuevos instrumentos denominados en euros en el mercado cambiario único de la zona euro.

En segundo lugar, los operadores de la zona euro están en mejores condiciones que en el pasado para exigir que la moneda europea sea utilizada en sus transacciones internacionales con el fin de limitar el riesgo de cambio. Los exportadores europeos que hasta ahora han utilizado divisas extranjeras podrían adoptar progresivamente el euro, su moneda local, como moneda de pago y de facturación respecto de terceros países.

En tercer lugar, los países emergentes y en transición podrían verse incitados a utilizar el euro para denominar y pagar sus importaciones en la perspectiva de equilibrar su riesgo cambiario global respecto de la zona euro. Asimismo, al familiarizarse con la moneda europea, los operadores de estos países podrían recurrir al euro como moneda vehicular en sus transacciones locales.

En cuarto lugar, las transacciones denominadas en euros alcanzarán en algún momento un umbral a partir del cual aumentará la propensión de los agentes económicos a utilizar el euro como medio de pago y moneda vehicular. Esta evolución debería acompañarse de una reducción en los costos de transacción, favoreciendo así la prosecución del proceso de internacionalización del euro.

2.2. La utilización privada del euro como moneda de fijación de precios y de facturación

La evolución en este campo debería ser igualmente lenta ya que obedece a los mismos factores que determinan el uso del euro como medio de pago/moneda vehicular. El rol internacional del euro como moneda de fijación de precios y de facturación depende en gran medida de las prácticas en los mercados de materias primas y de la energía, caracterizados por el uso generalizado del dólar. Estas prácticas evolucionan lentamente debido al alto grado de normalización y de centralización de dichos mercados.

2.3. La utilización oficial del euro como moneda de reserva, de intervención y de referencia

Según la BCE (1999) los bancos centrales se caracterizan por adoptar una posición conservadora en la gestión del nivel y de la composición de sus reservas internacionales. Toda evolución en este plano será por lo tanto gradual. Sin embargo, es probable que los bancos centrales sean inducidos a evolucionar en este ámbito por tres motivos principales.

En primer lugar, los bancos centrales pueden ser incitados a modificar la composición de sus activos para sacar ventajas de las posibilidades de diversificación ofrecidas por el euro. Estas políticas podrán ser estimuladas por el incremento de la liquidez y de la profundidad de los mercados de capitales en euros (ver más adelante). En segundo lugar, una mayor utilización del euro por parte de los agentes privados debería conducir a los bancos centrales a utilizar el euro como moneda de intervención. En tercer lugar, el euro será utilizado por los bancos centrales de los países que pretendan anclar sus monedas a la divisa europea.

En cuanto a la utilización del euro como moneda de referencia, es probable que un cierto número de países decidan en el futuro ligar – formal o informalmente– sus monedas a la divisa europea o a una canasta de monedas que la incluya. Este escenario atañe, en primer lugar, a los países que pretende incorporarse a la Unión Europea en los próximos años. El podría involucrar también otros países emergentes que deseen estabilizar sus monedas con relación a una o varias divisas de referencia (volveremos sobre esta cuestión en la cuarta sección de este trabajo).

Un estudio reciente de Eichengreen y Mathienson (2000), que analiza la evolución de la composición de las reservas internacionales oficiales de los países emergentes, completa y confirma el análisis precedente. Estos autores muestran que la composición de las reservas internacionales se

caracteriza por una importante estabilidad en el tiempo con respecto a sus principales determinantes: los flujos comerciales, los flujos financieros y el régimen cambiario. Las transformaciones constatadas son graduales, lo que sugiere la existencia de una fuerte inercia. Tras haber descendido entre 1970 y 1992, la participación del dólar en las reservas oficiales aumentó incesantemente hasta 1997. De una manera simétrica, la proporción del yen y de las monedas europeas ha declinado a lo largo de los años 90.

Los tests econométricos realizados por estos autores muestran que la importancia de las principales divisas clave antes de la creación del euro (dólar, marco y yen) en las reservas internacionales es una función creciente del peso de los países emisores de estas monedas en los intercambios comerciales y de la proporción de la deuda externa denominada en estas monedas. Por otra parte, cuanto más fuerte es el anclaje de un país a una gran moneda, más importante es la participación de ésta en sus reservas. Asimismo, la econometría pone en evidencia relaciones de complementariedad entre el dólar y el marco, lo que sugeriría que estas dos monedas son utilizadas conjuntamente por las autoridades monetarias, como instrumento de reserva internacional.

Otro importante resultado de este estudio –que aborda un período anterior a la creación del euro–, es que los países en desarrollo que liberalizaron su cuenta de capital han sido más proclives a modificar la composición en divisas de sus reservas internacionales en favor del dólar y de la libra esterlina. La explicación evocada por los autores es que estas dos monedas son emitidas por los países que se caracterizan por tener los mercados financieros internacionales más desarrollados. Puede entonces deducirse que la moneda única europea podría en el futuro ocupar un lugar importante en las reservas internacionales oficiales, en la medida en que se desarrollen los mercados financieros de la zona euro.

3. El uso financiero del euro por parte de los agentes privados: perspectivas de internacionalización significativas

La utilización del euro, por parte del sector privado, como moneda de colocaciones y de endeudamiento debería jugar un rol importante en el proceso de internacionalización de la moneda europea por dos razones. En primer lugar, en las transacciones internacionales, los operaciones financieros tienen un peso mucho mayor que el de las operaciones de bienes y servicios. De este modo, en los mercados cambiarios lo esencial de las transacciones constituye la contrapartida de las operaciones financieras. En segundo lugar, existe un amplio consenso sobre el hecho que la creación de la moneda europea debería jugar en el sentido de un desarrollo rápido de los mercados financieros en euros. Todos los especialistas prevén una implementación progresiva de un mercado del euro amplio, profundo y líquido, que debería traducirse en condiciones de colocación y financiamiento más ventajosas para los operadores europeos y de terceros países.

3.1. Los principales factores de desarrollo del mercado financiero del euro

La creación del euro tiene dos efectos positivos directos e inmediatos sobre los mercados de capitales en Europa. Por un lado, el euro termina con la fragmentación de los mercados nacionales. Por otro, el euro suprime el riesgo de cambio entre las monedas europeas.

Al aumentar el tamaño de los mercados y al suprimir los obstáculos a la circulación de capitales, la moneda única a incrementar la liquidez de los mercados de la zona euro, es decir la posibilidad de operar importantes transacciones sin perturbar significativamente el valor de los títulos.

El peso financiero del euro es bastante inferior a su peso económico; esto puede explicarse por la atomización de Europa. En el caso del dólar ocurre lo inverso: su peso financiero es muy superior a su peso económico. En la medida en que los pesos económicos de Estados Unidos y de Europa (medidos por tamaño del PBI o de la población) sean comparables, se puede avizorar una evolución –ciertamente,

frenada por los factores de inercia– hacia el equilibrio a nivel de las finanzas, gracias a una expansión significativa de los mercados de capitales de la zona euro.

Varios factores que no están ligados directamente a la creación del euro, pero cuyos efectos serán amplificados por la aparición de la nueva moneda, deberían contribuir a un desarrollo intenso de los mercados de capitales de la zona euro. Por el lado la oferta de capitales, el incremento del ahorro doméstico en Europa (por razones demográficas) y la transformación de los comportamientos patrimoniales de las familias (por ejemplo, la participación de los depósitos financieros en los patrimonios de los franceses se ha triplicado en los últimos 20 años). Por el lado de la demanda de capitales, tres factores van a aumentar fuertemente las necesidades de financiamiento de las empresas en Europa: el crecimiento económico, una sostenida recuperación de la inversión y la reestructuración de las empresas. Desde este punto de vista, la creación del euro tendrá repercusiones estratégicas en todos los sectores de la economía y debería implicar para las empresas inversiones suplementarias que deberán ser financiadas de manera eficaz.

3.2. El impacto de la creación de la moneda única en los diferentes compartimentos de los mercados financieros de la zona euro.

Los diferentes compartimentos del mercado financiero de la zona euro han sido afectados por la creación de la moneda europea en 1999. Hasta ahora, el mercado de obligaciones privadas ha sido, de lejos, el más dinámico (BCE, 2000).

3.2.1. Los mercados monetarios y cambiarios de la zona euro

La entrada en vigor de la moneda única europea y el nuevo marco de la política monetaria han suscitado un vasto proceso de integración y de uniformización en toda la zona euro. En efecto, con la introducción de la nueva moneda europea, los mercados monetarios e interbancarios comenzaron a funcionar de modo mucho más integrado.

La necesidad de redistribuir la liquidez entre los once países de la zona euro, incluida la liquidez provista por las operaciones de refinanciamiento del Eurosistema, favoreció el desarrollo de las transacciones transfronterizas a nivel de los mercados monetarios. Estas operaciones representan aproximadamente 50% de la actividad total en el conjunto de los compartimentos del mercado monetario. El sistema de pagos "en tiempo real" *Target*, utilizado por el sistema de bancos centrales, cumple una función clave en la distribución de la liquidez en la zona euro, así como en relación a las operaciones de arbitraje que contribuyen a estabilizar las tasas de interés de los mercados monetarios de la zona euro. No obstante, el grado de integración de estos diferentes compartimentos es todavía desigual. El mercado de pensiones (intercambio de liquidez contra títulos) está menos integrado debido a la falta de armonización, entre los diferentes países de la zona, del tratamiento jurídico y fiscal de la gestión de títulos que sirven de garantía.

En cambio, los mercados de productos derivados a corto plazo en euros se han desarrollado rápidamente. El mercado de contratos de swaps de tasas de interés en euros se ha unificado completamente, como lo confirma la existencia de una sola curva de rendimientos para el conjunto de la zona euro. Asimismo, la liquidez y la actividad progresaron fuertemente en los mercados de contratos a término y los contratos en Euribor –tasa de referencia única– han reemplazado a los antiguos contratos.

El pasaje a la unión monetaria ha sido uno de los principales catalizadores de la racionalización del mercado cambiario, emprendido gracias al proceso de fusiones entre bancos y a la utilización creciente de los sistemas de intermediación electrónica. La cantidad de operadores disminuyó, al igual que el volumen de transacciones, debido principalmente al efecto mecánico de la supresión de las transacciones cruzadas entre monedas europeas.

3.2.2. El mercado de acciones

A diferencia de los mercados monetarios, los mercados de acciones (al igual que los mercados de títulos públicos) no están unificados a la escala europea (BID, 2000). Puede sin embargo esperarse un desarrollo rápido de los mercados de acciones denominadas en euros durante los próximos años. Esta progresión podría resultar de varios factores.

En primer lugar, un efecto de "catch–up" respecto a los mercados competidores: en términos de porcentaje del PBI, la capitalización bursátil de la zona euro es, como vimos, muy inferior a la de Estados Unidos. La proporción de firmas que cotizan en bolsa, todavía baja en la zona euro, debería incrementarse en los próximos años, gracias a la próxima entrada en el mercado de numerosas empresas medianas.

En segundo lugar, la desaparición del riesgo país intraeuropeo en el segmento de las obligaciones debería atraer hacia los mercados de acciones a los inversores que buscan colocaciones riesgosas. Como en el caso del mercado de obligaciones privadas, la bolsa favorecerá la llegada de inversores extranjeros atraídos por los productos de la zona euro.

En tercer lugar, la creación del euro tiene un impacto positivo sobre las cooperación interfronteras y paneuropea entre las plazas bursátiles, lo que permitirá el desarrollo de mercados más vastos, más líquidos y más diversificados. Varias alianzas están en curso de negociación, por ejemplo la de las plazas de Londres y Francfort.

En cuarto lugar, la creación del euro suscita iniciativas que deberían dinamizar los mercados bursátiles. Entre ellas se puede citar la creación del Nasdaq–Europe en el 2000, que constituye una plataforma europea para la emisión de nuevas acciones de firmas con fuerte potencial de crecimiento, y el nacimiento de Easdaq, bolsa internacional con sede en Bruselas cuya función consiste en reunir las cotizaciones de empresas de tamaño y crecimiento intermedios que tengan una orientación europea o internacional.

3.2.3. El mercado de obligaciones

El auge de la emisión de obligaciones denominadas en la nueva moneda europea constituye la transformación más importante suscitada por la introducción del euro. Más precisamente, el segmento de las obligaciones privadas domésticas e internacionales ha conocido una expansión espectacular (Detken y Hartmann, 2000; BCE, 2000; BIS, 2000).

En lo que respecta a las emisiones soberanas, domésticas e internacionales, la evolución ha sido más moderada. Ciertamente, la conversión en euros de la deuda pública denominada en las antiguas monedas europeas generó un mercado más amplio que su homólogo japonés y que sólo es sobrepasado por el del tesoro de Estados Unidos. Hacia fines de 1999, el total de los empréstitos a largo plazo en euros de los Estados del Euroland se elevaba a 2.200 billones de euros, vale decir dos tercios del monto de obligaciones del Tesoro de Estados Unidos (BIS, 2000). Sin embargo, la expansión en Europa del mercado de obligaciones soberanas domésticas será limitada en la medida en que el tratado de Maastricht impone límites a los déficit fiscales y a los indicadores de endeudamiento de los países de la Unión Monetaria. En cuanto a los países emergentes, luego de las crisis financieras que tuvieron lugar después de 1997 se constata una desaceleración del ritmo de crecimiento de las emisiones soberanas.

En suma, la evolución reciente del mercado de obligaciones de la zona euro puede ser sintetizada de la siguiente manera:

- La estructura del mercado de obligaciones en euros se transforma: caída de la participación en la emisión de las obligaciones soberanas (como consecuencia de la disminución de los déficit públicos y de los programas de re–compra de deuda); aumento de la participación de las emisiones no soberanas, es decir las realizadas por las instituciones financieras y por las

empresas (en particular el sector de telecomunicaciones para el financiamiento de las licencias UMTS).

- El mercado doméstico de la deuda privada de obligaciones en euros es extremadamente dinámico: las emisiones privadas de obligaciones denominadas en euros progresaron 294% a lo largo de los nueve primeros meses de 1999 con respecto al mismo período de 1998 (BCE, 2000).
- Las emisiones internacionales en euros se desarrollan rápidamente: se incrementaron en más de 100% en 1999, sobrepasando el monto de las emisiones en dólares (cuadro 3). Más aún, la fuerte dinámica de las emisiones totales en euros por parte de los no residentes prosigue a lo largo del año 2000, en particular en lo que atañe a las obligaciones "corporate".

Cuatro factores principales explican el dinamismo de los mercados de obligaciones.

En primer lugar, la caída en la intermediación financiera (Canals, 1999): las empresas de la zona euro utilizan crecientemente el mercado de obligaciones para endeudarse, y esto se traduce en una disminución de los financiamientos vía créditos bancarios (desintermediación). Las estructuras financieras de las empresas de la zona euro, cada vez más orientadas hacia la finanza directa, se aproximan a las de los países anglosajones.

Por otra parte, la importancia de la reestructuración de empresas: estas operaciones (fusiones, adquisiciones...) implicaron una fuerte demanda de fondos de las empresas privadas que fue satisfecha en gran medida por la emisión de obligaciones denominadas en euros, por montos sin precedentes en la historia de los mercados financieros europeos. Las operaciones de fusión y adquisición relativas a empresas situadas en la zona euro como casa matriz o firma objetivo aumentaron 153% (en valor) en 1999, con respecto a 1998. En lo que respecta al sector bancario (+ 35% en 1999), el monto de las operaciones de reestructuración sobrepasó el registrado en Estados Unidos en 1999.

Cuadro 3

Títulos de deuda internacional : montos netos por moneda de emisión
(en miles de millons de dólares de los Estados Unidos y en %)

	1996	1997	1998	1999	Saldo fin dic. 1999
	En miles de millones de dólares de Estados Unidos				
Dólar Estados Unidos	259.10	331.60	410.40	546.20	2 512.20
Yen	85.70	33.40	- 26.80	- 5.80	536.80
Euro (o monedas de la zona Euro)	134.50	133.90	223.60	576.20	1 561.20
Otras monedas	52.70	64.40	73.70	108.70	755.40
TOTAL	**532.00**	**563.20**	**680.90**	**1 225.20**	**5 365.50**
	En % de variación anual				
Dólar Estados Unidos	278.8%	28.0%	23.8%	33.1%	-
Yen	7.4%	-61.0%	-180.2%	-78.4%	-
Euro (o monedas de la zona Euro)	59.7%	-0.4%	67.0%	157.7%	-
Otras monedas	86.9%	22.2%	14.4%	47.5%	-
TOTAL	**104.1%**	**5.9%**	**20.9%**	**79.9%**	-

Fuente: BRI (2000)

A su vez, el rol dinámico de los inversores, que se manifiesta de dos maneras. Por un lado, los inversores extranjeros (principalmente estadounidenses y asiáticos) incrementaron su presencia en los mercados de la zona euro para aprovechar su desarrollo. Por otro lado, se asiste, en la zona euro, a un aumento de la gestión colectiva del ahorro por parte de los inversores institucionales (fondos mutualistas,

fondos de pensión, compañías de seguros). De esto resulta una demanda creciente de colocaciones bajo la forma de títulos negociables en euros. En principio, los inversores tienen un objetivo de diversificación. En este plano, las perspectivas que ofrecen los mercados europeos son contradictorias: la creación de un espacio monetario financiero unificado elimina las posibilidades de diversificación por país. Sin embargo, el desarrollo reciente de nuevos segmentos de los mercados en euros –en particular la deuda de rendimiento elevado y alto riesgo– contribuye a abrir el abanico de opciones de los inversores. Otro factor importante para los inversores extranjeros es la cuestión de la correlación de los rendimientos de los activos en euros y en dólares. Esto podría conducir, –si seguimos lo que sugirieren numerosos trabajos recientes–, a una mayor sincronización de los ciclos económicos entre Estados Unidos y Europa.

Finalmente, la emergencia de nuevos instrumentos y segmentos contribuye a dinamizar el mercado de obligaciones. Es el caso del mercado de obligaciones a alto rendimiento (es decir de obligaciones emitidas por los establecimientos cuya calificación por parte de las agencias de rating es baja), reforzado por el aumento de las operaciones de fusiones–adquisiciones y por la demanda de obligaciones de rendimientos elevados por parte de los inversores institucionales. Este mercado, abierto también a las empresas de tamaño relativamente modesto, dispone de un gran potencial de desarrollo (su peso es significativamente inferior al que tienen los mercados estadounidenses de similares características).

4. El euro y las relaciones Europa–América Latina

Dada la importancia de sus relaciones con la Unión Europea, América Latina será seguramente afectada por la emergencia del euro. América Latina realiza casi el 15 % de su comercio exterior con la Unión Europea, en un marco de intensificación de las relaciones comerciales entre las dos regiones: a lo largo de los años 90 las importaciones latinoamericanas de productos europeos se incrementaron alrededor de 160%. Por otra parte, en este período los flujos de inversiones directas europeas hacia América Latina alcanzaron los mismos niveles que los provenientes de Estados Unidos y la implantación de los bancos europeos en la región aumentó de modo considerable. Así, en el caso de Brasil, uno de los países latinoamericanos que se caracteriza por la importancia de sus relaciones comerciales y financieras con Europa, se han identificado algunos efectos favorables y desfavorables del surgimiento del euro, a corto y mediano plazo, en el plano de la inversión directa, de los intercambios comerciales y del financiamiento exterior (Baumann y Abreu, 2000). Además, el hecho que las principales economías latinoamericanas hayan concluido (caso de México) o estén negociando (caso del Mercosur y de Chile) ambiciosos acuerdos de cooperación y de libre comercio con la Unión Europea debería reforzar los vínculos euro–latinoamericanos (IRELA, 1999).

Ahora bien, ¿cuáles serán los canales a través de los cuales se ejercerá la influencia del euro en América Latina? Cabe distinguir aquí dos dimensiones: la comercial y la financiera. A nivel comercial, las consecuencias del euro en las relaciones entre Europa y América Latina pueden resultar de varios factores: por un lado, el impacto de la disminución de los costos de transacción y del incremento de la competitividad al interior de la zona euro, como consecuencia de la introducción de la moneda única y, por otro lado, el efecto de las variaciones de la tasa cambio de la esta moneda en el comercio entre las dos regiones.

A pesar de que Europa constituye para numerosos países latinoamericanos un socio comercial importante (es decir, 20% o más de las exportaciones) (cuadro 4), no es de esperar que los efectos del euro en el plano comercial sean muy significativos. En efecto, dado el bajo grado de apertura comercial de una buena parte de los países latinoamericanos (y, en particular, de algunos de los que presentan relaciones comerciales más fuertes con la zona euro), no parece, a priori, que los cambios inducidos por las variaciones de las tasas de cambio reales efectivas, por la disminución de los costos de transacción o por las fluctuaciones del nivel de actividad en los países europeos tengan un impacto significativo en el crecimiento de las economías latinoamericanas (Levy Yeyati y Sturzenegger, 1999c).

Cuadro 4
Estructura geográfica de las exportaciones
(en % de las exportaciones totales)

	Estados Unidos	Europa	Japon	Otros
Argentina	7.91	14.62	2.54	74.93
Barbados	11.50	20.21	0.35	67.94
Bolivia	22.95	23.64	0.23	53.18
Brazil	19.35	24.58	4.30	51.76
Chile	16.41	24.03	14.16	45.40
Colombia	38.82	24.23	2.45	34.50
Costa Rica	48.37	21.26	1.16	29.21
Dominica	13.64	86.36	0.00	0.00
Dominican Republic	8.92	4.87	0.41	85.80
Ecuador	36.53	20.12	3.62	39.74
El Salvador	57.60	15.03	0.90	26.47
Grenada	30.00	30.00	0.00	40.00
Guatemala	52.08	11.42	1.97	34.52
Guyana	24.10	24.96	1.20	49.74
Haiti	87.07	10.54	0.34	2.04
Honduras	38.55	21.72	4.37	35.36
Jamaica	39.82	27.81	1.22	31.16
Mexico	87.92	3.33	0.73	8.02
Nicaragua	45.21	16.54	0.53	37.72
Panama	42.27	27.09	0.57	30.07
Paraguay	2.66	21.58	4.75	71.01
Peru	33.54	21.55	3.98	40.93
Trinidad and Tobago	37.81	15.57	0.16	46.47
Uruguay	5.78	16.00	0.79	77.43
Venezuela	47.28	7.63	1.25	43.84

Fuente : DOTS (IMF, 2000)

Aun cuando el dólar es la principal moneda de emisión de la deuda exterior de todos los países de América Latina (cuadro 5), los efectos en el plano financiero serán probablemente mucho más importantes. Esto se explica por dos razones. En primer lugar, en este plano, la mayor parte de los países latinoamericanos se caracteriza por un alto grado de apertura y de vulnerabilidad. En segundo lugar, el desarrollo de las funciones financieras del euro constituirá, como se vio, la faceta decisiva del proceso de internacionalización de la moneda única europea.

Ciertamente, diversos factores pueden contribuir a moderar las salidas de capitales de la zona euro en el futuro inmediato (desaceleración del proceso de compra de acciones en los mercados externos por parte de los residentes europeos, aceleración de la reestructuración industrial y bancaria en el espacio europeo que podría reducir los flujos de inversión directa hacia el resto del mundo...), como se señaló en la primera parte de este trabajo. Sin embargo, el nivel relativamente elevado del ahorro en Europa y la disminución de posibilidades de diversificación de riesgos al interior de la zona euro (fin de las operaciones en los mercados cambiarios de la zona, convergencia de las tasas de interés europeas...) dejan entrever que el viejo continente seguirá siendo, a mediano y largo plazo, una fuente de financiamiento importante para el resto del mundo.

En este escenario, ¿cómo se situará América Latina? Aunque las evoluciones sean más moderadas que en el pasado reciente, se puede considerar que a mediano plazo no habrá una ruptura importante respecto de las tendencias que caracterizaron a los años 90. En este período, Europa ha sido una fuente importante y creciente de capitales para América Latina. A la ya señalada expansión de la inversión extranjera directa se agregó un peso creciente de los préstamos bancarios europeos, como lo subrayan Levy Yeyati y Sturzenegger (1999). En efecto, los créditos bancarios originados en los países de la zona euro pasaron de 34% a 46% entre 1994 y 1997, mientras que los flujos de créditos provenientes de bancos estadounidenses, japoneses y canadienses cayeron de 39% a 32%. Al mismo tiempo, los flujos netos de

créditos hacia América Latina representaron, en la década pasada, una proporción importante pero estable en el total de préstamos externos de los bancos europeos.

Cuadro 5
Estructura de la deuda latinoamericana, por moneda
(en % de la deuda total)

	DOLAR	EURO	YEN	OTRAS
Argentina	63.10	12.93	7.47	16.50
Barbados	37.27	0.00	6.43	56.30
Bolivia	35.10	10.97	12.20	41.73
Brazil	68.80	7.17	5.53	18.50
Chile	47.70	4.10	8.43	39.77
Colombia	64.03	3.80	5.47	26.70
Costa Rica	55.57	1.97	7.03	35.43
Dominica	60.23	13.37	0.07	26.33
Dominican Republic	65.37	3.33	6.70	24.60
Ecuador	73.80	3.03	4.40	18.77
El Salvador	57.33	6.27	2.70	33.70
Grenada	61.70	2.10	0.00	36.20
Guatemala	63.07	4.90	2.07	29.97
Guyana	61.83	2.03	0.17	35.97
Haiti	77.77	2.80	0.00	19.43
Honduras	50.87	5.87	9.33	33.93
Jamaica	49.90	3.83	8.30	37.97
Mexico	65.93	6.17	8.37	19.53
Nicaragua	66.73	9.23	1.93	22.10
Panama	81.17	0.13	4.90	13.80
Paraguay	34.73	9.57	21.73	33.97
Peru	48.13	12.37	13.07	26.43
Trinidad and Tobago	48.07	3.87	15.83	32.23
Uruguay	60.30	6.17	5.13	28.40
Venezuela	70.70	11.77	3.67	13.87

Fuente : World Bank (WDF, 2000)

La evolución en el plano de los créditos de la banca comercial no es, sin embargo, el aspecto más decisivo en la dinámica reciente de las relaciones financieras euro–latinoamericanas. Mucho más relevante es el incremento de las emisiones internacionales de bonos –principal fuente de financiamiento externo generador de deuda de la región latinoamericana en los últimos años–, en las que los empréstitos en euros se han caracterizado por su fuerte expansión.

En los últimos años, los países en desarrollo han participado de manera importante en el crecimiento del mercado de obligaciones en euros. Como lo muestra el gráfico 2, la proporción de la moneda europea en las emisiones totales de estos países, que se incrementa sostenidamente desde 1994, continuó aumentando en 1999, aunque luego retrocedió ligeramente en el 2000. Sin embargo, a pesar de este retroceso, que resulta de la disminución de las emisiones de obligaciones soberanas en euros (que representan un tercio del total en el 2000), prosigue la expansión de la emisiones de obligaciones privadas. La proporción de éstas se duplica en el 2000, pasando de 6% a 12% del total, en detrimento de las emisiones en dólares (gráfico 3). En cuanto a las emisiones soberanas, el retroceso constatado en el 2000 beneficia principalmente a las emisiones en yenes, dado que la proporción de las emisiones en dólares acusó una nueva caída. El porcentaje de éstas en el total de emisiones de los países en desarrollo registra así su punto más bajo desde 1993, si se excluye el año 1995 (gráfico 4).

Gráfico 2

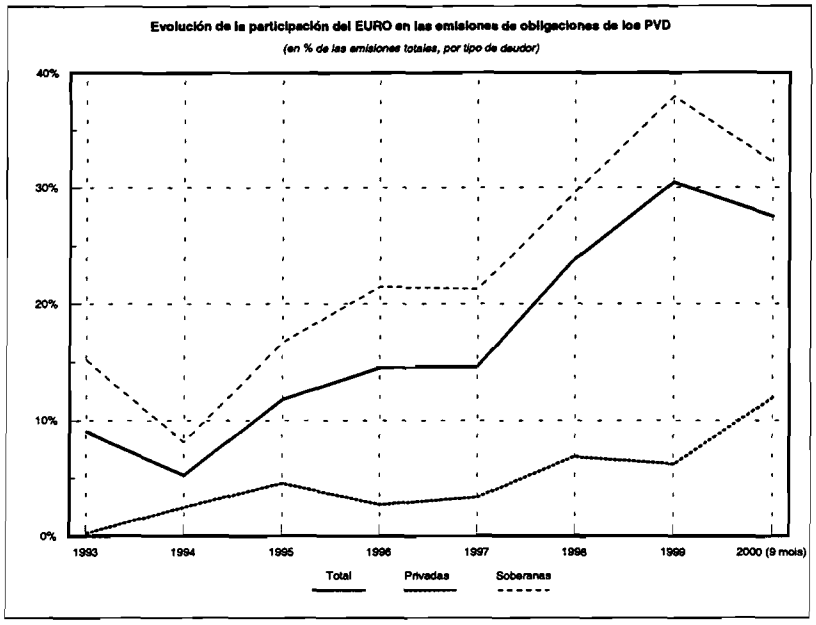
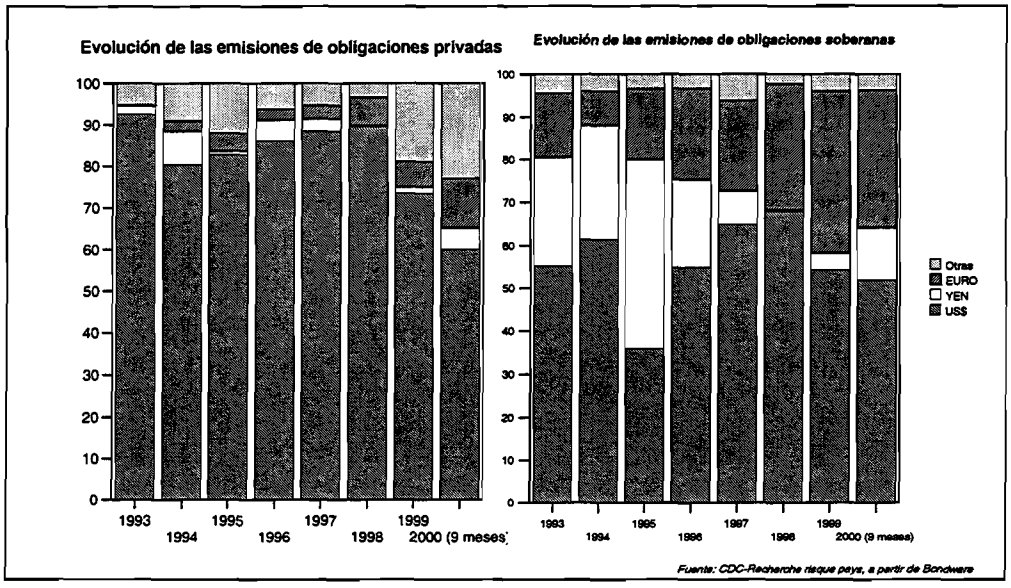


Gráfico 3 **Gráfico 4**



En este marco, América Latina también se caracteriza por el aumento de la participación de las obligaciones denominadas en euros en las emisiones totales desde 1994 (gráfico 5). Asimismo, en este gráfico se advierte que la proporción de bonos emitidos en euros por el sector público, en fuerte crecimiento desde 1994 (a pesar del retroceso registrado en 1997), cae levemente en el 2000. En cambio, prosigue el ascenso de la proporción de los bonos emitidos en euros en el total de las emisiones internacionales del sector privado latinoamericano. En suma, a partir de 1999 aumenta nuevamente la brecha entre la participación latinoamericana en las emisiones totales de los países en desarrollo y la parte que la región representa en las emisiones de obligaciones en euros de estos mismos países (gráfico 6). Con una proporción que en el 2000 alcanzó 60 % de las emisiones de bonos denominados en euros de los países en desarrollo, América Latina participa activamente en el proceso de internacionalización de la divisa europea como moneda de endeudamiento.

Gráfico 5

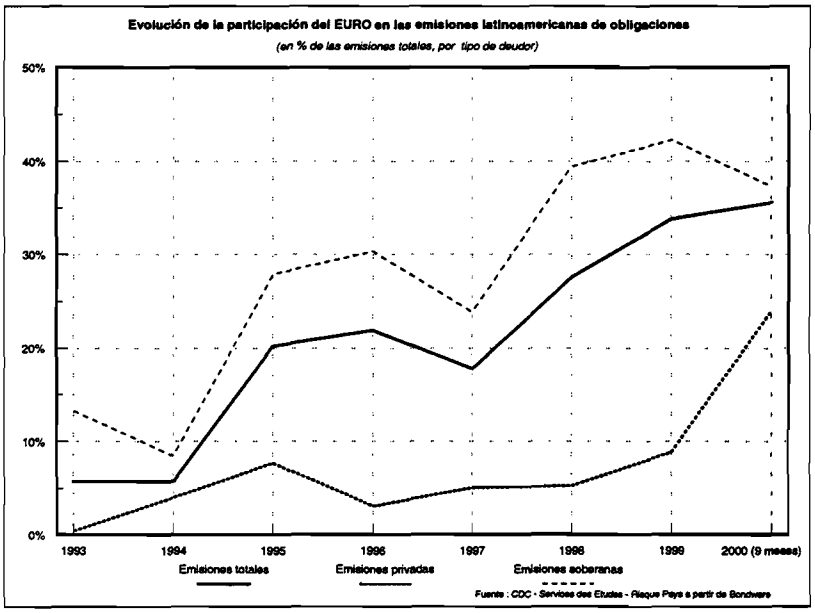
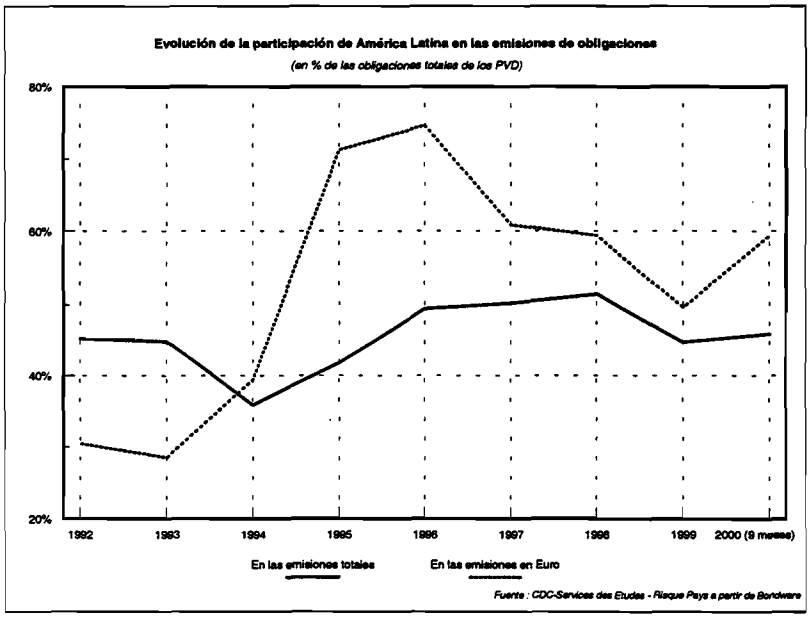


Gráfico 6



La prosecución de este proceso –un creciente endeudamiento en euros de los países latinoamericanos– tiene implicaciones en dos niveles diferentes pero interconectados. Por un lado, lleva a considerar con más atención la política de gestión de los compromisos externos de la región latinoamericana, así como el impacto sobre el servicio de la deuda del comportamiento de las tasas de interés en la zona euro. Por otro lado, obliga a reflexionar sobre sus consecuencias a mediano–largo plazo

en el plano de los regímenes cambiarios de América Latina. Esta segunda dimensión es la que será abordada en la tercera parte de este trabajo[3].

III. La emergencia del euro y la función de unidad de cuenta. Implicaciones para América Latina.

Los estudios sobre la creación del euro y sus perspectivas de desarrollo como moneda internacional se han centrado, en su gran mayoría, en las funciones de medio de pago y de financiamiento y endeudamiento. Además, desde hace poco tiempo, también comienzan a ganar terreno los trabajos sobre la gestión de las reservas internacionales y el rol prospectivo del euro como moneda de reserva (Alogoskoufis y Portes, 1997 y, sobre todo, Eichengreen y Mathieson, 2000).

En cambio, la función de unidad de cuenta es a menudo descuidada, probablemente porque la fijación de los precios en divisas del comercio internacional está particularmente sometida a las inercias resultantes de la existencia de externalidades de red. Otro factor explicativo que se suele avanzar a este respecto es que las divisas de cotización parecen derivar su uso de las otras funciones de la moneda (Bénassy–Quéré y Cœuré, 2000).

Como ya se señaló, la función de unidad de cuenta tiene que ver no solamente con la cuestión de la fijación de precios en el comercio internacional; ella concierne también la utilización de monedas internacionales como divisas de referencia (ancla), una de las funciones cruciales en el proceso de internacionalización. A corto plazo, al euro le será muy difícil competir con el dólar como moneda de anclaje mundial, dado que las decisiones en este ámbito están ligadas al tipo de integración comercial (orientación geográfica de los flujos de comercio exterior) y financiero (monedas de endeudamiento, origen de la IDE...) y a las prácticas comerciales (como ya se dijo, el comercio de la mayor parte de las materias primas está denominado en dólares). En particular, la existencia de fuertes inercias en el plano de las prácticas comerciales y financieras impide la rápida difusión del euro como divisa internacional. De todas formas, a mediano y largo plazo se puede esperar una mayor utilización del euro como moneda de anclaje de terceros países.

En primer lugar se abordará la cuestión de la determinación de facto de los anclajes monetarios, definidos por oposición a los anclajes declarados en tanto que regímenes oficiales, es decir los publicados por el F.M.I. (en el Annual Report on Exchange Arrangements and Exchange Restrictions). Luego se estudiarán los determinantes reales y financieros de las opciones adoptadas por los países en desarrollo en materia de anclaje de facto a partir de un análisis econométrico realizado para 93 economías. A partir de ello se construirá una tipología de los países analizados. Por último, se explorarán de manera prospectiva los canales de generalización de la utilización del euro como moneda de anclaje en América Latina.

1. Los regímenes de anclaje de facto: la metodología

Siguiendo el enfoque de Bénassy–Quéré y Cœuré (2000), se presenta una estimación de los regímenes cambiarios de facto a través de la utilización de ecuaciones econométricas basadas en el método de los momentos generalizados (ver Anexo 1). Los anclajes implícitos de 111 monedas han sido estimados a partir de datos semanales antes y después de las crisis financieras en los países emergentes (1997–1998).

Los resultados muestran que la proporción de las monedas ancladas de facto al dólar es mucho más elevada (50%) que lo que permiten entrever los regímenes oficiales publicados por el F.M.I. (ver Cuadros 6 y 7). Este fenómeno también prevalece después de la crisis asiática, lo que sugiere que, al

[3] La cuestión de la composición óptima de la deuda externa y la de la sensibilidad del servicio de la deuda a las variaciones de las tasas de interés del euro, que no son tratadas aquí, son abordadas en una versión más extensa de este trabajo que, como se señaló en la introducción, se encuentra en proceso de elaboración.

menos en el corto plazo, el sistema actual no ha sufrido cambios tan sustanciales como los que habitualmente se señalan (es decir, retroceso de las políticas de anclaje a una divisa de referencia y generalización de las políticas de flotación libre). Por consiguiente, la flotación pura es mucho menos frecuente de facto (4%) que de jure (30%).

Estos resultados son en parte convergentes con los obtenidos por Levy Yeyati y Sturzenegger (1999b), que observan numerosos anclajes de facto. Asimismo, no se advierte un retroceso de los llamados regímenes intermedios (una de cuyas características es el anclaje a una canasta de monedas). Esto ha sido demostrado por Masson (2000), a partir de un análisis dinámico de las transiciones entre regímenes cambiarios.

Cuadro 6

Los regímenes *oficiales* de cambio y su evolución (1983-1999)

(En % del total de monedas de los países miembros del F.M.I., a diciembre de cada año)

Regímenes de cambio	1983	1988	1994	1999
Cantidad de monedas	*146*	*152*	*181*	*187*
Anclaje fijo a una moneda (currency boards incluidos)	**35.60**	**38.30**	**26.00**	**30.00**
Dólar	23.30	25.70	13.80	15.00
Franco, marco, euro	8.90	9.20	8.30	12.30
Otras	3.40	3.40	3.90	2.70
Anclaje fijo a una canasta de monedas	**27.40**	**25.70**	**13.30**	**9.60**
DEG	8.90	5.30	1.70	3.20
Ecu	0.70	0.70	0.60	0.00
Otros	17.80	19.70	11.00	6.40
Flexibilidad limitada	**11.00**	**7.20**	**7.20**	**5.90**
Mecanismo europeo de cambios	4.80	4.60	5.00	1.10
Otros	6.20	2.60	2.20	4.80
Flotación limitada	**19.90**	**17.80**	**19.90**	**23.00**
Flotación libre	**6.10**	**11.20**	**33.70**	**31.60**
TOTAL	**100.00**	**100.00**	**100.00**	**100.00**

Fuente : F.M.I., Annual Report on Exchange Arrangements and Exchange Restrictions, varios números

Cuadro 7

Los regímenes de cambio *de facto*

(En % del total de monedas analizadas)

	Abril 1995-Junio 1997 (antes de la crisis asiática)	Octubre 1998-Diciembre 1999 (después de la crisis asiática)
Cantidad de monedas	*107*	*107*
Anclaje unitario a una moneda	**61.80**	**59.80**
Dólar	50.60	49.50
Euro	10.30	10.30
Yen	0.90	0.00
Anclaje parcial a una moneda	**13.00**	**9.30**
Dólar	12.10	6.50
Euro	0.90	1.90
Yen	0.00	0.90
Anclaje a una canasta de monedas	**20.50**	**27.10**
Dólar/euro	12.10	14.00
Dólar/yen	5.60	2.80
Euro/yen	1.90	2.80
Euro/dólar/yen	0.90	7.50
Flotación libre	**4.70**	**3.70**
TOTAL	**100.00**	**100.00**

Nota : los 14 países africanos de la zona franco son considerados como un solo país.

Fuente : Bénassy-Quéré y Benoît Coeuré (2000)

En suma, según el enfoque adoptado en este trabajo, el sistema monetario internacional no parece evolucionar hacia la flotación generalizada. Asimismo, Bénassy–Quéré y Cœuré (2000) subrayan que el SMI se encuentra aún lejos de una configuración en diferentes bloques monetarios de tamaños comparables.

2. Los determinantes financieros y comerciales de los regímenes de anclaje *de facto*

A partir de los resultados presentados en la sección anterior, nos concentraremos ahora en los determinantes reales y financieros de las opciones efectivamente adoptadas en materia de regímenes de anclaje de facto por los 93 países considerados. El cuadro 8 presenta las correlaciones entre les coeficientes de anclaje y las variables comerciales, financieras y geográficas[4].

[4] Los coeficientes de anclaje son tomados de Bénassy–Quéré y Cœuré (2000). A dichas variables se han asociado las variables binarias siguientes: Dolbin= 1 si el coeficiente es igual o superior a 0.5, 0 si es inferior; Eurobin= 1 si el coeficiente es igual o superior a 0.3, 0 si es inferior; Yenbin= 1 si el coeficiente es igual o superior a 0.1, 0 si es inferior. La variable binaria "petroleros" se asigna a los países cuyas ventas representan más del 10 % de las exportaciones totales. La variable binaria "dolarizados" se atribuye a los países en los que la participación del dólar en M3 es elevada, según la tipología realizada por el FMI. Las distancias geográficas se miden en km entre puertos o capitales.

Cuadro 8

Comercio, deuda y regímenes de anclaje de facto

Cuadro de correlaciones

	Dólar	Euro	Yen	Dolbin	Eurobin	Yenbin
Dólar	1.000	-0.969	-0.612	0.911	-0.937	-0.589
Euro	-0.969	1.000	0.396	-0.859	0.884	0.393
Yen	-0.612	0.396	1.000	-0.634	0.649	0.927
Dolbin	0.911	-0.859	-0.634	1.000	-0.865	-0.602
Eurobin	-0.937	0.884	0.649	-0.865	1.000	0.652
Yenbin	-0.589	0.393	0.927	-0.602	0.652	1.000
Estructura de la deuda por moneda						
En Dólares	0.019	-0.044	0.069	-0.032	-0.021	0.096
En Euros	-0.272	0.197	0.378	-0.356	0.292	0.350
En Yenes	0.205	-0.144	-0.292	0.213	-0.142	-0.251
Grado de dolarización de las economías						
Dolarizados	0.089	-0.016	-0.276	0.166	-0.154	-0.206
Exportación de petróleo						
Petroleros	0.140	-0.129	-0.104	0.144	-0.202	-0.155
Estructura del comercio exterior						
Con Estados Unidos	0.355	-0.352	-0.195	0.370	-0.371	-0.198
Con Japón	0.251	-0.240	-0.164	0.226	-0.222	-0.178
Con Europa	-0.451	0.458	0.211	-0.465	0.439	0.159

Geografía y regímenes de anclaje

Cuadro de correlaciones

	Dólar	Euro	Yen	Dolbin	Eurobin	Yenbin
Distancias geográficas						
kmUS	0.017	-0.019	-0.005	-0.032	0.020	-0.043
kmJapon	-0.089	0.017	0.274	-0.143	0.092	0.241
kmEurope	0.446	-0.468	-0.162	0.454	-0.415	-0.174
Zonas geográficas						
AMERICA LATINA	0.341	-0.331	-0.208	0.398	-0.360	-0.179
CENTRAL	0.202	-0.199	-0.112	0.276	-0.195	-0.032
DEL SUR	0.245	-0.234	-0.162	0.240	-0.278	-0.210
ASIA	0.312	-0.284	-0.252	0.299	-0.287	-0.261
MEDIO ORIENTE	0.153	-0.132	-0.146	0.139	-0.161	-0.122
EUROPA	-0.358	0.456	-0.127	-0.209	0.273	-0.087
AFRICA	-0.364	0.253	0.539	-0.506	0.424	0.481
AFRICA-CFA	-0.532	0.365	0.805	-0.668	0.578	0.765
AFRICA-NCFA	0.047	-0.029	-0.085	0.001	-0.017	-0.118

Fuente :

Comercio: DOTS-IMF (2000)

Deuda: World Bank (WDI 2000)

Dolarización : IMF 174 (1998)

Regímenes de cambio : Bénassy-Quéré (2000)

Notas :

La cifras en negrita indican correlaciones estadísticamente significativas

De este cuadro se desprende, principalmente, que los coeficientes de anclaje están correlacionados con las variables comerciales y financieras. En efecto, la utilización del euro como moneda de anclaje de facto está significativamente correlacionada con la uso de la moneda europea como divisa de endeudamiento (0.197) y con la orientación geográfica del comercio exterior (0.458), es decir los casos en los que Europa es predominante como cliente y proveedor de los países considerados. Por lo tanto, no resulta sorprendente constatar que los países de Europa (Central, Oriental y del Sur), al igual que los países de Africa pertenecientes a la zona franco, tengan una fuerte correlación con la utilización del euro como moneda de anclaje de facto (ya sea como única moneda o como moneda dominante en las canastas de anclaje).

Un estudio econométrico en términos de probabilidades permite completar el análisis (cuadro9).

Cuadro 9

La probabilidad de adherir a una moneda internacional

Ecuaciones Probit

	Dólar			Euro			Yen		
	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad
Constante	1.397	1.220	0.222	-0.322	-0.363	0.716	-0.657	-0.571	0.568
				Dirección del comercio					
Con Japón	**0.269**	2.299	**0.022**	**-0.191**	-2.644	**0.008**	-0.026	-0.353	0.724
Con Europa	**-0.044**	-3.037	**0.002**	**0.026**	2.201	**0.028**	**-0.031**	-2.108	**0.035**
Con USA	**0.037**	2.120	**0.034**	**-0.043**	-2.525	**0.012**	**-0.091**	-3.592	**0.000**
				Composición de la deuda por moneda					
En dólares	0.001	0.034	0.973	-0.006	-0.440	0.660	0.064	2.423	**0.015**
En euros	**-0.099**	-3.441	**0.001**	**0.063**	2.702	**0.007**	**0.159**	3.566	**0.000**
En yenes	**0.124**	3.501	**0.001**	**-0.062**	-2.332	**0.020**	**-0.904**	-3.752	**0.000**
				Otros determinantes					
Petroleros	**1.817**	2.787	**0.005**	**-1.264**	-2.149	**0.032**	**-1.781**	-2.067	**0.039**
Dolarizados	0.208	0.432	0.666	-0.192	-0.461	0.645	**-1.697**	-2.427	**0.015**
Restr. log likelihood		-19.550			-25.440			-13.657	
Probability(LR stat)		0.000			0.000			0.000	
Obs with Dep=0		27			58			68	
Obs with Dep=1		63			31			18	
Included observations		90			89			86	
McFadden R-squared		0.644			0.558			0.690	
% Correct		92.06%			83.87%			72.22%	

Notas :
Las cifras en negrita indican variables significativas a (al menos) 90 %
Debido a la presencia de problemas de multicolinearidad entre las variables comerciales y las variables representativas de las distancias geográfica, éstas últimas no han sido incluidas en la estimación econométrica.

En efecto, de las estimaciones econométricas realizadas se deduce que la probabilidad de utilizar el dólar como moneda de anclaje aumenta cuando Estados Unidos constituye un socio comercial importante del país en cuestión. De manera simétrica, esta probabilidad disminuye cuando Europa es un socio dominante en el comercio de los países considerados.

En lo que respecta al predominio de una moneda en el plano del endeudamiento, cuando un país está endeudado principalmente en la moneda estadounidense, la probabilidad de utilizar el dólar como divisa de anclaje no es significativa. Esto se explica por el hecho que la totalidad de los países de la muestra están endeudados principalmente en esta moneda. Además, la probabilidad de anclar una moneda al dólar disminuye significativamente cuando una parte importante de la deuda externa del país considerado está denominada en euros. Por otra parte, los países petroleros tienen una fuerte probabilidad de anclar sus monedas al dólar debido a que en el comercio internacional las transacciones se expresan en esta divisa.

Si se considera el caso del yen, los resultados de las ecuaciones econométricas relativas a la probabilidad de anclar una moneda a la divisa japonesa se revelan mediocres. Así, ser un socio comercial importante de Japón no aumenta la probabilidad de utilizar el yen como moneda de anclaje. Más aún, la probabilidad de utilizar el yen como ancla disminuye significativamente cuando la deuda exterior de un país está denominada en esta moneda. Por último, como era de esperar, los países petroleros y los que se caracterizan por un alto grado de dolarización de sus economías ven disminuir la probabilidad de anclar sus monedas al yen. Varios factores permiten explicar estos resultados econométricos. Uno de ellos es la crisis que caracteriza a Japón desde 1990, así como las fuertes fluctuaciones nominales y reales de corto plazo experimentadas por el yen en los últimos años. La desconfianza respecto de la economía japonesa y la volatilidad del yen aumentan los costos de transacción y el riesgos de cambio. Por otra parte, también puede jugar como factor explicativo la ausencia de una voluntad política –incluso el rechazo–, por parte de las autoridades japonesas, en cuanto a la perspectiva de desarrollo del yen como moneda internacional.

En lo que atañe al euro, la probabilidad de que un país utilice la divisa europea como moneda de anclaje disminuye cuando el comercio de un país se lleva a cabo de manera dominante con Japón o con Estados Unidos y aumenta si se realiza con los países de la zona euro, siempre y cuando éstos sean socios comerciales importantes. Igualemente, el ejercicio realizado confirma que la probabilidad de que se utilice la divisa europea como moneda de anclaje aumenta cuando una parte importante de la deuda exterior del país considerado está denominada en euros. Por otra parte, e inversamente a la ecuación que analiza la utilización del dólar como ancla, la probabilidad de anclar la moneda nacional al euro disminuye significativamente en el caso de los países exportadores de petróleo.

3. Una tipología de países

Las consideraciones realizadas hasta aquí pueden ser profundizadas con el fin de identificar el posicionamiento de los países de la muestra. Para ello, se realiza un análisis factorial en componentes principales (ver Anexo 2), que permite reagrupar los países con características comerciales, financieras y geográficas homogéneas. Veamos en primer lugar como se organiza la información tratada (cuadro 10).

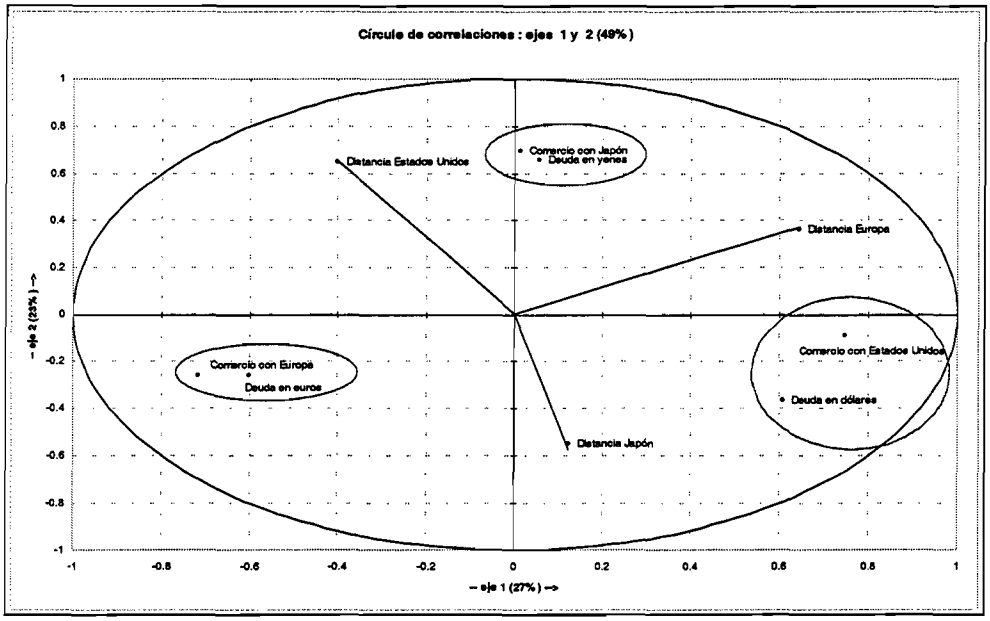
Cuadro 10

Valores propios y correlaciones entre variables y factores principales
Para los cuatro primeros ejes (significativos)

Valores propios	1	2	3	4
Valor	2.3966	2.0471	1.1904	1.0214
% de variabilidad	26.63	22.75	13.23	11.35
% acumulado	26.63	49.37	62.60	73.95
	factor 1	factor 2	factor 3	factor 4
Comercio USA	0.748	-0.089	-0.001	0.453
Comercio Japon	0.012	0.698	-0.031	-0.353
Comercio Europa	-0.719	-0.257	-0.029	-0.278
Deuda en dólares	0.606	-0.364	-0.220	-0.390
Deuda en yenes	0.055	0.658	-0.131	0.383
Deuda en euros	-0.601	-0.257	0.297	0.517
Distancia USA	-0.403	0.651	0.417	-0.146
Distancia Japon	0.122	-0.548	0.713	-0.141
Distancia Europa	0.641	0.362	0.593	-0.078

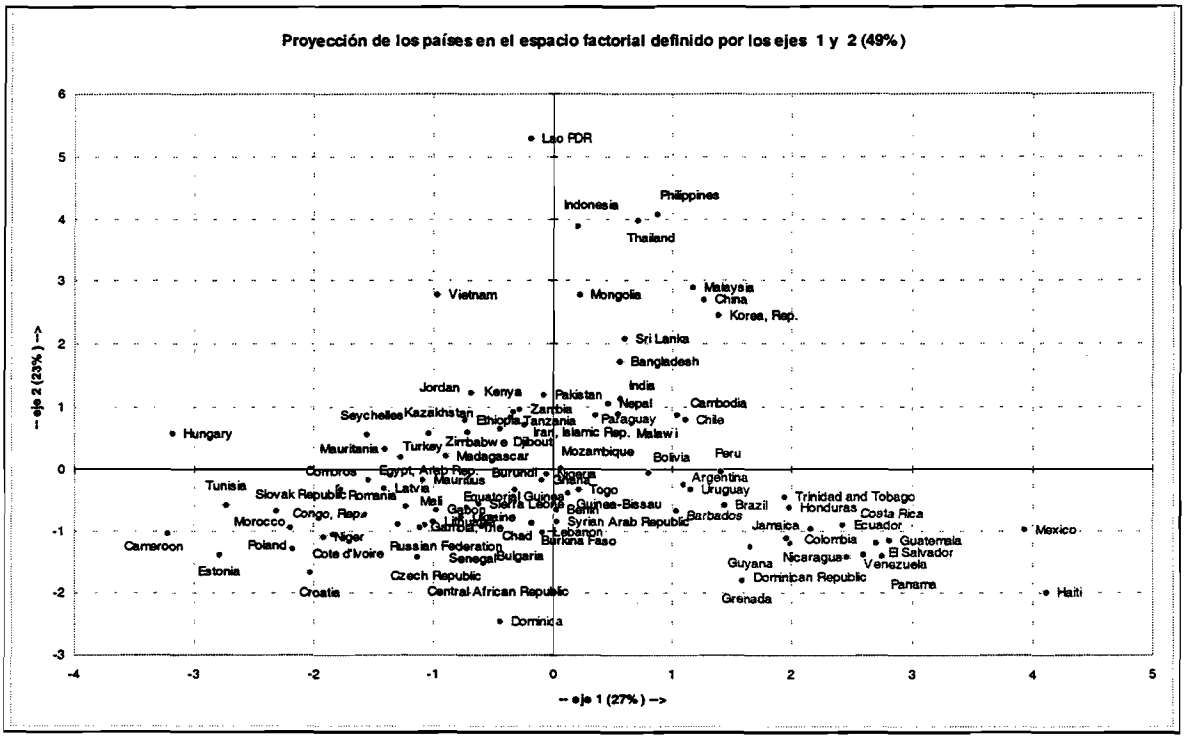
Las cuatro ejes principales representan el 74% de la variabilidad acumulada. En otras palabras, aproximadamente ¾ de la información total contenida en las variables puede ser resumida en los cuatro ejes principales. El gráfico 7 permite identificar la oposición entre las variables más ligadas al dólar respecto de las que están más bien relacionadas con el euro.

Gráfico 7



El gráfico 8 presenta la proyección de los países en el espacio factorial definido por los dos ejes principales, que resumen aproximadamente el 50% de la información total contenida en las variables utilizadas. De modo previsible, los países de la región latinoamericana se sitúan, en su gran mayoría, en la región sudeste del espacio factorial dominado por el comercio con Estados Unidos y el endeudamiento principalmente denominado en dólares.

Gráfico 8



A partir de una clasificación de los países considerados de acuerdo con sus coordenadas respectivas en el espacio factorial definido por los cuatro ejes principales se pueden identificar 5 grupos diferentes (cuadro 11).

Cuadro 11

Tipología de países a partir de los resultados del AFCP

Clasificación de las observaciones / Cantidad de países				
Grupo 1	Grupo 2	Grupo 3	Grupo 4	Grupo 5
15	26	16	22	14
Bulgaria	Benin	Bangladesh	Argentina	Cameroon
Croatia	Burkina Faso	Cambodia	Barbados	Congo, Rep.
Czech Republic	Burundi	China	Bolivia	Cote d'Ivoire
Dominica	Central African Repu	India	Brazil	Egypt, Arab Rep.
Equatorial Guinea	Chad	Indonesia	Chile	Estonia
Grenada	Comoros	Jordan	Colombia	Gabon
Kazakhstan	Djibouti	Korea, Rep.	Costa Rica	Hungary
Latvia	Ethiopia	Lao PDR	Dominican Republic	Mali
Lebanon	Gambia, The	Malaysia	Ecuador	Morocco
Lithuania	Ghana	Mongolia	El Salvador	Niger
Poland	Guinea-Bissau	Nepal	Guatemala	Nigeria
Romania	Iran, Islamic Rep.	Pakistan	Guyana	Russian Federation
Slovak Republic	Kenya	Philippines	Haiti	Tunisia
Syrian Arab Republic	Madagascar	Sri Lanka	Honduras	Turkey
Ukraine	Malawi	Thailand	Jamaica	
	Mauritania	Vietnam	Mexico	
	Mauritius		Nicaragua	
	Mozambique		Panama	
	Paraguay		Peru	
	Senegal		Trinidad and Tobago	
	Seychelles		Uruguay	
	Sierra Leone		Venezuela	
	Tanzania			
	Togo			
	Zambia			
	Zimbabwe			

Un segundo ejercicio econométrico que toma en cuenta las coordenadas de los países en el plano factorial (que resumen la información de las variables utilizadas para calcular los ejes factoriales) confirma que el hecho de exportar petróleo aumenta la probabilidad de anclar la moneda nacional al dólar y disminuye significativamente la probabilidad de anclarla al euro. A su vez, un grado elevado de dolarización de la economía aumenta fuertemente la probabilidad de anclar la moneda nacional al dólar y disminuye sensiblemente la probabilidad de anclarla al euro (cuadro 12).

Cuadro 12

La probabilidad de adherir a una moneda internacional

Ecuaciones Probit sobre las coordenadas factoriales

	Dólar			Euro			Yen		
	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad
Constante	**1.351**	2.824	**0.005**	-0.452	-1.480	0.139	**-1.285**	-3.044	**0.002**
				Direction du commerce					
Eje 1	**1.453**	3.645	**0.000**	**-1.018**	-4.497	**0.000**	**-0.261**	-2.125	**0.034**
Eje 2	**2.273**	3.379	**0.001**	**-1.350**	-3.355	**0.001**	**-1.257**	-3.296	**0.001**
Eje 3							**0.830**	2.790	**0.005**
				Otros determinantes					
Petroleros	**1.556**	1.874	**0.061**	**-1.668**	-2.410	**0.016**	-0.751	-1.380	0.168
Dolarizados	**1.828**	2.742	**0.006**	**-0.989**	-2.117	**0.034**	-0.356	-0.859	0.391
Restr. log likelihood		-54.104			-57.682			-49.159	
Probability(LR stat)		0.000			0.000			0.000	
Obs with Dep=0		27			57			70	
Obs with Dep=1		63			31			21	
Included observations		90			88			91	
McFadden R-squared		0.701			0.597			0.378	
% Correct		95.31%			81.25%			57.14%	

Notas :
Las cifras en negrita indican variables significativas a (al menos) 90 %

Más importante aún, un último ejercicio econométrico que relaciona los agrupamientos de países y las monedas de anclaje de facto muestra que los grupos 3 y 4 presentan una relación estadísticamente significativa con el dólar. Al mismo tiempo, los grupos 1 y 2 aparecen como zonas de anclaje a una canasta (dólar–euro en el caso del grupo 1, euro–yen en el caso del grupo 2), mientras que el grupo 5 se caracteriza por una relación estadísticamente significativa con el euro. Los países latinoamericanos y del Caribe, incluidos mayoritariamente en el grupo 4, forman parte de modo inequívoco de la zona dólar (cuadro 13).

Cuadro 13

Grupos geográficos y monedas internacionales

Ecuaciones Probit a partir de la tipología

	Dólar			Euro			Yen		
	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad	Coeficiente	Z-Stat	Probabilidad
Constante	**-1.163**	-2.773	**0.006**	-0.845	-1.844	0.065	-0.708	-1.418	0.156
				Grupos resultantes de la tipología					
Grupo 1	**1.228**	2.750	**0.006**	**0.873**	1.805	**0.071**	0.517	1.006	0.315
Grupo 2		*Referencia*		**2.558**	4.402	**0.000**	**1.338**	2.177	**0.030**
Grupo 3	**9.555**	22.738	**0.000**		*Referencia*		0.079	0.140	**0.889**
Grupo 4	**9.622**	22.892	**0.000**	-0.477	-0.749	0.454	**-7.284**	-14.886	**0.000**
Grupo 5	0.615	0.976	0.329	**1.564**	2.698	**0.007**		*Referencia*	
				Otros determinantes					
Peroleros	0.473	1.105	0.269	-0.392	-1.101	0.271	-0.326	-0.908	0.364
Dolarizados	**1.071**	2.069	**0.039**	**-1.510**	-2.681	**0.007**	**-1.083**	-2.455	**0.014**
Restr. log likelihood		43.556			37.859			24.049	
Probability(LR stat)		0.000			0.000			0.001	
Obs with Dep=0		28			59			70	
Obs with Dep=1		65			34			23	
Included observations		93			93			93	
McFadden R-squared		0.383			0.310			0.231	
% Correct		87.69%			82.35%			21.74%	

Notas :
Las cifras en negrita indican variables significativas a (al menos) 90 %

4. Implicaciones para América Latina

A pesar de su aparente obviedad, los resultados obtenidos no están exentos de interés. La "radiografía" presentada permite confirmar que, lógicamente, la preeminencia del dólar como moneda de anclaje es favorecida por los factores inerciales. Además, el grado de dolarización de las economías consideradas, así como la intensidad de las relaciones financieras y comerciales con Estados Unidos, son factores que refuerzan el rol del dólar como moneda de anclaje. De este modo, prácticamente ningún país de la región latinoamericana escapa a la zona dólar. En el marco de este análisis, los "clivages" que a menudo se evocan para distinguir México y los países de América Central, por un lado, de los países de América del Sur, por otro, no parecen relevantes.

Por otra parte, resulta evidente que la utilización del euro como única moneda de anclaje parece limitada a los países cuyas relaciones comerciales y financieras con la unión monetaria europea son muy fuertes (grupo 5 de nuestra tipología, constituido por países africanos y europeos del centro y del este, principalmente). Como lo muestran por ejemplo Boone et Maurel (1999) el euro constituye, para estos países, una moneda regional de anclaje más "natural" que el dólar. En particular, los países de Europa central y oriental y los del norte de Africa, que efectúan una buena parte de su comercio exterior con la zona euro, presentan ciclos de actividad bastante coincidentes con los de Europa y estructuras de especialización relativamente próximas a la europeo–occidental.

No obstante, de los ejercicios realizados se desprende también que el euro participa, en numerosos casos (grupos 1 y 2 de nuestra tipología), en canastas de anclaje de facto. Este punto es importante: en una perspectiva de mediano–largo plazo, no debe desdeñarse el potencial del euro para incrementar su participación en las canastas de anclaje. En efecto, otro de los resultados de este estudio es que la probabilidad de anclar una moneda nacional al dólar disminuye fuertemente cuando aumenta la participación de las deudas denominadas en euros.

Ahora bien, como ya se vio, en el caso de los países latinoamericanos se constata, desde 1997, un incremento en la participación de la emisión de obligaciones denominadas en euros en las emisiones totales. El cuadro 14 muestra que, para un grupo de países seleccionados –las economías más grandes de la región–, la utilización del euro como moneda de endeudamiento se desarrolla rápidamente. Más precisamente, la participación del euro en la emisión de títulos públicos alcanzó niveles muy elevados en el caso de Argentina, Brasil, Colombia y Venezuela. Chile constituye un caso especial: la participación del euro llegó a 100% en el 2000, pero en realidad se trata de la única emisión de un país que durante los últimos años no emitió obligaciones soberanas. Se constata además que, a pesar del aumento registrado en los últimos dos años, la proporción de las emisiones en euros en las emisiones privadas totales es todavía reducida (excepto el caso mexicano en el 2000).

Por otro lado, como se puso de manifiesto en la segunda parte de este trabajo, el compartimento internacional de las obligaciones privadas en euros se caracteriza por una fuerte expansión. No es por lo tanto improbable que las firmas latinoamericanas se orienten cada vez más hacia la emisión de deuda denominada en euros. La creciente penetración de los bancos europeos en América Latina y el auge de la inversión extranjera de origen europeo en la región podrían reforzar esta tendencia.

De esta manera, los países latinoamericanos que participen más activamente en el proceso de desarrollo de la moneda única europea como divisa de endeudamiento podrían considerar, a mediano–largo plazo, el uso del euro como moneda de anclaje en el marco de canastas. Obviamente, el dólar seguiría ocupando un lugar preponderante en esas canastas de monedas, habida cuenta del estatuto de la divisa estadounidense en la región latinoamericana.

Esta hipótesis es consistente con los análisis efectuados en la literatura tanto teórica como aplicada sobre la elección de las monedas de anclaje. Para Bénassy–Quéré y Lahrèche–Révil (1999) por ejemplo, la orientación relativamente diversificada –en el plano geográfico– del comercio exterior de algunos de los

grandes países de América Latina (con la excepción de México) podría justificar la adopción de una canasta que incluya al euro. Estos autores sugieren incluso la hipótesis de la creación de uniones monetarias regionales ligadas a una canasta de monedas que incluya al euro. A partir de nuestro enfoque se puede agregar que el factor clave que podría reforzar la perspectiva de la adopción de canastas que incluyan a la moneda europea es la intensificación de las relaciones financieras euro–latinoamericanas.

Cuadro 14

Evolución de la participación de las emisiones en euros de países selecionados

	Argentina	Brazil	Chile	Colombia	Mexico	Venezuela
	En las emisiones de obligaciones privadas					
1993	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%
1994	0.0%	12.9%	0.0%	0.0%	0.0%	
1995	21.0%	6.5%	0.0%	0.0%	0.0%	
1996	7.5%	2.2%	0.0%	0.0%	0.0%	
1997	8.6%	3.9%	0.0%		0.0%	
1998	5.8%	3.6%	0.0%		5.4%	
1999	29.2%	4.5%	18.5%		0.0%	
2000	20.9%	16.8%	0.0%		40.1%	
	En las emisiones de obligaciones públicas					
1993	28.2%	0.0%		0.0%	4.5%	14.4%
1994	22.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1995	37.8%	34.7%		21.1%	12.8%	48.8%
1996	47.2%	30.5%	0.0%	11.0%	18.7%	68.6%
1997	28.4%	29.1%	0.0%	0.0%	33.1%	0.0%
1998	57.0%	32.5%		16.0%	16.1%	26.0%
1999	56.1%	58.3%	0.0%	0.0%	13.9%	54.3%
2000	51.7%	25.3%	100.0%	36.1%	19.9%	68.5%
	En el total de obligaciones (privadas y públicas)					
1993	10.7%	0.0%	0.0%	0.0%	2.3%	13.8%
1994	9.9%	11.5%	0.0%	0.0%	0.0%	0.0%
1995	33.3%	15.7%	0.0%	8.8%	11.1%	48.8%
1996	39.2%	13.6%	0.0%	9.7%	15.7%	68.6%
1997	22.8%	16.6%	0.0%	0.0%	22.5%	0.0%
1998	44.3%	17.7%	0.0%	16.0%	11.9%	26.0%
1999	52.9%	43.2%	12.7%	0.0%	8.3%	54.3%
2000	47.7%	24.4%	55.9%	36.1%	23.7%	68.5%

Fuente : Caisse des Dépôts et Consignations - Service des études - risque pays, Bondware

Por supuesto, el anclaje a una moneda única, en este caso el dólar, constituye una alternativa muy atractiva en América Latina. Con respecto a la perspectiva de las uniones monetarias regionales, la decisión unilateral de vincularse exclusivamente con el dólar es una solución de facilidad que supone una menor exigencia en términos de coordinación y de cooperación regional. Además, la participación plena en la zona dólar puede aumentar las inversiones extranjeras atraídas por la diversificación del riesgo de cambio (Bénassy–Quéré, Fontaigné y Lahrèche–Révil, 1999). Más importante aún, una política de anclaje a una sola divisa clave es fácilmente comprobable por los operadores de mercado; la transparencia contribuye así a reforzar rápidamente la credibilidad de los países que adoptan este tipo de política (Frankel y alii, 1999). A su vez, en América Latina, donde el grado de dolarización de hecho es elevado y la cuestión de la credibilidad es crucial para muchos países, la problemática de la vinculación con el dólar va más allá de la discusión sobre el anclaje respecto de la divisa estadounidense. El debate planteado abiertamente desde 1999 está cada vez más centrado en las ventajas y los inconvenientes de una dolarización total, es decir el reemplazo –a priori irreversible– de las monedas nacionales por el dólar, que están implementando actualmente Ecuador y El Salvador.

En la medida en que la credibilidad esté asociada en América Latina al establecimiento de una relación estrecha con el dólar (en el marco de anclajes de jure o de regímenes de flotación que impliquen anclajes de facto a la moneda estadounidense) y, de alguna manera, con la Reserva Federal, la posibilidad de adoptar canastas en las que el euro participe se verá limitada. Cabe sin embargo formular dos argumentos que permiten matizar esta observación.

Por un lado, como lo señalan Levy Yeyati y Sturzenegger (1999c), con el lanzamiento del euro, el Banco Central Europeo podría ofrecer, si su política se revela exitosa, una nueva alternativa –en el mediano o largo plazo– a los países en búsqueda de credibilidad. Aun cuando, evidentemente, tanto la Reserva Federal como el BCE son extremadamente reticentes a cualquier propuesta que implique compartir el manejo de la política monetaria con terceros países, este último podría ser, según estos autores, menos reacio a la idea de establecer algún tipo de acuerdo cambiario con ciertos países de la región latinoamericana. El llamado Sistema Monetario Europeo bis (SME bis), acuerdo cambiario que liga la Unión Europea con otros países del viejo continente que son candidatos a la adhesión, constituye un antecedente interesante en este sentido aunque, por supuesto, no sea en principio trasplantable a otros países o regiones.

Por otro lado, los factores ya señalados que actúan en favor de la perspectiva de la adopción de canastas de anclaje podrían verse potenciados por el escenario internacional de mediano–largo plazo que se privilegia en este trabajo. En efecto, un SMI cada vez más bipolar pero asimétrico supone una elevada volatilidad entre las dos principales monedas internacionales. En este contexto, un anclaje exclusivamente centrado en el dólar podría revelarse nefasto para los países caracterizados por relaciones comerciales y financieras importantes con la zona euro. Por el contrario, el anclaje a una canasta en la que esté incluido el euro sería un elemento decisivo para reducir la vulnerabilidad –y, por ende, acrecentar la credibilidad– respecto de los bruscos cambios en la paridad de las principales divisas de referencia.

Conclusión

Varias conclusiones provisorias pero robustas se desprenden del análisis realizado.

En primer lugar, en lo que respecta a la evolución del SMI, el escenario de mediano–largo plazo que parece más plausible, habida cuenta de los primeros pasos del euro en la escena internacional y de las enseñanzas de la teoría económica, es el de un duopolio cada vez menos asimétrico. Aun cuando esta hipótesis es por supuesto discutible, parece verosímil considerar que el dólar conservará su posición hegemónica por un buen tiempo en el marco de una evolución gradual hacia una bipolarización creciente del SMI. En una configuración de déficit de cooperación monetaria internacional, este escenario supone una elevada volatilidad entre las dos principales monedas internacionales, lo cual constituirá un poderoso factor de desestabilización para los terceros países.

En segundo lugar, los dos primeros años de existencia de la moneda europea confirman que su uso creciente en las operaciones financieras –que tienen actualmente un peso mucho más importante que las operaciones de bienes y servicios- constituirá un vector decisivo (aunque insuficiente a largo plazo) en su proceso de internacionalización. A su vez, la expansión que caracteriza a los mercados de bonos en euros no es neutra en términos de efectos sobre los mercados de capitales de la zona de emisión. El desarrollo de los compartimentos de obligaciones debería incrementar, junto con otros factores, la presión para que el mercado financiero del euro sea cada vez más amplio, líquido y profundo. Esto debería favorecer el desarrollo de mejores condiciones de plazo, de refinanciamiento, de cobertura y de arbitraje, tanto para los operadores europeos como para los operadores de terceros países.

En tercer lugar, una consecuencia importante del creciente uso financiero de la moneda única europea y del desarrollo de los mercados de capitales del "Euroland" es que esto debería inducir, a mediano y largo plazo, una mayor diversificación, en favor del euro, en materia de reservas internacionales oficiales. En un contexto de liberalización financiera, la composición por divisas de las

reservas internacionales parece fuertemente afectada por el grado de desarrollo de los mercados financieros de las zonas de emisión de las principales monedas de referencia. Si esta tendencia no es contradecida por los hechos, una mayor diversificación en favor del euro en el plano de las reservas internacionales debería revalorizar la función de unidad de cuenta de la divisa europea.

En cuarto lugar, el aspecto más relevante en la dinámica reciente de las relaciones financieras euro–latinoamericanas –que se han intensificado fuertemente a partir de los años 90- es el incremento sostenido de las emisiones internacionales de bonos en euros (tanto del sector público como del sector privado). El estudio de los canales de generalización de la utilización de las divisas clave como moneda de anclaje demuestra que la probabilidad de anclar una moneda nacional al dólar disminuye cuando aumenta la proporción de la deuda externa denominadas en euros. Si los países latinoamericanos continúan incrementando su endeudamiento en euros y esto se traduce luego en una mayor diversificación de sus reservas internacionales; algunos de ellos podrían considerar la posibilidad de utilizar la divisa europea en canastas de anclaje, sobre todo en los casos en que la zona euro es un socio comercial importante. No obstante, el dólar debería seguir teniendo un papel preponderante en dichas canastas, dado el estatuto de la divisa estadounidense en la región latinoamericana.

En quinto lugar, el ritmo de este proceso dependerá de la velocidad a la que se intensifiquen los lazos financieros entre América Latina y la zona euro. Un punto crucial es la evolución futura del financiamiento en euros del sector privado de los países latinoamericanos, que es aún bajo en términos absolutos. La prosecución del dinamismo de la inversión extranjera directa de origen europeo en América Latina podría jugar en un sentido favorable a la intensificación en las relaciones financieras con Europa. Los factores que pueden obstaculizar esta progresión tienen que ver con los comportamientos inerciales que refuerzan los vínculos con la zona dólar (establecimiento de los balances en dólares y según las normas contables estadounidenses, acceso al financiamiento en el mercado bursátil de Estados Unidos...) y con la posibilidad de un desarrollo más lento que el previsto actualmente de los mercados de capitales de la zona euro. Obviamente la intensificación de las relaciones financieras entre Europa y América Latina dependerá también de las expectativas en materia de costos financieros y de riesgo cambiario del euro. A su vez, la perspectiva de un reforzamiento de los vínculos financieros entre las dos regiones obliga a considerar la política de gestión de los compromisos externos de los países latinoamericanos, así como el impacto sobre el servicio de la deuda del comportamiento de las tasas de interés en la zona euro. Estos temas se analizarán en la versión definitiva de este trabajo.

Por último, conviene subrayar que las consecuencias a mediano–largo plazo que se extraen en el plano de la evolución de los regímenes cambiarios deben ser resituadas en el nuevo escenario internacional que se perfila con la creación del euro. Los factores ya señalados que actúan en favor de la perspectiva de la adopción de canastas de anclaje, por lo menos en el caso de algunos países latinoamericanos, podrían verse potenciados por el escenario internacional de mediano–largo plazo que se privilegia en este trabajo. En efecto, un SMI cada vez más bipolar pero asimétrico supone una elevada volatilidad entre las dos principales monedas internacionales. En este contexto, un anclaje de facto o de jure exclusivamente centrado en el dólar, que en principio permite obtener importantes ganancias en términos de credibilidad, podría revelarse nefasto para los países caracterizados por relaciones comerciales y financieras importantes con la zona euro. Esta situación podría verse modificada si la credibilidad del Banco Central Europeo se refuerza. Este es, a su vez, uno de los elementos decisivos del proceso de internacionalización del euro.

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Anexo I
El método de cálculo de los regímenes de facto y sus resultados

El método más utilizado para identificar un régimen *de facto* consiste en la estimación de una ecuación que explica las variaciones del tipo de cambio de cada moneda a través de las fluctuaciones de los tipos de cambio de las grandes monedas de referencia (dólar, yen, marco, euro, etc.):

$$\dot{e}_{ikt} = a_0 + a_1 \dot{e}_{\$kt} + a_2 \dot{e}_{Ekt} + a_3 \dot{e}_{Ykt} + u_t \quad \text{en donde,}$$

$\dot{e}_{ikt}$ = designa la tasa de variación del tipo de cambio de la moneda i en relación con la moneda k entre t y t–1. $, E y Y designan respectivamente el dólar, el euro y el yen.

La constante a_0 es positiva si i se deprecia (o se devalúa) regularmente para compensar un diferencial de inflación positivo (caso de los anclajes reales o del *crawling peg*). Los coeficientes a_j se interpretan como el peso de cada moneda de referencia en la canasta implícita del país i.

Los casos que se pueden presentar son: $a_{ij} = 1$, que corresponde al anclaje unitario respecto de una moneda (un solo coeficiente significativo e igual a la unidad); $0 < a_{ij} < 1$, que corresponde al anclaje respecto de una canasta de monedas (al menos dos coeficientes significativos donde la suma es igual a la unidad); $a_{ij} = 0$ para $\forall_j$, que corresponde al caso de flotación libre (ningún coeficiente es diferente de cero).

Como la estimación directa de esta ecuación presenta el problema de definir el numerario k (una moneda que fluctúe independientemente de las grandes monedas explicativas), Bénassy–Quéré y Coeuré utilizan:

$$\alpha_i' X_{it} = \beta_i + u_{it} \quad \text{en donde,}$$

$X_{it} = (\dot{e}_{i\$t}, \dot{e}_{iEt}, \dot{e}_{iYt})$, α_i corresponde al vector de ponderaciones y β_i es un escalar.

La ecuación se estima como una condición de ortogonalidad usando el método de los momentos generalizados, con la restricción:

$$\sum_{ji=1}^{3} \alpha_{ij} = 1$$

La estimación fue realizada para 111 monedas, sobre tipos de cambio semanales y para dos períodos: abril de 1995 a junio de 1997 (antes de la crisis asiática) y octubre de 1998 a diciembre de 1999 (después de la crisis). El euro fue asimilado al Ecu antes de enero de 1999. De los 111 países utilizados por Bénassy–Quéré y Cœuré, los 93 que han sido retenidos este trabajo se indican a continuación.

Argentina	Costa Rica	Guinea–Bissau	Malaysia	Russian Federation
Bangladesh	Cote d'Ivoire	Guyana	Mali	Senegal
Barbados	Croatia	Haiti	Mauritania	Seychelles
Benin	Czech Republic	Honduras	Mauritius	Sierra Leone
Bolivia	Djibouti	Hungary	Mexico	Slovak Republic
Brazil	Dominica	India	Mongolia	Sri Lanka
Bulgaria	Dominican Republic	Indonesia	Morocco	Syrian Arab Republic
Burkina Faso	Ecuador	Iran, Islamic Rep.	Mozambique	Tanzania
Burundi	Egypt, Arab Rep.	Jamaica	Nepal	Thailand
Cambodia	El Salvador	Jordan	Nicaragua	Togo
Cameroon	Equatorial Guinea	Kazakhstan	Niger	Trinidad and Tobago
Central African Republic	Estonia	Kenya	Nigeria	Tunisia
Chad	Ethiopia	Korea, Rep.	Pakistan	Turkey
Chile	Gabon	Lao PDR	Panama	Ukraine
China	Gambia, The	Latvia	Paraguay	Uruguay
Colombia	Ghana	Lebanon	Peru	Venezuela
Comoros	Grenada	Lithuania	Philippines	Vietnam
Congo, Rep.	Guatemala	Madagascar	Poland	Zambia
		Malawi	Romania	Zimbabwe

Anexo II
El análisis factorial en componentes principales (AFCP)

El análisis factorial en componentes principales permite representar numerosas relaciones entre variables en un pequeño número de factores. Las observaciones (o individuos) pueden ser representados (proyectados) en un plano definido por los ejes factoriales.

Este método cuantitativo es el más adaptado para el análisis de un conjunto de variables heterogéneas, es decir expresadas en unidades *a priori* diferentes. La arbitrariedad que resulta de la utilización de escalas de medida diferentes, que se expresa en una dispersión no comparable, se suprime normalizando cada variable. Por consiguiente, cada variable posee una varianza igual a 1. Para J variables, la varianza total (que mide la dispersión global de los individuos, que resulta de todas las variables) es igual a J.

Geométricamente, las variables son representadas por puntos situados sobre una esfera. El ángulo entre dos variables ilustra su correlación (coeficiente de correlación linear de Bravais-Pearson): ésta es el coseno del ángulo. La correlación es más fuertemente positiva caundo el ángulo es agudo, y más fuertemente negativa cuando el ángulo es obtuso. La correlación es nula cuando las dos variables forman un ángulo recto.

El AFCP provee un conjunto ordenado de ejes y de valores propios correspondientes. El valor propio n° α es la varianza del factor correspondiente al eje α. La suma de los valores propios es siempre igual a la varianza total. Si las variables originales tienen todas una varianza igual a 1 (por construcción), los primeros factores tendrán una varianza notablemente superior a 1: cada uno de ellos materializa la disparidad de las observaciones imputable a un conjunto de variables. A partir de un cierto rango, los factores se asocian a valores propios inferiores a 1. Así, estos últimos factores expresan entonces menos de disparidad entre individuos que cualquier variable original. Se puede considerar entonces que la información que ellos aportan en términos de disparidad entre individuos es residual y, por ende, eliminarlos en el proceso de interpretación de los resultados.

Las coordenadas factoriales de los individuos (proyecciones sobre los ejes factoriales) pueden ser utilizadas como nuevas variables (compuestas) en ecuaciones econométricas. Dichas variables, que resumen la información contenida en el conjunto original de variables, presentan la ortogonalidad como característica fundamental, es decir, anulan todo riesgo de multicolinearidad.

MACROECONOMICS AND REGIONAL INTEGRATION: EMU AND THE STABILITY PROGRAMMES
SOME POSSIBLE LESSONS FOR LATIN AMERICA

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Introduction

With globalization and the slackening grip of national regulations and policy-makings, there is a tendency to argue for the need for world-wide level regulation and governance while a new development of "regionalism" has also appeared since the world economy has become more multi-polar, both on the real side and on the monetary one. In such a context, policy-makers face the difficult issue of defining the optimal level of governance and the kind of regulation a world market economy needs for operating smoothly and efficiently. The issue is deep-rooted and goes well beyond technical or economical domains since it involves fundamental philosophical choices about the kind of society we would like to live in, not to speak about the cultural opposition between the "interventionist centralism" of the Latin culture and the "individualistic decentralism" of the Anglo-Saxon one.

As it is known, the institutional building of the European Union represents an original, challenging mixture of different cultures (roughly speaking the concrete working of the European Union combined for the first time in history the three major cultural features which constitute the Western World: Latin, Anglo-Saxon and German practices). This aspect might constitute an experience of special interest for other regions, especially for Latin America and the Caribbean, when they consider the issue of the optimal level of governance for coping with the globalization wave of our economic world. All the more with the precedent of the ongoing implementation of the EMU and its single currency, the Euro, since the regional integration appears more clearly as a possible option towards a more regulated and stable globalization. Furthermore, the emerging trends towards an uncoordinated dollarization in Latin America calls for a deeper reflection about practical alternatives at regional level.

Therefore, ECLAC considers it useful to examine closely the macroeconomic provisions of the EMU and the European Union experience in this field as a way to spur the debate in Latin America about the macroeconomic dimension of regional integration.

In this context, and in order to provide ECLAC and the policy-makers of the region with possible useful pieces of thought, I invite the distinguished audience of this XI regional seminar, to follow me on a special European journey.

Before focusing on the macroeconomic framework of the EMU, I feel it is important to widen the scope of the technical fiscal area by dedicating some broader development to the roots and to the context of the emergence of the European model for integration. Since the purpose of the organizers of this regional seminar is to deal with some macroeconomic aspects of the EMU with a view of assessing its possible relevance for the Latin American region, it is indeed important to start by encompassing some very broad principles which allow for assessing better the European experiment. Once one dares to make analysis with a view to drawn lessons from one region to another one, there is a need for adopting a wider scope (in time as well as areas and their interconnections). By the way, this provides to me a nice opportunity to pay a special tribute to the genuine intellectual father of the Euro, the Belgian economist Robert Triffin from Yale and Louvain Universities.

This is why this paper choose to starts by looking backwards to some fundamental aspects at work in the case of the European experience, allowing to underline some basic principles that I believe are still valid and useful for LDCs and more specifically for Latin American countries. After the section dedicated to remembering these important backgrounds, I will present the macroeconomic regime of the EMU as a whole – its philosophy and main provisions, before to examine further the modalities of the Stability programmes. Upon these inputs, I will try to present some conclusive points for the region in order to launch a frank debate amongst the policy-makers.

Section 1: A brief journey through the context and roots of the European regional integration

1. Recalling some intellectual roots of the European integration process

Right from the outset, the European process of integration was closely related to the macroeconomic dimension and to the external context, especially to the IMS problem. The best way to make this clear is to single out one decisive contributor to the regional integration approach who is also famous as an important analyst of international monetary problems: Robert Triffin, a Belgian economist trained in Louvain and Harvard before World War 2, who served as an adviser to both the United States administration (the FED, the White House and others) and the European Institutions, namely the OEEC and the EPU during the Marshall plan, and later the European Commission. Triffin's thinking constitutes the best vehicle for understanding the European conception and model upon which the whole process of regional integration has been built, not just for domestic reasons but also for the sake of the international order.

Triffin perceived very early and expressed better than others the most fundamental issue of a globalized economy. His work decisively shaped the emerging European integration and the promotion of a regional approach as a way to stabilize the international economic and monetary system. He was the first to diagnostic and to propose a concrete solution to the fundamental issue of the adequate level of economic governance (which will be named later the "subsidiarity principle").

Following him, the way the international economy works (or better to say does not work well) must be analyzed along to two fundamental but simple observations: **the first** is the need for providing an institutional framework for international trade and payments which will limit the inevitable instability resulting from the clash of national sovereignties. Independent national policy decisions in an interdependent world cannot be optimal by themselves and so there is a *need for economic cooperation* amongst sovereign policy-makers and especially the need to strengthen the institutional framework of international convertibility for ensuring monetary and financial stability, and **the second** one is that *regional cooperation* might be a significant tool for opening the road towards such an international coordination scheme, since it is an intermediary step and an efficient way to launch the required institutional building and practices that a workable coordination scheme at world level ultimately needs. Triffin's conception of an international stable economic order and especially of the IMS (convertibility issue), is based upon the inter-twining of world-wide institutions, regional cooperation, and national policies. In fact, and before the concepts were properly named, this was already the "subsidiarity" issue in a "globalizing" world.

The basic issue of the presently called "globalization" phenomena, with which we are still and increasingly confronted, appeared clearly when he said as early as 1957 "*the fundamental dilemma of international economic relations in the 20th century lies in the inadequacy of national sovereignty as a framework for policy decisions and their administrative implementation in an interdependent world*"[2]. All Triffin's work was influenced by this threatening gap which traps national policy-makers and their voters into a typical "prisoner dilemma". Most of Triffin's contributions to international monetary problems were led by this systemic question, attempting to tackle it by designing workable schemes for reducing its costly consequences for world economy and policy-making.

Although he also had "*a greater faith in market convertibility than in intergovernmental agreements and organizations for world trade and payments*"[3], he saw the only stable solution as creating

[2] Triffin, Robert. 1957 « Europe and the Money Muddle », page 303, New Haven Yale University Press and Oxford University Press.

[3] ibid. page xiii of the Introduction

an institutional framework that could introduce some degree of coordination, reducing national autonomy for the sake of preserving external stability. The solid realism of the Belgian economist, allied to his cosmopolitan idealism, made him perfectly aware that this was easier to apply first among like-minded countries sharing common cultures and economic proximity.

The most famous contribution he made in that direction - the so-called ***Triffin's dilemma*** - was to warn the Bretton Woods system that the dollar-standard as the use of a national currency for international purposes was a logical non-sense for reaching an optimal creation of international liquidity. Since the very beginning of the dollar-standard, thus well before his book of 1957, Triffin already argued that to restore a world-wide system of multilateral trade and payments through the establishment of the IMF and the restoration of sterling as a key currency was condemned to fail and that *new methods of regional cooperation were required*, at least for Europe at that time. Thus Triffin's transparent bias in favour of regional rather than world-wide agreements led him to become one of the earliest proponents, active negotiators and most ardent defenders of the European Payments Union (EPU) which fulfilled the vacuum left by the failure of the sterling convertibility in 1947 and the weakness of the IMF at that early time. Indeed, in 1947-48 the resources in dollar of the IMF were already exhausted and the Marshall plan represented 20 times the borrowing rights of Europe from the IMF. Drawing upon the EPU success, he developed the theory that "*regional arrangements of this character, while admittedly discriminatory in some respects, can accelerate and consolidate progress towards world-wide currency convertibility, introduce elements of stability in international economic relations, and help limit the international spread of recessions and restrictions.*"[4]

During the fifties his analysis showed that the obstacles to the restoration of currency convertibility in Europe no longer lied "*in the weakness of its economy, in its inflationary proclivities or in the shortage of dollars, but in fears and uncertainties regarding the future harmonization of nationalistic trade and monetary policies in an interdependent world*"[5].

At this stage, I let the audience to assess itself by how much this almost half-century old sentence remains crucially true for the time being in Latin America. Furthermore, having in mind the crisis succession of the ERM in 1992-93, the Tequila in 94, the Asian in 97, the Russian in 98, the Brazilian in 99, and the...next coming ones, it is worth to remind that for Triffin at that time the maintenance of the ideal full convertibility was impossible among fully national sovereign states without crisis.

Although basically this diagnostic seems to reflect what will appear in the sixties as "*Mundell's triangle theorem of impossibility*" i.e. the impossibility to maintain simultaneously autonomous national monetary policies, fixed exchange rates and free movements of capital, Triffin's position goes further.

For Mundell, the efficiency of the markets is equivalent to opt for flexible rate as a way to solve the monetary dilemma through the markets. As the events that occurred after the collapse of the fixed exchange rate system tended to show, Mundell's position relied upon the implicit hypothesis that all the currencies are equivalent substitutes, allowing for the markets to respond efficiently to the international demand for money. It is now clear that these hypotheses were not present in the real world. Triffin, in *tempore non suspecto*, perceived the same impossibility but without any triangular equivalence.

Now, History will increasingly show how much he was right, and the facts already demonstrated the validity of the European approach. Historians of the European reconstruction and integration

[4] ibid. page x of the Introduction
[5] ibid. page 86.

acknowledge that the solution brought once and for all to bilateralism[6] thanks to the EPU design (with the Marshall's money carrot[7]) and its consequent success, was the keystone for the post-World War2 recovery and the creation of European Community.

What is less known but even more important, is that Triffin contributed also to shape the European approach and method of integration. First, the **subsidiarity principle**, although without giving it this name, by explaining the need for cooperation and limitation in some aspects of national sovereignty of economic policies, but insisting that "*in many cases , the centralization of negotiations and decisions...would constitute a handicap, an element of paralysis, and a source of international friction rather than an effective contribution to the solution of our problems*"[8]. Second, with the definition of the **coordination principle** based upon market sanctions, which will be finally selected by the "trial and error" process leading to the present European Union surveillance and coordination of economic policies: "*sovereign countries should not be expected to undertake and respect international commitments which come into conflict – real or even imaginary – with powerful national pressures or interests. Barring the use of coercion, the efficacy of international commitments depends primarily on the provisions that make their implementation both feasible and attractive, and their breach unnecessary and damaging from the point of view of the countries concerned. National interests should be made to coincide, through a double mechanism of deterrents and incentives, with the collective interests of the group. Reciprocity and mutual help are the keystones of such a construction*"[9]. The success of the recent development in the European Union are precisely due to the application of these two basic principles, demonstrating again the worth of the Triffin's approach of regional integration.

2. General features and principal lessons from the European Open Regionalism

Regionalism has not yet received a clear single definition but, as with an elephant, in the fact there is no doubt when it works. There is indeed no doubt that there is at least one region that reached to develop preferential agreements and succeeded to implement them. There are also some recurrent signs that numerous new attempts developed intensively during the 90s but it is generally too early now to assess their effective and successful implementation. Already during the sixties and seventies, various attempts were launched all around the world but they all failed. Therefore, the issue remains to know whether the only European success-story is sufficient for building a universal model following its lines. The devil's advocate would say that the divided Europeans complicated so much the simple unilateral liberalization that they were obliged to hide it using indirect ways for forcing them to go to the essentials which is merely to open any economy to trade and capital flows. Others argue that to advise the regions to build their own block is a dangerous unfounded second best approach since it could just transfer the national conflicts to continental or block level, leading again to bilateral bargaining in a "zero-sum game" mind as opposed to the first best multilateral approach and "positive-sum game".

In fact we are still faced with the old unsolved debate, i.e. unilateral liberalization and world integration versus preferential opening within a regional block. Without pretending to close such a fundamental debate, one could find in the European path some useful lessons, not necessarily for doing the same elsewhere, but for looking for the principles at work in the non-homogenous real world, and

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[6] Not just about monetary aspects (convertibility) but also in trade policy. An important aspect of Triffin's contribution was to link both sides and he wanted the competence of the IMF and the projected ITO to be closely connected for being fully coherent

[7] I cannot miss here the opportunity to pay homage to the clever vision and the political talent of the US leaders who were able at the time to resist the US short-term vested interests and other industrial lobbies, and to adopt a strategic long-run vision of a globalizing multilateral world as better for the US than to exploit their power in bilateral schemes. They accepted to let Europe derogate temporarily to the non-discriminatory principle for giving them both time and chance to re-build their competitiveness and opening faster later.

[8] Triffin, Robert. 1957, ibid. page 258

[9] Triffin, Robert. 1957, ibid page 246

especially for drawing the attention upon the crucial role of the "political economy" and institutional aspects of regional integration.

First of all, it is especially important to recall that in Europe, the monetary reconstruction was intimately linked to the trade integration. In fact, as Triffin insisted at the time, the European bilateralism was deprived of its major underpinning overnight by the creation of the EPU. That means that the convertibility aspects were the first step towards opening the way for gradual trade integration. Contrary to these historical facts and sequencing, our European integration process is generally presented by journalists and external observers - even by some historians - as a trade integration first, then a gradual, slow and painful process of macroeconomic cooperation for being in condition to create and extend a genuine EMU with a single currency: the single market first, then the single currency crooning the economic integration process (the so-called completion of the first pillar of the EU). The result is an "institutionalist view" of regional integration as a juridical process starting first and overall by preferential trade agreements allowing for a progressive construction of a single market and moving slowly towards financial and monetary integration, to which an eventual political step would be added later. Along with this conception is the idea that this whole process relies upon a progressive shift of political power and decisions at national level towards the supra-national one as this would be a "natural law of history" leading us towards a federal state in Europe.

My position is that it is not so much a wrong reading of our history and model, it is overall a wrong understanding of the way the present world works.

1° The globalized world of today has significantly changed the issue and the sequencing of regional integration.

- In the 50s and 60s, the trade aspects were crucial and were the main drive of the European integration but were organized in the Bretton Woods framework of current account convertibility and fixed exchange rates (a quasi-monetary union or dollarization except for capital transactions). This means that the custom union focused the political attention while the other policies were either automatically co-ordinated through the exchange rate constraint or allowed to diverge through capital controls and the complexities of the different national regulations.
- Nowadays, the capital liberalization and the GATT achievements impose a new dynamics, reducing the attractiveness and efficiency of the Custom Union model for economies whose currencies are not yet fully convertible or/and exposed to wild capital movements. Other fields of regional cooperation are becoming crucial. Even more than it was for Europe in the 50s, macroeconomic and monetary stability are essential prerequisites for trade integration. Economic agents would be very reluctant to lend credibility to a trade agreement in any regions if the exchange rates between their main partners were again to be changed from 1 to 2 in a few weeks time?
- With the globalization, the importance of financial integration has become fundamental for the competitiveness of a region, this was not so much the case in the past in Europe. The monetary and financial field has become a key-area for the success of any regional integration.
- Market sanctions and power have risen everywhere putting emphasis upon the efficiency and resilience of regulatory and prudential framework as well as the quality of the policies and of the general governance including the transparency of public decisions.

Conclusion: the globalization process has reversed the respective roles of the advantages brought about by regional integration: the static advantages of preferential trade have become less important than the dynamic advantages of the institutional building and the improvement in the decision making process.

2° LDCs and Regional Integration

The lesson drawn from the change of context due to globalization means that the advantages of regional integration are not only limited - as generally believed - to create preferential access to a single market for its members, but also to warrant a more stable, credible and transparent framework for the economic agents, i.e. to improve the so-called "institutional factor" which is the key for economic and social progress and for reaping profit of the globalized markets. It does not mean that regional trade agreements are not important but that these agreements loose their credibility and efficiency if the macroeconomic and regulatory framework is not reliable. It does not mean that regional integration would be the only way to improve the institutional building process, or that such a process was enough for justifying a regional approach against other economic aspects. I just mean that these aspects, the political economy of regionalism, are crucial in the real world but are not properly taken on board by most of the economic textbooks.

This was already an important lesson drawn by Triffin on the concrete basis of his successful plan for EPU. It is all the more important for LDCs and Transition economies in an already globalized world, since these countries are precisely trapped in the vicious circle that a market economy cannot work without something which, by definition, has not yet been created: an organized framework able to reduce all kinds of transaction costs (regulation, governance, security, law enforcement, human rights and democracy, countervailing power etc... i.e. the institutional factors, see Douglass North's theory[10]).

Globalization makes that competitiveness relies more upon the dynamic advantage than the static existing ones, i.e. the ability to respond to the incentives and to the changes in relative prices is the key. However, such a capacity depends upon all these institutional factors which cannot appear spontaneously but have to be progressively acquired, especially in the macro-monetary field. Macroeconomic stability is difficult to warrant since it requires credibility and efficient regulations (autonomous, credible central bank, prudential regulation, sound banking system, budgetary transparency and good governance). By definition, a transition economy or a LDC has fundamental weaknesses to make up for.

Therefore, the genuine question is how to create this institutional improvement ? My answer is that regional integration could be, under specific conditions, a useful tool for spurring the needed institutional building, especially on the macroeconomic field which is a major determinant of the other development aspects. ***The basic idea is that regional integration needs simultaneously preferential trade agreements and mutual surveillance of economic policies.***

To some degree, my point is similar to the Triffin method with the EPU although the context is very different: it was clear that the first best at that time was to restore convertibility on a multilateral basis, but it was also clear that the decision makers were blocked in a "prisoner dilemma". The EPU with the Marshall financial assistance, although a poor second best, was overall the way to break the dilemma by eliminating the bilateral reflex. For LDCs, the difficulty is partially similar since they have to trigger an endogenous process of change without adequate incentive for the decision-makers themselves. The Triffin's method to combine subsidiarity and coordination in order to reconcile national and regional interest should be workable in LDCs.

My thesis is that a comprehensive regionalism (trade + macroeconomic mutual surveillance + institutional cooperation) supported by adequate creditors' assistance could be a powerful vehicle for triggering these motivations and also for putting them under pressures for fixing themselves the right

[10] North, Douglass C. « Institutions, Institutional Change and Economic Performance » Cambridge University Press, 1990

priorities. By putting together the decision-makers of neighbouring and like-minded LDCs, the "collegial" dimension might create a catalyst effect as a result of the peer pressure review:

- a mutual vigilance results progressively from the fact that it is in all actors' individual interest to respect and to make effectively respected by the others the common rules or consensual views
- transparency effect and automatic benchmarking increasing the degree of consciousness of their own problems
- competition amongst the policy makers motivating them to demonstrate their ability to implement adequate policies (especially if there is a conditional carrot from outside donors) as well as for monitoring the partners' development and policies
- but also cooperation is stimulated towards gaining credibility and weight in front of the donors, the financial markets and the economic agents
- better capacity to resist against vested interests and national lobbying
- emulation and valorization of the national experts in charge of preparing the decisions, whose national responsibilities are improved
- importance of closer personal relationship between technicians and policy-makers
- economies of scales in the design and implementation of difficult reforms
- easier argumentation for facing public opinions and voters, generally sensitive to the political aspect of their own integration (prestige)
- better credibility and internalization of policy requirements and structural adjustments when they are recommended by their own regional economists (by comparison with the same kind of recommendations issued by the IMF staff or external donors); for the same reason, greater political acceptance of peers' critics in comparison with external critics
- development of a broader public debate on economic policy, increasing the chance to create countervailing powers even where democracy is not warranted

This non-exhaustive list of arguments shows several important advantages of open regionalism which make it a potential driving force for institutional changes. These arguments are not theory but "common-sense" combined with concrete political economy based upon personal experiments I had the opportunity to witness in different regions of the World, and especially in the CFA area (Sub-Saharan Africa) when these countries decided to move from mere monetary unions to genuine EMU, i.e. to complement their single currencies with single markets and schemes of regional mutual surveillance of their economic policies.

3° The domino effect of Regional Integration

The next step in my argumentation is that the formation of integrating regions creates external positive impacts able to trigger a new dynamic. There is a potential domino effect, which should be similar to the domino effect created by the formation of the European Community in 1957.

Some important lessons must also be recalled from the European case:

(i) much of the success of the EC is due to the simultaneous external opening of the custom union, in conformity with the GATT rules (and thanks to the United States vigilance and pressures): successful regionalism needs to be under increasing external competition pressure for reducing the "rent-seeking" temptation and the trade deviation effects

(ii) this emerging united trade block spurred the world opening: negotiations easier with third countries by pooling trade policies into a single voice; vested interests and lobbies weaker at supranational Community level than at the national one; third country exporters and competitors put their own government under pressure for bargaining better access to the emerging common market by opening their own domestic market. This mechanism of "widening" is the following: a firm's sales and

profits are harmed by anything that lowers its rival's costs, hence, as trade barriers began to fall within the EC, discriminatory effects began to appear, meaning lost profit opportunities for third country exporters, leading to political economy pressures for lowering the EC external tariffs but also for joining the club. History shows this is not theory but concrete political economy. For example, when the UK realized that the EC was not a joke but a fact, they created the EFTA club in order to increase their threatened bargaining power with the new continental block. But this was not enough for the British industry and the UK applied for joining the EC, - sparkling a domino effect towards full membership into the EC. Indeed, the 1973 enlargement meant a swelling of the EC markets and a shrinking of the EFTA markets, leading to inevitable further enlargements, prepared by the negotiation of bilateral free trade agreements between each of the remaining EFTA and the EC, that went into effect when UK and company acceded to the EC. As analyzed by Baldwyn and others, the upshot of all this was that by mid-1970s trade arrangements in West Europe had evolved from two non-overlapping circles to two concentric circles, preparing further enlargements. Another example is the Dillon Round and the positive answer given by the United States that changed its trade legislation and launched the Kennedy round. Although in the agricultural area the European integration made things worse, it is in fact the negative demonstration of the law that only open regionalism is successful; the deepening in agricultural integration was costly because it was managed without any external opening.

(iii) the degree of external openness of a region increases the needs and reasons for deepening its own integration: remaining competitive asked for eradicating remaining obstacles towards the single market and extending the cooperation between national administrations to new fields (financial markets, monetary policies, prudential regulations, external policies, fiscal and domestic affairs etc...). The European history also shows how this dialectic "deepening-widening" has been acting effectively and has driven the progress of the Community to much more than free trade. The start of the EC with only 6 members was a choice for deepening first (Custom union, Common Agricultural policy etc...). As explained above, such a deepening, in the GATT framework, significantly eased worldwide industrial trade liberalization. At the end of the 60s - beginning of the 70s, a further deepening towards EMU failed in the context of the international monetary turbulence (breakdown of the Bretton Woods system). But a first enlargement took place successfully in 1973 (UK, Ireland, Denmark). The next step was another deepening with the creation of EMS in 1979. For the first time, its success led to a simultaneous deepening and widening as Spain and Portugal were admitted while the comprehensive Single Market programme was on track. This successful combination created the momentum for a more ambitious deepening with the EMU programme and the Maastricht Treaty, quickly followed by the creation of the European Economic Area (EEA) and the European Agreements with the Eastern European countries.

The same kind of dynamics could be expected in other continents if some regions succeeded in launching genuine open regionalism with institutional improvements. Recent examples presently seem to appear in Latin America (Mercosur impacts on the other countries and regions, NAFTA on the European Union agreements with Latin American countries...) and in Africa (WAEMU-UEMOA and CAEMC-CEMAC and their impacts on Nigeria and the rest of the ECOWAS-CEDEAO that decided in April 2000 to create their own monetary union for merging it later with the single currency (CFA) of the UEMOA). However, these examples are not yet demonstrated since the story is not over. We have to remain prudent as the achievements are still fragile and not yet fully implemented or successful.

An important remark is that a deepening in regional integration does not mean that monetary union or EMU are necessary steps. Nevertheless, my argumentation is that macroeconomic and monetary cooperation are necessary steps but different exchange rate regimes are compatible with regional integration provided they generate stability. The forms and contents of these co-operative schemes are, however, a broad open question whose answer depends upon specific factors that the involved countries must assess themselves.

4° The systemic impact of the regional dynamics

The final step in my argumentation is very "Triffinian": such regional dynamics, if successful among LDCs and Transition economies, should take place in a broader international order which in turn could be easier to implement and to manage thanks to the intermediary regional level which allows for some decentralization of responsibilities. As Triffin wrote in the fifties: "*Institutions as the IMF and the proposed OTC...should also lean heavily on the regional organization and agreements that promote their basic objectives...*" since "*Regional cooperation is far more likely to succeed in developing habits of continuous consultation and negotiation over a broader range of governmental responsibilities; and it may...gradually evolve toward the actual merging of areas too small and too interdependent on one another to preserve national welfare and security on the basis of national sovereignty exercised within present political boundaries*"[11]

As developed first by Triffin, the advantages of such an intermediary level are an issue of subsidiarity: some levels of decision making should be broader than the national one but do not always need to (or could not) be universal since the regions are different while they present some like-minded features which ease the organization of policy coordination among participating countries.

Provided some regions could launch their own form and method of macroeconomic cooperation, there is a chance to see a new "deepening-widening" dynamics which should naturally improve the rationality of policy-making. With better macroeconomic policies and faster institution building, the deepest cause of financial instability would be under better control, contributing to a more resilient financial architecture. The IMF should work closely with the regional institutions as intermediary levels for the implementation of their own recommendations. It would be possible to associate the regional experts to examination under article IV of the members of a regional surveillance scheme, and progressively and case by case, it should be conceivable to integrate the results of the regional surveillance exercises into the assessment of the IMF. In particular, the use of IMF resources or other donors assistance could involve the regional levels to some degree. The common interest of both levels is a better appropriation of the adjustment policies, which cannot reduce the prerogatives of the IMF, on the contrary, and the IMF assessments are helpful for establishing and increasing the credibility of the regional mutual surveillance. This would mean a progressive and adjustable decentralization by region of the IMF functions. One of the significant advantages would be to enable the limited IMF staff to specialize more and to focus its energy and actions upon the most systemic aspects of the IMS and the most urgent needs and the weakest regions.

As regards the industrialized countries, the realization of EMU in the European Union has already accelerated the move towards a better balanced multi-polar monetary system. The progressive establishment of an alternative to the dollar should increase the chances of improving the international cooperation and especially the international monetary coordination. The main reasons are the reduction in the number of players, the more symmetric gains and relationships among similar economic and monetary poles, and the growing internalization of the external impacts of their own policies (see below).

A typical objection to this point is the risk of a "*benign (or malign) neglect*" of these big blocks with respect to the external impacts of their policies, and especially to the exchange rate behavior. While it is true that the exchange rate looses part of its traditional importance for small or medium economies, giving more room for manoeuvre in the monetary policy field, it is not true that their policy makers would not pay attention to the exchange rate and to the impact of their own monetary stance upon the world

[11] Triffin, Robert. 1957 Ibid. page 304

economy. Indeed, as shown by R. McKinnon, the currency substitution among more similar key-currencies will progressively make unstable the domestic demand for money, increasing the uncertainty and thus reducing the efficiency of domestic monetary policies. This constitutes a powerful motivation for central bankers to co-operate since it will become a necessity for meeting their own domestic commitments to respect price stability. So the reduction of the internalization through the lower importance of exchange rate movement for trade will be more than compensated by the increasing internalization through the globalized financial markets and the strongest pressures of currency substitution on domestic monetary management. It will become more urgent to reach a collegial management of the world liquidity by agreeing first to common targets for the monetary aggregate of the three main currencies (see McKinnon proposals) and progressively incorporating the other emerging regions into these aggregates.

Section 2: The EMU macroeconomic regime

1. The philosophy of EMU in a nutshell

The launch of the euro and the establishment of the Economic and Monetary Union in eleven European Union member countries in 1999 (twelve from January 2001 with the entry of Greece) represented a systemic change of the European Union policy regime, which is a major step toward deepening the European integration process and toward more rational policy-setting in Europe. This is true not only for the participants in the euro-area but also for the whole European Union and the three Member States that have not yet joined the single currency, but that fully share the policy requirements of EMU and participate in the mutual surveillance exercises. In particular, the budgetary discipline applies to them too, the only difference being the application of financial sanctions in case of failing to respect it (see section 3 below).

Indirectly, but not less importantly, the change of macroeconomic policy regime will also have a progressive influence on the international monetary system through the emergence of a more responsible policy-pole in Europe as an entity as well as by internalizing the spill-overs of domestic economic policies in the three main poles of the industrialized countries in a more satisfactory manner.

The EMU is a key-building block of the European integration process, and emerges as one of the very few success stories in the establishment of an operational system of international policy cooperation. This process is already half a century old, driven at the start by the United States with the strong conditionality of the Marshall plan (the European Payment Union and the OEEC in 1947-1948), and has progressively developed a mutually reinforced dynamic of deepening-and-widening regional integration. History plainly shows that European integration has, in fact, been a slow "*trial-and-error*" process swayed by growing sanctions by the markets in the context of accelerating world globalization. Successive attempts have therefore resulted in the selection of a few collegial procedures by national authorities, which are able to shape a pragmatic economic governance for the European Union (subsidiarity), pave the way to the convergence, and therefore permit the move to a single currency, without any major institutional changes. This improvement is fully shared by the three remaining member States that did not join the single currency.

Like any currency, the Euro has two facets: the microeconomic aspect i.e. the efficiency side since the single currency brings lower transaction costs and more competition pressures on the single market; and the macroeconomic one i.e. a change of regime since the new economic policy architecture put in place by the Treaty and its operational modalities defined in the *Stability and Growth Pact*, should warrant a macroeconomic policy mix which is more favorable to economic growth and job creation than the last three decades. These two facets correspond to the two interrelated objectives of EMU; efficiency and stability.

Much more than "*the currency for the single market*", the Euro emerges as a stable currency issued by an independent Central Bank working *within a new coordinated policy framework* and, particularly, within the budgetary scheme of the Growth and Stability Pact. Two important points developed in the following sections, are that (i) the macroeconomic aspects of the Euro are indeed dominant and potentially powerful for improving the world economic order, and (ii) although the Euro brings positive systemic changes thus reducing the risk of macroeconomic mistakes, complete success of EMU is not automatically guaranteed; it requires appropriate macroeconomic policies as well as product and labor markets operating with sufficient flexibility, i.e. conditions which are not automatically conferred by EMU as such, but that EMU will help to meet, by acting as a catalyst for further changes which are needed in any case to solve Europe's structural problems.

2. Economic policy setting in EMU

2.A. The convergence mechanism as a need for restoring to growth and employment

The successful EMU process and its sustainability depend on the principle of "convergence" of economic policies and performances, whose operational content is defined by quantitative criteria but in fact by a collegial scrutiny which has been tested for a long preparatory period. These so-called "Maastricht convergence criteria" - in terms of inflation, exchange rate behavior, interest rate gap, budgetary deficit and public debt ratio - show that price stability and sound public finances are the two first basic principles for both joining and ensuring the sustainability of EMU because they are also the two basic conditions needed to ensure sustainable growth. This why all the European Union Member States adhere to these criteria, even those that do not participate in the full EMU. The only consequence for the non-EMU members is that the non-respect of the convergence criteria does not leave them open to the same enforcement procedures.

On the macroeconomic side, it is important to see EMU as a device carefully prepared for securing and facilitating the operation of what is known as the convergence mechanism, in particular by improving the institutional framework on which policy-setting in the European Union and each of its Member States depends. Furthermore, this essential feature must be assessed, not with respect to the ideal "textbook case", in which a benevolent and ever rational national authority chooses the best policy mix, but with respect to the real complex European scenario and the tendencies national authorities actually displayed in the pre-EMU regime.

Basically, the convergence mechanism is the means chosen by different sovereign authorities and heterogeneous institutions to re-balance, through their own means and choices, the distorted global policy mix which kept all of them in a "*slow-growth trap*" and led to massive unemployment. As a result of their increasing integration, the problem had become a common one and therefore required, to some degree, a common solution. The mistakes of some Member States tended to spill over onto others as the resulting financial sanctions –worsened by the intra-European exchange rate crisis– had a major macroeconomic impact on the whole Community. This assessment is clearly demonstrated by a look back over the macroeconomic trends seen in Europe since the first oil shock.

In several Annual Economic Reports and in the 1993 *White Paper on Growth, Competitiveness and Employment*, the Commission services attributed the disappointing growth and employment trends mainly to past macroeconomic mismanagement, which pushed growth potential downward and contributed to a lower actual growth performance.

A) The mechanics of the "slow growth trap" were as follows:

- stability conflicts between budgetary policy, wage developments and monetary policy, along with recurrent currency upheavals since the first oil price shock and the end of the Bretton Woods system, resulted in a distorted policy mix and frequent overburdening of monetary policies,
- the consequent "crowding-out" through higher real rate of interests and negative impact on business and consumer expectations shortened the cyclical upswings (and lengthened the recessions), impeding unemployment re-absorption and contributing to a decline in the investment rate in the Union,
- as a result of the depressed investment ratio and the constrained aggregate demand, the potential rate of economic growth dwindled to a relatively low trajectory (currently at around 2 to 2.25 per cent per annum). The low actual growth performance was imposed, however, consistently with the need to prevent an inflationary explosion and to achieve some price stability. The low non-inflationary rate of growth in turn resulted in a lack of supply capacity (capital shortage) which, in turn, constrained aggregate demand and employment prospects, in spite of the manpower availability.

The most obvious argument of that form of classical unemployment (i.e. the lack of capital for reincorporating the unemployed at the existing relative price of the factors) is the fact that the rising slack in European labor markets was not associated with any rising slack in output markets (upward shift in Okun's curve).

Since net job creation corresponds arithmetically to the difference between the respective rates of growth of GDP and of labor productivity, a low potential rate of growth appears to constitute an obstacle to employment creation as far as labor productivity increases remains close to its past trend: a potential output that is too low with respect to the productivity trend makes the non-inflationary rate of GDP growth insufficient for creating the number of posts required; in other words, classical (or capacity-constraint) unemployment increases i.e. there is a lack of profitable physical working posts at the existing relative factor prices.

- If we split labor productivity[12] into its components of technical progress[13] and variation in capital-labor substitution[14], we see that the latter accounts for about half of growth in labor productivity. This trend was already observable in the 1960s, and contrasts with the United States where the degree of substitution of capital for labor is almost negligible.
- Such an increase in the capital-labor ratio is explained both by:
  - past resistance of wages to adjust to the productivity slowdown and to the deterioration of the terms of trade (in the wake of the two oil price shocks), and
  - by rigid wage differentials between skilled and unskilled workers (a relatively small degree of wage dispersion despite changes in the pattern of labor demand led by technological bias and external competition pressure).
- Thus, the high degree of capital-for-labor substitution European Union plays an important role in the high unemployment and its concentration among unskilled workers.

B) the above analysis was summarized in a brief presentation[15], which focused on disaggregating unemployment into three main categories:

- a purely cyclical component (less than 20% of total jobless) due to a lack of global demand,

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[12] Labour productivity is defined as as GDP per person employed.

[13] Technical progress is measured as the GDP growth per unit of both capital and labour factors weighted by their respective shares in value added

[14] Change in the capital-labour substitution is measured as the difference between the variations of the labour productivity and those of technical progress

[15] See "The Composition of unemployment from an economic perspective" in European Economy, n° , 1995

- a purely classical component (about 40%) due to the lack of profitably-usable capacity but which could be progressively corrected through a balanced growth process with capacity-expanding investment since those workers are able to match the created new posts, and
- a purely structural component (the remaining 40%), also due to a lack of existing equipment but which the growth process would be not enough to remedy as there the available manpower is not suitable for filling the kind of jobs that the growth process generates (mismatch).

C) This Commission's diagnosis, which was fully endorsed by Member States (1993 White Paper, successive Broad Economic Policy Guidelines, Joint Employment Reports and Employment Guidelines) clarifies the macroeconomic purpose of the EMU and its convergence mechanism. It is a coherent set of macroeconomic policies backed by strong Treaty provisions for creating a credible stability framework in order to reap lower risk premium in interest rates and a higher saving/investment balance. These policy and institutional provisions (i.e. the EMU strategy) aim at solving the macroeconomic obstacles to growth and employment in order put the European Union economy on a higher potential growth path by:

(a) preventing stability conflicts between monetary stability and budgetary and wage developments, thus making room for investment (crowding-in) through budgetary consolidation, wage moderation and the corresponding reaction of monetary policy allowing for a policy mix favorable to demand prospects,

(b) making it necessary and easier to implement a broad set of structural reforms in labor, product and service markets, in order to raise the limits on the speed growth, facilitate the re-incorporation of workers into the labor market and improve the human capital.

The essential macroeconomic purpose of EMU is therefore to create and preserve conditions which are conducive to a policy mix favorable to growth. The concrete architecture of policy-setting in the EMU regime is outlined immediately below, and section 3 goes on to examine budgetary surveillance through the stability and convergence programmes.

2.B. The economic policy framework of EMU.

2.B.1. The two main channels for adjustment without national monetary policies

The most obvious aspect of EMU is that the exchange rate and interest rates can no longer be used at the national level, since monetary policy shifted from national authorities to a new autonomous, supranational, single authority. But, at the same time, the EMU also constitutes a full economic union in order to provide the alternative mechanisms needed to adjust the national economies which are pooling their monetary tools. The following paragraphs develop the philosophy, main components and provisions of the architecture of this new European Economic Union. Before proceeding with a detailed examination, it is useful to briefly mention the **main alternative mechanisms** for adjustment, upon which the EMU in the European context and experience rely.

There are basically two: (i) the budgetary policies through the automatic stabilizers or discretionary actions and (ii) the functioning of products and factor markets in the context of Single Market completion.

(i) Unlike federated entities like the United States, the European Union budget will not be able to help cushion shocks incurred by individual Member States in replacement of national monetary policies. However, this role can actually be played by each individual budgetary policy, which, unlike federated entities, is still available in the European Union for this purpose within the limits of the sound management imposed by the EMU rules. As pedagogically illustrated by the Mundell-Fleming textbook model, in a fully pegged system of exchange rates (i.e. in such a model it is equivalent to a monetary union) national **budgetary policies** have stronger effects on the

economies. These effects are both direct (efficiency of budgetary stance for stabilizing purpose in the domestic economy) and indirect (spillovers on the other Member States and on the common currency and monetary policy). This is why *in EMU, the national budgetary policies become a common concern, justifying the fact that strong binding rules* place limits upon the autonomy of national authorities (budgetary criteria). Indeed, in a monetary union, budgetary misconduct has systemic, Union-wide consequences, since it could overburden the common monetary policy and the common pool of savings, and thereby potential output. Since these budgetary policies have to play a more active role and become the primary alternative instrument for stabilizing the economies, it was necessary to restore significant room for manoeuvre at national level by putting public finance on a sustainable track (Stability and Growth Pact see here after).

(ii) The single currency has been introduced in an area which was already integrated. Although the process is not yet fully completed, the area is progressing towards a genuine single market, in which products, services and factors move freely, contributing to the stabilization of the participant economies. While a direct effect is expected from the realization of genuine single monetary and financial markets, it is, however, clear that European Union product and labor markets still remain partially fragmented, in spite of the progress made in recent years. But EMU itself is supposed to act as a catalyst for improving the operation of the Single Market, through (i) increased price transparency in the euro area, the resulting increase in competition and the change in the behavior of agents for price and wage settings, as well as (ii) making the need for structural reforms at national level more visible and reducing the scope for rent-seeking behavior.

2.B.2. The economic policy architecture set by the Treaty of European Union

According to Article 2 of the Treaty, EMU is one of the listed instruments explicitly devoted to executing the main tasks of the Community, including "*a sustainable and non-inflationary growth*" , "*a high level of employment*" and "*high degree of convergence of economic performances*". Article 98 (ex-102-a) sets out that Member States' economic policies must contribute to the attainment of these Article 2 objectives and, for that purpose, these national policies must be co-ordinated as indicated in Articles 4 (ex-3-a) and 99 (ex-103). It is worth emphasizing that the organization of the economic policy coordination and surveillance is explicitly (via Article 98) linked to the objectives of Article 2, which refers particularly to sustainable growth, high levels of employment and convergence.

In such a context, EMU focuses on **making the macroeconomic policy-mix favorable to growth and employment** while respecting the other provisions of the Treaty.

Contrary to what is sometimes said, the **Treaty represents a genuine approach of economic governance** for the Community as a whole, since an experimentally-tested set of formally linked provisions clearly defines the economic policy-setting and responsibility of the three main autonomous groups of actors for reaching the Community's objectives. These three poles which fix the policy mix of the Euro are the **single monetary policy**, the Member States **budgetary authorities**, and the autonomous national or local **social partners** responsible for wage-setting according to national practices.

A priori, there is no reason why these three poles should not be able to optimize the global policy mix in the stability framework of the Treaty. On the contrary, the existence of formal rules with a surveillance procedure triggers a permanent scrutiny of several autonomous authorities or actors, i.e. the Member States' administrations and national central banks, the ECB, the Commission, the European Parliament, the social partners and other representative groups of interest as well as specialized press and independent experts or Institutes, including the IMF and the OECD. Underlying the formal surveillance exercise, there is an implicit process whereby it is in the interests of all the actors concerned to prevent a sub-optimal result, through vigilance over each other's behaviour. Although not immune to errors, this

collegial and ongoing search for the best policy mix through "self-correction" provides "a priori" more flexibility than a more centralized one. This is probably less risky because it relies on a consensual process and is a better reflection of the idiosyncrasy and diversity of European populations.

According to the Treaty provisions, national policies clearly cannot be fully independent but must be subject to some Community rules and principles in specific areas of common interest. Therefore, such a coordination principle makes it possible to define and apply a genuine economic policy at the Community level, by avoiding, when necessary or useful, stalemates or situations in which there is a lack of economic government. The fact that this is only true for these specific cases where common economic objectives are at stake, means that, as regards its first pillar, the European Union is not and cannot be ruled as a single state, but is managed collegially within the Council of National Ministers in the presence of the Commission responsible for protecting the Community interests, through the coordination principle in combination with the competition resulting from the subsidiarity principle. This original construction cannot be reduced to an Inter-governmental type of management like for example the United Nations, the OECD or regional entities like Mercosur. It relies upon profound consensus and explicit choices made by European policy-makers and peoples. Therefore, by limiting autonomy only in the case of gross errors, it allows most of the economic policy domain to remain firmly in the hands of national or local authorities – rather than at the level of the Union– for efficiency reasons as well as by deeply rooted political choice. Thus, a request for instituting a more formalized economic government would be premature and would go against the basic principle of European construction at this time, since the risk of moral hazard needs to be solved first.

With respect to the interplay between the three autonomous poles of the European policy mix, it appears that EMU offers even greater opportunities to achieve an optimal policy mix than used to be the case in Europe or than would be the case without a single currency. Let us examine why this is so, by looking at each pole under the new regime.

1. With the Euro, by definition, **monetary policy** becomes centralized for its members under the responsibility of an independent System of Central Banks (ESCB). However, the coordination issue remains in terms of the policy mix for the Union as a whole. This is one of the reasons used by some commentators to justify claims that the single Central Bank should face a single economic authority with which it could manage the global policy mix. In addition to the coordination scheme and the budgetary discipline which, as outlined above, make the Council into just such a single-voice authority, in **Article 105.1** the Treaty complements the primary objective of price stability that the monetary policy shall pursue: *without prejudice of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the* ***objectives of the Community*** *as laid down in Article 2*, i.e. growth and employment.

The implementation of the above provision of Article 105.1 means that the *macroeconomic policy mix will be favorable to growth and employment insofar as national budgetary policies and wage behavior of the social partners do not counteract the essential stability objective of the single monetary policy*. This is the **basic theorem of macroeconomic policies in EMU formulated in the Broad Guidelines**[^] : the more Member States' budgets and social partners' wage setting contribute to the common stability objective, the more favorable to sustainable growth and higher employment the monetary stance can be.

Both links established by the Treaty from Article 2 through Article 98 and Article 103 for the coordination of national economic policies, and between Article 105-1 and Article 2 for the coordination

[^] Council Recommendation of 7 July 1997

of the single monetary policy and the economic policies, define the framework in which economic and monetary policies are the major instruments for achieving the growth and employment objectives attributed to the Union. Thus, although EMU is not as such an employment policy, the Treaty provisions indirectly provide **the means and the motivation** for using macroeconomic policy in the Union to boost job creation.

2. Furthermore, as a complement to the general principle of coordination and the multilateral surveillance provisions, EMU establishes a set of rules for ensuring a minimum of **budgetary discipline** among all the Member States (not only for the members of the EMU). Since these policies remain fully in the hands of Member State authorities, the Treaty contains several provisions committing national policy-makers to achieving and maintaining this minimum level of budgetary discipline in order to prevent an unsuitable policy mix and negative spill-over effects for the EMU and the Community.

In this context, a **Stability and Growth Pact** was enacted by the European Council in Amsterdam in mid-1997. This binding Pact strengthens and accelerates the budgetary surveillance within the existing provisions of Articles 99 (ex-103) and 104 (ex-104-c), by providing their operational modalities, thus making fully credible the enforcement of the common budgetary discipline. The Pact is composed of two new Council regulations, under the guidance of a Resolution given by the European Council to the Council and the Commission. It is a means to attain and preserve the pro-growth policy mix Member States need for making the EMU sustainable and job-creating. The provisions of the Pact –especially the target of achieving a budget close to balance over the medium-term– confirm the budgetary policies that have already been recommended in successive Broad Guidelines by the European Council since December 1993. The Pact has in fact three **purposes**:
(1) to prevent an overburdened monetary policy, which would otherwise imply a sub-optimal stance of the policy-mix, with damaging effects on growth;
(2) to support the "crowding-in" process of investment the European economy needs to raise its potential output and make a stronger growth path sustainable: budgetary consolidation to reach a close-to-balance position will provide the necessary savings for higher investment and help to keep interest rates low;
(3) to give budgetary and fiscal authorities enough room for manoeuvre to establish optimal management of their economies in a full EMU (automatic stabilizers and discretionary action in case of asymmetric shocks):

- countries with a sound structural budget balance will have considerable budgetary flexibility during normal cyclical downturns without breaching the Treaty's limits on budget deficits (the so-called "automatic stabilizers" can play fully their harmonizing role in the business cycle)
- the realization of a medium-term budget balance in normal cyclical conditions (structural balance) means an accelerated reduction of the debt-to-GDP ratio. So, the combined effect of lower deficits and lower interest rates reduces the heavy burden of government debt-servicing, thereby allowing tax-reduction and/or other expenditure priorities, especially if needed in the case of country-specific shocks; this contributes significantly to creating a virtuous circle, reinforced by the action of market expectations, whereby the possibility of sound stabilizing public action, room for tax reduction and basic collective goods production, improve the supply side and strengthen stability and the endogenous forces of growth.

This secondary legislation is laid out in two Council regulations. The first one, based on Article 99-5, has an early warning function. It is a **preventive approach** which puts in place "Stability programmes" (or "Convergence programmes" for the non-participants in the Euro) at national levels and sets out the modalities of their implementation and surveillance (their first submission was at the end of the year 1998); the second one, based on Article 104-14, organizes a **dissuasive approach** for ensuring full compliance with budgetary criteria by Member States and triggering the application of sanctions in the case of non-respect of the criteria. There was, indeed, a need for more detailed provisions in order to speed

up and clarify the implementation of the excessive deficit procedure, in particular by establishing clear definitions and setting deadlines for the various steps (see section 3 for a more detailed analysis).

2.B.3. Wage developments

Generally represent the outcome of negotiations between autonomous social partners, which, according to differences in national practices among Member States, are held at different levels of centralization (national, sectoral, or firm). Thus, in terms of decision-making, their direct role and responsibilities in wage setting as well as in the labor market conditions, make the social partners the third essential pole for setting macroeconomic conditions, and therefore the policy mix. Indeed, wage trends are a key ingredient of macroeconomic and structural policies. The macroeconomic wage bill (including all social security contributions) is equivalent to about 50 per cent of Community GDP, i.e. the same order of magnitude as total government spending in the Community's economy. Consequently, the evolution of aggregate wages and wage differentials has substantial implications for inflation, growth, employment and the employment-content of growth. Indeed, firstly it is of crucial importance that the perception of the expected rate of inflation embodied in nominal wage settlements is, as far as possible, compatible with the price-stability objective of the central bank. If this is the case, wage developments *de facto* do not place an undue burden on the conduct of monetary policy, contributing to keep interest rates at low level. Secondly, as regards real wage rises compared with increases in productivity[^], wage evolution at the macroeconomic level has to take into account the need for safeguarding, and if necessary improving, the profitability of investment, which is a basic requirement for securing the much-needed recovery of the potential output in Europe. In view of their economic importance, it is warranted that policy-makers closely monitor wage developments, whilst fully respecting the autonomy of the social partners in this area. This is why the broad economic policy guidelines issued on the basis of the Article 103-2 have taken a position on wage development. In the Commission recommendation of May 1996, this position was worded in the following terms: *"nominal wage trends consistent with the price stability objective as well as real wage developments consistent with the conditions for strengthening employment-creating investment"*[^]

As regards the involvement of the social partners in the coordination of economic policies, Amsterdam, Luxembourg and Cardiff European Councils have made clear that the **social dialogue** should be part of the process. This why the European agreed upon a **European Employment Pact** Council in Cologne in June 1999. This links the different pieces of the policy-setting and allows for the social partners to be involved in the policy mix through the establishment of a "**macroeconomic dialogue**" among themselves and with the main other economic policy actors (the ECB and the Council). However the decentralized nature of the social partners means that their effective involvement is not so procedure-orientated.

Articles 138 and 139 underline the importance of the social dialogue between management and labor. In this framework, the European social partners have the opportunity to obtain technical support from the Commission, to maintain a fluid dialogue with it, and to speak with one voice by issuing "Joint opinions" on macroeconomic development and problems. In this context they have made significant contributions to the content of the Broad Guidelines recommended by the Commission. For example, in

[^] When comparing at the macroeconomic level wage and productivity developments, it must be taken into account that for the Community as a whole, almost half of the apparent labour productivity increase comes from the substitution of labour for capital. Distributing all the apparent productivity increase would maintain a high pressure for substitution among factors and prevent restoration of an adequate macroeconomic profitability of investment. In addition, despite the fact that the share of profits in GDP is presently above its level of the 1960s, further increases in profitability are still warranted in order to compensate for the significant increase in capital/output ratio that took place during the 1970s and arrive at the level of profitability per unit of capital stock that prevailed during the quasi full employment period 1961-73. Finally, the world-wide determined level of real interest rates tends to be higher than in the 1960s, which confirms the need for a higher level of macroeconomic profitability.

[^] European Economy (1996)

their Joint Opinion of November 1996, issued in view of the European Council at Dublin, they express the view that "*the evolution of wages and profitability, which are determined by autonomous social partners according to individual countries' practices, is a major factor influencing the decisions of the budgetary and monetary authorities. In turn, those decisions will influence the behavior of collective bargainers and thus the overall growth orientation of the policy-mix*". This is why they note that an "*important objective (...) is to build bridges between them and the authorities responsible for budgetary and monetary policies.* In fact, this message was fully taken on board by the Cologne European Council, in the decision to establish the macroeconomic dialogue as a way to build such a bridge to link the three main actors of the EMU regime.

More important than procedure is the fact that wage-setting itself is indirectly influenced by the change of regime brought about by the Euro. Firstly, the loss of the exchange rate instrument at national level internalizes, to a significant degree, the effects of the wage outcome in the practices of social partners. The link between wage development, competitiveness and employment becomes much more visible for them. In the past, a currency devaluation or an exchange rate depreciation could always absorb part of the effects of an excess of wage increases, creating a risk of moral hazard in the wage bargaining. Secondly, given increasing awareness of the EMU regime's priority of stability, lower and more dependable inflation makes the outcome from wage bargaining clearer and more predictable for both negotiating parties. Employers are expected to put up firmer resistance to conceding wage increases that exceed productivity growth. Trade unions, aware of the negative impact on employment of excessive wage increase, are likely to bring their wage claims closer to productivity trends, in exchange for less uncertainty about future inflation and easier attainment of target gains of disposable income. This reduces the risks for firms as well as for households, and thus helps to improve the conditions for economic decisions, especially for investment.

The fact that average macroeconomic wages are considered to have developed well in the European Union over the last four years, and that labor relationships in the Member States under left-oriented government (French, German, Italian) have been positive, are an illustration that macroeconomic wage developments in EMU can meet the requirements of an overall policy mix which is favorable to growth and employment. Furthermore, with respect to unemployment concerns, in the Euro zone, some European federations of trade unions are now considering the possibility of aligning their wage claims with local productivity increases.

This presentation of policy-setting in Euro zone leads to the **double conclusion** that:

1. With the birth of the Euro, a new policy regime was put in place through a deep institutional change which constitutes **systemic progress** for the European economies. There is an effective economic pilot in the Euro zone as a result of the interplay of the different autonomous and/or decentralized actors of policy-making in a stability framework imposed by the Treaty and the Stability and Growth Pact. It is in all the actors' individual interests to respect –and to ensure the others respect– the basic theorem of macroeconomic policy in EMU enacted by the Broad Guidelines: *the more Member States budgets and social partners wage setting contribute to the common stability objective, the more the autonomous monetary stance can be favorable to sustainable growth and higher employment.*
2. Fulfilling the above condition allows the EMU to create a new opportunity for achieving a macroeconomic policy mix in which growth and employment can develop without stability conflict and without monetary turbulence, i.e. **without the obstacles which repeatedly halted** promising recoveries during the last twenty years. In this new context, the Community's growth potential exceeding the productivity trend can be raised through a sustained increase of job-creating investment. Furthermore, the action plan for the full implementation of the Internal Market and the Cardiff process of structural reforms, can help to strengthen the productivity trend and the buoyancy of the European economy. In order to prevent effective growth from being blocked by bottlenecks and in order to increase the employment content of growth, it is important that the whole range of economic policies

i.e. including fiscal and structural policies, contribute to the achievement of Article 2 objectives, namely growth and employment. In this context, the improvement in the functioning of goods, services and labour markets, also contributes to achieving a favorable policy mix, by enhancing competition and reducing inflationary tensions. The structural aspects thus complement the macroeconomic ones, showing that the Euro brings a dynamic of change with both micro and macro dimensions.

Section 3: The strengthened mutual surveillance of budgetary policies through the stability programmes of EMU

1. The political economy argument behind the Stability and Growth Pact

From the previous section it appears very clear that budgetary discipline is the key building block of the convergence process and of the sustainability of EMU as well as of any sustainable growth in the EU. The purpose at this point is not to reiterate the economic arguments (see above section 2) which are now largely recognized, but to examine other fundamental aspects. Although we have already discussed the main aspects and instruments of budgetary surveillance in EMU, a more detailed presentation brings forth interesting information for the purposes of this paper and of the fiscal seminar.

As demonstrated earlier, the slow-growth trap that undermined the European Union economy was mainly due to unsustainable national budgetary development. With or without EMU, the objectives of the European Union Treaty could not be reached without an adequate degree of budgetary discipline. The EMU was instrumental in making this crucial step economically and politically viable and less costly than it would otherwise have been. Indeed, the purpose of the single currency was to serve as a very active catalyst through a combination of three mutually reinforcing factors: (i) the single currency was only possible if credible stability provisions were in place that would ensure it would be at least as good an anchor as the existing one, the DM; the fact that an EMU without this currency anchor was meaningless warranted a change of regime which should improve policy credibility; (ii) politicians and public opinion competed in taking the necessary steps for convergence; and (iii) overall, thanks to its strong and credible institutional mechanisms, EMU exerted significant downward pressure on national interest rates through market expectations. Meanwhile, financial markets have magnified every credible effort made towards budgetary consolidation through a reduction in the specific risk premium included in national interest rates ("convergence trade of bonds"), while severely penalizing any hesitation or lack of policy credibility by means of speculative attacks against the currencies that are at risk of not being able to join. The convergence process became self-fulfilling and self-rewarding for the initially more divergent economies, as the countries plagued by the highest deficits and public debt levels –which were also the ones with the highest interest rates in their own currencies (highest risk-premium)– stood to reap the largest benefits from joining the single currency in the event that they launched credible adjustment programmes. This obvious principle is true in any case, with or without EMU. However, the role of EMU was to give the less credible countries or governments a less costly and more rapid means of attaining something akin to German policy's reputation for stability, discipline and credibility, thanks to its surveillance scheme. The institutional progress resulting from regional integration thus constituted a **"positive-sum-game"**.

Nevertheless, the (positive or negative) market sanctions that ensured the success of the convergence process before joining the Euro automatically disappear from the national level once the different national currencies merge into or join the Euro. In fact, in a monetary union, market sanctions tend to have a blanket effect on all the participants without discriminating satisfactorily between the respective national responsibilities or merits. This typically creates a risk of moral hazard because, once inside the Euro area, national budgetary authorities could be tempted to behave as "free-riders" (either by

relaxing the discipline to which they have agreed; or by not sharing the political burden of counter-cyclical policies with the others).

This is why the Treaty set up a detailed and strong surveillance mechanism for budgetary policies, with specific procedures of progressive sanctions to compensate for the increasingly less internalized effects of national budgetary policies.

However, the provisions of the Treaty establish criteria that are merely thresholds. Experience has shown that budgetary policies in the European Union were excessively pro-cyclical. Under the Treaty, it is still possible for some countries to continue to be plagued by pro-cyclical policies even if they comply fully with the quantitative reference values (the budget deficit limits of -3 % of GDP or debt ratio restriction of 60 % of GDP). Indeed, remaining just inside but close to these superior limits would clearly be insufficient to cope with the normal cyclical effect on the budgetary balances. In such a case, those economies would be unable to let the automatic stabilizers to play their role. This would introduce a deflationary bias into the EMU. Furthermore, they would also be unable to create the discretionary room for manoeuvre that they would require to adjust to asymmetric shocks given the loss of the national exchange rate instrument in EMU.

In addition to this caveat, the novelty and untried nature of the new regime under the Treaty made it necessary to convince markets in advance that budgetary surveillance was sufficiently prepared and would be effective. The provisions of the Treaty being, by definition, general principles, it was necessary to translate them by means of specific legislation into operational concepts that would be fully transparent for market participants. It was especially important to ensure that there was no space for delaying tactics to be deployed through procedural devices. It was also necessary to obtain a highly visible political agreement at the uppermost level of the Union.

The Stability and Growth Pact enacted in 1997 was the concrete answer to these concerns about budgetary discipline, not only for the EMU but for addressing the challenges of a successful integration of the European Union as a whole in a framework of subsidiarity.

2. The modalities of the Stability and Growth Pact (SGP)

As the main principles and purposes have been discussed in section 2, we will concentrate here on the essentials of the concrete modalities of the SGP.

The core commitment of the SGP is to set the "*medium-term objective of budgetary positions close to balance or in surplus...*" in order to "*allow Member States to deal with the normal fluctuations while keeping the government deficit within the 3% reference value*".

The operation of the SGP is based on Stability and Convergence programmes, for EMU and non-EMU members, respectively. These programmes are obligatory and are presented annually by Member States according to a standard presentation and methodology. In these multi-annual programmes, which usually cover a three-year period, Member States set their medium-term target, as well as the detailed adjustment path towards these targets. The Commission assesses these programmes and submits a recommendation to the Council. In order to facilitate the task of the Commission, Member States have reached an agreement on a precise Code of Conduct on the content and format of the programmes, which goes further than the formal text of the SGP. This Code of Conduct was published in 1998.

Technically, the method of assessment employed in the Commission is a combination of some key indicators or criteria:

1. Monitoring and targeting a precise surplus of the "**primary balance**", i.e. the budgetary balance (in % of GDP) minus interest payments on public debt. The assessment of each country's case is based on a few key parameters which determine the prospects for interest payments (size of the debt and expected nominal interest rates) compared to the budgetary prospects (existing budgetary system, government commitments and programmes, receipts and expenditure structures, and growth and inflation prospects). The results of this comparison should show a trend in the primary surplus that will enable it to cover interest payments (or a significant part of them) in order to cut the deficit and lower the debt ratio.
2. The fundamental **distinction between cyclical and non-cyclical movements** in the budget balance. Although there is no formal requirement in the SGP to supply figures on cyclically adjusted budget balances, the activity of balancing the budget over a normal cycle makes an implicit distinction between actual and structural budgetary positions. The Commission's assessment is therefore largely based on cyclically adjusted budgetary balances (and the primary balances of point 1) as well as on the changes in their expenditure and receipt sides. This makes it possible to distinguish between "automatic" movements (which are attributable to cyclical factors) and discretionary policy measures, and it is therefore feasible to assess the extent to which the automatic stabilizers are coming into play. This is especially important in the European Union in order to avoid the past errors of building up structural deficits and applying pro-cyclical policies.
3. The Commission calculates a budgetary "**cyclical safety margin**" for each Member State, which is used to estimate a "minimal benchmark" that must be reached to ensure probabilistically safe conditions. The margins are obtained by multiplying the budgetary sensitivity to the cycle (the automatic stabilizers) by an output gap estimate which encapsulates the size and frequency of cyclical fluctuations in each economy's output. Estimates of budgetary sensitivity are arrived at by measuring the impact of a rise/fall in GDP on public expenditures and revenues. For the Euro-area, it has been estimated that a 1% fall in GDP relative to trend will increase the deficit by around 0.5%. The difference between the 3% reference value and the estimated cyclical safety margin is what is known as the country's "minimal benchmark", a level that will allow the built-in stabilizers to work freely without breaching the 3% deficit ceiling. The Commission adds other safety margins to these minimal benchmarks, i.e. for unforeseen budgetary developments (the budgetary consequences of mistakes in the macroeconomic forecast, especially the rate of growth and the interest rate levels). The Commission's calculations show that an **additional margin for "pure fiscal" shocks** of between 0.5% and 1% of GDP is enough to provide extra security, depending on the differences amongst Member States.
4. However, experience and empirical calculations show that the different routes to reducing the deficit - raising taxes or cutting expenditure - do not have the same effect on budgetary consolidation. Essentially, increasing the tax burden, unlike spending cuts, generally has a negative effect on the growth rate of the economy (in the EU). Another difference is the way in which the interest rate reacts. Moreover, the composition of expenditure cuts also has an important impact on budgetary adjustment, since some types of expenditure have an impact on growth or are more irreversible than others (for example empirical evidence shows that cutting public employment and transfer programmes is conducive to better growth performance than cutting capital expenditure). In fact, the more credible the cut in the deficit, the easier and the faster the consolidation, thanks to the reduction of the risk premium inherent in the interest rate. This reduces the deficit both directly, through debt service, and indirectly, as a result of its positive impact on investment, activity and employment creation. For all these reasons, the implementation of the SPG tends to take **key structural budgetary indicators** into account to improve the assessment of the quality of the adjustment path or the genuine soundness of public finances.

On the basis of the Commission's recommendation, the Council examines and delivers an Opinion on each programme. This may contain an invitation by the Council to a Member State to adjust its programme if, in the Council's view, the objectives and contents of the programme need to be

strengthened. The whole procedure must be completed within a strict two-month period of the date of submission of the programme by the Member State concerned.

The Commission and the Council regularly monitor the degree of implementation of the programmes. In case of "significant divergence" from the targets set in the programmes, or from the adjustment path toward these targets, the Council is obliged by Article 99 of the Treaty to issue a recommendation. In this recommendation, the Council urges the Member State to take the necessary adjustment measures and, in the case of continued divergence, the may issue further recommendations and decide to make them public. This is the **preventive function** of the SGP, i.e. an early warning system coupled with active peer-pressure to encourage corrective action prior to the risk of breaching the 3% reference value for the deficit.

In the event of the 3% limit being breached, the SGP also fulfils a **dissuasive function** by clarifying and speeding up the procedure set out in Art 104 of the Treaty.

- First the SGP specifies the scale of financial sanctions in the event of a persistent excessive deficit for the members of the euro-area only. In the first year the Member States must pay a non-interest bearing deposit consisting of a fixed component equal to 0.2% of GDP and a variable component equal to one tenth of the difference between the deficit and the reference value. A ceiling of 0.5% of GDP is set. In each subsequent year until the excessive deficit decision is abrogated, only the variable component will be applied. As a rule, a deposit is to be converted into a fine after two years if the excessive deficit persists.
- To ensure that the procedure is really effective, strict time limits are set for each step. Tight deadlines are also established for the Member State in question to take corrective action to bring its deficit back down below the reference value, without exceptions.
- Exceptional recession, which would allow a Member State to invoke the SGP safeguard clause, is defined in advance by objective criteria: an annual fall in real GDP of at least 2%; a fall of less than 2% could nevertheless be considered on a case by case basis if the downturn were exceptionally abrupt or if the accumulated loss of output relative to past trends were exceptionally substantial.

3. Assessment of the implementation of the Stability and Growth Pact (SGP)

The GSP ensures that budgetary issues also form an integral part of the strengthened multilateral surveillance and coordination of economic policies, which was agreed by the European Council when it was decided to launch the single currency. Such policy coordination facilitates the maintenance of appropriate budgetary policies in each participating Member State and in the Euro-zone, as well as in the European Union as a whole, taking into account the current and prospective stance of monetary policies, the economic situation and prospects, etc.

Budgetary positions close to balance or in surplus in normal cyclical positions provide scope to deal with all but the most severe disturbances without breaching the 3% reference value. In exceptional circumstances (as specified in the SPG), Member States will be allowed to exceed this value. Some Member States will, however, actually need to plan budget surpluses when economic conditions are favorable, in order to comply with the Pact's objective of ensuring a sustainable public finance position over the full range of the economic cycle. Sound budgetary policies will, in all likelihood, also increase the effectiveness of the automatic stabilizers. Proven budgetary discipline will strengthen the confidence of economic agents that public finances will not be permanently disrupted by a rising deficit during a recession, which should alleviate the adverse effects of higher interest rates.

Overall, the impressive budgetary consolidation process observed in the European Union over the last decade has confirmed the **effectiveness of a rule-based approach** (convergence criteria and subsequently the SGP). Between 1993 and 1999, the deficit was cut from –6% of GDP to –0.6%. This correction of 5.4% was achieved largely by a contraction in total expenditure as a percentage of GDP

(from 51.5% in 1993 to 47.2% in 1999) since the overall tax burden (total revenue) increased by just 1.2% (from 45.4% to 46.6%).

Although the public sector continues to be considerably larger than in 1970 (12 GDP percentage points higher) –13% higher than in the United States and 20% higher than in Japan– this development indicates that the European Union is progressively benefiting from systemic progress in the management of its public finances. Indeed, in addition to the Maastricht criteria, the SGP has created a **forward-looking framework** where more emphasis is placed on the distinction between cyclical and non-cyclical movements in the budget balance. In this framework, an improvement that has been particularly important is the calculation of **minimal safety margins** for each Member State, to keep deficits below the 3% reference rate during normal cyclical downturns.

The SGP saw full implementation in 1999, along with the single currency. The first set of programmes was submitted at the end of 1998. Given that deficits in the European Union still averaged –1.4% (–2% in the Euro-area), the programmes duly aimed at making progress toward the medium-term target of in-balance budgets by 2003. According to the Council's assessments, only five countries fulfilled totally SGP requirements, while the others were asked to improve their budgetary safety margins for 2002. In fact, with an average deficit of –0.6% of GDP, the European Union budgetary **performance in 1999** (-1.3% for the Euro-area) turned out to be better than expected. It represented an improvement of 0.3 GDP percentage points on the target of –0.9% committed in the Stability and Convergence programmes (and was 0.1% better than the -1.4% committed for the Euro-area). This modest over-achievement occurred despite lower growth than initially projected in several Member States. At the end of 1999, Member States updated their programmes and announced a further deficit cut of 0.8% in the European Union and 1.2% in the Euro-area for the period 2000-2003. These additional reductions, however, will be achieved by the combined effect of a reduction in the interest burden and improving growth conditions, i. e. no further structural improvement in the Euro-area is to be effected and a small discretionary deterioration in the European Union as a whole would even happen. This development would result from a reduction in the tax burden along with spending cuts. **Results for the year 2000** were, once again, better than expectations and targets, with the average deficit for the European Union (without including the one-off proceeds from the sale of mobile phone licenses, equivalent to 1.2% of GDP[*]) falling to just -0.1%, as against an average commitment of –0.7% of GDP (for the Euro-area, the deficits fell to –0.8% in comparison with an SGP commitment of –1.1%). While these results are positive, they are, in fact, largely attributable to increased revenues resulting from the cyclical upturn rather than reduced spending. Since the actual outcome was better than forecast, the committed minimum paths for deficit and debt reduction were overshot. However, it should not be concluded that Member States have genuinely surpassed their SGP targets. Actually, if we take into account the fact that the starting position in 1999 was better than expected, and that growth in both 2000 and 2001 will be higher than was assumed in the programmes, the adjustment efforts committed by Member States should result in the SGP targets being exceeded by 0.9% of GDP. In fact, the structural consolidation effort is waning as the growth dividend is used partly for tax cuts. In 2000, the cyclically-adjusted primary surplus already registered a small decrease i.e. a structural loosening.

Furthermore, as the output gap is expected to move into positive territory in 2001, the aggregate fiscal stance will become expansionary since substantial tax-cuts are not matched by expenditure reductions of a similar magnitude. Indeed the cyclically-adjusted primary balance is forecast to fall from 3.8% in 2000 to 3.5% in 2001 for the European Union and from 3.4% to 3.1% in 2001 for the Euro-area.

[*] These exceptional public receipts are earmarked for reduction of the public debt or the increase of reserves for future pension liabilities.

It is therefore my view that the SGP has been applied too smoothly by the Council creating a serious risk of repeating the pro-cyclical relaxation of budgetary policies when activity is already running at high speed. Unless this traditional mistake is corrected in time, the policy mix of the Euro-area will be unbalanced, which will create overheating pressures and will push up interest rates. It would be much more desirable, in fact, to adopt less expansionary fiscal policies and looser monetary policy. The argument that this particular relaxation has been generated by tax cuts is not sufficient, since the supply-side effects of these will only have an impact if the reduction in taxation is perceived to be lasting.

This is why the European Commission takes the view that a relaxation of budgetary adjustment is likely to occur in some Member States, instead of the real adjustment effort entailed by their stability and convergence programmes[*]. The problem is that, in this case, the SGP cannot formally be used to enforce adjustment since the actual targets have been met with room to spare. However budgetary surveillance is broader than the mere SGP, and is a typical "learning by doing" process which still requires improvement in the framework of joint policy monitoring. For this reason the Commission and the Council issued formal recommendations in the Broad Economic Policy Guidelines (Article 99), that several Member States must pursue, where appropriate, further budgetary consolidation beyond the minimum requirements of the SGP.

Furthermore, in line with these Broad Economic Policy Guidelines, budgetary strategies should also be structured in such as way as to be conducive to economic growth and employment. Deficit reductions, though important per se, should be pursued in conjunction with improvement of the quality of public finances. In the future it is to be expected that, as more sustainable budgetary positions are actually achieved, the emphasis in the budget policy debate will shift toward restructuring public finances in a growth and employment-friendly way and toward coping with some of the more long-term challenges to sustainability. In accordance with these challenges, the Broad Economic Policy Guidelines call for budgetary strategies that rely primarily on expenditure restraint to allow reductions in the generally high tax burdens. Reductions in current expenditure would also provide room for expenditure to be restructured, which would benefit physical and human capital investments. Tax systems need to be made more efficient and tax wedges on low-paid labor decreased. In addition, pension and healthcare systems should be reviewed in order to meet the medium to long-term budgetary concerns arising from the ageing of populations. The stability-oriented macroeconomic framework of EMU is delivering low interest rates which, together with the fall in debt ratios, will lead to a lower interest burden. This will help accomplish the budgetary adjustment efforts that are still needed and the restructure expenditures and revenues.

I should like, in passing, to draw the attention of the Latin American audience to the degree of relevance for their own cases of most of these European Union budgetary policy recommendations for the European economies.

Section 4: Conclusions and issues for Latin American policy-makers

1) Although the European model is probably not exportable as such, the results of its regional integration process and institution-building warrant careful and critical attention from Latin American policy-makers and economists; useful lessons may be drawn from the European experience, not necessarily for doing likewise elsewhere, but for seeking to identify the **principles at work** in the non-homogenous real world, and especially for drawing attention to the crucial role of the "political economy" and institution-building aspects of regional integration.

[*] Communication from the Commission to the Council and the European Parliament, 21 December 2000

2) The history of European integration offers some interesting hypotheses that I propose as principles to enrich the open debate amongst policy-makers:

- Macroeconomic stability was a prerequisite for intra-regional trade development and the European Customs Union was implemented in a quasi-monetary union under the dollar-standard of the Bretton Woods regime. The popular view of a sequence involving successive and progressive steps from trade and customs union to financial and monetary integration with economic union might be an inaccurate representation of events and is, at the very least, a misleading simplification for other regions. Changes in the external context (globalization) have reduced the attractiveness and efficiency of the Customs Union model for economies whose currencies are not yet fully convertible or/and are exposed to erratic capital movements. Even more than for Europe in the 1950s, macroeconomic and monetary stability are essential prerequisites for trade integration. Domestic economic agents and external investors would be very reluctant to lend credibility to a trade agreement in any region in which the main partners' exchange rates were liable to double within the space of a few weeks, as used to occur in some regions of Latin America.
- Rigorously implemented, regional cooperation and integration constitutes a useful catalyst for accelerating the institution-building which is essential if countries are to cope with globalization and widen the road to sustainable growth. This is all the more true for the macroeconomic field, which is a major determinant of competitiveness and of the other conditions of economic and social development.
- There should be no need for Latin American regions to repeat the many decades spent by Europe in the "trial and error" process: their need to activate their capacity for institution-building is much more urgent. The fact that the European process was ultimately successful in general terms does not imply that every constituent part of that process would be appropriate here. The only valid conclusion is that the point of arrival indicates appropriate targets which could perhaps be reached faster. In addition, it must not be forgotten that European trade integration benefited from a model of macroeconomic cooperation that was automatically enforced through the Bretton Woods fixed parity regime.
- Latin American regions could make use of regional cooperation and immediate exchanges of best practices between national administrations, to tailor their own institutions, spare reform costs, mobilize efforts and innovative capacities, and improve the rationality and transparency of their economic decision-making process. These determinants of productivity improve and modernization are easier to channel in a suitable regional dimension which provides for explicit cooperation. It is not necessary to wait reaching a very advanced level of trade integration before to launch a macroeconomic co-operation at regional level. Such a cooperation is a practical way to improve the decision-making process, generate better policy credibility, and thereby accelerate growth and trade integration; with globalization this macroeconomic cooperation is no longer generated automatically by the exchange rate regime, it has to be created by the countries of the region themselves.
- Much of the success of the European Union is attributable to the external opening, simultaneously with integration, of the Customs Union, in conformity with the GATT rules (and thanks to the United States vigilance and pressures): **successful regionalism needs the pressure of increasing external competition** to minimize the temptation of "rent-seeking" and the effects of trade deviation. Furthermore, the European case shows that this activates the dialectic **"deepening-widening"** force, which drove the progress of the Community far beyond free trade; the basic reason for this is that as a region opens externally, it has ever greater needs and reasons to deepen its own internal integration. To remain competitive the Community was obliged to eliminate the obstacles that still stood in the way of a single market and to extend cooperation between national administrations to new fields (financial markets, monetary policies, prudential regulations, external policies, fiscal and domestic affairs etc...).
- Successful open regionalism creates **positive externalities**, triggering an emulation or attraction among close neighbors and third countries or blocks, and facilitating international negotiations. Although the costs and consequences of a "block war" admittedly increase with the expansion of

regionalism, the fact that vested interests and lobbies are weaker at supranational Community level than at the national one (combined with the fact that regionalism usually helps to strengthen democratic debates) should further institutional progress in the international order (GATT, IMF, Financial architecture...) as proposed by R. Triffin half a century ago. With better macroeconomic policies and faster institution-building in other regions of the world, the most deeply rooted cause of financial instability could be better controlled, which would contribute to a more resilient financial architecture.

3) The EMU process and the move to the single currency acted and continue to act as a catalyst on economic policy in Europe, not only for those twelve Member States who joined the euro-area, but for the whole European Union. Furthermore, this has an impact on macroeconomic development and potential output at the world level. The EMU offers the valuable advantage of having created and put in place the means to preserve the conditions that allow for a policy mix favorable to growth in the largest player in world trade. Although the Euro is not a panacea, it is clear that it facilitated a faster and less painful process of macroeconomic convergence which –concerns of integration aside– was required amongst the European Union countries to put the old European economy back on track for more sustainable growth. Macroeconomic and monetary cooperation are, an essential step to deepening regional integration. Provided they all generate macroeconomic stability, different exchange rate regimes are compatible with a successful regional integration i.e. monetary union is not always necessary for each region.

4) The economic governance chosen by European Union constitutes an original answer to the challenges of globalization. Contrary to some common representations, the European Union does not embody a progressive trend towards supranational powers and the centralization of economic policy decisions. According to the subsidiarity principle, the transfer of national responsibility to the Union level occurs in only a very few areas, and even then it is subject to a fully collegial process of decision. The successive experiences and failed attempts of the last half-century have led the European Union to select very pragmatic formulas of economic governance, in which most of the non-monetary decisions remain in the hands of national authorities, but are under the permanent collegial scrutiny of the other Member States according to agreed procedures and rules. This is the coordination principle which, as propounded by Triffin, works because it is in all actors' individual interests to respect these rules and procedures and ensure they are respected by the others. Monitoring is conducted collegially within the expert committees and the Council of National Ministers, always in the presence of the Commission responsible for protecting the Community interests, with the peculiar combination of the coordination principle and the competition resulting from the subsidiarity principle. This original structure cannot be described to an Inter-governmental type of management like the case of Mercosur. It is a new kind of governance which warrants careful study. It might even indicate a viable route to securing a workable means of market-conforming regulation and effective governance for the future globalized economic world.

As regards the institutional or practical modalities of co-ordination, the European experience shows two important lessons: the first is the need to *build progressively a collegial culture and a confidence climate trough personal contacts amongst the technicians in charge, making possible the working of peer-pressures between national authorities*, the second is the need to establish through rules and procedures some *visible signals able to translate the quality of the policies to public opinion and markets*. This allows for speeding up the rewards or the sanctions for national authorities. In the exchange rate mechanism (ERM) of the EMS preparing the EMU, the important link was between the parity commitment and the credibility of the domestic economic policies, triggering positive or negative sanctions through the actions of financial markets.

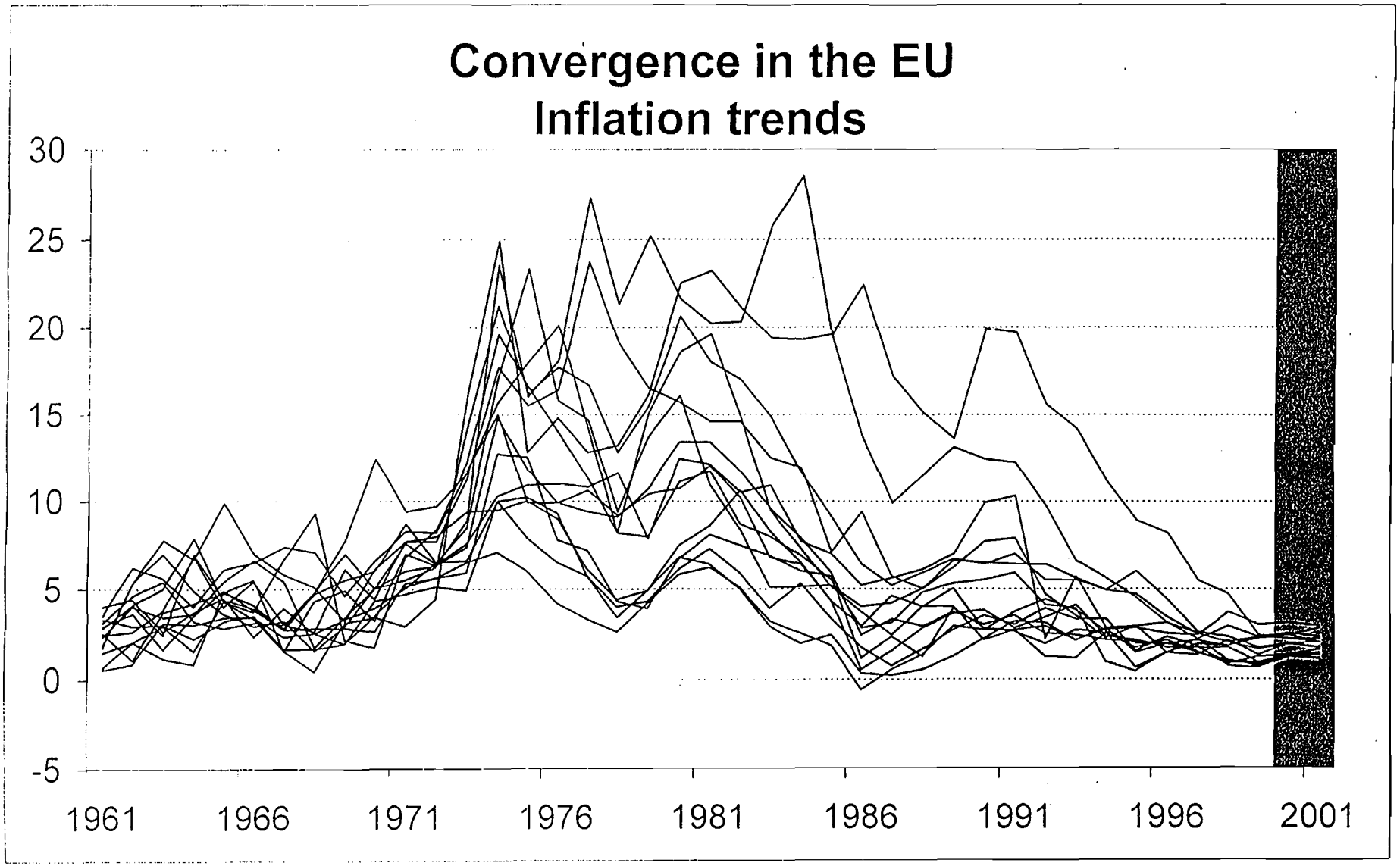
5) For **Latin American policy-makers**, there is, however, the risk of considering that the European model of macroeconomic cooperation and coordination could only be relevant if the objective of a single currency is also targeted. Once again, it would be an error to take everything the European Union does to

be appropriate or to view the EMU experience as a single block they have to buy or to reject as a whole. The fact that the much divided Europeans were able to design and agree upon workable schemes of cooperation and surveillance only for the extreme case of moving toward **a** single currency, does not mean that other regions which are not yet in conditions to implement full monetary and economic union need also remain trapped in the same "prisoner dilemma". The macroeconomic history of the European Union during the 25 years between the end of the sixties and the beginning of the nineties is an impressive succession of macroeconomic mistakes and lack of cooperation, which exacerbated divergences and conflicts, weakening the European Union growth potential and creating unacceptably high levels of unemployment. However during this period the slow but progressive groundwork led to the natural selection of a few workable procedures and rules that ultimately made the EMU possible. These procedures are widely valid and would have been very useful earlier in the process. It would be lamentable historical error if the Latin American authorities and economists – now that such an example of what not to do is becoming a public good – were to emulate the Europeans' past reluctance to cooperate. There is no rational reason for failing to seize the opportunity: they must select those elements that are appropriate for their own case, and try out their own new macroeconomic cooperation schemes.

6) Allow me to conclude with a synthesis, an attempt to place in a logical sequence the steps of my personal view of the potential lessons and normative proposals that may be drawn from the European Union macroeconomic experience:

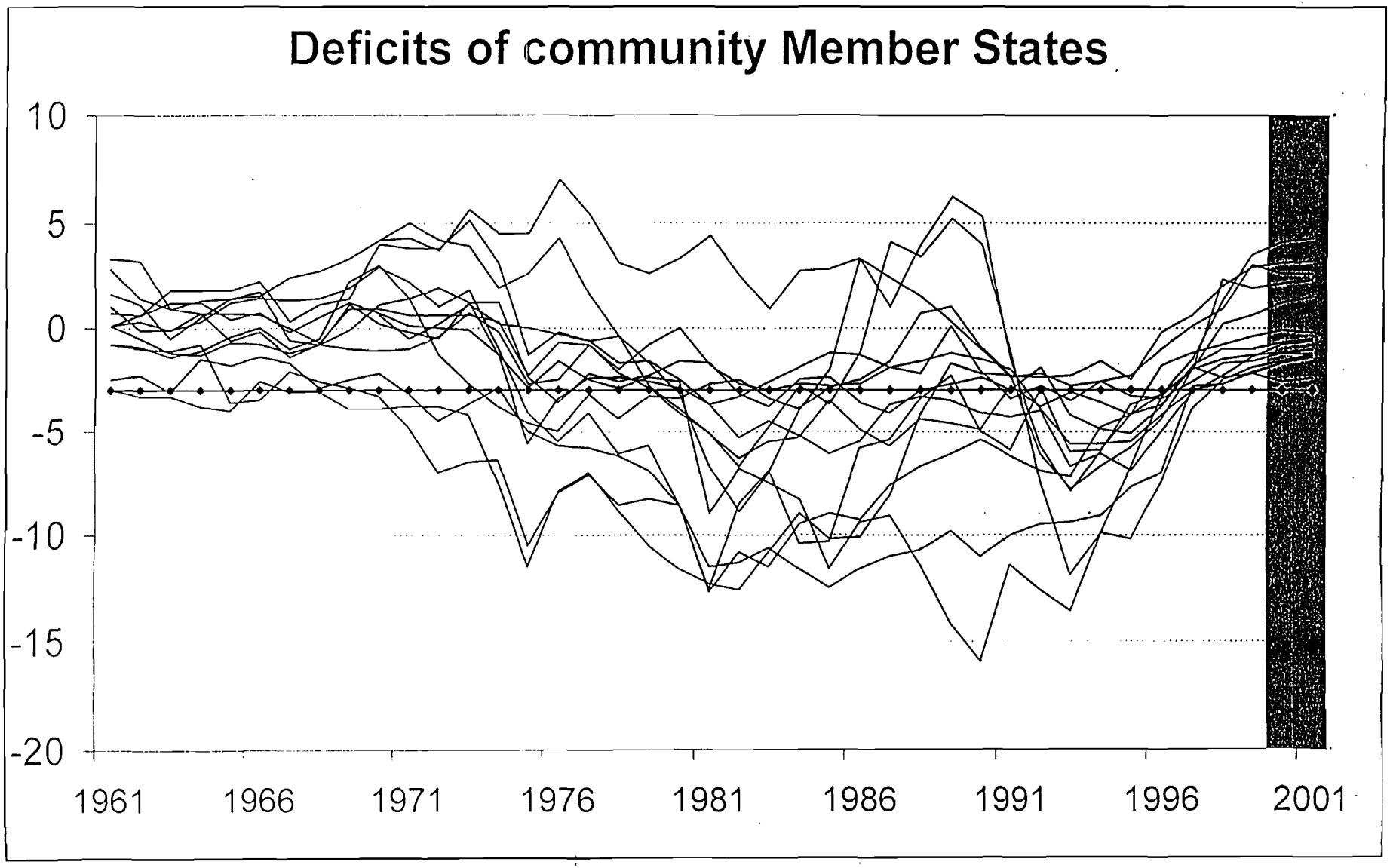
- Successful regional integration must be driven by sustainable growth, and both require macroeconomic stability and **convergence**.
- Any lasting convergence process relies upon **budgetary discipline**.
- Ensuring budgetary discipline is a tough "political economy" challenge that is easier and sounder to solve through collegial monitoring among like-minded countries by using a **rule-based, mutual surveillance** mechanism. Such a mechanism must fully respect the subsidiarity principle in order to prevent weakening the policy responsibility ("moral hazard"). Mutual vigilance results from each autonomous participant's own interest in preventing the others from breaking the agreed common rules, in combination with the specialized efforts of a neutral actor (the European Commission), which is responsible for formulating and protecting the common interests of the region's participants (the Community goals).
- Building an adequate surveillance mechanism at the regional level requires first **macroeconomic dialogue** and cooperation amongst national administrations and central banks, based upon (starting from) statistical harmonization efforts (i.e. along the lines of the GMM or Group of Macroeconomic Monitoring" recently launched by Mercosur) and seeking to progressively build consensual views on the content of economic policies, supported by open public debates and open to market sanctions.
- Launching a regional macroeconomic dialogue requires –at least– sharing common interests and problems and awareness of potential mutual **spillovers of national economic policy choices**. A macroeconomic dialogue does not require either institutional changes or formal procedures or decisions. All it needs is to work from the start in a collegial manner to build up the indispensable shared knowledge and confidence amongst policy-makers and macroeconomic experts, upon which personal links can develop, peer pressures can become effective and consensus can grow.
- In the European Union, the vehicle for progressively building macroeconomic dialogue was concern for **exchange rate stability** and the consequent collegial management of the exchange rate mechanism (ERM) created in 1979 by the EMS. Exchange rate behavior served to internalize the spillovers of national policies, creating incentives for cooperating and market sanctions for increasing policy credibility and effective co-ordination. Co-ordination became progressively the automatic result of the optimization of each national policy mix under the constraint of agreed rules and the scrutiny of markets able to sanction severely national authorities
- In **Latin America**, it appears to me that there are enough similar concerns with the dollarization issues, the high exposure to financial crisis and contagion, and the prospects for ALCA. It is therefore

a good time for Latin American policy-makers to take concrete action to trigger their own collegial dynamics in their own interests. If it is demonstrated to markets and creditors that the countries of the region have the capacity to jointly assess and monitor their respective policy mixes, they will enjoy, perhaps quite quickly, a significant gain in credibility and probably broadening democratic support.



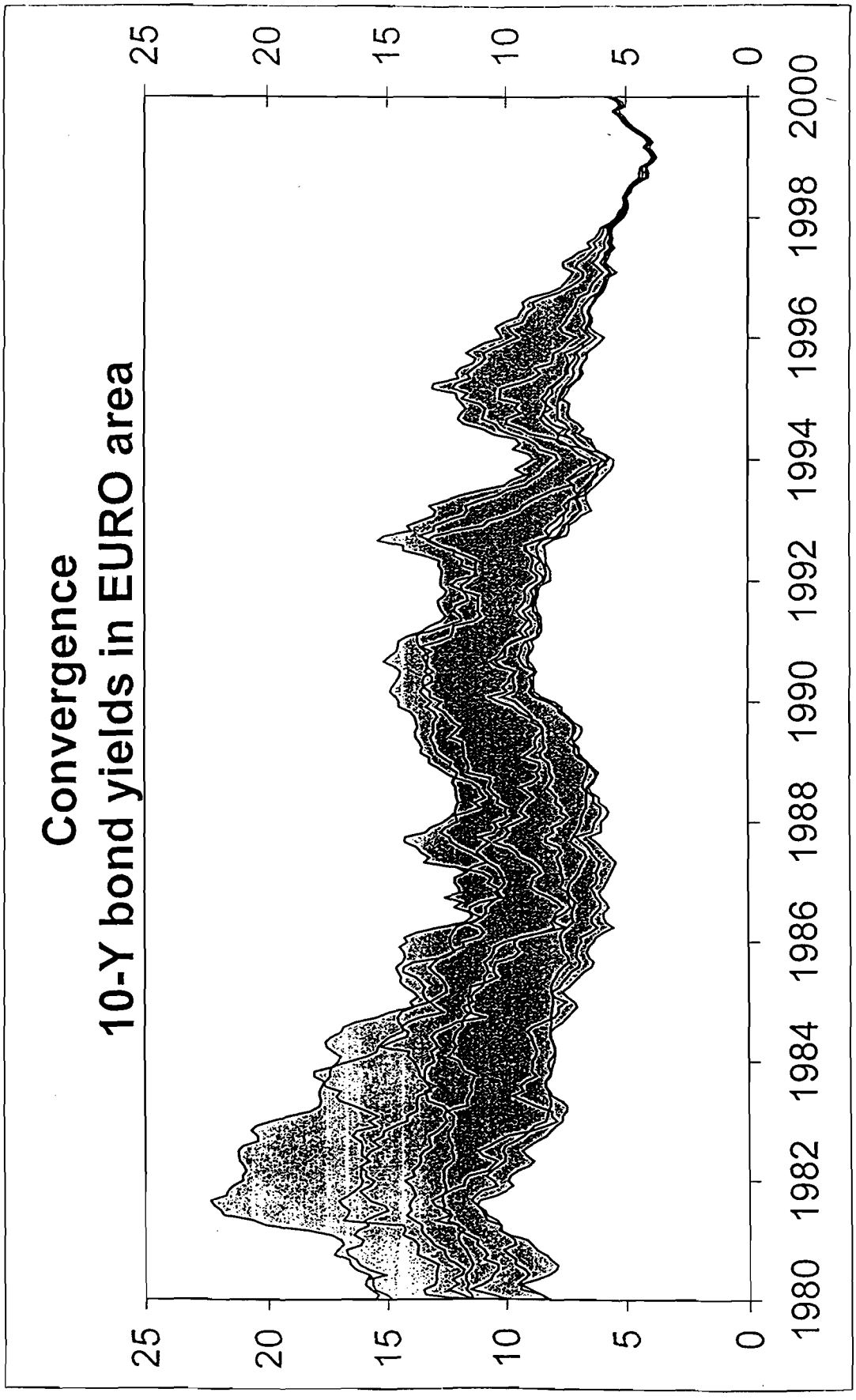
Private consumption price deflator

% change p.a.



Dot-line = Mastricht Criterion

Percentage of GDP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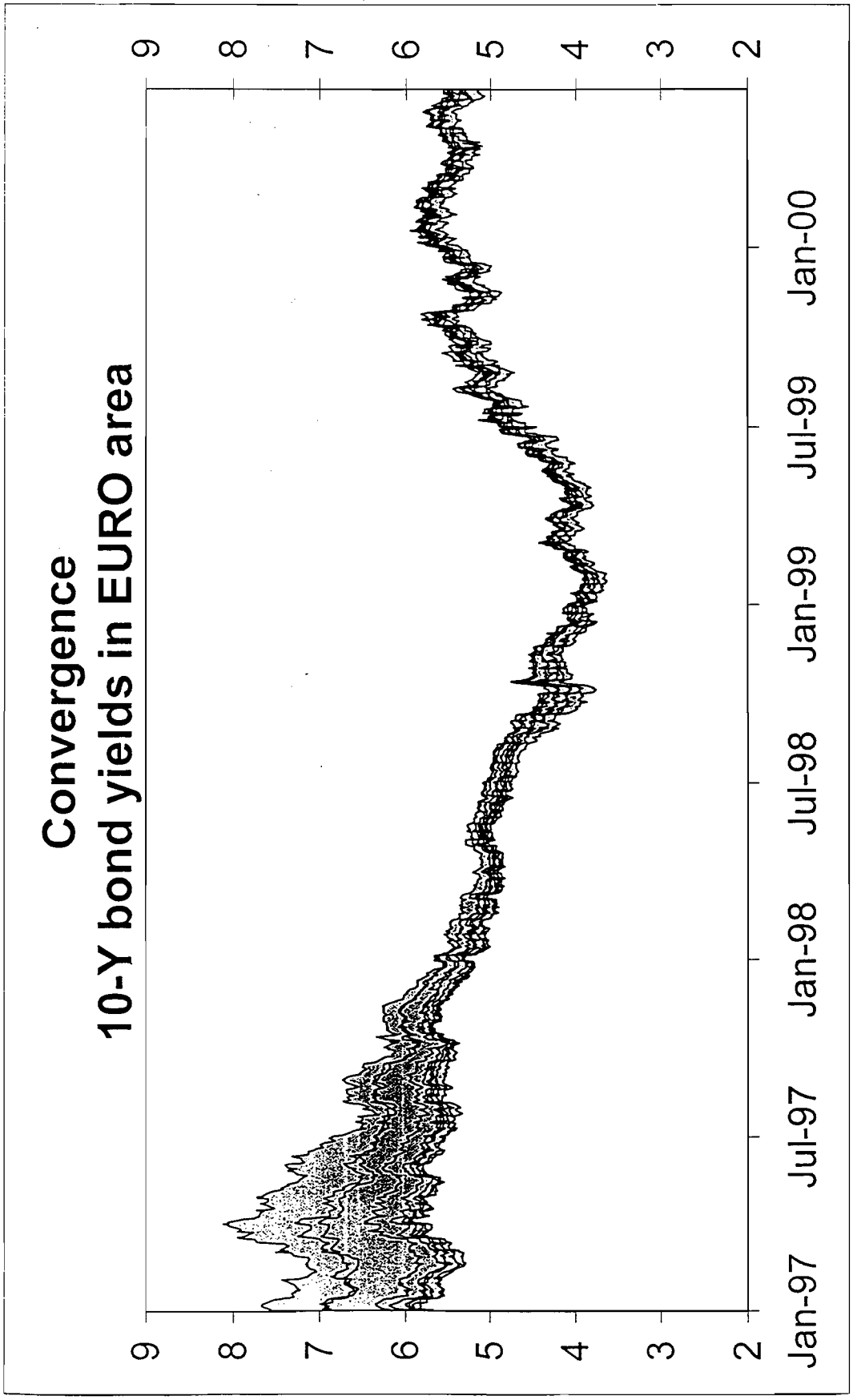
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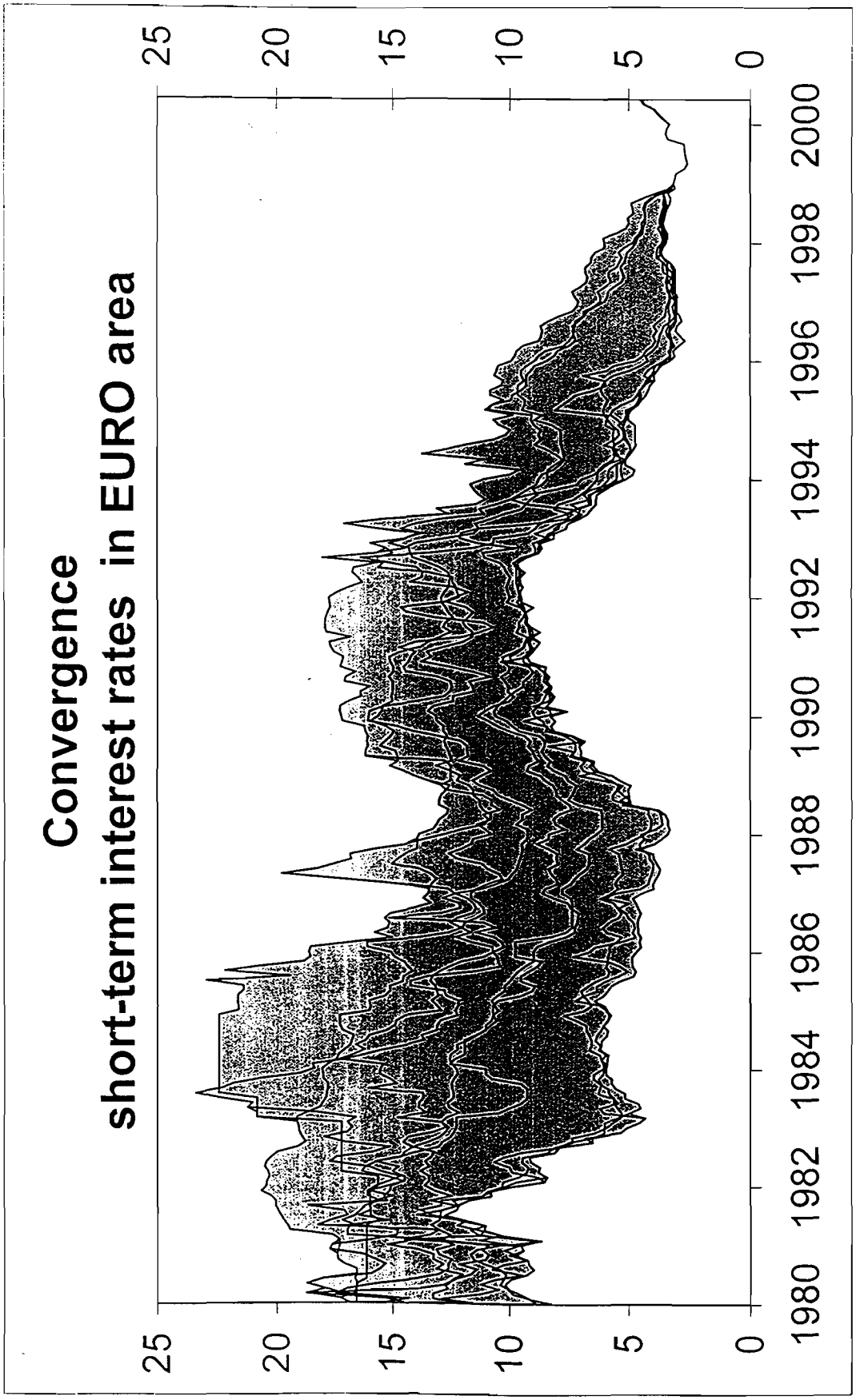
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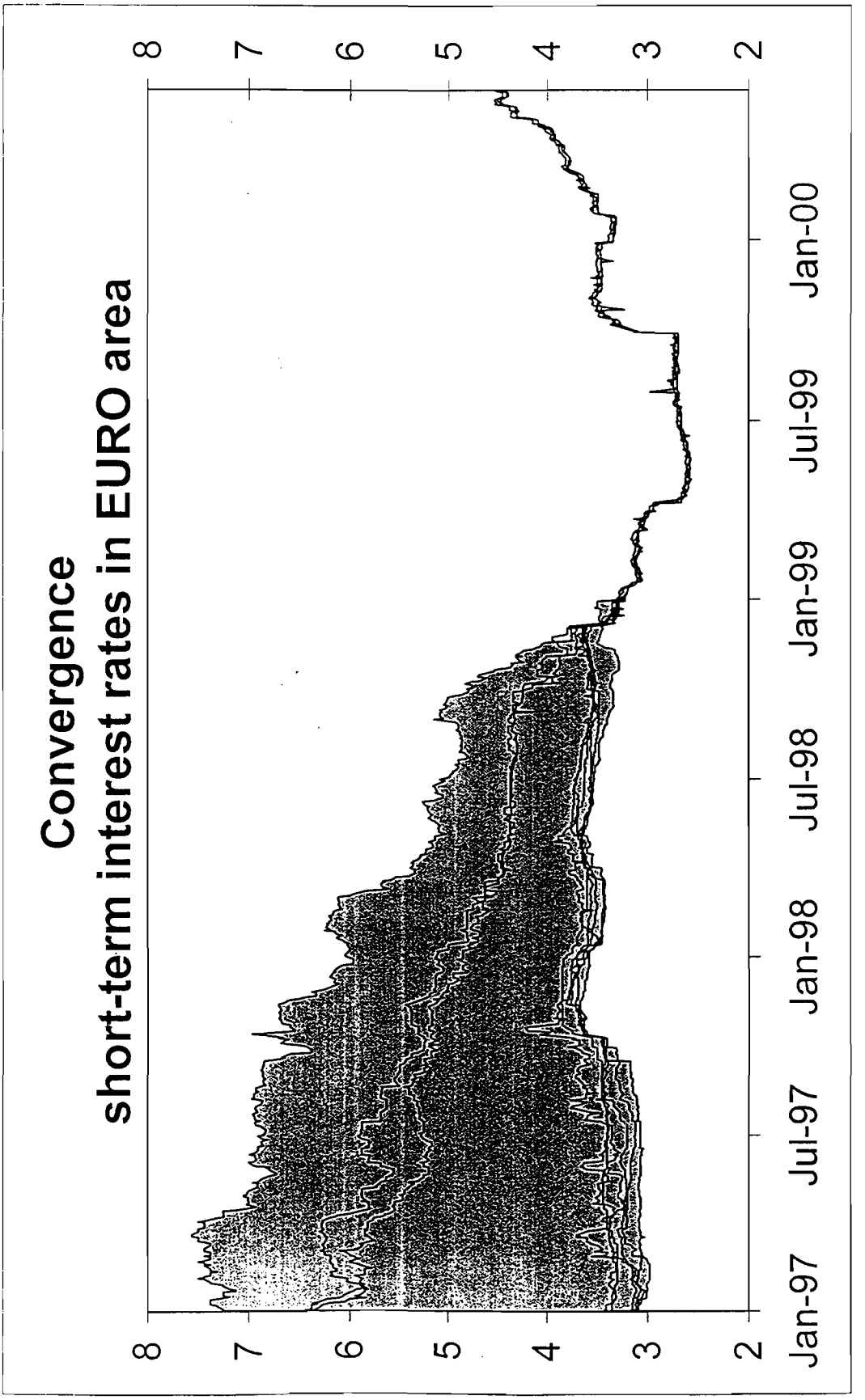
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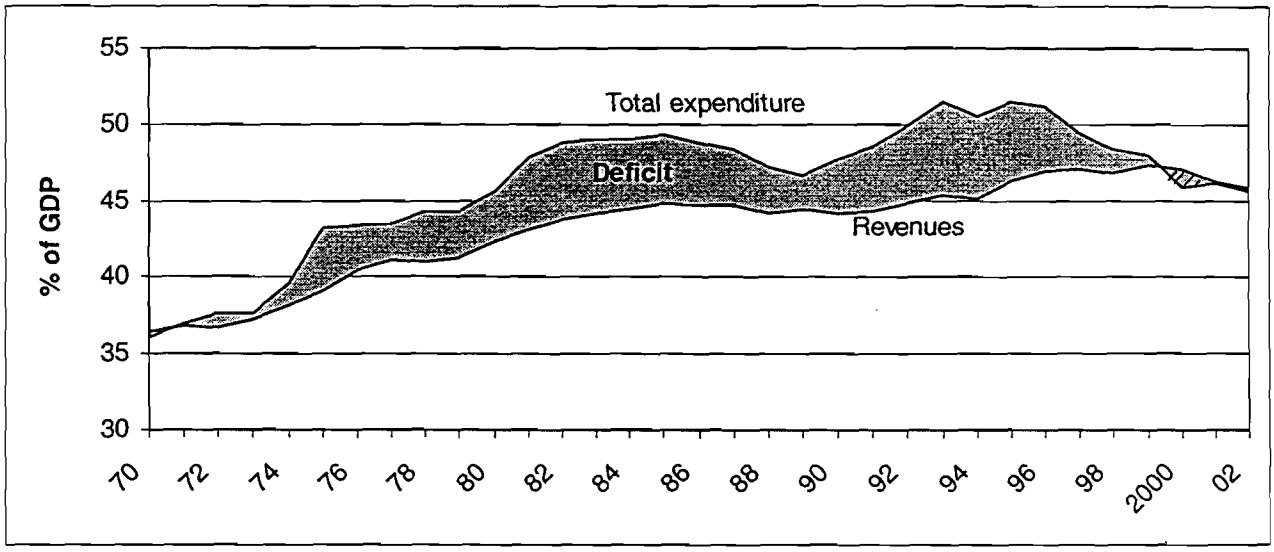
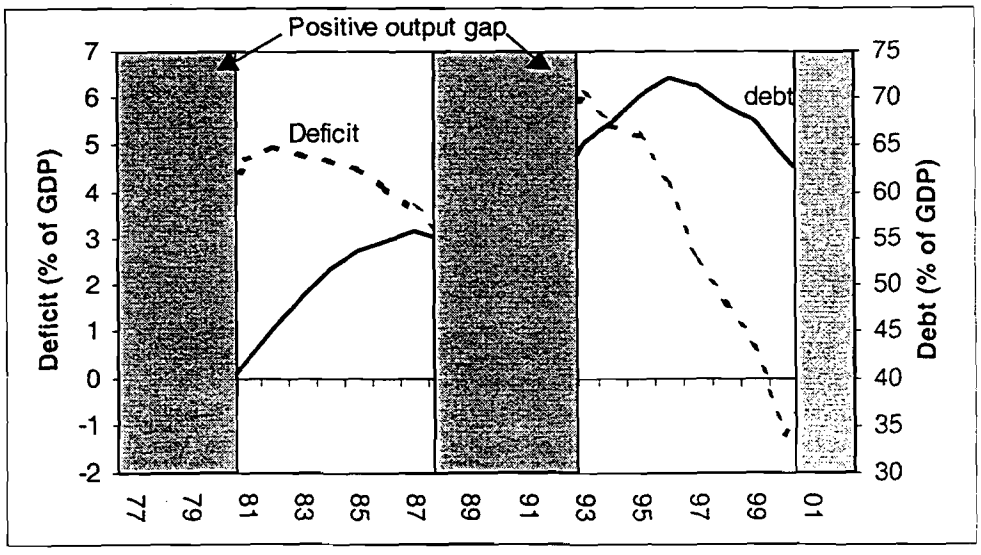
Graph 2.2. General government: expenditure, revenues and borrowing in the EU, 1970-2002



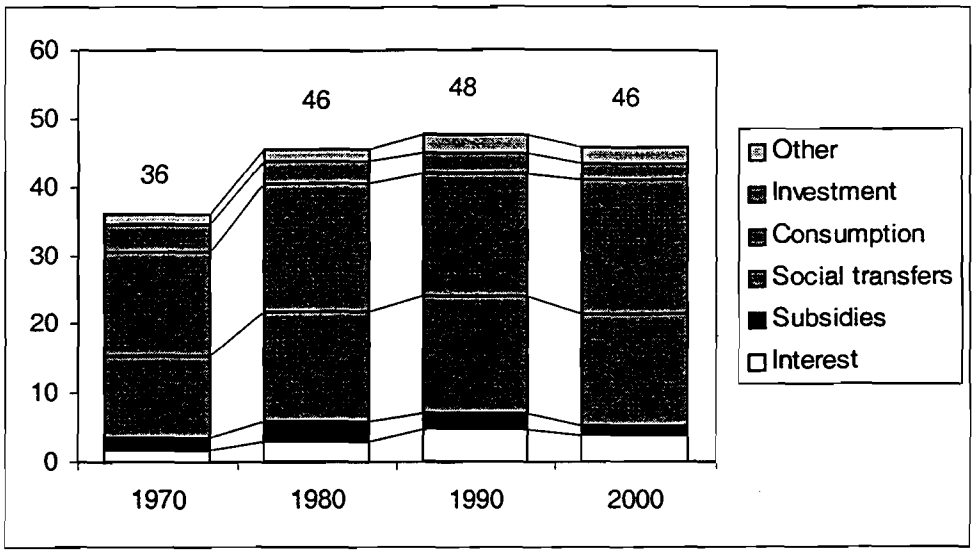
Source: Commission services

Graph 2.3. Budgetary imbalances in the EU 1977-2002



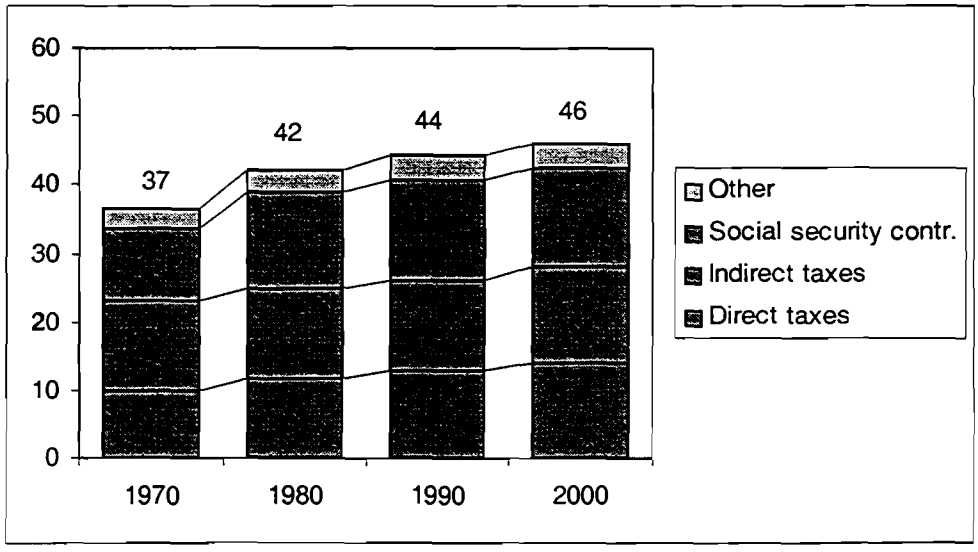
Source: Commission services

Graph 2.4. The structure of public spending in the EU, 1970-2002



Source: Commission services

Graph 2.5. The structure of government resources in the EU, 1970-2000



Source: Commission services

SESION 3

ASPECTOS INTERNACIONALES DE LA TRIBUTACION EN AMERICA LATINA

CAMBIOS EN EL CONTEXTO INTERNACIONAL Y SUS EFECTOS EN LA TRIBUTACIÓN DE AMÉRICA LATINA Y EL CARIBE

Alberto Barreix y Daniel Alvarez[1]

[1] Alberto Barreix (INT/BID) y Daniel Alvarez (SHCP/México) en colaboración. Las opiniones expresadas en este trabajo son de sola responsabilidad de los autores. Un especial agradecimiento a Alberto Schunk (LIB/BID), Carla Salazar y Mónica Echeverría (INT/BID) y Cecilia Etchegoimberry por su colaboración.

En los últimos quince años se ha producido una uniformización de la estructura de los sistemas tributarios sin precedentes, que no ha sido acompañada por la equiparación de capacidades de gestión de sus administraciones. A los influjos, primero debido a liberalizaciones comerciales y financieras a mediados de los setentas, y luego por la necesidad de una mayor disciplina fiscal impuesta por los ajustes estructurales posteriores a la primera crisis de la deuda se remodeló el mapa tributario de nuestra región. Este trabajo tiene por objetivo presentar algunas de las características esa nueva configuración tributaria de la región luego de casi dos decenios de vigencia.

Adicionalmente, al inicio de esta década se gestaron procesos subregionales de integración comercial en el continente a la vez que una serie de países han comenzado a alinear sus políticas monetarias y cambiarias en especial con los Estados Unidos. Estos procesos de liberalización comercial y financiera y de integración económica no han sido acompañados por esfuerzos paralelos en coordinar los aspectos internacionales de la política y la administración tributaria. Por lo contrario, en materia tributaria se ha acentuado la tendencia a la competencia por mantener y atraer el ahorro y la inversión tanto nacionales como extranjeros mediante los más variados incentivos sin reparar en muchos casos en sus efectos en su eficiencia económica y equidad. Es por ello que en estos últimos años organizaciones multilaterales tales como la Unión Económica Europea (UE) y la Organización para la Cooperación y el Desarrollo Económico (OCDE) han desarrollado esfuerzos para una mayor efectividad en el control, una más justa competencia y distribución de la renta proveniente de actividades internacionales. Adicionalmente, se intenta analizar las definiciones y decisiones de la OCDE para la determinación de paraísos fiscales y regímenes tributarios preferenciales dañinos y por ende, las condiciones para institucionalizar la cooperación internacional a nivel de política y administración tributaria.

Cambios impulsados por las liberalizaciones comercial y financiera

Durante el último cuarto del siglo América Latina y el Caribe experimentaron importantes cambios en su estructura económica. Los procesos de liberación comercial y financiera que se expandieron a diferentes velocidades y frecuencias por todo el orbe fueron aplicados en la región.

El cuadro 1 presenta con claridad la fuerte reducción de las tasas promedio y la dispersión de los aranceles, reduciendo la protección efectiva, limitando las políticas sectoriales—en especial en el sector manufacturero—y por consecuencia disminuyendo los ingresos de los sectores protegidos.

Adicionalmente es importante considerar que la región no sólo tiene niveles arancelarios relativamente bajos sino que también el porcentaje de cobertura de las barreras no arancelarias es muy bajo. En efecto, como se observa en el cuadro 2, por ejemplo en el caso del Tratado de Libre Comercio entre México y la Unión Europea el nivel de los aranceles caerá aún más por la aplicación de estos convenios.

Como corolario cuando el valor agregado de los sectores protegidos disminuye también se reducen los ingresos tributarios sobre la renta y las contribuciones a la seguridad social.

Cuadro 1

Indicadores de la Evolución de la Liberación Comercial de América Latina

		Todos los Productos			Productos Primarios			Productos Industriales			Cobertura %
	Año	Arancel Medio %	Arancel Medio Ponderado %	Desviación Standard de Aranceles %	Arancel Medio %	Desviación Standard de Aranceles %	Arancel Medio Ponderado %	Arancel Medio %	Desviación Standard de Aranceles %	Arancel Medio Ponderado %	Barreras No Arancelarias %
Argentina	1998	13.5	12.9	6.9	11.1	5.7	7.4	14.0	7.0	14.1	2.0
	1985	28.0		28.0							
Brasil	1998	14.6	16.6	7.3	11.3	5.9	9.1	15.2	7.4	18.3	8.0
	1985	80.0		52.0							
Chile	1998	11.0	10.9	0.7	11.0	0.0	11.0	10.9	0.8	10.9	0.0
	1985	36.0		10.0							
Colombia	1998	11.7	10.6	6.2	12.4	6.1	11.0	11.4	6.3	10.5	1.0
	1985	83.0		106.0							
Ecuador	1998	11.3	10.4	6.4	11.8	6.5	10.2	11.2	6.3	10.4	n.d.
	1985	50.0		145.0							
El Salvador	1998	5.7	4.3	7.9	10.0	8.4	6.5	4.4	7.3	3.8	0.0
	1985	53.2		31.0							
Guatemala	1998	8.4	5.7	9.5	8.6	7.3	8.3	8.3	10.1	5.1	0.0
	1985	50.0		45.0							
México	1998	13.3	12.5	13.5	16.8	29.0	14.6	12.6	7.8	12.0	10.0
	1985	34.0		56.0							
Nicaragua	1998	5.9	4.0	7.3	8.3	10.1	5.9	5.2	5.9	3.6	n.d.
	1985	54.0		43.0							
Panama	1998	9.2	8.0	5.9	11.4	6.9	9.3	8.5	5.4	7.7	0.0
	1985	41.3		22.0							
Perú	1998	13.2	12.6	2.9	13.7	3.3	13.0	13.1	2.7	12.5	0.0
	1985	64.0		62.0							
Uruguay	1998	12.2	10.0	7.9	11.4	5.5	7.2	12.4	8.4	10.7	1.0
	1985	32.0		18.0							
Venezuela	1998	12.0	10.9	6.1	12.5	6.1	10.9	11.9	6.1	10.9	0.0
	1985	30.0		63.0							
Canada	1998	7.5	3.8	26.5	16.1	54.9	6.7	5.1	6.1	3.2	
Estados Unidos	1998	5.2	2.8	11.8	6.4	25.1	3.2	4.9	5.5	2.7	
Unión Europea	1998	6.0	3.5	5.6	9.4	8.1	3.4	4.8	3.9	3.5	
	1988	8.7	6.9	7.3	10.1	10.5	4.7	8.3	5.9	7.5	

Fuente: International Monetary Fund, Government Statistics and World Development Indicators (various issues); The Worl Bank;UNCTAD, 1987 Report.

Cuadro 2

TLC México – UE

DESGRAVACIÓN ARANCELARIA

Porcentajes estimados de importaciones libres de arancel

	Prod. Industriales		*Prod. Agrícolas*	
Desgravación	*México*	*UE*	*México*	*UE*
Inmediata	47.6	82.0	27.6	58.2
2003	5.1	18.0	10.3	10.0
2005	5.6	--	--	--
2007	41.7	--	--	--
2008	--	--	7.9	5.3
2010	--	--	3.8	0.6
En espera	--	--	50.4	25.9

Fuente: Subsecretaría de Negociaciones Comerciales Internacionales, México. ALADI (2000)

Adicionalmente, cuando se cumplen las condiciones de equiparación del valor de productos e insumos a nivel internacional (Hecksher y Ohlin) se favorece la producción de sectores con ventajas comparativas. En nuestros países esto se traduce en el crecimiento de los productos primarios (agrícolas y recursos naturales no renovables) y una caída parcial del sector industrial. Sumado a ello, otras tendencias como la tercerización de servicios multiplicando las micro, pequeñas y medianas empresas genera una nueva distribución del valor agregado a nivel de los tres grandes sectores económicos tal como se presenta en el cuadro 3. Como puede observarse la región ha perdido casi 7% del producto industrial y ha ganado casi 10% en servicios en la composición al cabo de casi dos décadas.

Cuadro 3

Participación y Composición Porcentual del Valor Agregado

	PBI (Valor de Merc.) (US$000 millones)		Participación en VA Mundial (en %)		Valor Agregado Agropecuario (% del PBI)		Valor Agregado Industrial (% del PBI)		Valor Agregado por Servicios (% del PBI)	
	1980	1997	1980	1997	1980	1997	1980	1997	1980	1997
Sudeste Asia & Pacífico	444	1,528	4.4	5.5	28	18	31	33	29	37
OCDE	7,991	22,848	79.1	82.2	4	*2*	25	*21*	59	*63*
América Latina & Carib.	782	2,089	7.7	7.5	10	8	28	21	50	60
Medio Oriente & N. Africa	391	499	3.9	1.8	10	14	9	14	37	*48*
Sud Asia	223	512	2.2	1.8	37	25	17	19	38	46
Africa (Sub-Sahara)	270	327	2.7	1.2	18	18	16	17	43	48

Nota: No incluye sectores como minería, gas, electricidad, construcción entre otros.

Fuente: International Monetary Fund, Government Statistics (various issues); World Development Indicators, (various issues), The Worl Bank; and Interamerican Development Bank, Dept. of Statistics

Esto tiene importantes consecuencias, en especial para la política y sobretodo la administración tributaria ya que el grupo mayoritario de contribuyentes lo constituyen los "difíciles de gravar" (Shome, 1999). Es probable, que en parte este fenómeno pueda haberse visto compensado con un crecimiento en la concentración de la actividad económica. En la mayoría de los países de la región menos del 1% del total de contribuyentes recauda cerca del 75% del total.

A su vez, la liberalización de los flujos de capital acompañados por el desarrollo de las telecomunicaciones y el desarrollo de nuevos instrumentos de inversión han incrementado los movimientos de entrada y salida de capitales. El cuadro 4 recoge estadísticas del crecimiento del nivel de las transacciones financieras representado por tres flujos, neto de capital privado, inversión extranjera directa y de cartera para un período de tan sólo ocho años.

Cuadro 4

	Flujo Neto de Capital Privado US$ millones		Inversiones Extranjeras Directas US$ millones		Flujo de Carteras de Inversión Bonos US$ millones		Flujo de Carteras de Inversión Capital US$ millones		Préstamos relacionados con la Banca y el Comercio US$ millones	
	1990	1998	1990	1998	1990	1998	1990	1998	1990	1998
Sudeste Asia & Pacífico	17,664	67,249	10,347	64,162	-952	1,870	1,053	9,007	7,216	-7,790
Europa & Asia Central	7,695	53,342	1,097	24,350	1,893	14,385	185	2,904	4,520	11,704
América Latina & Caribe	12,411	126,854	8,188	69,323	101	17,627	896	1,748	3,226	38,156
Medio Oriente & N. Africa	668	9,223	2,757	5,054	-148	1,340	0	878	-1,941	1,950
Sud Asia	2,174	7,580	464	3,659	147	4,185	105	351	1,458	-615
Africa (Sub-Sahara)	1,288	3,452	834	4,394	-31	250	0	679	485	-1,872

Fuente: International Monetary Fund, Government Statistics y World Development Indicators, The Worl Bank.

La liberalización de los controles de cambios, los flujos de capital y el desarrollo de nuevos instrumentos dotan de gran mobilidad relativa al capital financiero. En efecto, esto genera competencia entre países para atraer capitales que resulta en una carrera a la baja de impuestos para reducir el costo del capital y así retener el ahorro propio y captar el externo. Adicionalmente, más sofisticados mecanismos de planificación fiscal de la estructura financiera (por ejemplo, sustituir dividendos por intereses en los casos que estos no estén gravados) sumado a los nuevos productos financieros brindan mayores posibilidades de arbitraje tributario y acentúan la tendencia a erosionar la base de los impuestos que gravan la renta.

En el cuadro 5 se efectúa una comparación del crecimiento de una serie de variables que confirman las tendencias expresadas anteriormente.

Cuadro 5

Crecimiento %de las Variables comparando el promedio del período 93-97 con el 78-82 en US$ de 1995

	PBI	Sector Agropecuario	Sector Industria	Sector Servicios	Ingresos Fiscales	Gastos Fiscales	Import.	Export.	Invers. Extranjera Bruta Directa
Argentina	35	36	18	44	17	13	142	180	715
Brasil	44	59	8	55	85	143	140	194	458
Chile	154	88	97	183	80	88	208	267	784
Colombia	83	13	18	112	119	151	241	160	581
Costa Rica	64	64	61	71	149	104	138	236	194
Repca. Dominicana	83	36	71	94	118	81	23	121	1,784
Ecuador	54	88	31	45	89	75	14	157	236
Guatemala	45	38	19	53	24	37	50	25	515
Haití	-16	-20	n.a.	0	-51	-12	131	29	-82
Honduras	65	69	77	61	101	111	19	27	1,087
Jamaica	29	29	17	29	32	9	126	60	48
México	45	25	59	45	42	50	159	408	254
Nicaragua	3	27	-16	-5	-14	11	21	90	794
Panama	61	52	52	66	61	42	29	1	119
Paraguay	60	77	31	65	117	131	322	452	391
Perú	34	69	19	32	25	8	72	58	542
Trinidad y Tobago	14	-19	-56	-2	-24	6	79	129	83
Uruguay	31	36	-7	53	87	99	136	173	-11
Venezuela, RB	36	35	65	18	44	49	43	97	535
Promedio Simple	49	42	31	54	58	63	110	151	475
Desvío Standard	36	31	37	44	54	51	84	123	445

Fuente: Fondo Monetario Internacional, Government Statistics; World Bank
World Development Indicators e Interamerican Development Bank, Statistical Division.

Adicionalemente, es importante destacar que la apertura comercial y la especialización en productos primarios viene acompañada con un grado importante de variación en los precios.

Cuadro 6

Indíces de Precios *Commodities* del Banco Mundial

	1980	1985	1990	1995	1999
Commodities (excl. petróleo)	100	76	57	59	85
Agricultura	100	76	52	58	90
Bebidas	100	94	39	50	104
Fertilizantes	100	72	56	49	85
Alimentos	100	65	52	51	85
Materia Prima	100	71	69	78	110
Metales y minerales	100	77	76	65	71
Petróleo	100	77	45	28	76
Productos de acero	100	80	91	81	66
Indice MUV G-5 (a)	100	95	139	166	104

Fuente: Banco Mundial, índice de precios de *commodities* (Development Prospects Group)
(a) MUV G-5 índice es la unidad de valor de los productos industriales exportados por G-5 a países en desarrollo. Estados Unidos, Japón, Alemania, Inglaterra y Francia

Esta variabilidad, obviamente sumada a otros factores repercute en una importante volatilidad en los agregados macroeconómicos y fiscales de la región tal como se observa en el cuadro 7 donde se destaca una importante variabilidad en los ingresos fiscales.

Cuadro 7 **Volatilidad macroeconómica y fiscal**
En Coeficientes de Variación (1980-1998)

	América Latina	OCDE
Crecimiento del PBI	0.5	0.1
Tasa de cambio real	0.4	0.1
Términos de intercambio	0.4	0.2
Flujos de capitales (% PBI)	0.6	0.2
Ingresos	0.4	0.1
Gastos	0.2	0.1

Nota: la volatilidad se mide por la desviación standard
Fuente: IMF, Government Statistics and International Finance Statistics (various issues); WB, World Development Indicators (various issues).

A su vez también ha cambiado la estructura de gastos del gobierno en estas dos décadas presentando en la región una fuerte reducción en subsidios y remuneración de funcionarios. Adicionalmente, el gasto público en la región se presenta con importantes deficits en salud y educación por lo que presentan una alta elasticidad ingreso. Además, suelen ser políticamente procíclicos. Es por ello que varios países han tratado de establecer disciplina mediante leyes de prudencia fiscal (caso peruano) o fondos de estabilización (casos venezolanos). Sin embargo, la mayoría de estas reglas no fueron cumplidas a partir de situaciones coyunturales difíciles.

Cuadro 8

Comparativo de la Estructura del Gasto del Gobierno

	Mercancías y Servicios % del total de gastos		Sueldos Y Salarios % del total de gastos		Interés de pago % del total de gastos		Subsidios y transferencias % del total de gastos		Gastos de Capital % del total de gastos	
	1980	1997	1980	1997	1980	1997	1980	1997	1980	1997
América Latina & Caribe	21	30	30	25	7	11	24	18	18	16
Medio Oriente & N. Africa	28	29	..	28	..	11	16	16	21	16
Sud Asia	31	34	13	10	12	20	26	22	17	15
Estados Unidos	29	22	11	9	10	15	43	51	6	3
Unión Económica Europea	24	21	13	11	4	9	50	55	9	4

Fuente: Fondo Monetario Internacional, Government Statistics y World Bank, World Development Indicators (varios tomos).

Evolución de la estructura tributaria

En materia tributaria, la tabla 1 indica que la región es la segunda presión tributaria en términos absolutos, pero en términos porcentuales del PBI su comportamiento está debajo del promedio.

Tabla 1

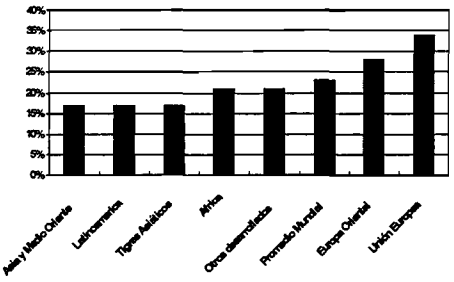
PBI e Impuestos per Capita por Región
(en EEUU Dólares Corrientes de 1995)

	PBI per Capita	Impuestos per Capita
OCDE (sin México)	26,791	6,949
América Latina y el Caribe	3,804	589
Africa del Norte y Medio Oriente	2,118	459
Asia (del Sur y Sudeste)[1]	891	129

[1] No incluye Australia ni Japón
Fuente: BM, FMI y OCDE

Grafica 1

Presión Impositiva



Fuente: World Development Indicators, The World Bank, 2000.

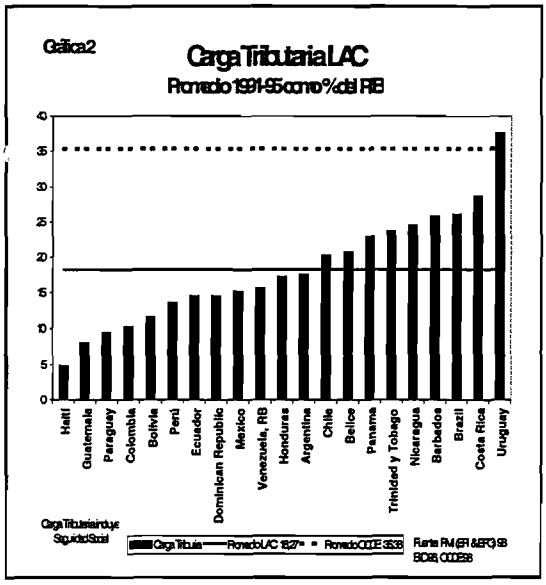
El cuadro 9 nos presenta la composición de la tributación en América Latina. La misma presenta un significativo aumento de la tributación en bienes y servicios y en seguridad social. Esto se compensa con caídas de aproximadamente del mismo porcentaje en impuestos al comercio exterior y la renta acorde con lo descrito en la sección de los cambios provocados por las liberaciones comercial y financiera.

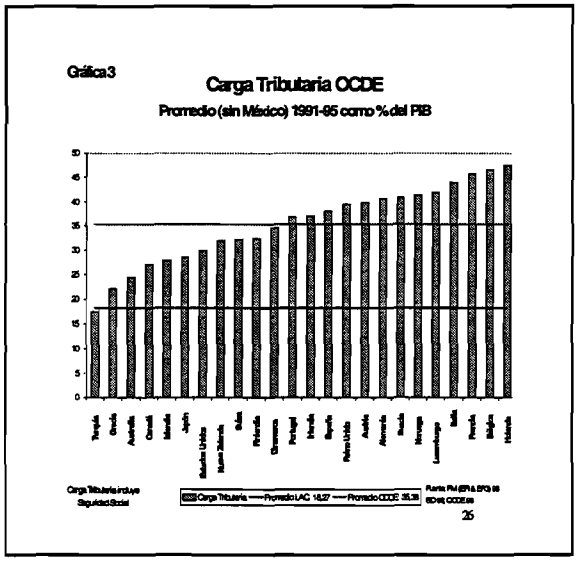
Cuadro 9

	Impuestos sobre Rentas y Ganancia de Capital		Contribuciones a la Seguridad Social		Impuestos sobre Mercancías y Servicios		Impuestos sobre Comercio Exterior		Otros Impuestos		Otros Ingresos	
	% del total		% del total		% del total		% del total		% del total		% del total	
	1980	1997	1980	1997	1980	1997	1980	1997	1980	1997	1980	1997
Sudeste Asia & Pacífico	25	31	1	3	42	30	16	10	3	11	13	15
OECD	35	27	22	28	24	30	4	2	4	4	11	9
América Latina & Carib.	23	19	11	16	30	42	19	9	5	7	12	9
Medio Oriente & N. Africa	17	19	7	2	8	12	19	12	8	10	41	45
Sud Asia	14	17	0	4	34	33	33	22	2	6	17	18

Fuente: International Monetary Fund, Government Statistics y World Development Indicators, The Worl Bank

Las gráficas 2 y 3 nos permiten comparar la carga tributaria de la región con los países de la OCDE mostrando diferencias significativas en ambos grupos a nivel de sus países miembros.





La tabla 2 nos presenta un resumen agregado (por promedios simples) de la evolución de para un grupo de 18 países que representan casi el 98% del ingreso regional. En el período de casi una década el esfuerzo tributario aumentó casi un 10% liderado por el IVA.

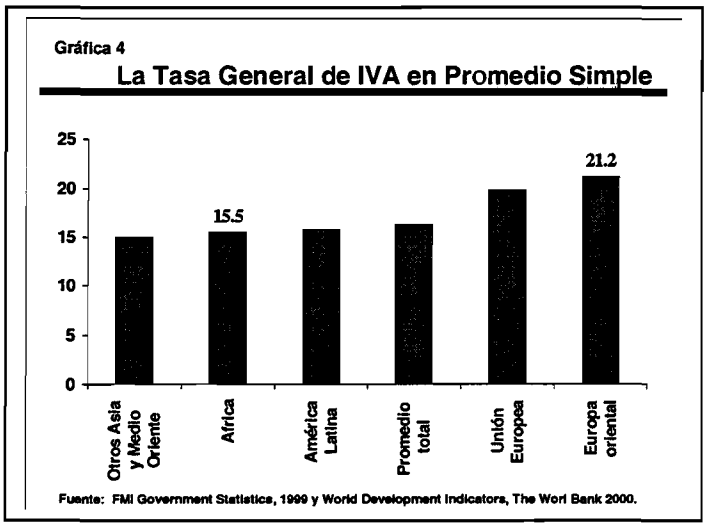
Tabla 2

Evolución de la Presión Tributaria en América Latina y el Caribe (países seleccionados)[1]

	Promedio			Desv. Standard			Composición %		Cambio	Máximo		Mínimo	
	1984/6	1997/8	Difer.	1984/6	1997/8	Difer.	1984/6	1997/8		1984/6	1997/8	1984/6	1997/8
Ingresos Tributarios	21.0	23.0	2.0	6.9	6.8	4.2	100	100	9.4	35.6	37.7	7.8	10.2
Comercio Exterior	2.83	1.96	-0.87	1.8	1.3	1.6	13	8	-30.8	6.5	5.6	0.5	0.7
Aranceles	2.47	1.93	-0.54	1.7	1.3	1.6	12	8	-22.0	6.5	5.6	0.1	0.7
Imp. s/ Exportaciones	0.36	0.03	-0.33	0.6	0.1	0.6	2	0	-92.2	2.5	0.3	0.0	0.0
Sobre Venta	6.9	8.7	1.8	3.6	2.6	2.4	33	38	26.6	16.2	15.1	2.1	5.3
IVA	3.6	5.8	2.2	2.1	2.1	1.5	17	25	61.2	9.6	10.0	0.0	3.0
Específicos	3.2	2.9	-0.3	2.6	1.7	1.7	15	13	-8.2	12.0	7.8	0.8	0.6
Renta	3.7	3.8	0.1	2.7	2.1	1.2	18	17	3.5	10.3	9.3	0.6	0.9
Persona Física	n.a.	n.a.	n.a.	n.a	n.a	n.a			n.a	n.a	n.a	n.a	n.a
Persona Jurídica	n.a.	n.a.	n.a.	n.a	n.a	n.a			n.a	n.a	n.a	n.a	n.a
Seguridad Social	2.2	3.2	1.0	1.8	2.8	1.6	11	14	43.2	5.8	9.9	0.2	0.2
Otros Impuestos	5.4	5.3	-0.1	4.4	4.5	2.3	26	23	-1.7	17.8	19.1	1.0	0.7
Recursos Naturales	2.6	1.9	-0.7	4.5	3.8	1.4	12	8	-25.2	16.6	15.7	0.0	0.0
Otros	2.8	3.4	0.6	1.5	1.8	1.8	13	15	20.1	5.3	6.3	0.4	0.6

[1] Argentina, Brasil, México, Venezuela, Colombia, Chile, Costa Rica, Uruguay, Perú, Bolivia, Ecuador, Guatemala, Trinidad y Tobago, Barbados, República Dominicana, El Salvador, Nicaragua y Honduras.

Fuente: Administraciones Tributarias (Receita Federal de Brasil, DGI Uruguay, SAT Guatemala, SHCP-SAT México, SRI Ecuador, AFIP Argentina, DEI Honduras, SENIAT Venezuela, Fondo Monetarios (RED), Banco Mundial, The Economist Intelligence Unit (varios reportes).



De la gráfica 4 se puede inferir que América Latina se sitúa muy cerca del promedio en lo que respecta al promedio de los países considerados. En el cuadro 10 es posible observar el fuerte incremento de la tasa general del IVA desde la implantación del tributo a la fecha. Sin embargo, todavía el promedio se encuentra significativamente por debajo (más de un 20%) de la media europea. También es posible observar que tanto al inicio de la vigencia del impuesto como actualmente existe una gran disparidad en el nivel de las tasas del tributo. Es importante destacar que en algunos países, en especial aquellos con regímenes donde diferentes niveles de gobiernos subnacionales recaudan impuestos a los ingresos como por ejemplo, Argentina o Brasil, cuyas tasas son aún mayores que las de la Unión Europea.

Cuadro 10

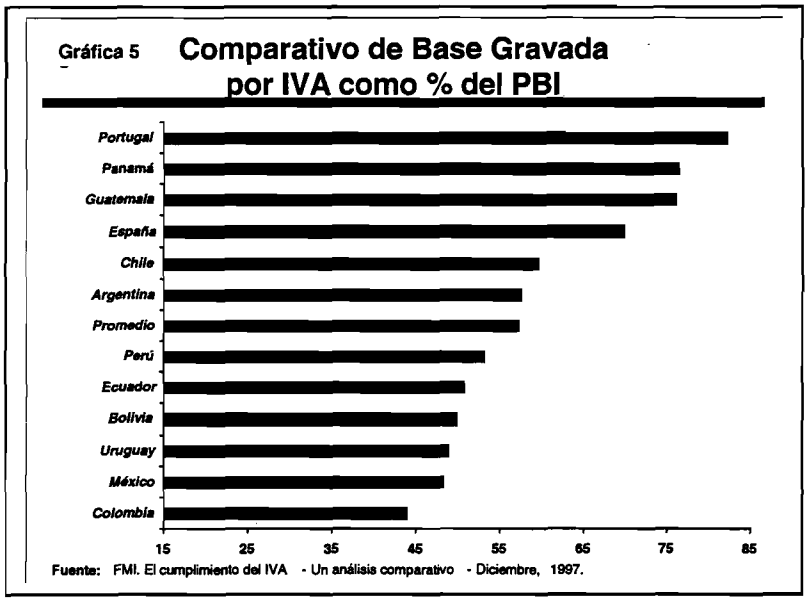
Tasas de IVA

Países América Latina y el Caribe	Fecha de introducción	Tasas al inicio AL y el C	Tasas Vigentes AL y el C	Tasas Vigentes U.E.	Países Unión Europea
Argentina	1975	16	21,27	15	Alemania
Bolivia	1973	5,10,15	13	20	Austria
Brasil[1] interestadual	1991	9,11	9.9	21	Bélgica
Brasil[1] intraestadual	1991	17	0, 21.9, 32	25	Dinamarca
Chile	1975	8,20	18	16	España
Colombia	1975	4,6,10	10,15,20,35,45	22	Finlandia
Costa Rica	1975	10	13	20.6	Francia
República Dominicana	1983	6	12	18	Grecia
Ecuador	1970	4,10	12	17.5	Holanda
Guatemala	1983	7	10	21	Irlanda
Honduras	1976	3	12, 15	19	Italia
México	1980	10	15,10	15	Luxemburgo
Nicaragua	1975	6	5,6,15	17	Portugal
Panama	1977	5	5	17.5	Reino Unido
Paraguay	1991	12	10	25	Suecia
Perú	1976	3,20,40	18		
Trinidad & Tobago	1990	15	15		
Uruguay	1968	5,14	14, 23		
Promedio		10.4	15.9	19.3	
Desvío Standard		5.1	4.1	3.1	

[1] La fecha de implementación del IVA del Brasil es 1967

Fuente: Tait, Alan A. *Value-Added Tax: Administrative and Policy Issues. FMI, 1991; VAT Monitor (various issues);* PriceWaterhouseCoopers Income Tax Worldwide Summaries y Banco Interamericano, División Estadística.

Por ejemplo, Bes (1999) para el caso argentino, estimó que para sustituir la recaudación del impuesto a los ingresos de provincia por el IVA utilizando tasas diferenciales, las tasas del IVA en algunas de las provincias serían superiores al 25%. Es menester reconocer que una comparación de tasas debe ser acompañada por un análisis similar sobre la base gravada. La gráfica 5 considera el alcance de la misma con relación al PBI sin descontar evasión. Si bien todas las mediciones basadas en cuentas nacionales pueden presentar dificultades técnicas importantes nos da una noción de la dispersión de las mismas y de las posibilidades de su expansión. En todo caso, podría reconocerse que en algunos casos existen posibilidades de crecimiento del tributo por base o tasa, pero en otros se observa cierto agotamiento de las posibilidades de expansión del tributo central para la recaudación en la región. En el Anexo 1 se presenta una descripción del tributo en un grupo de países de la región.



Es muy importante acotar que una buena parte del esfuerzo en administración tributaria en Latinoamericana se concentró en los llamados controles de documentación (controles que facturación y mercadería en tránsito) que sumados a unidades especiales dedicadas a grandes contribuyentes y el uso intensivo de retenciones constituyeron la base de las reformas de gestión impositiva. Este esfuerzo tenía por objeto concentrarse en la imposición indirecta y relegar los esfuerzos en renta al uso masivo de retenciones en la fuente, en especial de naturaleza salarial.

Lamentablemente, por falta de datos no podemos hacer un análisis detallado de los impuestos específicos o selectivos al consumo. Si bien estos bajan su participación relativa tal como se observa en el cuadro 2, es posible que ello se deba a la sustitución de este tributo por el IVA. En la mayoría de los países latinoamericanos los selectivos gravan bienes con baja elasticidad de sustitución (por adicción) y con externalidades negativas en la salud, como son los derivados del alcohol (bebidas) y del tabaco. También incluyen la venta de vehículos nuevos y combustibles que tienen una relativamente baja elasticidad precio y que en parte sustituyen cargos correspondientes al uso de caminería sin peaje. Si bien el tributo es recaudado generalmente de productores oligopólicos, su principal problema administrativo es el contrabando.

También es importante reconocer la dependencia de un grupo de países por los ingresos derivados de recursos naturales no renovables (ver Anexo 3) que presenta una concentración y dependencia con aquellos países exportadores de petróleo.

Respecto del impuesto a la renta es importante destacar nuestros países presentan la relación más regresiva del cociente impuestos de renta sobre consumo tal como se observa en el cuadro 11. Sin embargo, podemos observar un crecimiento relativo del impuesto a la renta corporativa en comparación con el de renta personal. Esto indicaría que algunos elementos del diseño de la imposición a la renta personal tienden a reducir su rendimiento.

Cuadro 11

Ratios de Impuestos de Renta y Consumo (Países Seleccionados)[1]

	Impuestos Renta/Consumo (Ratio)		Impuesto a la Renta Empresa/Individual (Ratio)	
	1985-87	1995-97	1985-87	1995-97
OCDE	1.2	1.2	0.2	0.3
Canada y EEUU	1.8	2.2	0.2	0.2
Pacífico	2.3	1.9	0.3	0.4
Europa	1.1	1.1	0.2	0.3
Países en Desarrollo	0.5	0.5	1.6	1.2
Africa	0.5	0.6	0.9	0.6
Asia	0.6	0.6	1.6	1
Medio Oriente	0.5	0.5	4.3	2.5
América Latina y el Caribe	0.4	0.4	1.8	2.3

Fuente: Tanzi y Zee (1998,) Revenue Statistics (OCDE); y Government Finance Statistics (FMI)

[1] Se compone de una muestra de países compuesta de : 8 de Africa, 9 de Asia, 7 países de Oriente Medio y 14 países de América Latina y el Caribe.

El cuadro 12 nos permite señalar que a un en paridad de poderes de compra el monto mínimo no imponible es significativamente más alto en la región que en los países de la OCDE. Otro factor es que las administraciones tributarias del subcontinente no han logrado superar el nivel de control de facturación. En la práctica, muy pocas de ellas poseen la capacidad para efectuar cruces masivos de información mediante el manejo de grandes bases de datos o auditorías más sofisticadas como ser intermediación financiera, alta tecnología o actividades internacionales.

Cuadro 12

Impuesto a la Renta en 1997

	Tasa Marginal más alta del Impuesto Personal Tasa Marginal %	Tasa Marginal más alta del Impuesto Personal sobre Renta US$	Tasa de Renta de Corporativa en %	Renta Mínima Imponible (en Ingreso per cápita)	Ingreso per Cápita[1]	Renta Mínima Imponible[2] (en Ingreso Per cápita *Ajustado*)
Argentina	33	120,000	33	1.6	11,944	19,110
Barbados	40	46,000	40	2.0	13,543	27,086
Brasil	25	52,000	33	2.7	6,828	18,436
Chile	45	14,748	15	0.2	8,895	1,779
Costa Rica	25	15,746	30	1.3	5,889	7,656
El Salvador	30	22,857	25	0.7	4,083	2,933
Guatemala	25	30,000	25	3.5	3,500	12,230
Honduras	25	38,460	25	1.9	2,478	4,709
Jamaica	25	2,838	33.3	0.8	3,490	2,751
México	35	25,492	34	0.1	7,637	764
Nicaragua	30	18,083	30	6.9	2,140	14,767
Panamá	30	200,000	15	0.5	5,244	2,622
Perú	30	50,036	30	1.4	4,516	6,483
Repca. Dominicana	25	16,176	25	1.9	4,460	8,475
Trinidad y Tobago	35	11,200	35	0.6	7,467	4,344
Uruguay	-	-	30	-	8,544	-
Promedio	30.5	44,242	28.6	1.7	6,291	8,943
Desvío Standard	5.9	49,734	6.6	1.7	3,161	7,515
Alemania	53.0	69,226	40	0.3	25,465	7,536
Australia	47	32,404	36	0.2	21,813	4,008
Austria	50	55,564	34	0.2	25,523	4,916
Bélgica	55	65,547	39	0.2	23,820	5,758
Canada[3]	49.3	42,741	38	0.2	20,249	4,333
Dinamarca	40	..	34	0.3	32,178	9,781
Finlandia	38	56,450	28	0.4	23,315	9,053
Francia	32	166,667	33	0.2	23,788	5,294
Grecia	45	55,923	35	0.5	11,427	5,493
Israel	50	57,387	36	0.8	8,192	6,209
Italia	46	181,801	37	0.3	19,912	4,978
Corea del Sur	40	56,529	28	0.9	9,287	8,358
Nueva Zelandia	33	19,922	33	0.4	17,271	6,909
Noruega	28	6,835	28	0.2	34,823	8,482
España	48	69,216	35	0.6	13,530	7,513
Turquía	45	59,259	25	0.9	7,914	7,123
Reino Unido	40	44,580	31	0.3	21,740	7,367
Estados Unidos[4]	46.1	278,450	41.9	0.2	29,297	5,859
Promedio	43.7	77,559	34.0	0.4	20,530	6,609
Desvío Standard	7.2	66,284	4.5	0.2	7,743	1,618

[1] América Latina y Caribe en PPP, resto de países en US$ corrientes.
[2] Surge de la multiplicación de la columna de Ing. per Cápita por la columna de Renta Mínima Imponible en Ingresos per Cápita
[3] Canada incluye una tasa federal y el promedio de la provincial.
[4] Estados Unidos incluye tasa federal del Impto. Personal 40% más 6.1% del promedio simple del impuesto estadual y en el corporativo la tasa del federal es 35% y del promedio simple estadual es 6.9%
Fuente: PriceWaterhouseCoopers Income Tax Worldwide Summaries y Tanzi, Vito y Howell H. Zee (1998).

Reporte de la OCDE sobre competencia tributaria dañina

La literatura sobre competencia tributaria internacional coincide en admitir la creciente dificultad que enfrentan las jurisdicciones que gravan los ingresos de portafolio y de inversión directa., tanto en el país fuente (origen de la inversión) como en el lugar de residencia (del inversor). Asimismo, existe hoy en día un mayor reconocimiento y aceptación de los efectos adversos que este fenómeno acarrea en términos de inequidad, distorsión en la dirección de flujos comerciales y financieros y de erosión de bases tributarias entre países. Sin embargo, en los albores del nuevo milenio aún no se han alcanzado consensos técnicamente sólidos y políticamente creíbles sobre las herramientas de política impositiva y de administración tributaria que permitan reducir dichos efectos en sistemas tributarios de países soberanos, en un marco de cooperación internacional.

El reporte emitido por la OCDE[2] sobre competencia tributaria dañina representa, tanto por la profundidad de las propuestas como por la amplitud de países que pretende involucrar, uno de los esfuerzos institucionales más importantes por desarrollar medidas dirigidas hacia ese fin[3]. El objetivo inicial del reporte es el de promover entre países miembros y entre aquéllos que no lo son, un mejor entendimiento de la manera en que los paraísos fiscales y los regímenes tributarios dañinos impactan negativamente la integridad, equidad y neutralidad de los sistemas tributarios, en detrimento del bienestar de la población global. A partir de este entendimiento, el reporte establece guías prácticas que permiten a los gobiernos identificar con mayor precisión los paraísos fiscales y regímenes de excepción de aquéllos que generan una competencia tributaria no dañina. Finalmente se establecen una serie de recomendaciones de política orientadas a combatir en forma más coordinada y eficiente prácticas de competencia tributaria dañina.

Una de las partes más novedosas del reporte lo constituye la distinción que hace entre prácticas dañinas de competencia tributaria de las que no lo son. En el fondo de esta diferenciación se advierte la necesidad de identificar aquellas jurisdicciones que tan sólo imponen relativamente bajas tasas efectivas de impuestos, de aquéllas que son capaces de financiar sus gastos públicos sin la necesidad de imponer gravámenes al ingreso y que además son utilizadas por no-residentes tan sólo como vehículos para eludir impuestos en su país de residencia (*paraísos fiscales*); o bien, que imponiendo dichos gravámenes, sus códigos tributarios contemplan tratamientos preferenciales con objetivos explícitos de promoción de inversiones, en detrimento de una sana competencia tributaria internacional (*régimen preferencial dañino*). Un resumen de las principales características definidas por la OECD para identificar un *paraíso fiscal,* un *régimen preferencial dañino* y las ciertas prácticas en *competencia tributaria desleal* se presentan resumidas en el Anexo 4.

Resulta sin dudas altamente conveniente que el reporte de la OCDE parta de esa diferenciación en aras de lograr una cooperación internacional efectiva. Tal como lo reconoce el propio organismo en el documento, existen jurisdicciones que en el ejercicio de su soberanía, reciben el mandato ciudadano de determinar una mezcla de bases y tasas impositivas que financien a un sector público relativamente pequeño, sin que ello signifique necesariamente la intención deliberada de atraer fuentes altamente movibles de ingreso (*régimen preferencial no dañino*). Considerando que en la práctica es difícil hacer este tipo de distinciones, el reporte provee una serie de factores objetivos a considerar para identificar prácticas desleales de competencia tributaria[4]. Uno de los signos distintivos más evidentes que permiten

[2] *Competencia Tributaria Dañina: Un Asunto Emergente Global*, Reporte del Comité de Asuntos Fiscales de la OCDE, adoptado en enero de 1998.

[3] Cabe también destacar el *Paquete Para Atacar la Competencia Tributaria Dañina en la Unión Europea*, adoptado por el Consejo de la Unión Europea a finales de 1997.

[4] Entre estos factores se encuentran la falta de transparencia en la aplicación de impuestos, la existencia de "regímenes cercados" (*ring fencing*), nulo intercambio de información con autoridades fiscales extranjeras, bases o tasas impositivas sujetas a negociación y la existencia de provisiones tributarias secretas.

en ocasiones lograr una identificación más objetiva de paraísos fiscales o regímenes preferenciales dañinos es la evidente desproporción entre los flujos de inversión que reciben y el nivel de actividad económica real que en ellos se desarrolla[5].

En términos de recomendaciones de política, el reporte sugiere en términos generales dos tipos de acciones en contra de dichas prácticas desleales: acciones de tipo unilateral enfocadas a dotar a las legislaciones domésticas de reglas que permitan desincentivar la movilización de bases gravables con fines elusivos[6], y acciones de corte bilateral que permitan intensificar y hacer más eficiente el intercambio de información entre países y que limiten en forma estratégica los beneficios concedidos a través de los tratados para evitar la doble tributación. Como muestra de la importancia de adoptar un enfoque multilateral en la búsqueda de soluciones conjuntas, el reporte anuncia la creación de un foro internacional que permita evaluar en forma permanente los avances logrados por las diferentes jurisdicciones fiscales en el combate a las prácticas dañinas de competencia tributaria.

En forma sintética podríamos resumir las positivas características de tan importante contribución:

1. Siguiendo la tradición, estos trabajos sobre tributación internacional siguen el patrón de la institución de estudiar temas relevantes (no sólo para la OCDE) con alto nivel profesional tal como lo fueron en el pasado por ejemplo, el modelo de tratados de doble tributación o los precios de transferencia y proveer guías de acción en la materia.

2. La organización ha realizado los trabajos sobre competencia desleal bajo un grupo de principios de validez universal muy apropiados a la época y relevantes a la cooperación internacional como son la transparencia, la no discriminación e el intercambio efectivo de información.

3. El estudio sigue una metodología participativa, donde se identifican en primera instancia regímenes potenciales dañinos de la propia organización (47) y luego 35 otras jurisdicciones, un sistema similar al que aplica la Comunidad Europea acompañadas de cursos de acción.

Aunque innovador y oportuno, el reporte de la OCDE no ha estado exento de críticas. Las más extremas incluyen desde teorías conspirativas, considerando que este es un esfuerzo de un grupo de países con presiones tributarias altas para inducir a otras jurisdicciones en ese camino, o razones de supervivencia burocrática de organizaciones multilaterales.

En nuestro criterio, creemos importante destacar:

1. El punto de concentración de estos trabajos en el tratamiento tributario preferencial solamente a los regímenes que afectan el ahorro, es incompleto. De una manera muy elocuente, Avi-Yonah[7] señala puntualmente algunas de las principales limitaciones del documento que impiden la adopción de una solución global e integral al fenómeno de la competencia tributaria desleal. De acuerdo con Avi-Yonah, los alcances de las recomendaciones de la OCDE quedan en principio altamente restringidas por la omisión deliberada de considerar dentro del reporte al ingreso proveniente de actividades reales, tomando en cuenta la relativa facilidad con la que en la actualidad es posible trasladar la producción de bienes hacia paraísos fiscales[8].

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[5] El reporte de la OCDE reconoce que la inversión extranjera directa de los países del G-7 en jurisdicciones ubicadas en el Caribe e islas del pacífico del sur se quintuplicaron durante el período 1985-1994 hasta llegar a más de 200 mil millones de dólares. Existe además evidencia de que aproximadamente una cuarta parte de los activos de las empresas multinacionales de EUA están ubicados en jurisdicciones que registran tan sólo 1.2% de la población total y el 3% del PIB mundial.

[6] Por ejemplo, el reporte recomienda a los gobiernos la adopción de reglas anti-diferimiento de impuesto tanto para empresas como para individuos con inversiones en paraísos fiscales.

[7] *Globalización, Competencia Tributaria y la Crisis Fiscal del Estado Benefactor*, Avi-Yonah R.S., 113 *Harvard Law Review* 1573, No. 7, Mayo de 2000, pp.1657-1666.

[8] Esta omisión afecta especialmente a los fiscos de las economías más avanzadas, debido a que 2/3 partes del intercambio global de mercancías es llevada a cabo por empresas multinacionales que en un 85% residen en países industrializados de la OCDE.

En nuestro criterio, debería incluirse también un análisis al tratamiento preferencial desleal de las inversiones, a que es lo que más afecta a países en desarrollo en variadísimas formas; desde zonas francas a regímenes especiales de subsidios muchas veces muy poco transparentes en buena parte del orbe y a los que América Latina y el Caribe no son la excepción[9]. Este es un punto crucial porque muchos de estos regímenes tributarios especiales a la inversión se originaron en regímenes preferenciales comerciales como son cuotas, regímenes bilaterales especiales, etc. (Jenkins y Kuo, 2000).
En definitiva, es difícil separar, y por ende negociar, regímenes tributarios especiales sin su correspondiente en regímenes comerciales preferenciales.

2. Es probable, que no sólo el alcance temático sea limitado sino que también en el grupo de países analizados no se encuentran jurisdicciones que tanto en Asia, América y Europa deberían de analizarse. A pesar de los esfuerzos del organismo internacional por ampliar la aplicación de las recomendaciones del reporte hacia un ambicioso universo de países por la vía de probables sanciones, su restringida aplicación a tan sólo los 29 países miembros de la OCDE representa otra limitación importante. Adicionalmente a las dificultades técnicas de las que adolecen algunas de las recomendaciones de la OCDE para combatir prácticas dañinas de competencia tributaria, el comportamiento no cooperativo de países no miembros deja en desventaja competitiva a empresas e inversionistas residentes en países cooperativos y/o miembros. Ante la falta de fórmulas más eficaces para ampliar la cobertura de las recomendaciones del reporte, esta situación de inequidad introduce mayores incentivos a los contribuyentes afectados a adoptar estrategias tendientes a ocultar sus bases gravables triangulando estratégicamente la dirección de flujos comerciales y financieros[10].

4. Es difícil de aceptar que en temas tributarios que tanto afectan la soberanía, un grupo de naciones pueda dictar normas y establecer probables sanciones a otras que no se encontraban representadas, ni invitadas, cuando se definieron los estándares para definir regímenes o mejores prácticas.

5. De alguna forma ignora las diferencias de capacidad administrativa entre países que pueden volver inaplicable los intercambios de información; es difícil intercambiar información que no se tiene en las administraciones débiles de países en desarrollo. Algunos de estos países no tienen la capacidad de explotar esa información por ejemplo, controlar ciertos activos de ciudadanos de países en desarrollo en naciones desarrolladas.

6. Ignora ciertas características históricas que pudieren ser muy perjudiciales ya que listar naciones bajo rótulo pueden afectar su reputación internacional e inclusive tener consecuencias económicas serias como afectar el crédito de un país. Esto es relevante, porque es muy probable que muchos de los regímenes preferenciales hayan surgido de regímenes tributarios o financieros restrictivos sobre los flujos financieros de otras jurisdicciones incluidas las de la propia OCDE. En definitiva, la negociación de las propias definiciones y cursos de acción deberá considerar mecanismos y calendarios, como la propia organización lo está haciendo efectivo pero en un sistema más equitativo y representativo.

Desde el punto de vista de los países de la región, resulta particularmente inquietante el sesgo que el reporte tiene hacia el intercambio de información como principal herramienta de cooperación multilateral. Si bien es cierto que esta herramienta es un elemento necesario para cualquier tipo de cooperación tributaria multilateral, para el fisco de un país importador neto de capitales y con *handicaps*

[9] En el Anexo 2 se presenta un resumen del trabajo de Peter Byrne y Reuven Avi Yonah, Incentivos Tributarios a la Inversión en América Latina (2001) primer borrador, para un grupo de países de la región.
[10] Así por ejemplo, un inversionista domiciliado en una jurisdicción "cooperativa" con las recomendaciones del reporte, puede invertir en otra a través de un paraíso fiscal que rompa la red de intercambio de información entre las autoridades fiscales residente y fuente, respectivamente.

administrativos resulta, desde el punto de vista de sus ingresos, más atractivo cooperar en un arreglo institucional que favorezca adicionalmente esquemas de retención en la fuente generalizados. En este sentido, cabe advertir que la cooperación multilateral impulsada por organismos internacionales tendrá mayores probabilidades de éxito, en la medida en que provea esquemas de política y administración tributaria que reconozcan desequilibrios en la estructura de flujos de capital entre regiones[11] tal como se presenta en la tabla 6.

Tabla 6

ESTRUCTURA DE FLUJOS (Dólares EUA)

	Pob. (1998)	PBI (1998)	Capital en Bolsas (1998)	Inv. Extranjera Directa Neta y Portafolio Neto (1999)
Total	5.9 Bn	35.12 Tr	25.48 Tr	0.34 Tr
Países Desarrollados	15.2%	65.1%	92.8%	48.5%
Países en Desarrollo	84.8%	34.9%	7.2%	51.5%
América Latina y el Caribe	7.9%	6.4%	1.5%	22.3%

Fuentes: FMI, BM, BIS, FIBV, EIU

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En definitiva, la OCDE en materia de cooperación tributaria internacional ha sentado las bases del espíritu que la debe gobernar pero se deben corregir falencias en el proceso seguido para lograrla.

Algunos factores que inciden en la necesidad de la coordinación tributaria internacional

Es importante destacar una serie de factores que influyen en la necesidad de desarrollar un esfuerzo técnico que impulse la coordinación para mejorar la tributación internacional de la región que a la vez salvaguarde el derecho de las naciones a establecer soberanamente su nivel de tributación en el marco de una leal competencia tributaria entre naciones. Este esfuerzo, tanto a nivel de política como de administración, requerirá la coordinación entre nuestros países y el resto del mundo en lo que refiere al tratamiento tributario, ahorro y la inversión externa. Sin embargo, buena parte del esfuerzo debe incluir la coordinación intraregional de los niveles e instrumentos de incentivos que aseguren una competencia leal y permita un poder de negociación mayor con otros agentes externos a la región tanto públicos como privados.

En primer lugar, está el aspecto tecnológico. En las próximas décadas la inserción internacional de un país estará afectada no sólo por la forma y condiciones de los mercados de sus productos, que ya son

[11] Como muestra de estas desproporciones cabe apuntar que los países de América Latina y el Caribe registran con únicamente el 1.5% del valor total de capitalización de mercados.

bastante desiguales para la América Latina. Más aún, en los dos últimos decenios la velocidad de la evolución tecnológica ha generado un nuevo riesgo para las economías en desarrollo, la posibilidad de su exclusión del concierto internacional. Por ende, la creación o adaptación de las estructuras económicas nacionales al cambio tecnológico y su apropiada explotación comercial, que son función de la capacidad científica de la nación, pasan a convertirse en un elemento clave del desarrollo y el comercio internacional, y por ende, afectando a la tributación.

El cuadro 13 nos muestra algunas cifras sobre diferentes componentes del acerbo científico de un grupo de países.

Cuadro 13

Comparativo de los Acervos Tecnológícos (países seleccionados)

	Científicos en I&D por c/millón de habitantes	Técnicos en I&D por c/millón De habitantes	Gastos en I&D en promedio del PBI	Exportación de Alta Tecnología US$ millones	% de export. Industriales	Regalías y Licencias de uso Recibos US$ mill.		Pagos		Inscripción de Patentes Residentes	No. residentes
	1985-1995	1985-1995	1985-1995	1997	1997	1990	1997	1990	1997	1996	1996
Argentina	671	149	0.4	1,355	15	4	6	409	240	..	..
Bolivia	250	154	..	17	9	0	0	3	5	..	..
Brasil	168	59	0.6	5,175	18	12	32	54	529	2,655	29,451
Chile	..	231	0.7	480	19	0	83	37	53	189	1,771
Ecuador	169	215	0.1	53	12	0	0	37	64	7	354
Guatemala	99	107	1.1	94	13	0	..	0	..	2	102
México	213	73	0.4	29,692	33	73	130	380	501	389	30,305
Venezuela	208	32	0.5	249	10	..	..	..	0	182	1,822
Total	1,778	1,020		37,116		89	250	920	1,392	3,424	63,805
Alemania	2,843	1,472	2.4	112,243	26	1,987	3,168	3,797	4,694	56,757	98,338
Australia	3,166	792	1.7	6,415	39	162	295	826	1,074	9,196	34,125
Bélgica	1,814	2,200	1.7	29,221	23	682	650	1,328	1,098	1,356	59,099
España	1,210	342	0.9	13,452	17	90	211	1,022	1,565	2,689	81,294
Estados Unidos	3,732	..	2.5	197,657	44	16,635	33,676	3,136	9,411	111,883	111,536
Hungría	1,033	512	0.8	5,745	39	49	100	36	192	832	24,147
Irlanda	1,871	510	1.4	26,467	62	38	110	591	4,140	925	52,407
Japón	6,309	828	2.9	152,431	38	2,866	7,303	6,051	9,620	340,861	60,390
Rusia	3,520	688	0.7	3,809	19	..	176	..	11	18,138	28,149
Reino Unido	2,417	1,019	2.2	95,755	41	3,055	6,901	3,575	6,332	25,269	104,084
Suecia	3,714	3,173	3.4	21,969	34	563	1,000	743	957	7,077	76,364
Total	31,629	11,536		665,164		26,127	53,589	21,104	39,094	574,983	729,933

Fuente: Fondo Monetario Internacional, Government Statistics; World Bank, World Developmente Indicators e Interamerican Development Bank, Statistical Division.

De estas cifras surge claramente las diferencias existentes entre la región y un grupo de países europeos y EE.UU. cuyos rendimientos actuales (representadas por el ingreso por exportaciones de tecnología) es casi 19 veces superior. Sin embargo, un simple análisis del nivel de recursos humanos, niveles de gasto, y patentes en alta tecnología nos hace prever que esta situación probablemente no sólo no se revierte sino que posiblemente aumentará la brecha aumentando el rezago y la dependencia de la región. En tal sentido, se hace relevante considerar el significativo efecto que tendrá sobre la tributación internacional, en especial para evitar la reducción de la base mediante diferentes instrumentos que requieren cooperación internacional como son precios de transferencia y coordinación para una competencia más transparente de los incentivos a la inversión extranjera.

Dentro de la capacidad científica se destaca la base de la llamada nueva economía, las telecomunicaciones y la informática (la tercer área sería la biogenética). En referencia a los medios

electrónicos e infraestructura de telecomunicaciones, las cifras del cuadro 14 nos permite percibir la posición relativa de América Latina y el Caribe en este rubro.

Cuadro 14

Estadísticas sobre Medios de Comunicación Electrónicos

	Radios	Televisión Aparatos de	Televisión Suscriptores de Cable	Teléfonos Móviles	Faxes	Computadoras Personales	Sitios de Internet
	(cada 1,000 habitantes)	(cada 1,000 habitantes)	(cada 1,000 habitantes)	(cada 1,000 habitantes)	(cada 1,000 Habitantes)	(cada 1,000 habitantes)	(cada 10,000 habitantes)
	1996	**1997**	**1997**	**1997**	**1996**	**1997**	**Julio 1998**
Sudeste Asia & Pacífico	184	229	39	11	0.4	7	1
América Latina & Carib.	398	264	31	26	2	33	8
Medio Oriente & N. Africa	268	140	9	6	2	15	0.2
Sud Asia	99	69	16	1	0.2	2	0.1
OECD	676	647	165	189	50	264	375

Fuente: Science and Technology Review (MIT) y World Bank, World Developmente Indicators (varios tomos).

Considerando los efectos de reducción de base tributaria que afectará en el futuro a la provisión de servicios intangibles vía electrónica afectará un sector creciente y dinámico de los ingresos impositivos por ventas y su diferente tratamiento influirá en la determinación de la base imponible de gravámenes al consumo y rentas.

Un segundo elemento (positivo) es el constante desarrollo e integración de los mercados financieros latinoamericanos y caribeños al mercado internacional, pero que no se ha visto equiparado con un esfuerzo de análisis para la posible cooperación en materia tributaria.

Los libres mercados financieros y cambiarios permiten recibir pero también exportar activos sin la respectiva capacidad de las administraciones tributarias para control. Para lo cual es importante la coordinación internacional en lo que sería la potestad de fiscalización de cada país. En efecto, esta preocupación afecta no solamente el tratamiento de los diferentes instrumentos financieros como medio de planificación tributaria que permite erosionar el impuesto a la renta de empresas sino también, lo referente al tratamiento fiscal de los rendimientos del ahorro que afecta a la renta individual y a los movimientos abruptos de fondos de corto plazo que tanto afectaron a la región en las crisis de los últimos años.

Adicionalmente, puede apreciarse que el número de empresas que comercializan valores en las bolsas más importantes de la región tiende a disminuir tal como se observa en el cuadro 15. En efecto, si bien las privatizaciones y la apertura aumentaron significativamente el valor de capitalización y el valor negociado (ver cuadro 15), las tendencias a la concentración tanto empresarial iniciada desde principios de los noventa y de las bolsas a finales de la década han afectado esta forma de canalización del ahorro en la región. Más aún, parte de los cambios en la forma de valuación de una empresa, un ejemplo las empresas vinculadas a la Internet, han llevado a que parte del valor internacional de una empresa sea capturado solamente en la bolsa en que cotiza. Por ejemplo, el valor de un descubrimiento médico o un nuevo tipo de servicio se capturan en donde la empresa cotiza y tal como se indicó antes este país tiene la ventaja de poder capturar una parte mayor de la base imponible cuyo valor se genera internacionalmente. Es claro, que este proceso está intrínsecamente ligado en una parte significativa al avance tecnológico.

Cuadro 15

Bolsas de Valores en 1999

	Valor de Capitalización US$ millones		Valor de Capitalización % del PIB		Valor Negociado % del PIB		Ratio de Ventas (valor negociado en % de capital)		Número de compañías listadas	
	1990	1998	1990	1998	1990	1998	1990	1998	1990	1998
Argentina	3,268	45,332	2	18	1	8	34	29	179	136
Brazil	16,354	260,887	4	31	1	25	24	71	581	536
Chile	13,645	51,866	45	93	3	10	6	7	215	295
Colombia	1,416	13,357	4	20	0	2	6	10	80	189
Costa Rica	475	820	7	9	0	0	6	4	82	114
México	32,725	91,746	12	39	5	13	44	29	199	198
Sudeste Asia & Pacífico	197,109	426,006	16	26	7	41	118	164	1,443	3,624
América Latina & Caribe	78,470	508,395	8	30	2	15	30	45	1,748	2,238
Medio Oriente & N. Africa	5,265	125,286	28	35	1	9	..	..	817	1,328
Sud Asia	42,655	143,250	11	28	6	13	53	56	6,996	7,163
OECD	8,913,233	21,749,035	56	98	32	82	49	75	17,064	22,253

Fuente: Bank for International Settlements (web site, Table 1. 3a)

Por último y como ejemplo, podríamos considerar al sector turismo internacional (ver cuadro 16). En nuestros países existen múltiples y generosos beneficios fiscales casi sin excepción (ver anexo 2) pero por el contrario, muy pocas legislaciones para coordinar los efectos tributarios internacionales, por ejemplo los "paquetes" y la devolución del IVA a los turistas, y ninguna forma de coordinanción internacional.

Cuadro 16

Evolución del Turismo Mundial

	Turismo Internacional: ingreso de turistas en miles		Turismo Internacional: Salida de turistas en miles		Ingresos por Turismo: En US$ millones corrientes		Ingresos por Turismo: como % de Exportaciones	
	1980	1997	1980	1997	1980	1997	1980	1997
Sudeste de Asia & Pacífico	9,570	49,784	3,339	37,471	2,480	37,017	5.1	7.0
Europa & Asia Centrales	17,935	91,125	15,522	89,019	1,029	33,835	3.0	10.3
América Latina & Caribe	**22,766**	**48,213**	**9,907**	**27,212**	**11,262**	**31,629**	9.2	**8.0**
Medio Oriente & N. Africa	11,815	22,229	4,620	12,173	4,589	12,388	2.5	7.8
Sud Asia	2,086	4,068	1,259	5,040	1,485	3,936	8.5	5.9
Estados Unidos	22,500	48,409	22,721	52,735	10,058	75,056	3.7	8.0
Europa Unión Monetaria	112,095	207,544	68,933	165,816	42,198	135,757	5.8	6.6

Fuente: Fondo Monetario Internacional, Government Statistics; World Bank, World Developmente Indicators
World Bank (varias ediciones) y, Organización Internacional del Turismo (página web).

Algunos factores que inciden en el esfuerzo por la coordinación tributaria internacional

Las naciones han desarrollado su política tributaria, y como apéndice la coordinación con otros países, de acuerdo a sus objetivos nacionales desde que existe historia escrita. Es probable que las condiciones de integración comercial y financiera alcanzadas en las últimas décadas han puesto y probablemente aumentarán el rol de la tributación internacional. Un ejemplo, la rebaja tributaria para la captación del ahorro internacional efectuada por los EE.UU. durante los primeros años de la década del ochenta para no presionar aún más al alza de los costos financieros del sector privado originados en el financiamiento de sus crecientes déficit fiscales (Avi-Yonah, 2000). Otro ejemplo más reciente, la preocupación de la Comunidad Europea por retener y proteger la base tributaria del impuesto personal para financiar su alto nivel de gasto social expresada en los ya comentados esfuerzos, por disminuir la competencia tributaria dañina, incluyendo amenazas de sanciones a los países supuestamente desleales, en instrumentos de ahorro (OECD 1998 y 2000).

Uno de los elementos importantes que determinan la relación tributaria internacional está dada por el nivel de intercambio de bienes y servicios. Tal como establecimos anteriormente, los noventa se han caracterizado por el impulso a los acuerdos comerciales regionales. No corresponde a este trabajo si estos convenios generan o no desviación de comercio o los beneficios y desventajas que ellos pudieren generar. De todas formas, en el cuadro 17 se observa un importante crecimiento del comercio intrabloque en los últimos treinta años que se ha acelerado en esta década de los acuerdos. Aunque existan diferencias relativas en las cifras de intercambio o con el uso de otros indicadores es claro que el crecimiento del comercio intrabloque no ha sido acompañado de un esfuerzo de coordinación tributaria. El anexo 5 resume las convenciones bilaterales sobre Imposición a la Renta y el Capital y/o Acuerdo para el Intercambio de Información; en este cuadro se puede fácilmente observar la falta de esfuerzo de la región en la materia. Los acuerdos bilaterales extrarregionales son casi seis veces más que los intrarregionales para los países seleccionados.

Cuadro 17

Exportaciones de Bienes dentro del Bloque

	(US$ 000 millones)				Crecimiento %
	1970	1980	1990	1998	1998 / 1970
Coop. Econo. Asia Pacífico	58	358	902	1,737	2,915
Comunidad Europea	76	457	981	1,077	1,308
NAFTA	22	102	226	522	2,263
ALADI	1.3	11.0	12.3	42.9	3,300
MERCOSUR	0.5	3.4	4.1	20.4	4,413
Grupo Andino	0.1	1.2	1.3	5.1	5,132
Mercado Común Centroamericano	0.3	1.2	0.7	2.1	617
CARICOM	0.1	0.6	0.4	1.0	1,852

Fuente: División Estadística del BID

Por último, es necesario reconocer que todo esfuerzo, incluido el actual de OECD por controlar paraísos fiscales y competencia desleal, deben contar con el apoyo de los EE.UU. que presenta estructuras de servicios públicos, en especial en salud y educación, así como en seguridad social significativamente inferiores a los europeos y por lo tanto menores niveles de presión fiscal. Su participación activa en el esfuerzo por cualquier tipo de coordinación tributaria a nivel regional adquiere aún mayor relevancia. El cuadro 18 nos provee algunas claves de la estructura de su comercio exterior. En el se observa la

importancia relativa de la región que es un poco mayor que a nivel de cuenta corriente, asimismo se confirma la participación significativa del NAFTA.

Cuadro 18

Balanza Comercial de los Estados Unidos

(Año 1997, en %)

	Importaciones Totales	Exportac. Totales	Superavit Totales	Importaciones Industriales	Exportac. Industriales	Superavit Ex. - Im. Ind.
Unión Europea (15)	18.1	20.5	2.4	14.3	17.1	2.8
Japón	14.0	9.5	-4.5	13.1	7.1	-6.0
Cooperación Econo. Asia Pacífico	37.6	29.1	-8.5	33.5	23.5	-10.0
Tigres Asiáticos [1]	8.1	6.9	-1.2	7.2	6.3	-0.9
OCDE	70.5	66.6	-3.9	56.7	51.5	-5.2
ALCA	35.2	41.3	6.1	22.5	33.8	11.3
TLCAN	29.2	32.5	3.3	20.2	26.4	6.2
ALADI	14.1	16.6	2.5	8.6	13.6	5.0
MERCOSUR	1.4	3.3	1.9	0.8	3.0	2.2
Comunidad Andina	2.6	2.3	-0.3	0.2	0.9	0.7
Merc. Común Centroamericano	1.0	1.1	0.1	0.7	0.9	0.2
CARICOM	0.2	0.5	0.3	0.1	0.4	0.3

[1] Corea, Singapur, Malasia, Hong Kong, Taiwan
REF. Total de Exportaciones de Bienes EE UU (1997) en US$686.300 millones e Importaciones por US$870.7 millones
Fuente: División Estadística del BID

Existen otros factores que pueden ser muy influyentes en el interés de los EE.UU. para liderar coordinación tributaria en la región como son la capacidad administrativa y la garantía de los derechos en los países contraparte que presentan elementos menos tangibles para su evaluación.
Por ejemplo, factores históricos que acompañan a los países de su independencia. Mientras los EE.UU. festejaban el *Boston Tea Party* bajo el principio de *no taxation without representation* en un esfuerzo por establecer un control sobre el poder que administraba, la América Ibérica se independizaba bajo el sino del descontrol administrativo generado por el período napoleónico. Sin embargo, la región ha hecho importantes sacrificios para imponerse disciplina fiscal.
Otra característica, es que en EE.UU. ha existido la garantía del imperio de la constitución y la ley mediante un poder judicial influyente desde las famosas sentencias de John Marshall en los albores del siglo XIX. Sin embargo, aunque se debe mejorar en los muchos aspectos de la administración pública y garantía de los derechos ciudadanos, la región con esfuerzo ha avanzado de manera muy significativa consolidando la democracia en los últimos años.

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Anexo 1

IVA en América Latina y el Caribe

País	Ciertas excepciones	Exportaciones	General %	Especial %
Argentina	Ciertos productos alimenticios, alquiler de propiedad de inmuebles, servicios de salud, educación, algunos productos farmaceúticos, venta de acciones, libros	Gravados a tasa 0	21	27
Barbados	Ciertos productos alimenticios y servicios financieros, servicios médicos, renta de viviendas, venta de terrenos	Gravados a tasa 0	15	0/7.5
Bolivia	Algunos servicios financieros, transferencia de valores y seguros	Gravados a tasa 0	13	No
Brasil	Algunos equipos y servicios de alta tecnología	No gravado	0-365.6	S/D
Chile	Transporte Público, ciertos seguros.	Exonerados	18	S-D
Colombia	Algunos insumos para productos médicos, vacunas y fertilizantes	Gravados a tasa 0	15	10/20/35/45
Costa Rica	Ciertos productos alimenticios	Gravados a tasa 0	13	S/D
República Dominicana	Productos agropecuarios	Gravados a tasa 0	8	S/D
Ecuador	Alimentos básicos (leche, cereales, huevos, etc.), servicios médicos	Gravados a tasa 0	12	S/D
El Salvador	Alimentos básicos, servicios médicos, educación	Gravados a tasa 0	13	S/D
Guatemala	Servicios y transacciones específicas	Gravados a tasa 0	10	S/D
Guyana	S/D	S/D	S/D	S/D
Honduras	Productos alimenticios, farmaceúticos y combustibles; productos y equipos agrícolas; impresos, productos escolares; servicios financieros, educativos, servicios de salud y transporte, seguro	Gravados a tasa 0	12	15
Jamaica	Servicios Financieros, médico y dental alquiler de propiedades, pasajes, productos alimenticios	Gravados a tasa 0	15	0

IVA en América Latina y el Caribe (Cont.)

País	Ciertas excepciones	Exportaciones	General %	Especial %
Mexico	Venta de propiedad inmueble, libros, matrícula escolares, intereses ganados en transacciones con instituciones financieras; servicios médicos; ventas de acciones y valores.	Gravados a tasa 0	15	10
Nicaragua	Importaciones de productos alimenticios, farmaceúticos, productos y equipos agrícolas; impresos, agua y energía eléctrica; servicio médico, educación, servicios de transporte y financiero; seguro	Gravados a tasa 0	15	5/6
Panamá	Productos alimenticios, combustible, artículos escolares, productos farmaceúticos, servicios	Gravados a tasa 0	5	-
Paraguay	Importacioness; transferencia de valores y otros instrumentos financieros; combustibles; propiedad inmobiliaria; servicios financieros; cierto tipo de intereses	Exentos	10	S/D
Perú	Ciertos productos básicos, productos alimenticios, libros, lanas	Gravados a tasa 0	18	S/D
Trinidad & Tobago	Ciertos productos alimenticios y servicios financieros, médicos y dental, alquileres de propiedades	Gravados a tasa 0	15	0
Uruguay	Ciertos productos alimenticios, renta y venta de propiedad inmueble, servicios financiero, venta de moneda extranjera, combustible	Gravados a tasa 0	23	14
Venezuela	Ciertos productos agrícolas y alimenticios, educación, combustible, servicios de salud	Gravados a tasa 0	15.5	-

Fuente: Miguel Valdés y Carlos Casanovas, Ernst & Young LLP, New York y Amparo Mercader PriceWaterhouseCoopers.

Anexo 2

Incentivos Tributarios a la Inversión Vigentes – Países Seleccionados	
Argentina	1.Tierra del Fuego (1972) Zona Franca; 2.Provincias menos desarrolladas: San Luis, San Juan, Catamarca y La Rioja (1984). Beneficios similares a los de Tierra del Fuego pero limitado a "cupos" presupuestales anuales; 3. Industria del papel (1974); 4. Industria petroquímica; 5. Minería y Forestal (1992); 6. Industria automotriz
Brasil	1. Zonas Francas (Export Processing Zones tales como Manaos). 2. Para el desarrollo regional vía fondos hasta el año 2010 hasta el 40% del impuesto a la renta en una serie de actividades. 3. Crédito fiscal del 15% en desarrollo e investigación más depreciación acelerada y exoneración del IPI (impuesto a las ventas). 4. Para la promoción de exportaciones con exoneración de impuestos indirectos en insumos e impuesto de renta
Chile	1. Zonas Francas industriales y comerciales. Exoneración parcial del impuesto a la renta e impuestos indirectos. 2. Crédito fiscal o depreciación acelerada de gastos en investigación y desarrollo. 3. Promoción de exportaciones por devolución de impuestos indirectos. 4. Crédito de 10 a 40% de la inversión en activos fijos en proyectos en determinadas industrias (turismo, industrial, etc.)
Colombia	A. Desastres Naturales: 1. Nevado de Ruiz (1986); 2. Rio Paez (1992); 3. Quimbaya B. Incentivos a Industrias Específicas: 1. Editoriales—libros, revistas y periódicos; 2. Transporte Internacional—exoneración de rentas y valor agregado; 3. Equipos Deportivos—sin fines de lucro y exonerados de renta. 4. Empresas de Servicios Públicos—agua y saneamiento, electricidad, etc. C. Incentivos a la Exportación: 1. Zonas Industriales de Exportación; 2. Zona Franca Comerciales: La Isla de San Andrés y la Guajira; 3. Plan Vallejo/Certs: Créditos Tributarios sobre el Valor de Exportación. D. Excenciones de Ganancias de Capital a la Venta de Acciones y Compañías Cotizantes en Bolsa.
Costa Rica	A. Incentivos Vigentes pero Limitados por la Reforma del 92: 1.Certificado de Crédito de Exportación que son basados en el valor de las exportaciones Fob; 2. Crédito a la Inversión Hotelera, crédito fiscal hasta el 50% de la inversión y exoneración del impuesto a la renta; 3. Incentivos Forestales hasta un 100% de las reinversiones en los proyectos forestales. B.Incentivos Vigentes: 1. Zonas Francas, Manufactureras para Exportación, de Exportación de Servicios de Investigación Científica y Construcción y Reparación de Naves y Aeronaves; 2. Duty Drawback incluye también la excención del Iva en las compras de plaza; 3. Incentivo a la Industria Forestal; 4.Incentivos a la agricultura, excención de aranceles en equipos y maquinaria de impuesto a la renta; 5. Incentivos a la industria turística y las compañías de electricidad.

Incentivos Tributarios a la Inversión vigentes – Países Seleccionados. Cont.	
México	A. Maquiladoras: aproximadamente tres mil empresas y un millón de trabajadores. Tiene exoneración de aranceles y valor agregado en las importaciones. Los proveedores de las maquilas reciben tratamiento de iva tasa cero en sus ventas. B. Crédito de investigación y desarrollo hasta un 20% de los gastos. C. Beneficio a la agricultura, industria pesquera y forestal, y editoriales, reducción de hasta un 50% del impuesto a la renta. D. Regímenes simplificado desde 1991 basado en el flujo de cajaafecta al 15% del producto bruto mexicano. E. Compañías aseguradoras. Diferimiento indefinido en el tiempo de las ganancias por inflación a la vez que permite deducción inmediata de las pérdidas por inflación. F. Consolidación, similar a las reglas de la OCDE
Perú	A. La ley de Amazonía. Excenciones de valor agregado, impuesto a la renta, impuesto selectivo y aranceles para empresas situadas en la región amazonica. B. CETICO, excención de valor agregado, impuesto a la renta, impuesto selectivo y aranceles en determinadas zonas fronterizas como ser Ilo, Tacna y Paita entre otras operan como zonas francas, industriales y comerciales. C. Contratos de estabilidad, requieren ciertos criterios como ser monto de la inversión, montos de salarios pagos y aseguran por 10 años que las bases y las tasas de cálculo de los impuestos no pueden se modificadas. D. Incentivos a la actividad minera, contrato de estabilidad minera iguales a los anteriores pero por 12 años. E. Contratos mineros en general incluye depreciaciones aceleradas, deferimiento indefinido de la repatriación de dividendo. Exención de los impuesos a los activos, entre otros. Incluye además beneficio especiales para la exploración de hirdrocarburos y gas natural. Existen además incentivos tributarios especiales para para la exploración y explotación de hidrocarburos y gas natural.
Uruguay	A. Deducción de reinversiones (40% para maquinaria y equipos, 20% para inmuebles), depreciación acelerada para determinados bienes (computadoras, maquinaria agrícola, etc.), deducción extra del 50% de los gastos en capacitación de personal. B. Ley de Promoción Industrial (Leyes 14178 y 16906) exoneración de renta por siete años y de aranceles selectivos e iva en las importaciones de equipo. Aproximadamente 2500 empresas en 25 años recibieron este beneficio. C. Leyes Forestales (Leyes 13723 y 15939). Proyectos forestales son exonerados de todo impuesto incluyendo seguridad social e impuestos a la propiedad inmueble. D. Admisión temporaria y Duty draw-back. Dentro de los límites del acuerdo del Mercosur la admisión temporaria será eliminada en el año 2001 para exportaciones al Mercosur pero no para terceros países. E. Zonas Francas. Uruguay tiene Zona Franca desde 1913, actualmente existen ocho zonas francas de servicios en funcionamiento, especialmente financieros, profesionales y comerciales, con las ventajas de exoneración de todos los impuestos internos excepto la seguridad social, a los efectos del Mercosur se los considera como extraterritoriales

Fuente: Resumen de Byrne, Peter y Reuven Avi Yonah, Incentivos Tributarios a la Inversión en América Latina (2001) primer borrador.

Anexo 3

Evolución de la Presión Tributaria en América Latina y el Caribe (países seleccionados)

	Argentina[1]			Brasil[2]			México[3]			Venezuela[4]			Colombia[5]		
	1984	1998	Difer.	1984	1997	Difer.	1984	1998	Difer.	1984	1997	Difer.	1984	1997	Difer.
Ingresos Tributarios	20.6	20.1	-0.5	24.3	29.9	5.6	20.4	25.1	4.7	24.0	29.9	5.9	16.0	25.0	9.0
Comercio Exterior	1.4	0.8	-0.6	0.5	0.7	0.2	0.6	0.7	0.1	1.2	1.6	0.4	1.3	1.0	-0.3
Aranceles	0.1	0.8	0.7	0.5	0.7	0.2	0.6	0.7	0.1	1.2	1.6	0.4	1.2	1.0	-0.2
Imp. s/ Exportaciones	1.3	0.0	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.1
Sobre Venta	10.4	10.3	-0.1	8.6	9.4	0.8	5.8	5.3	-0.5	2.1	6.4	4.3	4.9	7.2	2.3
IVA[1]	5.0	8.5	3.5	5.6	7.1	1.5	3.4	3.2	-0.2	0.0	4.4	4.4	2.0	6.4	4.4
Específicos	5.4	1.8	-3.6	3.0	2.3	-0.7	2.4	2.1	-0.3	2.1	2.0	-0.1	0.8	0.8	0.0
Renta	0.7	2.9	2.2	4.8	5.2	0.4	4.4	4.5	0.1	2.6	2.0	-0.6	3.1	4.4	1.3
Persona Física	n.a.	n.a.	n.a.	n.a	3.6	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Persona Jurídica	n.a.	n.a.	n.a.	n.a	1.6	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Seguridad Social	3.6	3.5	-0.1	5.1	9.9	4.8	2.1	3.2	1.1	0.3	0.8	0.5	2.4	7.3	4.9
Otros Impuestos	4.5	2.6	-1.9	5.3	4.7	-0.6	7.5	11.4	3.9	17.8	19.1	1.3	4.3	5.1	0.8
Recursos Naturales	0.0	0.1	0.1	0.0	0.0	0.0	6.1	5.5	-0.6	16.6	15.7	-0.9	0.3	0.6	0.3
Otros	4.5	2.5	-2.0	5.3	4.7	-0.6	1.4	5.9	4.5	1.2	3.4	2.2	4.0	4.5	0.5

[1] Incluye Impto. s/Ventas Provincial en IVA
[2] Incluye Impto. s/Ventas
[3] Incluye el superavit de PEMEX y la regalía petrolera en Recursos Naturales
[4] Incluye la regalía petrolera y el superavit the PDVSA
[5] Incluye el superavit de ECOPETROL y el Fondo del Cafe

Cuadro Continuación

	Chile[6]			Costa Rica			Uruguay			Perú[7]			Bolivia[8]		
	1984	1998	Difer.	1986	1998	Difer.	1984	1998	Difer.	1985	1998	Difer.	1987	1998	Difer.
Ingresos Tributarios	27.4	23.0	-4.4	21.4	23.1	1.7	21.6	30.2	8.6	15.7	14.4	-1.3	19.9	18.3	-1.6
Comercio Exterior	3.3	1.5	-1.8	5.4	2.1	-3.3	2.3	1.2	-1.1	3.3	1.3	-2.0	4.6	1.4	-3.2
Aranceles	3.3	1.5	-1.8	2.9	1.8	-1.1	1.9	1.2	-0.7	3.0	1.3	-1.7	4.6	1.4	-3.2
Imp. s/ Exportaciones	0.0	0.0	0.0	2.5	0.3	-2.2	0.4	0.0	-0.4	0.3	0.0	-0.3	0.0	0.0	0.0
Sobre Venta	12.6	11.3	-1.3	6.3	10.2	3.9	9.6	12.6	3.0	8.6	8.5	-0.1	4.3	8.2	3.9
IVA	9.6	8.9	-0.7	3.5	6.5	3.0	5.9	8.6	2.7	2.6	5.3	2.7	3.4	6.9	3.5
Específicos	3.0	2.4	-0.6	2.8	3.7	0.9	3.7	4.0	0.3	6.0	3.2	-2.8	0.9	1.3	0.4
Renta	3.4	3.9	0.5	2.9	3.3	0.4	1.8	3.4	1.6	2.2	3.2	1.0	0.6	0.9	0.3
Persona Física	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a
Persona Jurídica	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a	n.a.	n.a.	n.a
Seguridad Social	3.0	1.4	-1.6	5.8	6.3	0.5	4.5	6.7	2.2	0.5	0.7	0.2	0.2	0.2	0.0
Otros Impuestos	5.1	4.9	-0.2	1.0	1.2	0.2	3.4	6.3	2.9	1.1	0.7	-0.4	10.2	7.6	-2.6
Recursos Naturales	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	-0.6	7.5	4.6	-2.9
Otros	4.7	4.5	-0.2	1.0	1.2	0.2	3.4	6.3	2.9	0.4	0.6	0.2	2.7	3.0	0.3

[6] Incluye la renta de CODELCO (cobre) en Recursos Naturales
[7] Ingresos de contratos mineros e hidrocarburos
[8] Ingresos de YPFB

Cuadro Continuación

	Ecuador[9]			Guatemala[10]			Trinidad y Tobago[11]			Barbados[12]		
	1986	1997	Difer.	1985	1998	Difer.	1985	1997	Difer.	1985	1998	Difer.
Ingresos Tributarios	16.9	23.6	6.7	7.8	10.2	2.4	30.7	26.1	-4.6	35.6	37.7	2.1
Comercio Exterior	2.9	2.3	-0.6	1.2	1.4	0.2	2.9	1.7	-1.2	6.5	2.8	-3.7
Aranceles	2.9	2.3	-0.6	0.9	1.4	0.5	2.9	1.7	-1.2	6.5	2.8	-3.7
Imp. s/ Exportaciones	0.0	0.0	0.0	0.3	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
Sobre Venta	3.8	7.4	3.6	3.4	5.6	2.2	3.3	7.6	4.3	9.6	15.1	5.5
IVA	2.8	3.9	1.1	2.1	4.0	1.9	2.3	4.5	2.2	5.8	10.0	4.2
Específicos	1.0	3.5	2.5	1.3	1.6	0.3	1.0	3.1	2.1	3.8	5.1	1.3
Renta	1.7	2.0	0.3	1.3	1.9	0.6	10.3	8.7	-1.6	10.3	9.3	-1.0
Persona Física	n.a.	n.a.	n.a	0.5	n.a.	n.a	7.3	n.a.	n.a	7.3	5.5	n.a
Persona Jurídica	n.a.	n.a.	n.a	0.8	n.a.	n.a	3.0	n.a.	n.a	3.0	3.8	n.a
Seguridad Social	1.6	2.3	0.7	0.2	0.3	0.1	0.4	0.8	0.4	4.5	5.6	1.1
Otros Impuestos	6.9	9.6	2.7	1.7	1.0	-0.7	13.8	7.3	-6.5	4.7	4.9	0.2
Recursos Naturales	5.3	3.5	-1.8	0.0	0.0	0.0	9.7	4.3	-5.4	0.0	0.0	0.0
Otros	1.6	6.1	4.5	1.7	1.0	-0.7	4.1	3.0	-1.1	4.7	4.9	0.2

[9,10,11,12] Incluye Impto. s/Ventas

Anexo 4

Definiciones de la OCDE

Competencia Tributaria Desleal

Factores para identificar un Paraíso Fiscal

- Exención/Tasa exclusivamente nominal de impuesto.
- No existe un efectivo intercambio de información con otras jurisdicciones fiscales.
- Nula transparencia en la aplicación del impuesto.
- Ausencia de ventajas económicas, o de un marco legal o comercial que permitan atraer la inversión, si no fuera por el marco tributario.

Factores para determinar un Régimen Tributario Preferencial Dañino

- Exención/Bajas tasas efectivas de impuesto.
- Regímenes especiales diferenciados ("ring fencing").
- No existe un efectivo intercambio de información con otros fiscos.
- Nula transparencia en la aplicación del impuesto.

Otras características:
- Nula adherencia a principios internacionales sobre Precios de Transferencia
- Bases y tasas de imposición sujetas a negociación ("soak-up" taxes).

Prácticas Tributarias

Competencia Tributaria Desleal:

- Implementación de reglas anti-diferimiento de impuestos.
- Restringir esquemas de exención a fuentes de ingreso ubicadas en el extranjero.
- Aplicación de reglas que permitan obtener información sobre transacciones internacionales.
- Estricta aplicación de reglas internacionales sobre precios de transferencia.
- Acceso a información bancaria para efectos fiscales.
- Introducción de disposiciones que permitan limitar los beneficios negociados en los tratados internacionales para evitar la doble imposición (TIDI)
- Coordinación internacional de operaciones de auditoría

Anexo 5

Convención (Bilateral) sobre Imposición a la Renta y el Capital y/o Acuerdo para el Intercambio de Información

Año del vigencia del último acuerdo (19XX) - Países Seleccionados

	Argentina	Bolivia	Brasil	Chile	Colombia	Co. Rica	Ecuador	Guatemala	Honduras	México	Nicaragua	Panamá	Paraguay	Perú	Rep. Dom.	T & T	Uruguay	Venezuela
Argentina		76	80	76														
Bolivia	76																	
Brasil	80						83											
Chile	76									98								
Ecuador			83															
México				98			92											97
Trinidad y Tobago																		96
Venezuela										97						96		
Número	*3*	*1*	*2*	*2*	*0*	*0*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*2*

	Argentina	Bolivia	Brasil	Chile	Colombia	Co. Rica	Ecuador	Guatemala	Honduras	México	Nicaragua	Panamá	Paraguay	Perú	Rep. Dom.	T & T	Uruguay	Venezuela
Alemania	78	92	75			93				93						73	87	95
Australia	99																	
Austria	79		75															
Bélgica	96		72							92								93
Canada	93		84	78						90					76	95		
Corea del Sur			89							94								
Dinamarca	95		74							97						69		
España	92	97	74							92								
EEUU	81		67	93	93	89	91		90	92	38			90	89	70		99
Francia		94	71				89			91		95				87		92
Holanda	96		90							93		97						91
Israel																		
Italia	79		78				84			91						71		90
Japón			76							96								
Portugal			71															96
Reino Unido	96	94	67							94						82		96
Suecia	95	94	75							92				66		84		93
Suiza	97						94			93						73		96
Número	*13*	*5*	*15*	*2*	*1*	*2*	*4*	*0*	*1*	*14*	*1*	*2*	*0*	*2*	*2*	*9*	*1*	*10*

Fuente: Tax Analysts, Worldwide Tax Treaties

GLOBALIZATION AND TAX COMPETITION: IMPLICATIONS FOR DEVELOPING COUNTRIES

By
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The current age of globalization can be distinguished from the previous one (from 1870 to 1914) by the much higher mobility of capital than labor (in the previous age, before immigration restrictions, labor was at least as mobile as capital). This increased mobility has been the result of technological changes (the ability to move funds electronically), and the relaxation of exchange controls. The mobility of capital has led to tax competition, in which sovereign countries lower their tax rates on income earned by foreigners within their borders in order to attract both portfolio and direct investment. Tax competition, in turn, threatens to undermine the individual and corporate income taxes, which remain major sources of revenue (in terms of percentage of total revenue collected) for all modern states.

The response of both developed and developing countries to these developments has been first, to shift the tax burden from (mobile) capital to (less mobile) labor, and second, when further increased taxation of labor becomes politically and economically difficult, to cut government services. Thus, globalization and tax competition lead to a fiscal crisis for countries that wish to continue to provide those government services to their citizens, at the same time that demographic factors and the increased income inequality, job insecurity and income volatility that result from globalization render such services more necessary.

This paper argues that if government service programs are to be maintained in the face of globalization, it is necessary to cut the intermediate link by limiting tax competition. However, from both practical and normative considerations, any limits set to tax competition should be congruent with maintaining the ability of democratic states to determine the desirable size of their government.

International Tax Competition and the Taxation of Capital

From its beginnings late in the 19th century, the modern state has been financed primarily by progressive income taxation. The income tax differs from other forms of taxation (such as consumption or social security taxes) in that in theory it includes income from capital in the tax base, even if it is saved and not consumed. Because the rich save more than the poor, a tax that includes income from capital in its base is more progressive (taxes the rich more heavily) than a tax that excludes income from capital (e.g., a consumption tax or a payroll tax). However, the ability to tax saved income from capital (i.e., income not vulnerable to consumption taxes) is impaired if the capital can be shifted overseas to jurisdictions where it escapes taxation.

Two recent developments have dramatically augmented the ability of both individuals and corporations to earn income overseas free of income taxation: The effective end of withholding taxation by developed countries, and the rise of production tax havens in developing countries. Since the U.S. abolished its withholding tax on interest paid to foreigners in 1984, no major capital importing country has been able to impose such a tax for fear of driving mobile capital elsewhere (or increasing the cost of capital for domestic borrowers, including the government itself). The result is that individuals can generally earn investment income free of host country taxation in any of the world's major economies. Moreover, even developed countries find it exceedingly difficult to effectively collect the tax on the foreign income of their individual residents in the absence of withholding taxes imposed by host countries, because the investments can be made through tax havens with strong bank secrecy laws.

Developing countries, with much weaker tax administrations, find this task almost impossible. Thus, cross-border investment income can largely be earned free of either host or home country taxation.

For example, consider a wealthy Mexican who wishes to earn tax-free interest income from investing in the bonds of an American corporation. All he needs to do is set up, for a nominal fee, a Cayman Islands corporation to hold the bonds. The interest payments are then made to the Caymans corporation without any U.S. tax withheld under the so-called "portfolio interest exemption." The individual does not report the income to the Mexican tax authorities, and they have no way of knowing that the Caymans corporation is effectively an "incorporated pocketbook" of the Mexican resident. Nor are the exchange of information provisions of the U.S.-Mexico tax treaty of any help, because the IRS has no way of knowing that the recipient of the interest payments is controlled by a Mexican resident and therefore cannot report this to the Mexican authorities. As a result, the income is earned completely free of tax (the Caymans, of course, impose no income taxes of their own).

When we switch our attention from passive to productive investment, a similar threat to the taxing capacity of both home and host jurisdictions emerges. In the last decade, competition for inbound investment has led an increasing number of countries (103, as of 1998) to offer tax holidays specifically geared to foreign corporate investors. Given the relative ease with which an integrated multinational can shift production facilities in response to tax rates, such "production tax havens" enable multinationals to derive most of their income abroad free of host country taxation. Moreover, most developed countries (including the U.S.) do not dare impose current taxation (or sometimes any taxation) on the foreign source business income of their resident multinationals, for fear of reducing the competitiveness of those multinationals against multinationals of other countries. If they did, new multinationals could be set up as residents of jurisdictions that do not tax such foreign source income. Thus, business income can also be earned abroad largely free of either host or home country taxation.

For example: Intel Corporation, a top 10 multinational, has operations in more than 30 countries around the globe. The company states that "[a]n Intel chip developed at a design center in Oregon, might be manufactured at a wafer fabrication facility in Ireland, packaged and tested in Malaysia, and then sold to a customer in Australia. Another chip might be designed in Japan, fabricated in Israel, packaged and tested in Arizona, and sold in China." Specifically, outside the United States, Intel has major manufacturing facilities in Puerto Rico, China, Malaysia, the Philippines, Ireland, and Israel. Thus, outside the United States, all of Intel's manufacturing facilities are located in countries granting tax holidays. Nor does Intel pay current U.S. tax on its income from those foreign operations, because under U.S. law, active income earned by foreign subsidiaries of U.S. multinationals is not taxed until it is repatriated in the form of dividends, which Intel can delay for many years. Thus, the effective tax rate on Intel's foreign source income is far below the nominal U.S. corporate rate of 35%.

If income from capital can escape the income tax net, the tax becomes in effect a tax on labor. Several empirical studies have in fact suggested that in some developed jurisdictions the effective tax rate on income from capital approaches zero, and tax rates on capital have tended to go down sharply since the early 1980s (when exchange controls were relaxed). As a result, countries that used to rely on the revenues from the income tax are forced to increase relatively regressive taxes. The two fastest growing taxes in OECD member countries in recent years have been consumption taxes (from 12% of total revenues in 1965 to 18% in 1995) and payroll taxes (from 19% to 27%), both of which are more

regressive than the income tax. Over the same period, the personal and corporate income taxes have not grown as a percentage of total revenues (the personal income tax accounted for 26% of total revenues in 1965 and 27% in 1995, while the figures for the corporate income tax are 9% and 8% respectively). The total tax revenue as a percentage of GDP in developed countries went up sharply during the same period (from an average of 28% in 1965 to almost 40% in 1994), and this increase is largely accounted for by the rise of consumption and payroll taxes. Moreover, there is evidence that as the degree of openness of an economy in OECD member countries increases, taxes on capital tend to go down while taxes on labor go up (the income tax is imposed on both capital and labor, so that its stability may mask this trend).

The same trends can be observed in developing countries as well. In non-OECD member countries (outside the Middle East) total government revenues as a share of GDP rose from an average of 18.8% in 1975-80 to 20.1% in 1986-92. This growth was financed primarily by the growth of revenues from the VAT in the same period (from 25.5% of total revenues to 31.8%). At the same time, revenues from both the individual and the corporate income tax were flat or declined.

Tax Competition and the Developing Countries

The drawbacks of tax competition for developed countries are relatively clear, because such countries have an elaborate social insurance safety net that requires a high level of government expenditure and that is threatened by tax competition. But how does tax competition affect developing countries?

First, it should be pointed out that developing countries need the revenues at least as much as developed countries do, if not more. A common misperception is that only OECD member countries are confronted by a fiscal crisis as a result of the increasing numbers of elderly people in the population. In fact, the increase in dependency ratios (the ratio of the elderly to the working population) is expected to take place in other geographic areas as well, as fertility rates go down and health care improves. Outside the OECD and the transition economies, the dependency ratio starts in the single digits in the 1990s, but rises to just below 30% by 2100. Moreover, while outside the OECD and the transition economies direct spending on social insurance is much lower, other forms of government spending (e.g., government employment) effectively fulfill a social insurance role. In Latin America, for example, direct government spending on social insurance is much lower than indirect spending through government employment and procurement programs.

Moreover, it seems strange to argue that developing countries need tax revenues less than developed countries because they have less developed social insurance programs. If one accepts the normative case for social insurance, it applies to developing countries with even greater force because of widespread poverty, which means that losing a job can have much direr consequences. But the need for revenues in developing countries goes far beyond social insurance. In some developing countries revenues are needed to insure the very survival of organized government, as the Russian experience demonstrates. In other, more stable developing countries revenues are needed primarily to provide for adequate education (investment in human capital), which many regard as the key to promoting development. For example, the UN has estimated that for only $30-$40 billion, all people in the world

can obtain basic social services (such as elementary education). Given current trends in foreign aid, most of these funds have to come from developing country governments.

Second, the standard advice by economists to small open economies is that they should refrain from taxing foreign investors, because such investors cannot be made to bear the burden of any tax imposed by the capital importing country. Therefore, the tax will necessarily be shifted to less mobile factors in the host country, such as labor and/or land, and it is more efficient to tax those factors directly. But while this argument seems quite valid as applied to portfolio investment, it seems less valid in regard to FDI, for two reasons. First, the standard advice does not apply if a foreign tax credit is available in the home country of the investor, which frequently would be the case for FDI. Second, the standard advice assumes that the host country is small. However, an extensive literature on multinationals suggests that typically they exist in order to earn economic rents. In that case, the host country is no longer "small" in the economic sense. That is, there is a reason for the investor to be there and not elsewhere. Therefore, any tax imposed on such rents (as long as it is below 100%) will not necessarily drive the investor to leave even if it is unable to shift the burden of the tax to labor or landowners.

This argument clearly holds in the case of rents that are linked to a specific location, such as natural resources or a large market. But what if the rent can be earned in a large number of potential locations? In this case, the host country will not be able to tax the rent if the multinational can credibly threaten to go elsewhere, although once the investment has been made the rent can be taxed. This situation, which is probably the most common, would require coordinated action to enable all host countries to tax the rent earned within their borders. Some possibilities for such action are described below.

This relates to the final argument, which is that host countries need to offer tax incentives to be competitive. An extensive literature has demonstrated that taxes do in fact play a crucial role in determining investment location decisions. But all of these studies emphasize that the tax incentives are crucial *given the availability of such incentives elsewhere.* Thus, it can be argued that given the need for tax revenues, developing countries would in general prefer to refrain from granting tax incentives, if only they could be assured that no other developing country would be able to grant such incentives.

Thus, restricting the ability of developing countries to compete in granting tax incentives does not truly restrict their autonomy or counter their interests. That is the case whenever they grant the incentive only for fear of competition from other developing countries, and would not have granted it but for such fear. Whenever competition from other countries drives the tax incentive, eliminating the competition does not hurt the developing country, and may aid its revenue raising efforts (assuming it can attract investment on other grounds, which is typically the case). Moreover, under the proposals described below, developing countries remain free to lower their tax rates generally (as opposed to granting specific tax relief aimed at foreign investors).

What Can Be Done About Tax Competition?

The tax competition problem is thus essentially a problem of coordination and trust. Each jurisdiction would prefer to tax investors from abroad to gain the revenue, but is afraid that by doing so it

would drive the investors to other jurisdictions that do not tax them. If there was a way to coordinate actions among the relevant jurisdictions, they all could gain added revenues without running the risk of losing the investment.

A good illustration of how this dynamic works is the history of German taxation of interest income. In 1988, Germany introduced a 10% withholding tax on interest paid to bank depositors, but had to abolish it within a few months because of the magnitude of capital flight to Luxembourg. In 1991, the German Federal Constitutional Court held that withholding taxes on wages but not on interest violated the constitutional right to equality. The government thereupon reintroduced the withholding tax on interest, but made in inapplicable to non-residents. Non-residents may, however, be Germans investing through Luxembourg bank accounts. To cope with this problem, the Germans have led an EU effort to introduce a 20% withholding tax on all interest payments to EU residents. However, both Luxembourg and the United Kingdom have so far blocked the adoption of this plan, arguing that it will lead to a flight of investors to Switzerland or the United States.

Thus, the key to finding a solution to the tax competition problem is to attack it on a broad multilateral basis, through an organization such as the OECD. Under current conditions, the OECD is the natural choice for leading such coordinated actions against tax competition, for three reasons. First, for individual investors to earn decent returns on their capital without incurring excessive risks, they need to invest in an OECD member country. Tax havens do not offer adequate investment opportunities, and developing countries are generally considered too risky for portfolio investment (other than through mutual funds, which do not offer tax avoidance opportunities). Thus, if all OECD members enforced taxation of portfolio investment, it could be subject to tax without requiring cooperation from the tax havens.

Second, about 85% of the world's multinationals are headquartered in OECD member countries. This is likely to continue to be the case for a while, because OECD members offer stable corporate and securities law protection to investors that is lacking in other countries. Thus, if all OECD members agreed on a coordinated basis to tax their multinationals currently on their income from abroad, most of the problem of tax competition from direct investment could be solved.

Third, the OECD has the required expertise (its model tax treaty is the global standard) and has already started on the path of limiting tax competition. In 1998, it adopted a report entitled "Harmful Tax Competition: An Emerging Global Issue." This report is somewhat limited, because it only addresses tax competition for financial activities and services (as opposed to, e.g., Intel's manufacturing plants). It also does not address the taxation of investment income. But it represents an extremely useful first step, and proof that a consensus can be reached on the tax competition issue (Switzerland and Luxembourg abstained, but did not dare veto the adoption of the report by the other 27 members of the OECD).

The OECD makes a useful distinction between tax competition in the form of generally applicable lower tax rates, and tax regimes designed to attract foreign investors. This distinction is both normatively and pragmatically sound: Restricting tax competition should not and cannot mean that voters in democratic countries lose their right to determine the size of the public sector through general tax increases or reductions. But it does mean that countries should not provide windfalls for foreign investors at the expense of the ability of other countries to provide those public services their residents desire.

Such limitations are particularly appropriate because those foreign investors themselves often reside in countries providing a high level of services, and yet refuse to pay the tax price that providing such services entails.

Depending on the OECD for solving the tax competition problem suffers from one major drawback: Developing countries are left out, and may perceive actions by the OECD as a cartel of rich countries operating at their expense. In fact, as pointed out above, it is unlikely that tax competition benefits developing countries, who can also use the tax revenues they give up to attract foreign investors. If all developing countries could be prevented from competing in this fashion, they all could gain. But in the longer run, it may be better to entrust the fight against harmful tax competition to the WTO, in which developing countries are adequately represented. This would also solve the problem of what to do about the 15% of multinationals who are not headquartered in OECD member countries (a percentage that can be expected to grow if the OECD indeed moves to restrict tax competition for its multinationals).

To sum up: As a result of globalization and tax competition, tax rules can no longer be set by countries acting unilaterally or by bilateral tax treaties. In a world in which capital can move freely across national borders and multinationals are free to choose among many investment locations, the ability of any one country (or any two countries in cooperation) to tax (or otherwise regulate) such capital is severely limited. Any such unilateral attempt will be undercut by other countries, and will probably not be even attempted in the name of preserving national competitiveness. Thus, a multilateral solution is essential if the fundamental goals of taxation or other regulation are to be preserved. Private market activities that span the globe can only be regulated or taxed by organizations with a similar global reach.

This paper has attempted to outline some of the ways in which such global governance can be achieved in the area of capital income taxation. Achieving this goal will not be easy, given the expected resistance of both private actors eager to preserve their freedom from taxation and of governments concerned about preserving their sovereign ability to set their own tax rules. But it is not impossible. Moreover, since preserving the ability of nations to tax income from capital is essential to the achievement of several crucially important goals (like the preservation and development of adequate government services to the poor), it must be tried.

REVIEW AND COMPARISON OF PRICING REGULATIONS LATIN AMERICA, THE UNITED STATES AND OECD GUIDELINES

By

Luis Coronado

I. OECD Transfer Pricing Guidelines

A. Introduction

The Organisation for Economic Cooperation and Development (OECD) is an international organization whose 30 members include most industrialized countries.[1] The OECD is organized in committees of member country representatives; the OECD's main tax policy body is the Committee on Fiscal Affairs (CFA) and is governed by a Council of member representatives. One of the objectives of the OECD has been to strive to build an international consensus on principles of international taxation.

As part of its efforts to minimize conflicts among taxing jurisdictions, the OECD has published several reports dealing with transfer pricing issues. The first report, *Transfer Pricing and Multinational Enterprises*, was issued in 1979. This was followed by three additional reports that tackled specific topics within the context of transfer pricing: *Transfer Pricing for Multinational Enterprises -- Three Taxation Issues* (1984), *Thin Capitalization* (1987) and *Tax Aspects of Transfer Pricing within Multinational Enterprises: The United States' Proposed Regulations* (1993). In 1995, the OECD revised the 1979 report, replacing it with *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* (hereinafter OECD Guidelines). The 1995 document, which was updated in 1996, 1997, 1998 and 1999, expand and clarify many of the concepts enunciated in the 1979 report.

Transfer prices are the prices at which an enterprise transfers tangible or intangible property, provides services or financing to related enterprises. For tax purposes, the existence of significant economic relations between the parties involved in a transaction is not irrelevant. In the case of transactions between related enterprises, external market forces might not directly determine the commercial and financial relations of the related parties -as happens in uncontrolled transactions[2]- and, in addition, the controlled transaction[3] might be designed to reduce or avoid tax by shifting or distorting income, deductions, credits or allowances. The aim of transfer pricing regulations is to reflect the arm's length result a controlled taxpayer must obtain, placing that controlled taxpayer on a tax parity with an uncontrolled taxpayer, thus obtaining a fair allocation of the tax base.

The OECD Guidelines constitute the international standard that OECD member countries have agreed should be used in analyzing transfer pricing issues between multinational enterprises and tax administrations. It is important to note at the outset, however, that the OECD Guidelines are not binding on OECD member countries although member countries are encouraged to follow them when analyzing transfer prices between related parties.[4] The purpose of the transfer pricing recommendations is to ensure that taxpayers clearly reflect income attributable to transactions carried out with associated parties (controlled transactions) as if the transactions were carried out with independent companies under normal market conditions. In other words, to ensure that transactions between related parties adhere to the arm's length principle.

The OECD Guidelines are divided into eight chapters and a glossary. Chapter I, *The Arm's Length Principle,* discusses that principle and its status as the international standard and includes guidelines for its application. Chapter II, *Traditional Transaction Methods*, explains the application of the Comparable Uncontrolled Price method (CUP), the Resale Price method (RPM) and the Cost Plus method (CP). Chapter III, *Other Methods,* describes the two methods that may be used when the traditional transactional methods cannot be used, *i.e.*, the Profit Split Method (PSM) and the Transactional Net Margin Method (TNMM). Chapter IV, *Administrative Approaches to Avoiding and Resolving Transfer Pricing Disputes,*

[1] The OECD member countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Korea, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.
[2] Uncontrolled transactions are transactions between enterprises that are independent with respect to each other.
[3] Controlled transactions are transactions between enterprises that are associated enterprises with respect to each other.
[4] The OECD also has a program that encourages non-member countries to follow the Guidelines.

details penalties, corresponding adjustments, procedures to avoid double taxation, simultaneous examinations, safe harbors, advance pricing agreements (APAs) and arbitration. Chapter V, *Documentation,* establishes the type of information that taxpayers should maintain when setting transfer prices. Chapter VI, *Special Considerations for Intangible Property,* sets out the most important facts and circumstances that should be taken into consideration for transfers of intangible property. Chapter VII, *Special Considerations for Intra-Group Services,* defines the characteristics of different types of intra-group services. Chapter VIII, *Cost Contribution Arrangements,* discusses those types of arrangements between two or more associated enterprises. The Annex, *Guidelines for Conducting Advance Pricing Arrangements under the Mutual Agreement Procedure (MAP APAs),* provides guidance to tax administrations about conducting MAPs that involve APAs. The Glossary defines important transfer pricing terms that are used throughout the OECD Guidelines.

As noted below, the OECD Guidelines are premised on Article 9 of the OECD Model Tax Convention. That article deals with the taxation of profits of associated enterprises and adjustments to those profits when transactions between associated enterprises (parent and subsidiary companies and companies under common control) are not made on arm's length terms. A number of countries with transfer pricing legislation (*e.g.*, Argentina, Brazil, Mexico and Venezuela) have expansive definitions of related parties that include as taxpayers parties that may be deemed to be unrelated under Article 9. Inconsistencies arising from such definitions potentially may expose such parties to double taxation and/or inconsistent transfer pricing adjustments.

B. The Arm's Length Principle

OECD member countries endorse the arm's length principle as the appropriate standard to be used for tax purposes by multinational groups and tax administrations. The arm's length principle enables taxpayers or tax administrations to analyze whether the results obtained in a cross-border controlled transaction are comparable to the results the associated company would have obtained had the transaction been carried out between independent enterprises.

Chapter I of the OECD Guidelines discusses the arm's length principle as well as the comparability analysis used to compare conditions in controlled transactions (*i.e.*, transactions between associated enterprises) with conditions in uncontrolled transactions. The economically significant characteristics of the transactions should be sufficiently similar so that both the controlled and the uncontrolled transactions could be considered comparable. According to the OECD Guidelines, the following factors should be examined to determine whether the transactions might be considered comparable:

- Characteristics of property transferred or services provided;
- Functions performed, assets used and risks assumed by the party under examination (*i.e.*, a functional analysis);
- Contractual terms;
- Economic circumstances such as geographic location, size of the markets, extent of competition in the markets, relative competitive positions, availability of substitute goods or services, etc; and
- Business strategies.

The OECD Guidelines permit the use of inexact comparables that are similar to the controlled transaction although, to improve the reliability of the selected pricing method, reasonably accurate adjustments must be made to the uncontrolled comparables so that material differences between controlled and uncontrolled transactions can be taken into account. The OECD Guidelines reject the use of

"unadjusted industry averages" to adjust the result of controlled transactions because they are considered to be arbitrary.

The OECD Guidelines acknowledge that a range of prices or profits may be appropriate to establish the arm's length nature of a transaction. Although the OECD Guidelines do not include specific rules for establishing the arm's length range, they recognize that substantial deviation in the results of the comparable uncontrolled transactions may imply that some of the comparables may not be as reliable. The OECD Guidelines do not advocate that adjustments be made in the case of an overly broad range by applying statistical methods but propose additional analysis of the comparables and that the taxpayer have the opportunity to demonstrate that the conditions of the transaction fall within the range that is consistent with the arm's length principle. Further, the OECD Guidelines provide that if the price or margin of a controlled transaction falls outside the arm's length range and the taxpayer is unable to provide evidence of an arm's length result, tax adjustments should be made to the point that best reflects the facts and circumstances of the particular controlled transaction.

The OECD Guidelines recognize that business strategies may be reflected in transfer prices. Several considerations must be made: (1) the conduct of the parties should be consistent with the professed business strategy; (2) the nature of the relationship between the parties to the controlled transaction should be consistent with the taxpayer bearing the cost of the business strategy; and (3) the business strategy must be credible to produce a return that justifies its cost within a reasonable period of time.

Although the OECD Guidelines provide that, "ideally," the arm's length principle should be applied on a transaction-by-transaction basis, they acknowledge that in certain circumstances aggregation of transactions would be more appropriate (*e.g.*, long-term contracts for the supply of commodities or services, rights to use intangible property, etc.).

The OECD Guidelines do not explicitly mention the Best Method Rule (as used in the U.S. transfer pricing regulations or in Argentine legislation) although they establish the same principle when indicating the considerations a taxpayer must take into account to select the method that better reflects the arm's length nature of the controlled transaction (*i.e.*, the facts and circumstances of the transaction, the evidence available and the reliability of the different methods).

C. Traditional Transactional Methods

The chapter of the OECD Guidelines dealing with transactional methods provides a detailed description of the three traditional methods: the CUP, the RP and the CP methods. The OECD Guidelines specify how to apply the methods and the special circumstances under which the methods would likely be the best method. Significantly, the OECD Guidelines express a preference for the traditional transactional methods and state that the cases when there may be practical problems in the application of the methods are exceptional.

1. CUP Method

The OECD Guidelines apply the CUP to transfers of tangible and intangible property and to the provision of services. The CUP compares the price charged in a controlled transaction to the price charged in a comparable uncontrolled transaction under similar circumstances. The CUP requires a high degree of comparability of products and functions and is generally the most reliable measure of arm's length results if transactions are identical or if only minor quantifiable differences exist. The CUP is therefore usually applicable if the same or very similar products sold to related parties are also sold to unrelated parties under similar circumstances.

It is often difficult to locate comparable uncontrolled transactions since minor differences in the transferred property in the controlled and uncontrolled transactions may have a material effect on price

even though the business activities associated with the transactions are sufficiently similar to generate the same overall profit margin. Comparability may be achieved by a reasonable number of adjustments to account for differences in product quality, contractual terms, geographic markets, embedded intangibles and foreign currency risks.

2. RP Method

The OECD Guidelines apply the RP method to transfers of tangible and intangible property, the latter when the property is sublicensed to third parties. The RP evaluates whether the amount charged in a controlled transaction is at arm's length by reference to the gross margin obtained in comparable uncontrolled transactions. The RP compares the resale price margin[5] of a controlled transaction with the resale price margin obtained in comparable uncontrolled transactions. An appropriate RP is easiest determined in cases in which the reseller does not add substantial value to the products or alter them. Although this method requires less product comparability than the CUP, closer comparability of products will produce better results.

3. CP Method

The OECD Guidelines contemplate the use of the CP method to sales of tangible property and the provision of services, *i.e.*, transfers of semi-finished goods, the conclusion of joint facility agreements or long-term buy-and-supply arrangements, or the provision of services between associated enterprises. The basis of comparison in the CP method is the gross profit because the CP compares the cost plus markup of a controlled transaction with the cost plus markup obtained in comparable uncontrolled transactions. When applying the CP method, it is particularly important to consider differences in the type and level of expenses associated with functions performed and risks assumed. The CP method requires detailed comparisons of products manufactured, functions performed, risks borne, manufacturing complexity, cost structures and intangibles between the controlled and uncontrolled transactions.

D. Other Methods

The OECD Guidelines accept the use of transactional profit methods, the PSM or the TNMM, that analyze the profits arising from certain aggregated controlled transactions. The transactional profit methods are methods of last resort because they are applied only when practical difficulties prevent application of traditional transaction methods (although the OECD Guidelines advocate considering traditional methods before applying the profit methods). The OECD Guidelines recognize that most countries prefer the PSM to the TNMM because the former considers both parties to the transaction while the latter only considers one of the parties. As a result, the PSM is less likely to generate an extreme result for either party while the TNMM may yield a very different result for members of a group that have extremely high or low profits.

1. PSM

The PSM should be applied when the transactions are so interrelated that they cannot be evaluated on a transaction-by-transaction basis. The OECD Guidelines distinguish between a contribution analysis and a residual analysis. Under the contribution analysis, the PSM allocates operating profits or losses from controlled transactions in proportion to the relative contributions made by each party in creating the combined profit or loss. Since the PSM does not rely directly on closely comparable transactions, it can be

[5] The resale price margin represents the amount out of which the reseller would seek to cover its selling and other operating expenses and even make an appropriate profit.

applied when no comparable uncontrolled transactions could be easily identified. The nature of the information required by this method makes it more subjective and difficult to apply than the other methods. The residual analysis is similar to the contribution analysis although it requires the existence of highly profitable intangibles. Mexico considers the residual analysis as a separate method called the Residual Profit Split method.

2. TNMM

The TNMM starts from the premise that ideally transactions are analyzed individually and that each level of aggregation must be justified. The TNMM examines the net profit margin relative to an appropriate base (*e.g.*, sales, costs, assets). Net profit margins are less affected by transactional differences than the price used in the CUP and are more tolerant to functional differences than gross profit margins. In most cases, the related party being evaluated should not own intangible property or unique assets that distinguish it from unrelated comparable companies. The degree of comparability affects the reliability of the TNMM analysis. Ideally, the operating profit that a taxpayer obtains from the controlled transaction should be established by reference to the operating profit that the taxpayer obtains incomparable uncontrolled transactions. If no such comparison is possible, the operating profit earned in third party comparable uncontrolled transactions may serve as a reliable reference.

The OECD Guidelines criticize the use of the global formulary apportionment method[6] (such as the approach currently followed in Brazil) but acknowledge that a proportional apportionment formula that takes into consideration the taxpayer's facts and circumstances that could be agreed between a taxpayer and tax administration when other recognized methods could not be applied.

E. Administrative Approaches

The OECD Guidelines address various administrative issues related to avoiding and resolving transfer pricing disputes.

1. Examination Practices

The OECD Guidelines encourage tax administrations to be flexible in their transfer pricing approaches and not demand from taxpayers an unrealistic precision on their transfer pricing results. The OECD Guidelines also encourage tax administrations to initiate their transfer pricing analysis from the perspective of the method that the taxpayer has selected in setting its prices.

2. Penalties

The OECD Guidelines strongly recommend that the primary objective of civil tax penalties be to promote compliance.

[6] The global formulary apportionment method allocates global profits among associated enterprises on the basis of a predetermined, mechanical formula. Formulary apportionment differs from the transactional profit methods in that under the formulary approach profits are allocated on a global basis, whereas the profit methods compare profits on a case-by-case basis, considering the profits that comparable independent enterprises would have obtained under similar circumstances.

3. Mutual Agreement Procedure

The MAP is a process by which tax administrations consult with each other to resolve disputes regarding the application of tax treaties. The MAP does not, however, compel competent authorities to reach an agreement and resolve their tax disputes.

4. Corresponding, Primary and Secondary Adjustments

A corresponding adjustment (which is often part of the MAP) can reduce or eliminate double taxation in cases where the tax administration increases a company's taxable profits (primary adjustment) as a result of applying the arm's length principle to the transaction involving an associated enterprise in a second tax jurisdiction. To make the actual allocation of profits consistent with the primary transfer pricing adjustment, some countries that proposed a transfer pricing adjustment will assert under their domestic legislation a constructive transaction (a secondary transaction), whereby the excess profits resulting from a primary adjustment are treated as having been transferred in some other form and taxed accordingly. Since tax administrations are not required to reach an agreement under the MAP, corresponding adjustments are not mandatory.

5. Safe Harbors

A safe harbor is a provision that allows taxpayers to follow a simple set of rules whereby transfer prices would be automatically accepted as being at arm's length by the tax administration. The OECD Guidelines find a number of disadvantages to safe harbors, and therefore recommends they not be used. The OECD Guidelines also state that where the safe harbor is incompatible with an arm's length result, the taxpayer may be exposed to a risk of double taxation. Venezuela has an alternative to safe harbors: taxpayers that do not want to carry out a detailed transfer pricing analysis may use the gross margins provided by the tax administration, or alternatively may prepare a detailed study supporting the arm's length nature of related party transactions.

6. Advance Pricing Agreements

An APA is an agreement that determines, in advance, an appropriate set of criteria for the determination of the transfer pricing for the transactions over a fixed period of time. The OECD Guidelines distinguish between unilateral and multilateral APAs, enumerate a number of advantages and disadvantages in connection with the use of APAs, and endorse the preference of most countries for multilateral APAs.

7. Arbitration

The OECD Guidelines contain a brief discussion of transfer pricing arbitration.

F. Other Chapters

1. Documentation

The documentation chapter provides substantial guidance on the type and level of documentation that taxpayers should prepare and provide to the tax authorities. The OECD Guidelines reject a general requirement that taxpayers take account of and produce documents that become available only after the

controlled transaction has taken place. The OECD Guidelines recommend that taxpayers endeavor, at the time the transfer prices are established, to determine whether the prices are consistent with the arm's length principle.

Argentina, Mexico and the United States require contemporaneous documentation demonstrating that transactions with nonresident related parties are at arm's length. Venezuela does not have a statutory documentation requirement, although the Venezuelan tax authorities recommend that taxpayers follow the OECD Guidelines. There is no contemporaneous documentation obligation in Brazil, although if a study is not prepared, the Brazilian tax authorities will be entitled to use the transfer pricing method that produces the highest taxable income.

2. Special Considerations for Intangible Property

This chapter discusses special facts and circumstances that may arise when trying to determine whether the conditions established between associated enterprises regarding the transfer of intangible property are at arm's length. The prices established for transfers of intangible property should be based on reasonable expectations of future benefits so tax authorities should not adjust the prices based on actual benefits.

3. Special Consideration for Intra-Group Services

Two main issues must be considered when analyzing intra-group services: (1) whether the services were actually rendered; and (2) what the arm's length charge should be. The OECD Guidelines focus on compliance with the arm's length principle by recharging costs specifically incurred by one member in the group for services provided to another member of the group. In such a case, the costs incurred include a reasonable allocation of indirect costs. According to the OECD Guidelines, the inclusion of a profit margin is part of the cost of the service provided because an independent company would seek to obtain a profit in rendering the service to a third party.

4. Cost Contribution Arrangements

A cost contribution arrangement (CCA) is contractual arrangement whereby business enterprises agree to share the costs and risks of developing, producing or obtaining assets, services or rights, and to determine the nature and extent of the interests of each participant in those assets, services or rights. The peculiarity of the CCA is that some benefits of the CCA activity will be known in advance whereas other benefits will be uncertain. Another distinctive characteristic of the CCA is that every participant involved in the CCA must have a reasonable expectation of benefits derived from the agreement.

A CCA will be deemed consistent with the arm's length principle if each participant's proportionate share of the overall contribution to the arrangement is consistent with the participant's proportionate share of the overall expected benefits derived from the arrangement.

None of the Latin American countries considered in this report allow cost contribution or cost sharing payments to be deducted.

5. Advance Pricing Agreements

In October 1999, the OECD released an annex to the OECD Guidelines that provides guidance on how to obtain a MAP APA, focusing on the role of tax administrations of both OECD member countries and non-member countries. The annex emphasizes the significance of an APA and provides a detailed description of the different types of APAs mentioned in Chapter IV and explains the main objectives of an

APA (*e.g.*, to resolve transfer pricing issues expeditiously, to use the resources of the taxpayer and the tax administration more efficiently and to eliminate double taxation). The annex also describes the process of obtaining an APA: whether it is possible for a taxpayer to apply for an APA; the request and finalization of an APA; and monitoring taxpayer compliance with the terms and conditions in the APA.

Of the countries considered in this report, Brazil, Mexico and the United States make provisions for APAs, but neither Argentina nor Venezuela authorize the use of APAs.

II. Argentina

A. Legislation and Regulations

Since the transfer pricing law was introduced in December 1998, the tax authorities have only issued two sets of guidance on how the law should be applied. A resolution issued in October 1999 requires taxpayers to file a new form, Form 662, outlining their intercompany transactions and to maintain documentation to support their transfer prices.[7] The second resolution issued in November 2000[8].

According to recent amendments, taxpayers engaged in transactions with related parties must file an annual tax return (from the tax year ending December 31, 2000 and onwards, bi-annual tax returns will be required).

1. Definition of Related Parties

The regulations impose an expansive definition of related parties. The transfer pricing rules are triggered if any of the following circumstances exist:

- One entity, directly or indirectly, controls another party with which it engages in transactions;
- The entities that engage in transactions are under the common control of a third entity (*i.e.*, brother-sister companies);
- A person (*i.e.*, an individual or legal entity) owns all or a controlling part of the capital of another person;
- A person fully owns or has the majority interest in another person;
- An individual or legal entity has a sufficient number of votes to control the corporate will or to prevail in shareholders meetings or over another taxpayer's partners. The presence of common directors, common executive officials, and common managers indicates related party status;
- A person has the authority to act for another person, such as through a trust or as the exclusive agent or distributor for the purchase or sale of goods, assets, services or rights;
- A person licenses proprietary or technological information even if the licensor and licensee are unrelated;
- An entity substantially participates in the formation of another party's business or in the supply of raw materials to, or the trading or marketing of another business.

[7] General Resolution 702 dated October 15, 1999.
[8] Decree 1037/2000 issued by the Executive branch on November 9, 2000, and published in the Official Gazette on November 14, 2000.

Two or more individuals or legal entities can be viewed as related in a number of circumstances. For example, a common control relationship between parties may result in related party status. There are three aspects to a common control relationship: (1) where an individual or entity has the whole or a majority interest in the capital of two or more other entities; (2) where a person has control over two or more businesses; or (3) where the person has a significant simultaneous influence over two or more entities.

Parties that share a participation with another party are treated as related even if the relationship is through a condominium, joint venture, group or assembly with no legal existence if a party exerts a significant influence on the price-setting process. Contract terms can indicate related party status when the parties undertake preferential contractual clauses, such as for discounts, funding, delivery or other terms.

A person that is a single supplier, single customer or single vendor in relation to another party is not independent of that party under the Argentine rules. A party that funds another through loans or guarantees is not independent of that other party. A taxpayer that assumes another party's obligations, losses or expenses is not independent of that party nor is an entity independent of a second entity if the second entity gives instructions to directors, executives or managers of the first entity or if the first entity acts in the best interest of the second entity. Shifting management or stewardship to an individual or legal entity that has a minority interest may destroy independence.

2. Low-Tax Jurisdictions

As mentioned above, the Argentine transfer pricing rules capture transactions with entities located in tax havens by presuming that such transactions are related party transactions, regardless of whether the parties actually are related. As originally drafted, the tax haven rules relied on cumbersome and confusing criteria to determine whether a jurisdiction qualified as a low-tax jurisdiction.[9] Amendments issued in November 2000, however should provide some clarity since the tax authorities have issued a list of 84 countries and territories deemed to be tax haven jurisdictions. Any transactions with entities in these jurisdictions will be deemed not to be at arm's length and are subject to the scrutiny of the Argentine tax authorities.

3. Transfer Pricing Methodologies

While the Argentine legislation is in many respects similar to the U.S. rules, it is clear that the actual Spanish language was taken from articles 64-A and 65 of the Mexican Income Tax Law as well as relevant Miscellaneous Tax Provisions (MTP). The Argentine rules provide for the same methodologies set forth in the Mexican legislation and the OECD Guidelines: CUP, RP, CP, PSM, residual profit split and TNMM which, depending on the level of aggregation of transactions, is equivalent to the CPM frequently used in the Under Law 25,063 applicable during 1999 and 2000 with the exception of taxpayers with year end on December 31, 2000 the residual profit split was a valid method. For tax years ending on December 31, 2000 and onwards the new Law 25,239 eliminated the residual profit split.

[9] The regulations defined a low-tax jurisdiction as a country, which in addition to a low tax rate, contained one of the following characteristics:

- Secrecy rules for banks, financial institutions and stock exchanges;
- Minimum requirements for accounting methods, organizational activities and business activities of the enterprise;
- Favorable tax rules or other advantages to nonresidents that are not available to residents;
- The tax authorities in the low-tax jurisdiction have the power to grant discretionary tax privileges or other advantages;
- Allowing ownership to be held in trust for the intended party;
- Not maintaining a registry or not requiring registration of corporations or partnerships; or
- No withholding taxes on dividends and interest paid to foreign residents.

As in the United States, the Argentine rules require a taxpayer to use the "best method" to determine its transfer prices. The best transfer pricing method for a transaction is the method that is most appropriate based on regular market practices and economic reality. The best method should be the method that is most compatible with the business and corporate structure; utilizes the greatest amount and highest quality of information available to warrant application of the method in question; provides the greatest degree of comparability among related and non-related transactions; and requires the fewest adjustments to eliminate differences and discrepancies in comparable facts and situations.

4. Comparability

To establish comparability, the taxpayer may look at comparable transactions or comparable companies. The underlying premise of the Argentine regime is that transfer pricing is based on comparability between transactions. With that objective in mind, the following four factors determine comparability:

1. The financial structure of the transaction, such as whether the party is a principal or guarantor, terms, guarantees, whether the debtor is solvent and what is the interest rate;

2. The nature of the services, if appropriate, and whether or not the services involve expertise or technical knowledge;

3. The physical characteristics of the goods in the case of a purchase or lease, including their quality, reliability, availability and volume; and

4. The type of intangible, including the type of transaction (*i.e.*, lease or sale), duration of the intangible, degree of protection and anticipated benefits.

The regulations rely on a functional analysis, which encompasses the assets employed and risks assumed to determine comparability. They take into account contractual terms where those terms reflect price or margin, economic circumstances, including geographic location, size and type of the market, level of supply and demand, and the scope of competition. Business strategies are taken into account, including market penetration, permanence and growth, although the tax authorities might not accept a market share strategy as the best method.

The regulations permit multi-year data for comparability purposes. Multi-year data may be permitted when the business cycle relative to taxpayer's product or the commercial acceptance of the taxpayer's product covers more than one accounting period.

New Law 25.239 (in effect since December 31, 2000) provides for five methods that are currently defined by the new regulatory decree. Methods are very much the same as provided by Law 25.063 with the exception of the residual profit split, which was eliminated.

One significant problem with the Argentine regime is the lack of guidance regarding what comparables should be used when the taxpayer is seeking to apply one of the profit-based methods that would require a comparison of companies. As is the case in many other countries, detailed and qualified public information about public companies, which might be used to make the comparison, is not available in Argentina. Under the legislation, the tax authorities may use "secret comparables" obtained from their records to challenge the taxpayer's transfer pricing methodology. Aside from the legal issues raised by the use of secret comparables, including whether the taxpayer has access to the same information, the use of secret comparables creates considerable uncertainty. It is therefore expected that the tax authorities will take a prudent approach with respect to secret comparables, as has been the case in Mexico.

If local information is unavailable, taxpayers can resort to foreign comparables from either the United States or Europe, which are available in various databases. It must be emphasized, however, that in most cases the use of foreign comparables will require the taxpayer to make adjustments to reflect the

differences in the economic environment ("geographic market adjustments") in addition to the usual adjustments regarding inventories, receivables and payables.

The Argentine transfer pricing rules require the taxpayer to make adjustments in applying comparability, including adjustments for differences in payment terms, the value of interest accrued, differences in the amount or volume traded (including trade discounts or bonuses), and difference as to promotional activities, advertising, and publicity charges, taking the price per unit into account. The tax authorities are particularly concerned with the transfer pricing implications of advertising, publicity and promotional activities for comparative purposes. Therefore, the regulations contain a special accounting procedure: expenses must be apportioned pro rata among the goods or assets, services or rights applied in promoting the company's brands. The pro rata apportionment is to be made on the basis of product sales.

Prices of goods, assets, or services are to be adjusted to take into account the packaging, freight and insurance costs for comparative purposes. Similarly, prices are to be adjusted, depending on costs incurred, to reflect the physical nature of the goods, assets, services or rights that are comparable with each other. Comparable transactions are to be adjusted if the transactions take place on different dates -- the wholesale price index can be used for this purpose.

The regulations also provide guidance for when the currency lacks an exchange rate against the Argentine currency. Currency should be first converted into dollars and then into Argentine currency. In a similar manner, changes in the price of commodities can be demonstrated by reference to commodity exchange listings.

5. Documentation Requirements

Taxpayers are required to maintain documentation analogous to that required by the U.S. contemporaneous documentation provisions. The Argentine requirements are onerous even when compared to the U.S. transfer pricing regulations. The taxpayer must justify both the transfer pricing reflected and the comparison of the methods. Records must be maintained in accordance with the Procedural Tax Act and retained for 10 years (*i.e.*, until expiration of the statute of limitations). While no provision is made for APAs, the information required is similar to what taxpayers in Mexico must submit when requesting an APA.

Law 25.239 clarifies that the transfer pricing documentation rules apply to related party transactions with nonresidents and to import and export transactions if the parties are unable to prove the wholesale price in the country of origin or destination.

Taxpayers must maintain extensive and detailed records, including a wide variety of documents, records and other information, as supporting documentation:

- Detailed description of the taxpayer's functions and activities, assets used, risks assumed and organizational structure;
- Identity of all affiliated parties and documentation outlining the nature of the relationships;
- Information on transactions with related parties;
- Information on activities of each member in a group of companies;
- Financial statements of the taxpayer, financing information and the cost structure of the taxpayer;
- Copies of contracts (*e.g.*, warranties, know-how, cost sharing, R&D, advertising, etc.) between the taxpayer and foreign related parties;

- Information on the particular industry, anticipated changes in the industry, market size, competition, etc.;
- Methodology used to determine transfer prices and information on comparable transactions or companies; and
- Information on transfer pricing regimes applicable to foreign related parties and whether those affiliates are involved in a transfer pricing dispute with the foreign tax authorities.

The November 2000 decree includes a requirement of information similar to that previously required by General Resolution 702/99. Interestingly, the requirement for information relating to marketing strategies and start-up situations that might justify initial enterprise losses has been eliminated. It is expected, however, that regulations to be issued under the new law might reinstate such a requirement.

6. Penalty Provisions

No special penalties have been established for noncompliance with the transfer pricing documentation rules other than the penalties imposed by procedural law. However, if noncompliance gives rise to tax fraud, penalties range from two to 10 times the amount evaded. Adjustments related to transfer pricing also would increase the tax base. Tax losses carried forward from previous years can be used to offset those adjustments.

In the case of transactions between related parties, the taxpayer must be able to demonstrate that transactions are carried out under arm's length conditions. If the arm's length standard is not met, the tax authorities may recharacterize the transactions as a capital contribution or the payment of a dividend. If taxes are due as a result of adjustments, even though no penalties will be imposed, the taxpayer will be subject to an interest charge of 3% per month as a late payment. Compared to Argentina's negligible rate of inflation (less than 1% per year), this constitutes a real penalty.

Failure to file the transfer pricing tax return will subject the taxpayer to a failure to file penalty.

B. Tax Treaties, MAP and Competent Authority

Argentina has concluded tax treaties with the following countries:

- Australia
- Austria
- Belgium
- Bolivia
- Brazil
- Canada
- Chile
- Denmark
- Finland
- France
- Germany
- Italy
- Netherlands
- Spain
- Sweden
- United Kingdom

All of the treaties include provisions for the competent authority process. In the case of the treaties with Chile, Bolivia and Brazil, which are based on the Cartagena model, this procedure is not entirely clear.

C. Application

1. Taxpayer Obligations

The Argentine transfer pricing regulations require resident taxpayers engaged in transfer pricing transactions to file an annual income tax return and a supplemental transfer pricing return (Form 662) that reflects all related-party transactions. The return must be filed electronically. The return is due within the first 10 days of the fifth month following the accounting year-end (this coincides with the date a corporate taxpayer must file its annual tax return).

2. Examination, Dispute Resolution, APAs

Transfer pricing examinations are just beginning in Argentina. Initially, the tax office focused primarily on requesting information to build up a transfer pricing database. Later, while conducting tax audits, tax inspectors would request the transfer pricing study. The tax authorities are now conducting specific transfer pricing audits.

There are no specific dispute resolution procedures other than those stated in the Tax Procedural Law. In this respect, when a transfer pricing audit is carried out and an adjustment made, the taxpayer may opt to pay the tax determined or appeal to the tax court without paying the amount determined by the tax authorities. If the tax court rules in favor of the authorities, the taxpayer must pay the amount due to appeal to the higher courts, and ultimately to the Supreme Court. If the taxpayer prevails in court, the Tax Office also has the right to appeal up to the Supreme Court.

Argentine legislation does not authorize APAs although it is expected that in the near future such agreements with be allowed as the Tax Office and taxpayer become more mature in handling transfer pricing issues.

III. Brazil

A. Legislation and Regulations

As contained in Law 9430/96, Brazil's transfer pricing rules generally are based on the OECD Guidelines but also contain some substantial deviations. The rules themselves are relatively simple and flexible, and allow companies domiciled in Brazil to implement a variety of tax planning strategies. Nevertheless, the rules also are designed to prevent multinational companies from manipulating prices between related parties in a manner that allows for the inappropriate transfer of otherwise reportable income from Brazil to a low or no-tax country; or artificially transferring profits from one related party to another related party with tax losses. To this end, the rules call for the imposition of significant penalties in some instances.

The transfer pricing rules determine the extent to which costs, expenses and charges relating to goods, services and rights stated on import or acquisition documents pertaining to transactions between related parties will be deductible in computing taxable income. Insofar as the transfer pricing rules refer to adjustments to Brazil's income (IRPJ) and social contribution on corporate net profits (CSLL) tax bases, they are strictly tax-related provisions and are not to be construed as a monetary policy, since they do not set any limit on amounts required for the payment of import or export operations.

Brazil's transfer pricing rules target transactions between a Brazilian entity and its overseas related parties involving the import and export of goods, services and rights, without distinguishing between tangible property or services.

The rules provide for two safe harbors. First, export transactions between related parties will not be subject to a transfer pricing adjustment if the average export price in those transactions equals or is greater than 90% of the average sale price involved in transactions between unrelated parties in Brazil[10]. Second, if a company can show either that its net profit from export sales to related parties equals (before tax) at least 5% of all such sales or that its net revenue from exports has never exceeded 5% of total net revenue over the same period, it is not obliged to fully disclose its intercompany transactions to the Brazilian authorities. These safe harbors do not apply to export transactions with companies located in tax havens, however.

1. Definition of Related Parties

Like Argentina and Venezuela (to some extent Mexico as well), Brazilian law provides for a broad definition of the term "related party." For transfer pricing purposes, Brazil considers the following businesses and individuals to be related to an entity domiciled in Brazil:

- a nonresident parent company;
- a nonresident branch or subsidiary;
- a nonresident individual or business that has a capital participation and is deemed to be a controlling or "associated shareholder" (10% of capital);
- a nonresident business deemed to be its controlled or affiliated entity;
- a nonresident business under common administrative or equity control, or when the same shareholder holds at least a 10% capital participation in both companies;
- a nonresident individual or business that, together with the Brazilian company, holds a capital participation in a third company that renders them controlling or "associated shareholders;"
- a nonresident individual or business that is associated with the Brazilian company in a consortium or joint venture (as defined under Brazilian law);
- a nonresident individual who is related to the third degree, spouse or common-law spouse of any officer, controlling partner or shareholder;
- a nonresident individual or business that is its exclusive agent, distributor or concessionaire for the purchase and sale of services, goods or rights; or
- a nonresident individual or business for which the Brazilian company is an exclusive agent, distributor or concessionaire for the purchase and sale of goods, services or rights.

These rules also apply to operations carried out by a company domiciled in Brazil through unrelated third parties with nonresident parties that are related to the Brazilian company.

2. Transfer Pricing Methodologies

Unlike many transfer pricing regimes, the Brazilian transfer pricing rules are not based on a specific arm's length principle. Nevertheless, taxpayers to which the transfer pricing rules apply generally are expected to engage in transactions with related parties that would be consistent with transactions that occur between unrelated parties under similar circumstances. Just as there is no specific arm's length principle on which Brazil's transfer pricing rules are based, so there is no strict priority imposed on the

[10] Venezuela has adopted a similar rule.

taxpayer regarding which transfer pricing methodology to use in a given situation. Taxpayers are free to choose any method or combination of methods from those specified in the regulations and can apply them to tangible property or services, just so long as, whatever method is chosen, the taxpayer provides all of the information necessary to apply the method or methods chosen. All of the approved Brazilian transfer pricing methods involve price comparisons or reconstruction rather than a determination of profit margins.

2.1. Methodologies for Import Transactions

Taxpayers may use the following transfer pricing methods for import transactions: the CUP method (also known as the comparable independent prices method), the resale price less profit method; or the production cost plus profit method.

Comparable Uncontrolled Price Method: Under the CUP, the importer must determine the average sales prices for similar goods, services or rights in Brazilian or foreign markets under similar conditions and compare those to its own sales prices. In making the comparisons, the prices must be compared with the prices of similar tangible or intangible property or services sold by the same exporter to unrelated parties, purchased by the same importer from unrelated parties or in sales between other, unspecified, unrelated parties. No fixed gross margin is applicable under this method.

Retail Price Less Profit: Under the Retail Price Less Profit Method, the importer determines the average resale prices of goods, services or rights after reducing the resale prices to reflect (1) unconditional discounts, sales taxes or contributions and brokerage costs; and (2) a 20% profit margin calculated based on the resale price. A transaction between unrelated parties is the only standard for comparison under this method.

Production Cost Plus Profit: Under this method, the importer calculates the average cost of goods, services or rights based on what they would be in the country where they were produced. To this figure the importer adds any export taxes imposed by the producing country and a 20% profit margin calculated on the costs. A range of factors may be used to determine costs under this method.

2.2. Methodologies for Export Transactions

Taxpayers may use the following transfer pricing methods for export transactions: the export sales price method, the wholesale price in the country of destination less profit method, the retail price in the country of destination less profit method or the acquisition or production cost plus taxes and profit method.

Export Sales Price Method: Under the Export Sales Price Method, the exporter determines the average prices of exports it has made to unrelated third parties as a comparison standard or, as an alternative, the average prices of similar goods, services or rights exported by other Brazilian companies during the same time period and under similar conditions.

Wholesale Price in the Country of Destination Less Profit Method: Under the Wholesale Price in the Country of Destination Less Profit Method, the exporter calculates the average wholesale price of similar goods. These averages are determined based on the wholesale price in the country of destination but do not include any taxes imposed by the country of destination. Finally, a 15% profit margin is subtracted from the average wholesale price.

Retail Price in the Country of Destination Less Profit Method: Under the Retail Price in the Country of Destination Less Profit Method, an average retail price for similar goods, based on prices in the country of destination is arrived at. From this price is subtracted any taxes imposed by the country of destination and reflected in the average price and a 30% profit margin calculated on the retail price.

Acquisition or Production Cost Plus Taxes and Profit Method: Under this method, the average cost of producing or acquiring similar exported goods, services or rights is determined. To this figure is added any taxes and contributions levied in Brazil and reflected in the cost and a 15% profit margin, calculated on an amount that includes the costs, contributions and taxes.

3. Documentation

Although specific requirements relating to documentation are not explicitly delineated in Brazilian tax law, practical necessity dictates that taxpayers subject to the transfer pricing rules must collect, develop and maintain documentation adequate to support their reported income, expenses and deductions from operations with related parties. To this end, they must prepare a transfer pricing analysis prior to paying the last installment of their income tax or, in case of losses during the tax year, prior to filing their tax returns.

There is an enormous amount of information about imports, exports, debts, credit not registered at the Central Bank and transactions or operations with related parties that is subject to scrutiny pursuant to Brazilian tax and transfer pricing law. At a minimum, a taxpayer's transfer pricing analysis should include any and all documentation necessary to support the statements made on the taxpayer's tax return.

Depending on the transfer pricing method or methods utilized, the taxpayer must keep a documentary record of how average prices and comparables were arrived at. This record would reasonably include invoices, inventories, a record of costs and prices and payroll information among other necessary documentation, consistent with OECD Guidelines in this area. Adequacy of documentation is routinely evaluated by the competent authorities as part of the transfer pricing audit process.

4. Penalty Provisions

Although there are no specific penalty provisions included in Brazil's transfer pricing rules, any taxpayers that fail to provide adequate information on their tax returns are subject to penalties under Brazilian income tax laws. These penalties range from 75% to 150% of the unpaid tax amount. In addition, such a taxpayer is liable for interest on any tax due in accordance with the established monthly national interest rate. In some instances, taxpayers may have their penalties reduced.

B. Tax Treaties, MAP and Competent Authority

Brazil has concluded tax treaties with the following countries:

- Argentina
- Austria
- Belgium
- Canada
- China
- Czechoslovakia
- Denmark
- Ecuador
- Finland
- France
- Germany
- Hungary
- India
- Italy
- Japan
- Korea
- Luxembourg
- Netherlands
- Norway
- Philippines
- Portugal
- Spain
- Sweden

There are no treaties between Brazil and any other country that deal exclusively with transfer pricing issues. Furthermore, none of the current treaties include a mutual agreement provision similar to Article 25 of the OECD Model Tax Convention dealing with transfer pricing. All of the existing treaties, however, contain a mutual agreement provision (MAP) similar to that in Article 9 of the OECD Model Convention addressing associated enterprises. Under the MAP provision, the signatory countries may tax

certain income that, except for arrangements that cause "two enterprises" to differ in their relations from those of "independent enterprises," otherwise would have accrued to one of the enterprises.

In addition, there is a process under Brazilian law whereby an individual company or group of companies may petition the Brazilian competent authority to prove that a gross profit margin maintained by a particular company is excessive in regard to a specific good, right or service. To date, however, no company has petitioned the Brazilian competent authority to reduce the gross profit margin.

C. Application

1. Taxpayer Obligations

Taxpayers that carry out business activities with a nonresident related party must adhere to all existing transfer pricing laws and regulations. Most importantly, taxpayers who find themselves subject to the transfer pricing rules must prepare a transfer pricing study by the end of each calendar year for each transaction it maintains with a nonresident related entity. By June 30 of each year, companies must file their tax returns, including all required information. All documents used to support the information contained in the return must be kept for a period of six years.

2. Examinations, Dispute Resolution, APAs

Within the Federal Revenue Secretariat's International Department is a special transfer pricing team that is responsible for conducting transfer pricing audits and investigations, as well as imposing penalties for failure to adhere to transfer pricing rules. Taxpayers may dispute the findings of the auditors initially through an administrative process. If no relief is granted as a result of that process, the taxpayer may then dispute the findings of the auditors in court.

Brazilian law does not have explicit advance pricing agreement regulations, however taxpayers may request a ruling from the tax authorities allowing them to use a different gross margin to the fixed ones provided in the different transfer pricing methods.

IV. Mexico

A. Legislation and Regulations

Until 1996 (*i.e.*, before the transfer pricing regime was introduced), Article 64-A of the Income Tax Law (ITL) granted powers to the tax authorities to determine the prices of related party transactions when those transactions were not carried out on arm's length terms. The 1997 transfer pricing regime codified the arm's length principle as set forth in the OECD Guidelines and shifted the burden of proof from the tax authorities to the taxpayer to demonstrate that its transactions with related parties were consistent with the arm's length principle.

1. Definition of Related Parties

The related party definition enacted in 1997 is based on the OECD Guidelines as well as Article 9 of the OECD Model Tax Convention, although the definition is much more encompassing than the OECD definition. Under the Mexican rules, two or more parties are related when one directly or indirectly participates in the management, control or capital of the other, or when a person or group of persons

participates directly or indirectly in the administration, control or capital of both (all) of those parties. There is no minimum percentage requirement for control or participation, nor is there a definition of direct or indirect participation, management, control or capital.[11]

The Mexican rules also contain a rebuttable presumption that transactions entered into with a party located or resident in a low-tax jurisdiction are related party transactions and not carried out on arm's length terms. The legislation includes a provision making all payments to recipients located or resident in a low-tax jurisdiction non-deductible unless the taxpayer can demonstrate that the transactions are at arm's length. In the case of transactions with low-tax jurisdictions, the tax authorities have the power to determine the price, consideration or profit margin unless the taxpayer can prove through documentation that arm's length prices were used or that the transactions were between independent parties. This provision seems to exceed the scope of the OECD Guidelines, which state: "tax administrators should not automatically assume that associated enterprises have sought to manipulate their profits."

2.Transfer Pricing Methodology

Six methodologies may be used in setting an arm's length price: CUP, RP, CP, PSM, residual profit split and Transactional Operating Profit Margin (TOPMM) methods. Unlike the OECD Guidelines that discourage the use of transactional profit methods and consider them methods of last resort, the Mexican rules allow application of any of the methods. There is no hierarchy of approaches or best method approach.

Comparable Uncontrolled Price Method - The CUP uses the same criteria as the OECD Guidelines, although the omission of the phrase "in comparable circumstances" may give rise to conflicts when establishing the criteria for applicability (and thus its reliability) and when determining adjustments that must be made to the transactions.

Resale Price and Cost-Plus Methods - The RP and CP methods require the use of gross margins for comparable transactions and do not offer the flexibility allowed by the OECD of applying net margins and projected costs (*i.e.*, actual costs must be determined under Mexican GAAP). For instance, in the case of the CP method, the OECD allows the costs and expenses of an enterprise to be grouped into three segments: direct costs, indirect costs and production and operating expenses.

Profit Split Methods - Under the profit split methods, consideration should be given to assets (both tangible and intangible), costs and expenses when determining how to divide the profits. If these items are the only factors taken into account in a functional analysis, the approach is consistent with the OECD Guidelines; otherwise, this method could be viewed as a type of formulary apportionment.

Transactional Operating Profit Margin Method -The TOPMM is defined as a method that "determines [in related party transactions] the operating profit that would have been obtained by comparable companies or independent parties (sic) in comparable transactions, based on profitability factors which take into account variables such as assets, sales, costs, expenses or cash flows.

This definition theoretically parallels the definition of the TNMM in the OECD Guidelines but emphasizes the operating profit obtained from comparable transactions. This raises the question whether the TOPMM as it is based on comparable transactions is the same as the comparable profits method (CPM) under U.S. rules. The CPM evaluates whether the amount charged in a controlled transaction is arm's length, based on indicators from uncontrolled taxpayers, *i.e.*, companies rather than transactions. It appears that the Mexican TOPMM would be equivalent to CPM to the extent the tested party carries out

[11] Under new wording of ITL Article 74, which governs the taxation of individuals, the definition of related party is extended to cases where "linkage exists among them (the parties) in accordance with customs legislation."

one transaction or a group of segmented transactions.[12] Otherwise, it could be argued that the method is not consistent with the OECD Guidelines since it compares the consolidated global profits of different multinational enterprises.

Using a profit-based method gives rise to practical problems when determining the tested party in a cross-border analysis, since a literal reading of the rules leads to the conclusion that the tested party must be the Mexican taxpayer. Therefore, in a highly complex transaction involving a full-fledged Mexican manufacturer with intangibles and a simple distributor abroad, testing the "simple" party may not satisfy the Mexican tax authorities.

No specific profit level indicators are required but it appears that the tax authorities have accepted indicators, including the Berry ratio, operating margin and return on assets. For purposes of determining income, costs, gross margins, net sales, expenses, operating profit, assets and liabilities, Mexican GAAP should be followed.

3. Comparability Analysis

Mexican taxpayers that carry out related party transactions must determine their income and deductions by considering the prices that comparable companies would have used in comparable transactions. Companies or transactions are considered comparable when differences may be eliminated through reasonable adjustments. To identify differences between controlled transactions and the comparables, a number of factors must be considered, including characteristics of the transactions,[13] functional analysis, contractual terms, economic circumstances and business strategies.[14]

The use of "inexact" comparables has become established practice in countries such as Mexico, where there is limited access to information on public comparable transactions or companies and that lack reliable databases from which to derive transfer pricing information.

The items of the tested company should be determined based on Mexican GAAP. Where non-Mexican comparables are used to determine the transfer price, compliance with this rule will require careful analysis. Generally, the use of non-Mexican comparables will require adjustments to the financial statements of the comparable companies in respect of the accounting/valuation method applied to certain transactions. These adjustments are necessary to bring the financial statements of the comparable companies in line with the Mexican GAAP. Where such adjustments are made, the taxpayer should be prepared to explain and justify them.

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[12] In dealing with Mexico and U.S. transfer pricing issues, specifically with respect to the TOPMM method, it will depend on the level of aggregation of the transactions that the Mexican authorities will accept to determine whether the CPM is equal to the TOPMM method. The provisions of paragraphs 1.42, 1.43 and 3.26 of the OECD Guidelines should be taken into account when determining the level of aggregation of transactions. The Guidelines provide that "there are often situations where separate transactions are so closely linked or continuous that they cannot be evaluated adequately on a separate basis."

[13] Characteristics of the transactions include the following:

- For financing operations, the amount of the principal, term, guaranties, solvency of the debtor and interest rate;
- For the provision of services, the nature of the services, and whether the services involve technical experience or knowledge;
- For the use, enjoyment or sale of tangible goods, the physical characteristics, quality and availability of the goods;
- For the exploitation or transfer of intangibles, the length and degree of protection; and
- For the alienation of shares, the updated shareholders' equity of the issuing company, the present value of profits or projected cash flows or stock market quotation of the day before the sale.

[14] Business strategies would include market penetration, permanence and expansion.

4. Documentation Requirements

Mexican companies engaging in transactions with related parties must obtain and retain contemporaneous documentation substantiating the arm's length nature of transactions with those parties. This requirement applies to transactions that take place on or after January 1, 1997 and was recently amended to require a transaction-by-transaction analysis. The documentation must include the following:

- Name, address and tax residence of the related parties, as well as documentation that discloses direct or indirect participation;
- The functions and activities of the taxpayer, and assets used and risks assumed by the taxpayer for each type of transaction;
- Information and documentation on the related party transactions and amounts thereof for each related party and for each type of transaction in accordance with the classification and information established in Article 64-A;
- The method applied in accordance with Article 65, including information and documentation on comparable transactions or companies for each type of transaction.

Although the law does not explicitly state that documentation must be contemporaneous, it must be prepared by the due date of the Mexican tax return. The SAT[15] may request documentation only for completed fiscal years. Taxpayers that make quarterly advance tax payments under ITL Article 12 and that do not enter into transactions with parties in low-tax jurisdictions are not subject to the documentation requirements.

5. Penalty Provisions

Tax penalties are imposed if a taxpayer underpays a tax liability. Reduced penalties may apply if an adjustment is to be made but the taxpayer has complied with the documentation requirements. The penalties are reduced by 25% of the tax omitted when the payment of the tax on the adjustment is made before the tax authorities gives notification of the resolution of the assessment; in the case of overstated losses, 15% to 20% of the overstatement, and in other cases, 35% to 50% of tax.

Changes made to the rules on constructive dividends conflict with the OECD Guidelines, which state that an examination by the tax authorities should be based on the transaction actually undertaken by the associated enterprise, and only in exceptional cases should the transaction be disregarded or reconstructed. The OECD also believes that restructuring legitimate business transactions is arbitrary and could lead to double taxation. The constructive dividend provisions were amended to incorporate the definition of related party and to add three new situations that trigger a constructive dividend: interest that is nondeductible because paid to a related party (*i.e.*, non-arm's length interest) and interest from back-to-back loans, even when granted through financial institutions resident in Mexico or abroad and the additional profit arisen from a transfer pricing adjustment.

[15] Tax Administration Service.

B. Treaties, MAP and Competent Authority

Mexico has entered into the following tax treaties that generally include a MAP clause in accordance with the OECD Model Tax Convention.

- Belgium
- Canada
- Chile
- Denmark
- Germany
- Finland
- France
- Ireland
- Israel
- Italy
- Japan
- Korea
- Netherlands
- Norway
- Singapore
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States

The SAT has discretion to allow a Mexican taxpayer to amend its return to reflect the application of a proposed adjustment by a foreign tax administration if Mexico has concluded a tax treaty with the country making the adjustment.

C. Application

1. Taxpayer Obligations

Taxpayers are allowed to obtain ranges of prices, considerations or profit margins through the adoption of any of the methods authorized under Article 65 when determining their transfer prices.

Article 65 states that a range may be adjusted by means of statistical methods. No reason is given why this may be necessary, although it is understood that it is in order to obtain a statistically representative sample. Based on the MTP this means that the SAT will accept methods that use interquartile ranges.

Further, in conformity with the OECD Guidelines, the Mexican rules provide that the taxpayer will be found to have determined its transfer price on an arm's length basis, if the amounts are within the arm's length range. Otherwise, the median will be deemed to be the arm's length price or amount of consideration.

Mexico does not impose specific methods for intangible property as is the case in the United States, nor does it follow the OECD recommendations in "The Taxation of Global Trading and Financial Instruments." Further, Mexican law does not permit cost sharing arrangements because under domestic law any pro rata expense incurred abroad is non-deductible (except in the case of permanent establishments).

The 2000 tax reform introduced a requirement to file a transfer pricing return. The first filing is due in February 2001 to report fiscal year 2000 related party transactions.

2. Examinations, Dispute Resolution and APAs

A taxpayer will be notified in advance of an audit, but the audit may commence the day after notification. No time limit is specified for the length of a transfer pricing audit. The SAT may use secret comparables (*i.e.*, confidential third party information) in making adjustments. The taxpayer is entitled to

appoint two representatives to review the confidential information, but only for a period of 45 days and the representative may not copy or disclose the information to anyone else (unauthorized disclosure may result in imprisonment). The identity of secret comparables may only be disclosed through court procedures.

If the taxpayer does not document its transactions, upon audit the tax authorities will determine the transfer pricing method(s) and comparable transactions or companies (probably by using confidential information). An adjustment will be proposed by reference to the median in the case of ranges of prices or amounts of consideration. The tax authorities are unlikely to make adjustments to account for special circumstances in the taxpayer's trade or business (such as start-up operations).

APAs - Mexico authorizes bilateral and multilateral APAs and allows the SAT to issue transfer pricing rulings covering up to five years. Taxpayers are encouraged to request an APA when the application of traditional methods is not straightforward or those methods are difficult to apply. An APA must be issued within eight months of the application or it will be deemed to be rejected.

Legal precedence is established for bilateral APAs by providing that transfer pricing rulings may arise from bilateral agreements with countries that have concluded a tax treaty with Mexico. In these cases, the SAT may totally or partially waive surcharges provided the tax authorities of the other country have not accrued interest in favor of the taxpayer of refunded the corresponding tax. As a result, the Mexican authorities through the MAP may be able to resolve disputes over juridical double taxation arising from transfer pricing adjustments.

It is important to note that transfer pricing rulings differ from APAs in the United States or under the OECD Guidelines. A Mexican ruling is not a binding agreement between the taxpayer and the SAT. It is a private letter ruling that creates rights for the taxpayer and is strictly limited to the real and concrete circumstances under which it was requested and issued. Any change in facts may invalidate a ruling and leave the taxpayer uncovered[16].

Maquiladoras - Mexico adopted general legislation on transfer pricing in 1997. Before this legislation was introduced, transfer pricing regulation was generally limited to the *maquiladora* industry.[17]

The MTP issued in March 2000 implement the October 1999 agreement with the United States that eliminates the permanent establishment (PE) exposure for U.S. companies that maintain maquiladora operations. The agreement contains safe harbors that are available for three years while the respective competent authorities decide upon rules or alternatively *maquiladoras* restructure their operations or take other steps to deal with the PE issue.

Under the October 1999 agreement, a U.S. company with maquiladora operations in Mexico will not be deemed to have a PE in Mexico if the maquiladora meets one of two safe harbor tests or applies for a transfer pricing ruling (*i.e.*, APA) with the Mexican tax authorities. If the taxpayer chooses the safe harbor route, one of two tests must be satisfied. For tax years 2000, 2001 and 2002, the taxable income of the maquiladora must be equal to at least the greater of 6.9% of the value of the assets earmarked for maquiladora operations (except leased assets), or 6.5% of the deductions and costs associated with the maquiladora operations. Maquiladora companies may alternatively request an APA from the Mexican tax authorities taking into consideration for purposes of carrying out the functional analysis and comparability assessment all assets destined to the maquiladora operations.

[16] The tax authorities have published in the MTP guidelines regarding the contents of ruling requests as well as the minimal information that the taxpayer must produce and submit for consideration.

[17] Maquiladoras are in-bond industries that manufacture, process, assemble and/or repair raw materials and components. The finished or semi-finished products are typically exported back to the county of origin.

V. United States

A. Legislation and Regulations

The purpose of section 482 is to ensure that taxpayers clearly reflect income attributable to controlled transactions and to prevent the avoidance of taxes with respect to those transactions. The Internal Revenue Service (hereinafter "Service") may make whatever allocations are necessary between or among controlled taxpayers, if it determines that the taxpayer has not reported its true taxable income. Taxpayers, however, may only use section 482 to report on a timely filed return an arm's length result that is different from the actual result. Taxpayers cannot compel the Service to apply section 482, nor can they file amended or untimely returns to decrease taxable income based on allocations or other adjustments to their controlled transactions.

1. The Arm's Length Standard

A controlled transaction will be arm's length if the results are the same as would have been realized by uncontrolled taxpayers engaged in the same transaction in the same circumstances. The regulations, however, state that "because identical transactions can rarely be located, whether a transaction produces an arm's length result will be determined by reference to the results of comparable transactions under comparable circumstances."[18] This evaluation is to be made using a pricing method selected under the standards of the "best method rule" described below.

2. Best Method Rule

Transfer prices must be determined using the best method, *i.e.*, the method that, under the facts and circumstances, provides "the most reliable measure" of an arm's length result. There is no strict priority of methods and any method may be used without establishing the inapplicability of another method. In selecting a method, the factors to consider in identifying the best method are: (i) the degree of comparability between controlled and uncontrolled transactions; (ii) the completeness and accuracy of the data; (iii) the soundness of the assumptions relied upon; (iv) the sensitivity of results to deficiencies in data and assumptions; and (v) where two methods produce inconsistent results, the confirmation of the chosen results by comparison with a third method.

3. Comparability

The general standard of comparability requires that an uncontrolled transaction be sufficiently similar to the controlled transaction such that it provides a reliable measure of an arm's length result. The regulations do allow for a reasonable number of adjustments to the results of the uncontrolled transaction to account for material differences between the controlled and uncontrolled transaction, if such differences have a definite and reasonably ascertainable effect on prices or profits.

Under the regulations, all facts and circumstances that could affect prices or profits in arm's length dealings are taken into account when evaluating comparability. The general factors to be considered in evaluating comparability include:

- Functions performed and resources employed;
- Contractual terms;

[18] Thus, under the regulations, controlled transactions may be evaluated by reference to uncontrolled transactions that are comparable, but not necessarily identical.

- Risks assumed;
- Economic conditions; and
- Specific property or services involved.

4. Arm's Length Range

If there are no uncontrolled comparables for which it is likely that all material differences between the controlled and uncontrolled transactions can be identified and eliminated by adjustments, the regulations require that the controlled result fall within the interquartile range of all of the uncontrolled results (*i.e.*, between the 25th and 75th percentiles of the results). However, if a taxpayer that uses this method has results that are not within the interquartile range for a given year, an adjustment ordinarily will be to the median of all the results.

5. Determination of Taxable Income for Loans, Services and Leases

Loans - When one member of a group makes a loan or advance to another member of the group, either directly or indirectly, that member must charge an arm's length rate of interest, from the day after the indebtedness arises to the day on which the indebtedness is satisfied, subject to certain exceptions. An arm's length interest rate is defined as the rate of interest that was charged, or would have been charged at the time the debt arose, in independent transactions with or between unrelated parties under similar circumstances. The regulations include a safe harbor rate based on the applicable federal rate, but this rate does not apply to any loan or advance expressed in a currency other than U.S. dollars.

Services - The regulations state that the Service may make adjustments under section 482 where one member of a group of controlled entities performs marketing, managerial, administrative, technical, or other services for the benefit, or on behalf of, another member of the group, for less than an arm's length charge. An arm's length charge for services is defined as the amount that was charged or would have been charged for the same or similar services in independent transactions with or between unrelated parties under similar circumstances considering all the relevant facts.

For services that are not "integral" to the business activity of either the service provider or the recipient, the regulations includes a cost chargeback safe harbor. This safe harbor includes all direct and indirect costs of providing such services, and taxpayers may use any reasonable method of allocating and apportioning these expenses, (*e.g.*, allocation formulas or analysis of time spent). The cost chargeback safe harbor is not available for so-called "integral" services, which are subject to the arm's length standard.

One significant issue that arises in the services area is whether the particular services performed are merely a duplication of a service that the related party is performing for itself, or are support services provided solely to the subsidiary. This distinction between "stewardship" services, for which no compensation is required, and support services that require an arm's length charge, often turns on whether the services involve the subsidiary's day-to-day operations.

Leases - When a member of a controlled group, by lease or other similar arrangement, transfers the use of tangible property to another member of the group, the lease must include an arm's length charge between the parties. Arm's length rent is defined as the amount of rent that was charged, or would have been charged, for the use of the same or similar property, in independent transactions between unrelated parties under similar circumstances. When determining the arm's length rent, the period and location of the use, the owner's investment in the property or rent paid for the property, expenses of maintaining the property, type of property involved, its condition and all relevant facts must be considered.

6. Methods for transfers of tangible property

Under the regulations, a taxpayer has available six methods for determining taxable income from the transfer of tangible property: the CUP, RP, CP, CPM, PSM and other unspecified methods. Both the CPM and the PSM apply to transfers of both tangible and intangible property, and therefore they are discussed in a separate section, below.

Comparable Uncontrolled Price Method - The CUP method evaluates whether the amount charged in a controlled transaction is arm's length by reference to the amount charged in a comparable uncontrolled transaction. Such transactions can involve third parties to the transaction at issue, but also can involve the same taxpayer making a sale to or purchase from an uncontrolled taxpayer. An uncontrolled transaction is considered comparable if the tangible property and contractual terms are substantially the same as those of the controlled transaction and, if any minor differences exist, they either have no effect on the price or have a definite and reasonably ascertainable affect on price that can be accounted for by a reasonable number of adjustments to the uncontrolled transaction. Where the products and circumstances are sufficiently similar (*i.e.,* the product comparability standards are met), the CUP method generally will be the most reliable measure of the arm's length result of the controlled transaction.

Resale Price Method - The RP method evaluates whether the amount charged in a controlled transaction is arm's length by reference to the gross profit margin realized in comparable uncontrolled transactions. The RP method ordinarily is used in cases involving the purchase and resale of tangible property in which the reseller has not added substantial value to the tangible goods (by physically altering the goods or through the use of an intangible) before resale.

Cost Plus Method - The CP method determines an arm's length charge by comparing the gross profit markup realized in controlled and uncontrolled transactions. The CP method is ordinarily used in cases involving the manufacture, assembly or other production of goods that are sold to related parties.

Unspecified Methods - Where none of the previously discussed methods can reasonably be applied, another method may be used to determine the arm's length price.

7. Methods for Transfers of Intangible Property

If an owner of the rights to exploit an intangible transfers such rights to a controlled taxpayer, the owner must receive an arm's length consideration. An "intangible" is defined as an asset that has substantial value independent of the services of any individual, including: (i) patents, inventions, formulae, processes, designs, patterns or know-how; (ii) copyrights and literary, musical or artistic compositions; (iii) trademarks, trade names, or brand names; (iv) franchises, licenses, or contracts; (v) methods, programs, systems, procedures, campaigns, surveys, studies, forecasts, estimates, customer lists or technical data; and (vi) other similar items that derive value from their intellectual content or other intangible properties, not from their physical attributes. The owner of a particular intangible is either the legal owner of the right to exploit the intangible if the intangible is legally protected, or the developer of the intangible if the intangible is not legally protected. However, if the owner received assistance (*e.g.*, loans, services, tangible or intangible property) in the development or enhancement of the intangible from a related party, then such related party may be entitled to an arm's length consideration for such assistance.

The arm's length amount to be charged for the use of intangible property may be determined under one of the following four methods: the comparable uncontrolled transaction method, the CPM, the PS and an unspecified method.

Comparable Uncontrolled Transaction (CUT) Method - The CUT method evaluates whether the amount charged for a controlled transfer of intangible property was arm's length by reference to the

amount charged in a comparable uncontrolled transaction. For purposes of applying the CUT method, comparable intangible property must be used in connection with similar products or processes, within the same general industry or market, and have similar profit potential. Like the CUP method, the CUT method will generally provide the most reliable measure of an arm's length result is sufficient comparables are available.

Unspecified Methods - When none of the specified methods can reasonably be applied, an unspecified method may be used.

Implementation of the Commensurate with Income Standard - Periodic Adjustments - If an intangible is transferred under a multi-year arrangement, the consideration charged in each year may be subject to adjustment to ensure that it is commensurate with the income attributable to the intangible. Such adjustment shall be made in accordance with the arm's length standard under the rules previously discussed. There are some exceptions to this rule that do not require an allocation.

Comparable Profits Method - The CPM evaluates whether the amount charged in a controlled transaction is arm's length based on objective measures of profitability (profit level indicators) derived from uncontrolled taxpayers that engage in similar business activities under similar circumstances.

A reliable application of CPM requires the selection of a profit level indicator that will produce the most reliable measure of income that the tested party would have earned had it dealt with the related party at arm's length. Profit level indicators that may be used are: (i) the return on operating assets (ROA), and (ii) financial ratios that measure relationships between profit and costs or sales revenue, such as, but not limited to, the operating margin or the Berry ratio.[19] The profit level indicators for CPM should be derived from a sufficient number of years of data to reasonably measure returns that accrue to uncontrolled comparables. Generally, a three-year period, encompassing the taxable year under review and the preceding two taxable years, is sufficient. Profit level indicators based on a taxpayer's internal data (*e.g.*, data from its other divisions) cannot be used. Furthermore, the profit level indicators should be applied solely to the tested party's financial data that is related to the controlled transactions.

The three profit level indicators identified in the regulations as reliable: (i) *Return on Operating Assets (ROA):* ROA is equal to operating profit divided by operating assets, (ii). *Operating Margin:* Operating margin is equal to operating profit divided by net sales and (iii) *Berry Ratio:* The Berry ratio is equal to gross profit divided by operating expenses.

Overall, the degree of functional comparability required to obtain a reliable result under the CPM is generally less than that required under the resale price or cost plus methods. However, because operating profits may be affected by varying cost structures (as reflected, for example, in the age of plant and equipment), differences in business experience (such as whether the business is in a start-up phase or is mature), or differences in management efficiency, these factors are more important in evaluating comparability under this method.

[19] In a recent article, one commentator has suggested that in some circumstances the return on assets method is more reliable than either of the financial ratios. *See* Clark, R., "Choosing a Reliable Profit Level Indicator," 5 *Tax Mgmt Transfer Pricing Rpt* 807 (4/9/97).

Profit split method - The PSM compares the allocation of the combined operating profit or loss attributable to controlled transactions to the relative value of each controlled taxpayer's contribution to that combined operating profit or loss. The allocation should correspond to the division of profit or loss in an uncontrolled transaction, where each party performs functions similar to those of the controlled taxpayers. The profit allocated to any particular member of a controlled group is not necessarily limited to the total operating profit of the group from the relevant business activity. Thus, in a given year, one member of the group may earn a profit while another member incurs a loss. The regulations provide for a comparable profit split method and a residual profit split method.

8. Cost Sharing Arrangements

Despite the addition of the "commensurate with income" standard to section 482 in 1986, the Conference Committee report to the 1986 Act made it clear that the change was not intended to preclude the common practice of related parties entering into bona fide research and development cost sharing arrangements for the development of intangibles. The report stated, however, that for cost sharing arrangements to be consistent with the "commensurate with income" standard, a participant should be expected to bear its portion of all research and development costs, the allocation of costs generally should be proportionate to profit as determined before deduction for research and development, and to the extent one participant begins funding R&D at a much earlier point in time than another participant, that participant should receive an appropriate return on its investment.

9. Penalties

Section 6662(e) and (h) sets forth penalties of 20 and 40% for certain increases in U.S. income tax attributable to section 482 adjustments. One significant objective of the so-called transfer pricing penalty was to improve taxpayer compliance with the arm's length standard by encouraging (some might say forcing) taxpayers to make reasonable efforts to determine and document arm's length prices for their intercompany transactions. However, the penalty will not apply to the extent that the taxpayer complies with specified contemporaneous documentation requirements.

B. Tax Treaties, MAP and Competent Authority

The United States and most of its trading partners maintain an extensive network of tax treaties, the stated purposes of which are to eliminate double taxation and prevent tax evasion. In situations where the application of United States and foreign tax laws would result in the taxpayer being subject to double taxation, a taxpayer may invoke a tax treaty's mutual assistance procedure to request relief from double taxation. The application of domestic transfer pricing laws fall under tax treaty jurisdiction pursuant to the "Associated Enterprises" articles contained in the various treaties. Generally, the "Associated Enterprises" provision allows the tax authority of one country to include in the income of one of its taxpayers the income of a related party located in another country if the two parties did not act at arm's length. Because unilateral transfer pricing adjustments will always result in double taxation, taxpayers may request competent authority assistance under the treaty's mutual assistance procedure whenever they are subject to a transfer pricing adjustment.

Once a taxpayer's request for relief is accepted, the competent authorities of both treaty countries will attempt to reach a settlement that eliminates double taxation through the mutual attribution of income, deductions, credits, or allowances between related taxpayers.

C. Application

1. Taxpayer Obligations

A taxpayer can avoid the imposition of the transfer pricing penalty only if contemporaneous documentation is created by the time the taxpayer files its return for each specific year. There are two categories of documentation that a taxpayer must maintain -- principal documents and background documents. The principal documents must include:

(1) An overview of the taxpayer's business, including an analysis of the economic and legal factors affecting pricing;

(2) A description of the taxpayer's organizational structure covering all related parties engaged in transactions potentially relevant under section 482;

(3) Any documentation specifically required by the section 482 regulations (*e.g.*, documents related to a qualified cost sharing arrangement);

(4) A description of the method selected and an explanation of why that method was selected;

(5) A description of the alternative methods that were considered and an explanation of why they were not selected;

(6) A description of controlled transactions and any internal data used to analyze those transactions;

(7) A description of the comparables that were used, how comparability was evaluated, and what adjustments (if any) were made;

(8) An explanation of the economic analysis and projections relied upon in developing the method;

(9) A description or summary of any relevant data obtained after the end of the tax year and before filing a tax return; and

(10) A general index of the principal and background documents and a description of the record keeping system used for cataloguing and accessing those documents.

The background documents, which support the assumptions, conclusions, and positions contained in the principal documents, may include the documents required under the section 6038A regulations, such as original entry books and records and profit and loss statements, another documents not specifically listed in either set of regulations, which the Service determines are necessary to establish that the taxpayer's method was selected and applied in a way that provided the most reliable measure of an arm's length result.

B. APAs

The negotiation and execution of a bilateral or multilateral APA is the only way for a taxpayer to obtain prospective relief from double taxation. An APA is a binding, written contract between the taxpayer, the IRS, and, in the case of a bilateral APA, a foreign tax authority. In an APA, the parties agree on the best transfer pricing methodology (TPM) for determining the arm's length price for certain covered transactions and the proper application of such method to the taxpayer's particular facts and circumstances. Once an APA is finalized and executed by the parties, the IRS (and the foreign tax

authority for a bilateral APA) will regard the results of applying the TPM as satisfying the arm's length standard provided the taxpayer complies with its terms. The duration of an APA is typically from three to five years, and can be renewed in future years. An APA can also be applied to previous years ("rolled back") in certain circumstances. In addition to the *Traditional* APA, in 1998, the IRS addressed taxpayers concerns about time and expense in obtaining an APA by issuing procedures for small business taxpayers to obtain an APA that will be negotiated under a streamlined process.

VI. Venezuela

A. Legislation and Regulations

The Venezuelan transfer pricing rules focus primarily on import and export transactions of tangible property, although certain rules target interest charges between related parties. Royalties, technical assistance fees and technological service fees are specifically excluded from the transfer pricing legislation since these types of payments are covered by other provisions that limit the amount that may be deducted. In this respect, the Venezuelan transfer pricing rules resemble the rules in Brazil.

Following the trend in Latin America (*e.g.,* Argentina, Brazil and to some extent Mexico), Venezuela has adopted diverse and complex attribution rules in terms of indirect and family relationships. The legislation includes safe harbors in manner similar to that of Brazil as well as the arm's length standard similar to that of Mexico.

1. Definition of Related Parties

The provisions determining related party status are very broad. Parties may be deemed related under the Venezuelan rules in situations where those parties would not be deemed related under the related party definitions used in most OECD countries.

- Through a relationship with a legal entity domiciled in Venezuela;
- Through a relationship with a permanent establishment in Venezuela; or
- Through a relationship with a fixed base in Venezuela.

The transfer pricing law contains three types of attribution: attribution based on legal structure, family relationship and on both family relationship and legal structure.

2. Transactions with Low-Tax Jurisdictions

Venezuela includes a rebuttable presumption that a Venezuelan entity conducting business with an entity in a low-tax or tax haven jurisdiction is conducting business with a related party. Unlike the rules in Argentina, the Venezuelan statute does not define "low-tax jurisdiction." Nevertheless, based on other sections of the tax reform, it is anticipated that the Venezuelan tax authorities will publish a list of countries considered low-tax jurisdictions following Mexico's practice.

3. Methodologies for Import Transactions

Taxpayers may use the following methods in computing an arm's length price for import transactions: CUP, RP, production cost method[20] and transactional operating profit margin method

[20] This method is equivalent to the CP method in the OECD Guidelines.

(TOPMM).[21] Costs and deductions are taken into account for income tax purposes up to the import value, as determined under one of these methods. The importer may not deduct as a business expense amounts paid in excess of the import value.

Although the preamble to the reform states that the transactional profit margin method is a method of last resort, the legislation does not include specific language to that effect. Similar to Brazil, the statute permits the importer to use the four methodologies but permits the importer to select the highest import price within these methodologies. An importing taxpayer may select the best method to increase the value of purchase deductions.[22] The law does not contain provisions for the profit split method.

Comparable Uncontrolled Price Method: The importer must determine the average price or cost in the open market as a comparison of its import cost. Import law concepts apply and the importer must determine the cost or price of "identical" or "similar" goods, services or rights and compute an average of these amounts. The importer may use either foreign or domestic markets taking payment financing into account. Allowing price averaging for comparison of controlled and uncontrolled transactions poses an additional deviation from the approach recommended in the OECD Guidelines, according to which any uncontrolled price within a range is recognized as evidence of an arm's length result.[23]

Resale Price Method: The importer determines the average resale price of the goods, services or rights after reducing the resale price by the following amounts: unconditional discounts, sales tax commissions, brokerage costs and factoring expenses, and a markup calculated on the resale price.

The legislation established that the Venezuelan tax authorities will provide a safe harbor markup[24]. The authorities will accept a different markup if the taxpayer proves the markup with publications, a report or official bulletins.

Production Cost Method: The importer uses the average cost of goods, services or rights, regardless of whether these amounts are "identical" or "similar" under import law concepts. The amounts are determined in the country where the goods, services or rights would have been originally produced. The importer adds the export tax at the country of origin and a markup calculated on the cost as determined.

Transactional Operating Profit Margin Method: The TPMM determines the profit of transactions between related companies. Arm's length profitability is obtained by comparable businesses or independent parties in comparable operations and activities. Earnings profitability takes into account variables such as assets, sales, costs, expenses or currency fluctuations. Unlike other countries, the TPMM in Venezuela is not a method of last resort and can be chosen as the appropriate method without the taxpayer demonstrating that no other method was feasible.

4. Methodologies for Export Transactions

Income derived by an exporter is subject to specified transfer pricing rules when the average sales price of exported goods, services or rights falls below 90% of the average price of the sales of the same goods, services or rights of unrelated parties. The average price is applied to the sales of the same goods, services or rights between unrelated parties in the domestic market during the same period and with similar methods of payment financing. If the exporter is unable to determine the average price in the Venezuelan domestic market, the exporter may use the average price of the sales of similar goods,

[21] Brazil does not accept any profit-based methods, thus the transactional net profit margin method is not included in its transfer pricing rules.

[22] The same principle applies to exports since taxpayers may apply the lowest export price computed under the four methods.
[23] The use of averages is general for all Venezuelan methods.
[24] This applied for all methods, except for the TOPMM.

services or rights between unrelated parties in the destination market during the same fiscal period and under similar methods of payment financing.

If the exporter's sales price fails to meet the 90% test, the exporter must determine its income by using one of the five official transfer pricing methods designated for exports. The permitted methodologies are as follows:

Average Export Sales Price Method: This method is the company's average sale price for other customers or another domestic exporter with identical or similar goods, services or rights.

Wholesale Sales Price Method: This method is based on sales to the country of destination less the wholesaler's profits, *i.e.*, the wholesale sales price is the average price of the goods, services or rights in the wholesale market in the country of destination. The wholesale sales price is based on similar payment conditions and is calculated by subtracting the sales tax included in the country of destination and subtracting a profit margin on the wholesaler's sales price. The Venezuelan tax authorities may establish this profit margin by issuing administrative regulations.

Retail Sales Price Method: The RP method is based on sales to the country of destination less the retailer's profits. The retail sales price is the average price of identical or similar goods sold in the country of destination. The tax authorities apply payment factors analogous to the wholesale sales price by subtracting the sales tax of the country of destination and the profit margin from the retail price. The tax authorities may establish this profit margin by issuing administrative regulations.

Production Cost Method Plus Profits Method: The Venezuelan tax administration may determine export sales income through the purchase price plus profits or production price plus profits method. This method consists of determining the average purchase or production price of the exported goods, services or rights, plus adjustments. The tax administration, through administrative regulations, is to add the taxes imposed on the sales activity by either country and add a profit margin based on the sum of the costs and taxes.

Transactional Operating Profit Margin Method: The TOPMM permits the taxpayer to determine the profitability that would have been obtained by comparable businesses or by unrelated parties in similar situations. This comparison could take into account factors such as profits that are based on other factors such as assets, costs, expenses or currency fluctuation.

5. Financing transactions

The Venezuelan transfer pricing legislation reflects to some extent the reality of inflation and currency devaluation in the country. Interest paid or credited between related parties is deductible only for the purpose of determining taxable income up to the amount that does not exceed the value calculated based on LIBOR rates to deposit U.S. dollars for a period of six months, increased by the annual percentage proportionate to the period to which the interest refers. The Venezuela tax authorities determine this percentage based on information from the Central Bank.

6. Information Gathering

Venezuelan law allows taxpayers to use various sources of information to support their transfer prices. Costs, average prices and profit margins are to be determined by taking into account the following:

- Official publications and bulletins, issued by a domestic or foreign recognized institution, of the buyer's and seller's countries. Declarations by the tax authorities may be used if that country has concluded a double tax treaty with Venezuela that provides for the exchange of fiscal information.

- Trade data collected by recognized companies or technical institutions, or technical publications that are specific to the relevant industry. This type of information must specify the period it relates to, companies included, etc.

7. Documentation Requirements

Although taxpayers are not required in the transfer pricing legislation to provide documentation, under the Income Tax Law, taxpayers must maintain documentation to prove that income, expenses and deductions from operations with related parties comply with arm's length principle by the filing date of the annual income tax return. Taxpayers must provide all information, reports, bulletins, publications, etc. requested by the tax authorities in the course of a direct audit. The tax authorities will accept that information if it was prepared in accordance with internationally accepted methods provided it refers to the same tax period as the Venezuelan company.

8. Penalty Provisions

There are no specific penalty provisions applicable to transfer pricing. However, Article 97 of the Income Tax Law provides for a penalty of 10% to 200% of the unpaid tax and Article 59 establishes interest charges based on the maximum rate for loans in Venezuelan banks, plus 3%.

B. Tax Treaties, MAP and Competent Authority

Venezuela has concluded tax treaties with the following countries:, although not all of them are currently applicable due to lack of certain legalities.

- Belgium
- Czech Republic
- France
- Germany
- Italy
- Mexico
- Netherlands
- Norway
- Portugal
- Sweden
- Switzerland
- Trinidad and Tobago
- United Kingdom
- United States

These treaties contain a MAP similar to that in Article 25 of the OECD Model Tax Convention, as well the provisions applicable to transfer pricing. Venezuela has also signed a multilateral treaty, the Cartagena Agreement, with Bolivia, Colombia, Chile, Ecuador and Peru. This convention does not follow the OECD rules so it does not contain a MAP.

C. Application

1. Taxpayer Obligations

Taxpayers that carry out business activities with a foreign related party must use transfer pricing methods to determine their income, cost and deductions by the filing date of the annual income tax return. Taxpayers must provide all information, reports, books, records, etc. requested by the tax authorities in the course of a direct audit.

2. Examinations, Dispute Resolution, APAs

Since the transfer pricing rules are a relatively new initiative in Venezuela, the tax authorities have had no practical experience with transfer pricing audits.

The Venezuelan statute does not provide for APAs.

Bibliography

OECD Transfer Pricing Guidelines

OECD Model Tax Convention

Argentina Income Tax Law and Regulations

Brazil Income Tax Law and Regulations

Mexico Income Tax Law, Regulations and Miscellaneous Tax Provisions

United States Internal Revenue Code and Regulations

Venezuela Income Tax Law

SESION 4

INCENTIVOS FISCALES Y COMPETITIVIDAD: EXPERIENCIA Y PERSPECTIVAS PARA AMERICA LATINA Y EL CARIBE EN UNA ERA DE CRECIENTES CONFLICTOS ECONOMICO-COMERCIALES INTERNACIONALES

LAS REGLAS MULTILATERALES SOBRE SUBSIDIOS A LA LUZ DE ALGUNOS FALLOS DE LA ORGANIZACIÓN MUNDIAL DEL COMERCIO (OMC)[1]

Vivianne Ventura Dias[2]

[1] Esta es una versión preliminar y no editada del documento.

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1. Introducción

La subvención directa o indirecta de actividades económicas por el sector público es una práctica tan antigua cuanto la propia existencia de los Estados naciones. Los aportes del erario público tienen el propósito de reducir los costos de producción, de comercialización, de transporte, o de consumo de productos específicos, y por lo tanto inciden sobre las condiciones de competencia en estos mercados. Sin embargo, hasta la última ronda de negociaciones comerciales multilaterales (1986-1993), los subsidios no estaban cubiertos por reglas multilaterales precisas. La Ronda Uruguay definió por primera vez conceptos y limitaciones para el empleo tanto de los subsidios a la exportación como de los subsidios a la producción, así como reglas y procedimientos para la aplicación de medidas compensatorias. Vale notar que los negociadores lograron que los subsidios a los productos y a los productores agropecuarios fueron incluidos en el Acuerdo sobre la Agricultura y tuvieron un trato diferente de los subsidios a la producción y exportación de manufacturados cuyas reglas están definidas en el Acuerdo sobre Subvenciones y Medidas Compensatorias (SMC). Las disciplinas sobre subvenciones a la producción y exportación de los servicios aún no han sido objeto de negociaciones.[3]

Es importante destacar que en lo relativo a los subsidios no agrícolas, las disciplinas sobre Subvenciones y Medidas Compensatorias tienen un doble propósito. Por una parte, restringir el uso de ciertas subvenciones por sus efectos negativos sobre el comercio de los demás signatarios de los acuerdos; y por otra, restringir la introducción unilateral y arbitraria de medidas de compensación por daños debidos a importaciones sospechas de haber recibido subsidios.

Durante los seis años de operación de la OMC, solamente cinco de los cerca de 55 informes emitidos por el organismo de solución de controversia de esta institución se refirieron a quejas por subvenciones. Los casos más recientes y también los más complejos se refieren a las quejas cruzadas de los gobiernos de Brasil y Canadá por subvenciones a la exportación de aviones civiles producidos respectivamente por la empresa brasileña Embraer y la canadiense Bombardier, y la querella de la Unión Europea por los subsidios otorgados por el gobierno de los Estados Unidos a ciertas operaciones de sus empresas transnacionales, las exenciones de impuestos a las Empresas de Ventas Externas (*Foreign Sales Corporations)* de los Estados Unidos.[4]

Este documento tiene como objetivo presentar las reglas multilaterales sobre subsidios, a partir de la interpretación de las mismas por el sistema de solución de controversias de la OMC en sus fallos de los casos de Brasil contra Canadá y Canadá contra Brasil. Está dividido en cinco partes. La segunda, subsecuente a esta introducción, describe la evolución de la normativa multilateral sobre subvenciones. La tercera examina someramente el órgano de solución de controversias de la OMC con vistas a exponer los procedimientos, sus propósitos y los límites de su acción. La sección cuarta proporciona información sobre los dos fallos de la OMC referidos anteriormente. Finalmente, la última sección presenta algunas cuestiones planteadas por la normativa multilateral a la acción de los gobiernos.

[3] El Artículo XV (Subvenciones) del Acuerdo General sobre el Comercio de Servicios define "Los miembros reconocen que, en determinadas circunstancias, las subvenciones pueden tener efectos de distorsión del comercio de servicios. Los Miembros entablarán negociaciones con miras a elaborar las disciplinas multilaterales necesarios para evitar esos efectos de distorsión..." (GATT, 1994, pág. 357).

[4] Dos otros casos abarcan una reclamación de los Estados Unidos contra subsidios otorgados por Australia a productores y exportadores de cuero utilizados en autos (documento de la OMC WT/DS126/1) y una queja conjunta de los Estados Unidos, la Unión Europea y Japón en contra de la política automotiva de Indonesia (documento de la OMC WT/DS54, 55, 59 & 64) (véase la página web de la OMC http://www.wto.org).

2. La evolución de las reglas multilaterales sobre subvenciones fiscales

Es solamente a partir de una revisión del Acuerdo General sobre Aranceles y el Comercio (GATT), procesada a mediados de los años 1950, que las subvenciones empezaron a ser tema de política comercial, en contraste con los derechos de aduana, que tenían una larga tradición ya sea en el ámbito bilateral o multilateral (UNCTAD, 1994, pág. 71). En el acuerdo original del GATT de 1947 existían pocas disciplinas internacionales correspondientes a los subsidios. Las subvenciones eran objeto de los artículos VI y XVI del GATT. El primero se refería a la imposición de derechos antidumping y compensatorios, mientras que el artículo XVI trataba los subsidios como interferencias indeseables al libre flujo de bienes. Además, el gobierno signatario del Acuerdo General (Parte Contratante) que mantuviera una subvención debería, como obligación general, consultar con los demás signatarios acerca de la "posibilidad de limitar la subvención" si se determinara que esta última causaba o amenazaba causar "un perjuicio grave a los intereses de otra parte contratante".

En 1955, los dispositivos del Artículo XVI fueron revisados, siendo añadida una sección B (sobre subsidios a la exportación) a los conceptos ya existentes, los que a su vez pasaron a componer la sección A (subvenciones en general). Es decir, se hacía una distinción entre los subsidios a la producción y los orientados hacia la exportación, siendo que los últimos permitían la imposición de derechos compensatorios, mientras que los primeros determinaban obligaciones vagas de consultas e intercambio de información (Dam, 1970, pág. 132).[5]

Por otra parte, es necesario destacar que hasta mediados de los años sesenta, la baja capacidad de financiamiento interno de los países en desarrollo y la estructura de los mercados internacionales de capital, convertían los subsidios en instrumentos de los países industrializados. Los productos subvencionados, que eran posteriormente exportados, pasaban a competir en condiciones ventajosas tanto con la producción local, en los países en desarrollo, como con sus exportaciones en terceros países. Como resultado de las negociaciones multilaterales, varios dispositivos fueron introducidos en la sección B del artículo XVI, con vistas a limitar el uso de las subvenciones, especialmente a la exportación de los "productos primarios". A partir de enero de 1958 fue introducida una obligación para los países industrializados de no conceder subvenciones a la exportación de "cualquier producto que no sea un producto primario...". En 1960, un grupo de trabajo preparó una lista ilustrativa de esas subvenciones prohibidas.[6]

Asimismo, poco a poco se formó una jurisprudencia aceptada en el GATT de que una concesión arancelaria quedaría "anulada o menoscabada" por una subvención a productores nacionales del país que hiciese la concesión, en los términos del Artículo XXIII del GATT (UNCTAD, 1994, pág. 73).

Estos elementos de la diplomacia comercial reflejan también que ante el impacto de los subsidios en la eficiencia del uso de los recursos internacionales los economistas no mantenían el mismo consenso que lo que tenían en relación a la eficiencia económica de los subsidios al interior de cada país. Al contrario, la mayoría de los autores consideraba que los subsidios introducían menos distorsiones en el comercio internacional que los aranceles. En efecto, aunque los subsidios a la exportación fueran en

[5] Artículo XVI, párrafo 1 (Sección A – Subvenciones en general) "Si una parte contratante concede o mantiene una subvención, incluida toda forma de sostenimiento de los ingresos o de los precios, que tenga directa o indirectamente por efecto aumentar las exportaciones de un producto cualquiera del territorio de dicha parte contratante o reducir las importaciones de este producto en su territorio, esta parte contratante notificará por escrito a las Partes contratantes la importancia y la naturaleza de la subvención, los efectos que estime ha de ocasionar en las cantidades del producto o de los productos de referencia importados o exportados por ella y las circunstancias que hagan necesaria la subvención. En todos los casos en que se determine que dicha subvención causa o amenaza causar un perjuicio grave a los intereses de otra parte contratante, la parte contratante que la haya concedido examinará, previa invitación en este sentido, con la otra parte contratante o las otras partes contratantes interesadas, o con las partes contratantes, la posibilidad de limitar la subvención." (GATT, 1994, 529).

[6] Los países en desarrollo no firmaron la Declaración sobre Subsidios a la Exportación de 1960 (Winham, 1986, pág. 221).

general criticados, los subsidios a la producción eran considerados legítimos, en términos del desarrollo de la producción local, y lícitos ante los principios del GATT, desde que no hubieran trabas a la libre importación, dado que permitirían a la industria local adquirir escala y competir con las importaciones, lográndose así un aumento de la eficiencia global (Dam, 1970/1977, págs. 133-141).[7]

Por otra parte, en la ausencia de reglas claras hasta la Ronda Uruguay, los Estados pasaron a desarrollar su legislación interna con el propósito de "remediar" los efectos de las prácticas de los otros Estados. Como se dijo anteriormente, cuando se considere que han tenido lugar algún tipo de subvención que ha causado o amenaza causar un perjuicio importante a la industria nacional, la subvención puede ser contrarrestada con un derecho compensatorio equivalente.

Desde 1897, los Estados Unidos mantienen leyes internas para "remediar" los efectos de las prácticas de los otros Estados (derechos compensatorios).[8] Inicialmente aplicada para compensar los productores domésticos de donaciones públicas a las exportaciones que eran gravadas en aquél país, la ley fue ampliada en 1922 para incluir subsidios domésticos. Además, las Leyes de Comercio de 1974 y de 1979 ampliaron considerablemente la autoridad federal para imponer derechos compensatorios. El mayor problema residía en que los derechos compensatorios eran aplicados sin que la existencia de un "daño importante", llamada "prueba de daño", fuera demostrada con rigor.[9]

Durante la Ronda Tokio (1973-1979) no fue posible llegar a un acuerdo generalizado relativo a "la interpretación y aplicación de los artículos VI, XVI y XXIII del GATT".[10] El principal escollo fue la inclusión de los subsidios a la producción, que era deseada por los Estados Unidos, pero no por los países de Comunidad Europea. Por otra parte, los países en desarrollo defendían su derecho de seguir utilizando subvenciones gubernamentales para diversificar su estructura productiva sin la imposición de derechos compensatorios por los países industrializados. Finalmente, estos países decidieron no suscribir el Código de Subsidios (Winham, 1986).

De toda manera, el Código de Subsidios, que resultó de la Ronda Tokio se constituyó el primer texto abarcante de disciplinas multilaterales sobre el uso de subsidios en el comercio internacional (Jackson, 1989/1992). Según Maciel (1994, pág. 256) la metodología del acuerdo era defectuosa, el propio acuerdo era vago en muchos puntos y el lenguaje jurídico era muy impreciso. Estos problemas deberían ser solucionados en el nuevo texto a ser negociado en la Ronda Uruguay.

El Acuerdo sobre Subvenciones y Medidas Compensatorias (SMC) que resultó de la Ronda Uruguay consta de 32 artículos y siete anexos que extendieron de forma significativa los 18 artículos del Código de 1979. Por la primera vez define con rigor y abundancia de detalles el término subvención, como una medida costeada por el erario público, que otorga un beneficio a empresa(s) o rama(s) de producción específicas, y que se aplica en una de dos situaciones:

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[7] La literatura económica reconoce que los subsidios afectan los patrones de producción de productos específicos mientras que los aranceles tienden a distorcionar tanto los patrones de producción como los de consumo.

[8] En el espírito de sus leyes y en su práctica, siempre existió un amplio consenso en los Estados Unidos acerca de la legitimidad de la protección de las industrias locales afectadas por el comercio. En virtud de la ley de 1897, el secretario del Tesouro debería imponer un gravámen especial a los productos que se concluyeran que habían sido subvencionados en el país de origen, en un monto análogo al del subsidio. La misma ley abarcaba también los bienes vendidos a precios inferiores a su real valor (*dumping*) (Destler, 1992, pág. 139).

[9] Entre 1934 y 1968 se hicieron 191 investigaciones de subvenciones de las cuales solamente 30 casos concluyeron con la imposición de derechos compensatorios. Sin embargo, entre 1980 y 1984 se iniciaron cerca de 258 casos de medidas compensatorias, de las cuales, 135 se concluyeron con la imposición de derechos o bien la suspensión de las subvenciones alegadas (Destler, 1992, págs. 141 y 154).

[10] El Artículo XXIII se refiere a acciones de las Partes Contratantes ante el no cumplimiento de las obligaciones por otra parte contratante (anulación o menoscabo).

(1) la primera es por medio de una contribución financiera de un gobierno o de cualquier organismo público establecido en el territorio del país miembro a través de: transferencia directa de fondos (por ejemplo, donaciones, préstamos y aportaciones de capital) o transferencia directa potencial de fondos o de pasivos (por ejemplo, garantías de préstamos); ingresos públicos no recaudados (por ejemplo, incentivos tales como bonificaciones fiscales); provisión de bienes o servicios excluidos los de infraestructura general, o la compra de bienes; pagos a un mecanismo de financiación, o encomienda a una entidad privada de una o varias de las funciones descritas anteriormente (GATT, 1994, pág. 275);[11]

(2) la segunda, cuando haya alguna forma de sostenimiento de los ingresos o de los precios (en el sentido del Artículo XVI del GATT).[12]

Cabe notar que el término beneficio no es definido con precisión (Artículo 1.1(b)).[13]

A seguir, el Artículo 2 del Acuerdo SMC introduce el concepto de "especificidad", y los principios para determinar si una subvención es específica para una empresa o rama de producción o un grupo de empresas o ramas de producción. Finalmente se definen las subvenciones prohibidas (parte II), aquellas que son recurribles y aquellas que no son recurribles (partes III y IV). La parte V del Acuerdo establece normas complejas sobre el procedimiento de investigación, pruebas, determinación de la existencia de daño y establecimiento y percepción de derechos compensatorios.

Son subvenciones prohibidas (a reserva de lo dispuesto en el Acuerdo sobre la Agricultura):

a) las subvenciones supeditadas *de jure* o *de facto* a los resultados de exportación, como condición única o entre otras varias condiciones, con inclusión de las citadas a título de ejemplo en el anexo I;[14]
b) las subvenciones supeditadas al empleo de productos nacionales con preferencia a los importados, como condición única o entre otras varias condiciones.

Cabe señalar que solamente los subsidios a la exportación eran considerados subsidios prohibidos en el Código de la Ronda Tokio, mientras que el Acuerdo SMC extendió la cobertura de los subsidios prohibidos para incluir los subsidios a la sustitución de importaciones. Sajjanhar (2000, págs. 264-265) llama la atención para los nuevos compromisos asumidos por los países en desarrollo, dado que en el

[11] Artículo 1:1: "A los efectos del presente Acuerdo, se considerará que existe subvención: a)1) cuando haya una contribución financiera de un gobierno o de cualquier organismo público en el territorio de un Miembro (denominado en el presente Acuerdo "gobierno")... a)2) cuando haya alguna forma de sostenimiento de los ingresos o de los precios en el sentido del artículo XVI del GATT de 1994; y b) con ello se otorgue un beneficio (GATT, 1994, págs. 275-276).

[12] Según Sajjanhar (2000, pág. 262) la siguiente cláusula debería ser incluida en la definición de subsidio: "toda práctica pública que no se ajuste a los criterios expuestos no pueden ser considerados subvenciones para efectos del Acuerdo."

[13] El grupo especial establecido para analizar la queja de Brasil contra Canadá sugirió un concepto más detallado de "obligación". El grupo consideró que "una contribución financiera por un gobierno o un organismo público otorga un beneficio, y por lo tanto se constituye un subsidio en el sentido del Artículo 1 del Acuerdo SMC, cuando ella otorga una ventaja a quién recibe en comparación con alternativas comerciales, es decir, cuando es otorgado en términos que son más ventajosos a quién la recibe, que los que están disponibles en el mercado (OMC, 1999a, pág. 176-178).

[14] El SMC explicita que: "Si hay razones para creer que la subvención puede en realidad ser específica aun cuando de la aplicación de los principios enunciados en los apartados a) y b) resulte una apariencia de no especificidad, podrán considerarse otros factores. Esos factores son los siguientes – la utilización de un programa de subvenciones por un número limitado de determinadas empresas, la utilización predominante por determinadas empresas, la concesión de cantidades desproporcionadamente elevadas de subvenciones a determinadas empresas, y la forma en que la autoridad otorgante haya ejercido facultades discrecionales en la decisión de conceder una subvención. Al aplicar este apartado, se tendrá en cuenta el grado de diversificación de las actividades económicas dentro de la jurisdicción de la autoridad otorgante, así como el período durante el que se haya aplicado el programa de subvenciones" (Artículo 2.1:c) (GATT, 1994, págs. 276-277) La última frase, diferentemente de la legislación de los Estados Unidos limita la aplicación del análisis *de fato* de la especificidad del subsidio (Sajjanhar, 2000, pág. 263).

Código de la Ronda Tokio, ellos tenían derecho a mantener subsidios a la exportación y los subsidios a la sustitución de importaciones no eran objeto de medidas compensatorias por otros países. Además, el lenguaje del Acuerdo SMC permite suponer que un subsidio a la sustitución de importaciones puede ser recurrible independientemente de ser *de jure* o *de facto* específico o de otorgar un beneficio.

Todas las subvenciones que no sean claramente definidas como "no-recurribles", que cumplan con las condiciones de la definición de subsidio (artículo 1); que no sean "prohibidas", y que no se refieran a "productos agropecuarios" pueden ser "recurribles" ante el Órgano de Solución de Diferencias de la OMC. Las subvenciones "no recurribles" son las siguientes (artículo 8):

a) la asistencia para actividades de investigación realizadas por empresas, o por instituciones de enseñanza superior o investigación contratadas por empresas, bajo ciertas condiciones;
b) asistencia para regiones desfavorecidas situadas en el territorio de un Miembro, prestada con arreglo a un marco general de desarrollo regional y no específica, bajo ciertas condiciones;
c) asistencia para promover la adaptación de instalaciones existentes a nuevas exigencias ambientales impuestas mediante leyes y/o reglamentos que supongan mayores obligaciones o una mayor carga financiera para las empresas, bajo ciertas condiciones.

3. El Sistema de Solución de Controversias de la OMC: los límites de su acción jurídica

El Órgano de Solución de Controversias de la OMC no es ni tiene el propósito de ser un tribunal comercial internacional. Las partes contratantes buscan imponer una solución de consenso negociada a un diferendo de naturaleza comercial que mantenga el equilibrio de derechos y obligaciones entre los países miembros. El Entendimiento relativo a las normas y procedimientos por el que se rige la solución de diferencias, que es parte del conjunto de acuerdos, decisiones, declaraciones y entendimientos que resultaron de la Ronda Uruguay, otorgó más automaticidad en la adopción de decisiones, plazos precisos, el establecimiento de un Órgano de Apelación, un mecanismo de retorsión cruzada, y reglas especiales para los casos en que no se alegue infracción de obligaciones (Millán, 1994, pág. 347).[15]

El Artículo 3:2 define el sistema de solución de diferencias de la OMC como "un elemento esencial para aportar seguridad y previsibilidad al sistema multilateral de comercio." Además, que "sirve para preservar los derechos y obligaciones de los Miembros en el marco de los acuerdos abarcados y para aclarar las disposiciones vigentes de dichos acuerdos de conformidad con las normas usuales de interpretación del derecho internacional público." Por otra parte, "las recomendaciones del OSD (Órgano de Solución de Diferencias) no pueden entrañar el aumento o la reducción de los derechos y obligaciones establecidos en los acuerdos abarcados" (GATT, 1994, pág. 421-422).

A su vez, el párrafo 3 del mismo artículo dispone que "el mantenimiento de un equilibrio adecuado entre los derechos y obligaciones de los Miembros" depende de una "pronta solución de las situaciones en las cuales un Miembro considere que cualesquiera ventajas resultantes para él directa o indirectamente de los acuerdos abarcados se hallan menoscabadas por medidas adoptadas por otro Miembro". La definición de anulación está clara en el párrafo 8: "El incumplimiento de las obligaciones que fueron contraídas en función de un acuerdo determina un caso de anulación o menoscabo" (Artículo 3,

[15] Sáenz (1999, pág. 328) se refiere al Entendimiento como una codificación de las prácticas desarrolladas por el GATT desde su creación en 1947. Los Artículos XXII y XXIII son las únicas disposiciones sobre solución de controversias del GATT de 1947, pero no contienen aspectos precisos de procedimientos.

párrafo 8). Por lo tanto, el objetivo del mecanismo de solución de diferencias es "conseguir la supresión de las medidas de que se trate si se constata que éstas son incompatibles con las disposiciones de cualquiera de los acuerdos abarcados" (Artículo 3, párrafo 7).

Es importante destacar que el mecanismo no tiene como objetivo sancionar un determinado gobierno a través de compensaciones comerciales "sino en el caso de que no sea factible suprimir inmediatamente las medidas incompatibles con el acuerdo abarcado y como **solución provisional** (énfasis nuestra) hasta su supresión." Además, la suspensión de concesiones fue propuesta como último recursos, y solo puede ser implementado "siempre que el OSD autorice la adopción de estas medidas" (Artículo 3, párrafo 7).

El sistema de solución de controversias comprende varias etapas aunque no sean todas necesarias, que comprende la solicitud de celebración de consultas, buenos oficios, conciliación y mediación, la formación de un grupo especial que deberá "examinar, a la luz de las disposiciones pertinentes (del acuerdo abarcado o de los acuerdos abarcados) que hayan invocado las partes en la diferencia, el asunto sometido al OSD ... y formular conclusiones que ayuden al OSD a hacer las recomendaciones o dictar las resoluciones previstas en dicho acuerdo o dichos acuerdos." Posteriormente, una vez adoptado el informe del grupo especial, si las partes no estuvieran conformes con ello, podrán solicitar que el informe del grupo especial sea revisado por el Órgano de Apelación. Si el grupo especial o el Órgano de Apelación llega a la conclusión de que una medida es incompatible con un acuerdo abarcado, debe recomendar que las medidas cuestionadas sean reformuladas de forma a estar en conformidad con el acuerdo.

El Acuerdo SMC contiene plazos y procedimientos para la solución de diferencias concernientes a subvenciones consideradas prohibidas en el Artículo 4 y sobre las subvenciones recurribles en el Artículo 7. Es importante señalar que según el Artículo 4:2, cabe al querellante presentar evidencias de la existencia y naturaleza de la subvención de que se trate, cuando solicite consultas con el país Miembro que supone que concede o mantiene una subvención prohibida.[16] Es decir, al querellante debe demostrar primero, que existe un subsidio, en el sentido de que cumple con las definiciones dadas por Artículo 1 del SMC, y, después, que este subsidio es contingente a un desempeño exportador, en el sentido del Artículo 3. Sin embargo, las consultas son confidenciales y no tienen registro documental.

4. El caso de Embraer versus Bombardier (Brasil versus Canadá) y vice-versa

El caso reciente de las quejas cruzadas de Canadá y Brasil ante el sistema de solución de controversias de la OMC es ejemplar porque es uno de los pocos casos en que dos gobiernos están concretamente defendiendo los intereses de dos empresas privadas, la empresa Bombardier canadiense y Embraer, brasileña, ambas empresas rivales en la producción y exportación de aeronaves civiles de porte medio para vuelos regionales.

En junio de 1996, Canada solicitó consultas con Brasil con relación a los subsidios a la exportación otorgados a la empresa EMBRAER bajo el Programa de Financiamiento a las Exportaciones (PROEX), para la compra de aeronaves. A su vez, en marzo de 1997, Brasil solicitó consultas con el gobierno de Canadá con referencia a subsidios que el gobierno del Canadá o sus provincias otorgan para la exportación de aeronaves civil de Canadá. Aunque Canadá haya manifestado su intención de solicitar el establecimiento de un grupo especial desde septiembre de 1996, solamente el 10 de julio de 1998, tanto Canadá como Brasil solicitaron la formación de un grupo especial para analizar las reclamaciones

[16] (4:1) "Cuando un Miembro tenga razones para creer que otro Miembro concede o mantiene una subvención prohibida, el primero podrá pedir al segundo la celebración de consultar." (4:2) "En la solicitud de celebración de consultas al amparo del párrafo 1 figurará una relación de las pruebas de que se disponga respecto de la existencia y la naturaleza de la subvención de que se trate" (GATT, 1994, pág. 278).

respectivas.[17] Las dos querellas avanzaron con los mismos plazos. El 14 de abril de 1999 circularon los informes de los dos grupos especiales (WT/DS70/R y WT/DS46/R), y el 2 de agosto de 1999 circularon los dos fallos del Órgano de Apelación (WT/DS70/AB/R y WT/DS46/AB/R).[18]

El caso de Brasil contra Canadá

Brasil solicitó al grupo especial que verificara que ciertos subsidios empleados por Canada eran *de jure* o *de facto* contingentes a un desempeño exportador, y por lo tanto eran inconsistentes con el Artículo 3 del Acuerdo SMC, respectivamente:

1. garantías de financiamiento y préstamo por EDC (Export Development Corporation) incluyendo aportación de capital a empresas establecidas para facilitar las exportaciones de aeronaves civiles;
2. Apoyo a la industria de aeronaves civiles por Canada Account;
3. Fondos suministrados a la industria de aeronaves civiles por Technnology Partnerships Canada (TPC) y los programas que la precedieron, específicamente el Defence Industry Productivity Programme (DIPP);
4. la venta por Ontario Aerospace Corporation, una agencia del gobierno de la provincia de Ontario, de 49% de participación en una empresa de aeronaves civiles (de Havilland, Inc.) en términos favorables;
5. beneficios otorgados por el Canada-Québec Subsidiary Agreement on Industrial Development; y
6. beneficios otorgados por el Gobierno de Québec por la Societé de Développement Industriel (SDI) du Québec (OMC 1999a), págs. 2 y 3).

Brasil enfrentó una misión doblemente difícil: por una parte, defender el PROEX de las acusaciones de ser subsidio prohibido, y por otra, de encontrar evidencias amplias de los subsidios generalizados canadienses, para las cuales, sería necesario obtener información confidencial y no disponible. Además, mientras Canadá tenía una queja muy específica, la de Brasil, al contrario, abarcaba una vasta gama de instrumentos e instituciones.[19]

La defensa de Canadá fue muy enfática en negar información que describiera los detalles de las operaciones financieras de las instituciones acusadas por Brasil de promover las exportaciones de aeronaves civiles del país. Según Canadá, Brasil tenía la responsabilidad de presentar su caso ante el grupo especial. Por lo tanto, el gobierno brasileño debería encontrar suficiente evidencia para que se formara la sospecha de que sus afirmaciones acerca de la práctica de subsidios prohibidos en Canadá eran verdaderas. Es decir, según la percepción canadiense, y que fue posteriormente respaldada por el grupo especial, si Brasil no disponía de tales pruebas, Canadá no tenía la obligación de suministrar información adicional, y consecuentemente, la querella de Brasil no debería ser aceptada. En el caso en que Brasil dispusiera de tal información, entonces la otra parte debería aceptar el costo de desacreditar la sospecha con fuerte evidencia.[20]

El gobierno brasileño tuvo que basarse en la información disponible acerca de los varios programas canadienses, y en información circunstancial sobre el impacto de estos programas en las

[17] En la querella cruzada, los Estados Unidos y la Comunidad Europea reservaron sus derechos de participar en los procedimiento del grupo especial como terceras partes.
[18] Los informes de los dos grupos especiales fueron distribuidos a las partes el 12 de marzo de 1999.
[19] Para Canadá, entregar las informaciones confidenciales *transaction-specific* solicitadas por Brasil transformaría el proceso de los grupos especiales de la OMC en comisiones de inquérito (OMC 1999a, pág. 22).
[20] OMC, 1999b, págs. 23 y 24, párrafo 4.94).

exportaciones del Bombardier.[21] El grupo especial decidió que no era compatible con sus operaciones buscar información detallada con respecto a transacciones específicas aunque aceptó que esta falta de información debilitaba las quejas de un país contra subsidios a la exportación prohibidos.[22]

El grupo especial respaldó la jurisprudencia del sistema de resolución de diferencias de la OMC que impone la carga de la prueba a la parte querellante, que debe establecer una caso de inconsistencia *prima facie* con una disposición específica de un acuerdo de la OMC. Consecuentemente, el grupo especial no aceptó las pruebas presentadas por Brasil acerca de que el programa de EDC, como un todo, se caracterizaba como un programa de subsidios. Asimismo, para que la queja de Brasil contra el financiamiento por la EDC al sector de aviación regional de Canadá fuera exitosa, el país debería producir evidencia de que este financiamiento constituía un subsidio. El grupo especial aceptó la proposición de que EDC es un organismo público y que el financiamiento otorgado constituía una transferencia directa de fondos. Sin embargo, Brasil no suministró evidencia de que existiera un "beneficio" en el sentido de que el financiamiento fuera otorgado en condiciones más ventajosas que las que estarían disponibles en el mercado. Esta queja de Brasil y todas las demás en relación a EDC fueron así rechazada por falta de pruebas. También fueron desestimadas las quejas relativas a la venta por Ontario Aerospace Corporation, de 49% de participación en una empresa de aeronaves civiles (de Havilland, Inc.) en términos favorables; los beneficios otorgados por el Canada-Québec Subsidiary Agreement on Industrial Development; y los beneficios otorgados por el Gobierno de Québec por la Societé de Développement Industriel (SDI) du Québec.

Por otra parte, el grupo especial encontró evidencia de que el financiamiento por Canada Account y los fondos suministrados por Technnology Partnerships Canada (TPC) a la aviación regional constituían subsidios a la exportación inconsistentes con el Acuerdo SMC y recomendó su eliminación.

Las conclusiones del grupo especial fueron posteriormente ratificadas por el Órgano de Apelación.

El caso de Canadá contra Brasil

En su queja, el gobierno de Canadá debería probar que los pagos realizados por el gobierno brasileño bajo el componente de ecualización de tasas de interés del PROEX otorgaba subsidios a la exportación de las aeronaves regionales producidas por Embraer.

Básicamente, a través del PROEX, el gobierno brasileño aporta contribuciones financieras que reducen el costo de los productos exportados. En la práctica, esto se realiza de dos maneras. (i) los pagos de PROEX pueden ser utilizados para bajar la tasa de interés para el comprador en hasta 3.8 puntos porcentuales por año; (ii) el comprador puede también elegir recibir un único pago (*lump sum*).

La información sobre el programa PROEX es pública y accesible, dado que los términos del financiamiento son definidos por decretos ministeriales. El plazo del financiamiento que varia de uno a diez años, depende del producto a ser exportado. En el caso de las aeronaves regionales, el plazo puede ser

[21] El gobierno brasileño presentó más de 1.600 páginas de evidencia, en tres volúmenes de anexos, con base en fuentes públicas (OMC, 1999b, pág. 27).

[22] "In cases involving alleged prohibited export subsidies, we appreciate that a complaining party may have difficulty in obtaining information necessary to support its case, especially where details of the alleged subsidy has not been notified under Article 25 of the SCM Agreement, and where the respondent Member chooses not to divulge relevant information during dispute settlement proceedings. This raise obvious systemic issues regarding the effectiveness of the SCM Agreement notification procedures, and of the WTO dispute settlement procedures generally. However, we consider that such systemic issues are a matter for serious consideration by the WTO Members in the appropriate fora, and not a matter to be resolved by this Panel acting under Article 13.1 of the DSU." (OMC, 1999b, págs. 165-166, párrafo 9.53).

extendido hasta 15 años. La extensión del tiempo, a su vez, determina el *spread* a ser ecualizado, que varia entre 2 a 3.8 puntos porcentuales por año. El PROEX es administrado por una agencia interministerial (Comité de Crédito a las Exportaciones) y las operaciones son coordinadas por el Banco do Brasil, que tiene autoridad para autorizar operaciones que no excedan 15 millones de dólares. Operaciones con valores superiores deben ser autorizadas por el Comité (OMC, 1999a, págs. 2-3).

En primero lugar, Canadá solicitó al grupo especial respaldar su percepción de que:

1. los pagos de ecualización de intereses por el PROEX constituyen subsidios en el sentido del artículo 3 del Acuerdo de SMC;
2. la ecualización de intereses otorgada a las transacciones de Embraer constituyen subsidios prohibidos;
3. estos pagos no se constituyen excepciones al Artículo 3;
4. Brasil no había satisfecho las condiciones del Artículo 27.4, y que, por lo tanto, no podía beneficiarse de los ocho años del periodo de gracia permitido para los países en desarrollo bajo el Artículo 27.2(b).

Canadá solicitó que el grupo especial formulara las siguientes recomendaciones:

1. Brasil no debería otorgar nuevos subsidios bajo PROEX incluyendo subsidios prometidos o obligados, pero que no hayan sido ejecutados, y que afectan aeronaves regionales que no fueran entregadas;
2. Brasil debería terminar con los subsidios de ecualización de tasas de intereses bajo el PROEX, antes de los tres meses posteriores a la adopción del informe del grupo especial por el Órgano de Solución de Controversias (OSC);
3. Brasil deberá retirar los subsidios PROEX otorgados a transacciones posteriores a la formación del grupo especial, el 22 de octubre de 1998;
4. que los pagos parcelados se terminen antes de tres meses después de la adopción del informe del grupo especial, en lo que se refiere a aeronaves que no hayan sido entregadas o de aeronaves entregadas después de esa fecha;
5. si el grupo especial decide que los subsidios PROEX son otorgados en el momento de entregar la aeronave, que el grupo recomiende que tales subsidios no sean otorgados a ninguna aeronave entregada después de la fecha de adopción del informe del grupo especial por el OSC; y
6. que sean eliminados los subsidios a la ecualización de intereses a todos los pedidos de aeronaves realizados entre la fecha de establecimiento del grupo especial y la adopción de su informe por el OSC.

La línea de defensa del gobierno brasileño se centró en admitir que los pagos de ecualización de intereses para aeronaves constituían subsidios a la exportación, (una transferencia potencial directa de fondos) pero que estaban exentos de las prohibiciones del Artículo 3.1(a) en virtud del Artículo 27 y del ítem (k) de la lista ilustrativa de subsidios prohibidos. El ítem (k) incluye "...el pago de la totalidad o parte de los costes en que incurran los exportadores o instituciones financieras para la obtención de créditos, en la medida en que se utilicen para lograr una ventaja importante en las condiciones de los créditos a la exportación." El planteamiento de Brasil consistía en argumentar que el contrario de la disposición era que tales pagos son *permitidos* desde que no sean utilizados para asegurar una ventaja material en las condiciones de los créditos a la exportación.

Entre las condiciones que determinaban que la ecualización de las tasas de intereses no aseguraban una ventaja material a Brasil, la defensa argumentó sobre el riesgo soberano de Brasil que justificaría la adopción del instrumento de PROEX. Entre los varios datos, Brasil indicó que las tasas sobre los títulos

canadienses (10 años) en el tercero trimestre de 1998 era 5.25% mientras que las de los títulos brasileños eran 15.75%. Los 10.5 puntos porcentuales representan la diferencia entre el riesgo Brasil y el riesgo Canadá. Este "riesgo Brasil" tiene una impacto dramático y profundo en todos los términos financieros y transacciones que atañen a Brasil, incluyendo los términos de crédito a la exportación. El impacto adverso para la exportación de aeronaves regionales es particularmente severa, dada la práctica establecida por los países industrializados de que sea el productor que es responsable por el financiamiento de su aeronave"(OMC, 1999a, págs. 26-33).

Por lo tanto, según la percepción de Brasil, la forma de determinar si los pagos por PROEX eran utilizados para asegurar una ventaja material en las condiciones de créditos a la exportación, era comparar los términos de los créditos de exportación con base en los pagos de PROEX con los términos de crédito a la exportación que estaban disponibles a los compradores de las aeronaves regionales canadienses.

Por otra parte, el Artículo 27 se refiere al trato especial y diferenciado para los países en desarrollo Miembros. En el párrafo 2 dispone que "La prohibición establecida en el párrafo 1a) del artículo 3 no será aplicable a: a) los países en desarrollo Miembros a que se refiere el Anexo VII; b) otros países en desarrollo Miembros por un período de ocho años a partir de la fecha de entrada en vigor del Acuerdo sobre la OMC, a reserva del cumplimiento de las disposiciones del párrafo 4." (GATT, 1994, págs. 312-313).

A su vez, el párrafo 4 define que "Los países en desarrollo Miembros a que se refiere el párrafo 2b) eliminarán sus subvenciones a la exportación dentro del mencionado período de ocho años, preferentemente de manera progresiva. No obstante, los países en desarrollo Miembros no aumentarán el nivel de sus subvenciones ala exportación, y las eliminarán en un plazo más breve que el previsto en el presente párrafo cuando la utilización de dichas subvenciones a la exportación no esté en consonancia con sus necesidades de desarrollo..."(GATT, 1994, pág. 313).

El grupo especial no aceptó los argumentos de Brasil. En su informe, el grupo especial argumentó que el enfoque brasileño en relación a "ventajas materiales significaba que un subsidio a la exportación, admitido como tal, no debería ser prohibido si puede ser demostrado que lo mismo estaría meramente compensando una ventaja o ventajas disponibles a productos competidores de otro Miembro. El grupo especial consideró que tal planteamiento era totalmente contrario a los objetivos del Acuerdo SMC (OMC, 1999b, págs. 79-88).

Finalmente, el grupo especial consideró que las disposiciones del Artículo 27:4 son vinculantes, y que si el país no cumple con el párrafo 4, las disposiciones del Artículo 3.1(a) sobre subsidios prohibidos se aplican también a los países en desarrollo, como Brasil. Para Canadá, el Artículo 27:4 contiene tres condiciones relevantes: 1) los subsidios a la exportación deben ser eliminados en el periodo de 8 años; 2) el nivel de los subsidios a la exportación no deben crecer en este periodo; 3) los subsidios a la exportación deben ser eliminados en un periodo inferior a ocho años si el uso de estos subsidios no es consistente con las necesidades de desarrollo del país miembro (OMC, 1999b, pág. 89).

El grupo especial concluyó que: 1) Brasil había aumentado el nivel de sus subsidios a la exportación en el sentido del Artículo 27:4; 2) por el compromiso de ventas de aeronaves, no parecía tener intención de cumplir con la eliminación de los subsidios para 2002; y 3) no había evidencia para determinar si el uso de los subsidios eran inconsistentes con las necesidades de desarrollo de Brasil. Por lo tanto, los subsidios otorgados bajo el programa PROEX fueron considerados subsidios prohibidos, y que deberían ser eliminados en los 90 días subsecuentes a la adopción de su informe por el OSC.

Posteriormente, el Órgano de Apelación, con pequeñas modificaciones, mantuvo el fallo del grupo especial, deliberando que Brasil debería eliminar los subsidios del PROEX en los 90 días siguientes a la adopción del fallo.

5. Consideraciones finales

La presentación concisa de los resultados de los dos casos sobre subsidios ante la OMC no hace justicia a los elegantes y detallados planteamientos jurídicos que componen los informes de los grupos especiales y del Órgano de Apelación. Conceptos, reglas y procedimientos de los Acuerdos respectivos son revisados continuamente por el sistema de solución de controversias generando una jurisprudencia que amplia los compromisos iniciales.

Los dos fallos representaron una doble derrota para Brasil. La primera, por no poder demostrar con precisión, por falta de pruebas conclusivas, la extensión de los subsidios canadienses. La segunda, por verificar que su situación de país en desarrollo no le facultaba mantener subsidios claramente comprobados como prohibidos, dado que no había cumplido con otras condiciones del acuerdo.

El Acuerdo sobre Subsidios y Medidas Compensatorias representó una gran concesión de los países en desarrollo a la normativa de comercio internacional, por dos razones: porque estos países aceptaron disciplinas multilaterales a los subsidios a la exportación, y la inclusión de disciplinas a los subsidios orientados hacia las industrias sustitutivas de importación. Por un lado, lo hicieron, porque necesitaban de mayor protección multilateral contra las prácticas de economías más poderosas, que aplicaban medidas compensatorias unilaterales y arbitrarias, sin un proceso justo de identificación de pruebas de daño. Asimismo, porque suponían que el trato especial y diferenciado les permitiría mantener sus instrumentos de promoción de exportaciones por un cierto periodo de transición.

A su vez, el Órgano de Solución de Controversias de la OMC no es un Tribunal de Comercio Internacional. El OSC opera bajo las restricciones de su mandato específico dictado por las reglas de la OMC, ampliada y especificada por la jurisprudencia de su práctica legal. Pero, también opera bajo las restricciones del derecho público internacional, es decir, enfrenta las dificultades de imponer sanciones a Estados soberanos y de efectividad de los fallos. El OSC recomienda la eliminación de una determinada medida que fue juzgada incompatible con las obligaciones del Miembro ante la OMC, y cuya ejecución disminuye o menoscaba los derechos de otro o otros Miembros. El propósito de la acción del OSC es la eliminación de la medida, a través de la persuasión y negociación entre las partes. En la ausencia de un entendimiento, posteriormente a la adopción del informe del Órgano de Apelación, el país querellante puede imponer derechos compensatorios.

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COURTING FDI: IS COMPETITION BAD?

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Abstract

This paper examines the convenience of banning the use of subsidies to attract foreign direct investment. We find that competition with subsidies achieves the efficient allocation of investment projects. The effect of banning subsidies on the welfare of the host countries is ambiguous, and depends on the differences in social returns of investment among them. Eliminating subsidies benefits host countries only when these are sufficiently similar. In addition, we find that the best alternative for host countries is to delegate the decisions regarding the maximum subsidy allowed to a supra-national authority. Provided countries with the highest social returns are also those with the highest private returns, this solution achieves the efficient outcome, and at the same time maximizes welfare for the host countries.

I. Introduction

One of the most important features of the trend toward globalization in recent times has been the increased importance of foreign direct investment around the world. Together with this increase in FDI, competition among potential hosts to attract FDI has intensified as well. To the extent that foreign direct investment projects generate positive externalities for the host countries, related to activities such as innovation or labor training, there is a case for countries to offer subsidies in order to lure potential investors to locate within their boundaries. However, the increase in the intensity of competition observed in recent years has raised concerns regarding its effects on the welfare of host countries. In particular, as a result of competition, foreign firms may be able to appropriate all the benefits associated to FDI. This raises a number of important questions: What are the effects of competition for FDI on the welfare of the world as a whole? Are host countries better off by banning incentives for FDI? Should these countries restrict competition in any way? In this paper, we develop a model of competition for FDI in order to answer some of these important questions.

A striking illustration of the increased intensity of competition for FDI is provided in table 1, which is reproduced from Oman (2000a). The table, which is based on unofficial sources, shows the cost of the subsidy per worker for a set of 14 FDI projects in the automobile sector, both in developed and developing countries, during a period spanning from 1980 to 1997. The escalation of costs is remarkable.

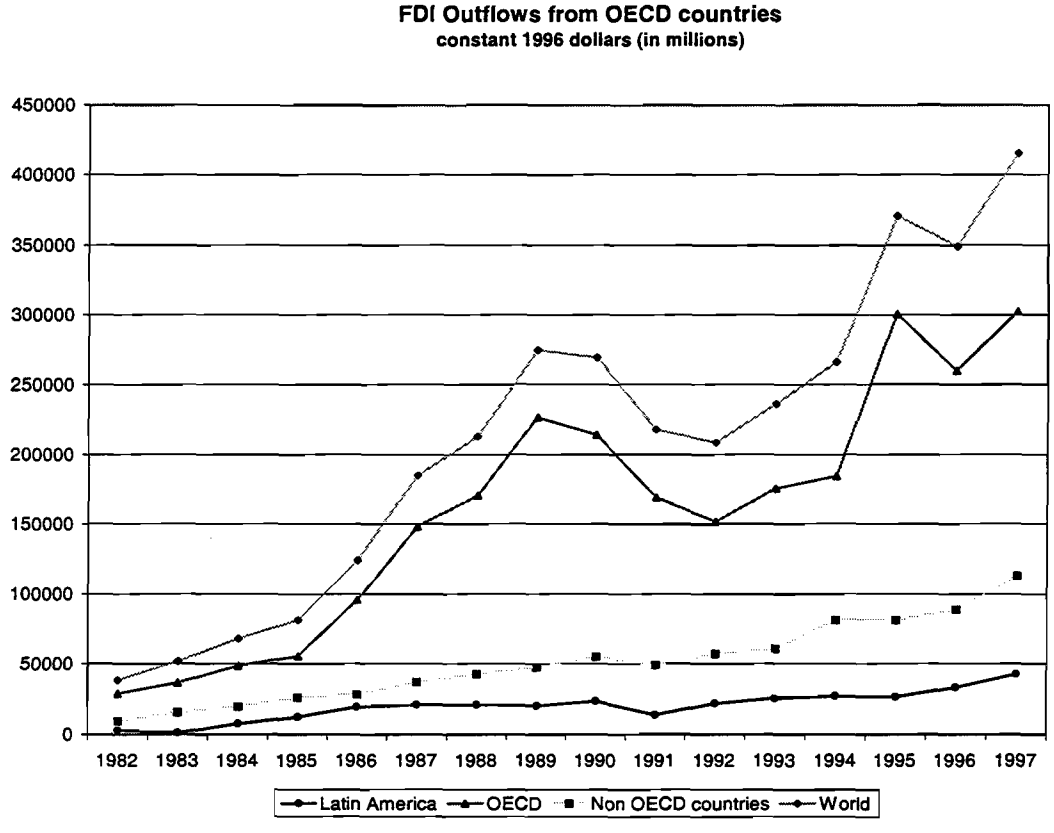
Table 1
Investment Incentives in the Automobile Industry

Date of Package	Country of Project	Investor	Amount per Job* (US dollars)
1980	United States	Honda	4000
Early 1980s	United States	Nissan	17000
1984	United States	Mazda-Ford	14000
mid-1980s	United States	GM Saturn	27000
mid-1980s	United States	Mitsubishi-Chrysler	35000
mid-1980s	United States	Toyota	50000
mid-1980s	United States	Fuji-Isuzu	51000
Early 1990s	United States	Mercedes Benz	168000
1992	Portugal	Ford-Volkswagen	265000
1995	Brazil	Volkswagen	54000-94000
1996	Brazil	Renault	133000
1996	Brazil	Mercedes Benz	340000
1997	Germany	Volkswagen	180000
1997	India	Ford	200000-420000

Note*: Estimated value of fiscal and financial incentives supplied by national and sub-national governments to a particular investment project, divided by the number of jobs the project was expected directly to create.
Sources: Unoffcial, cited in Donahue (United States), Bachtler et al. (Europe), Da Motta Veiga and Iglesias (Brazil) and Venkatesan et al. (India)

There are several reasons why the intensity of competition for FDI may have increased in recent years. One of them is the spectacular increase in the volume of FDI itself. This increase means that the stakes in the quest to attract FDI are now much higher. Figure 1 shows the evolution of FDI outflows for OECD countries between 1982 and 1997, in constant 1997 dollars. During this time span, these FDI flows have increased by a factor of 11. To put this in proper context, during the same period, world trade flows increased by a factor of 2. This trend has not slowed down in recent years. For 1997, FDI outflows from OECD countries are nearly twice as high as they were during the early 1990s. FDI flows to the developing world and, in particular, to Latin America, have increased at an even faster rate.[1]

Figure 1



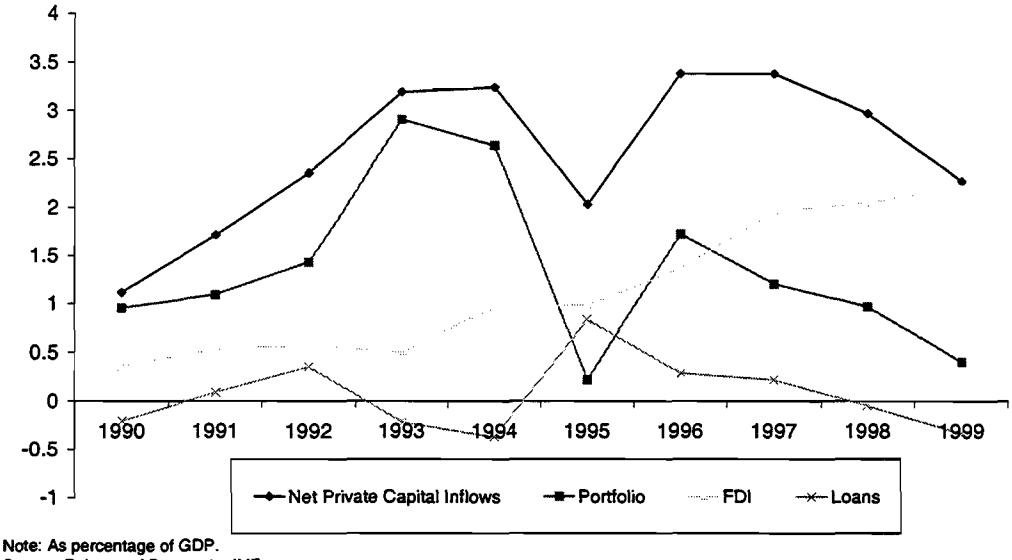
Furthermore, while FDI flows to the developing world have increased so spectacularly, other forms of capital flows have remained fairly stagnant. In fact, FDI represents by far the most important source of private external finance to Latin America in recent years, as can be clearly seen in Figure 2.[2] The figure suggests that, when it comes to private external financing for developing countries, FDI has virtually become the "only game in town".

Another reason for the intensification of the competition is the increased number of players in this "game". Countries that used to discourage FDI, such as China, have become major players.[3] At the same time, several countries have experienced a trend toward decentralization, accompanied by greater political

[1] FDI flows to developing countries have increased between 1982 and 1997 by a factor of 12, while flows to Latin America have increased by a factor of 14.
[2] Figure 2 is reproduced from Fernandez-Arias (2000)
[3] See discussion in Oman (2000a)

and fiscal autonomy of subnational governments. In some countries, such as Brazil, subnational governments have also recently become major players in this game. In fact, the escalation of subsidies for FDI in the automobile sector shown in table 1 has for the most part resulted from competition among subnational units of government within the same country, rather than competition among countries.

Figure 2: Net Private Capital Inflows, Portfolio, FDI and Loans in Latin America, 1990-99



Note: As percentage of GDP.
Source: Balance of Payments, IMF.

The relevant space of competition for FDI is defined not only by the willingness of potential host countries to engage in competition, but also by the nature of the goods produced, and the existence of natural and policy-induced barriers to trade. The more tradable the goods, and the lower the barriers to trade, the greater the scope for competition. The reduction in trade barriers experienced in most of the world has increased the space of competition. Similarly, the appearance of new activities such as e-business, which can provide similar services to the entire world from any location, may potentially increase the intensity of competition as well.

Competing by offering subsidies is not the only way for countries to court potential investors. Oman (2000b) discusses other forms of competition, both benign and potentially harmful. Countries could compete by improving their institutions, the quality of their labor force or the quality of their infrastructure. This competition, which Oman refers to as "beauty contest" would obviously have positive externalities. On the other hand, countries could compete by relaxing labor or environmental standards, which could have obvious adverse effects on the welfare of the population. While these other forms of competition may also be important, in this paper we focus exclusively on the effects of incentive-based competition.

II. A simple model of competition for FDI

In this section we consider the returns of FDI, both private and social. To the extent that social returns exceed private returns, i.e., there are positive externalities, countries may be willing to provide subsidies to ensure that investment takes place. To make the problem interesting we assume that there are in fact positive externalities associated with FDI, an assumption upon which most economists agree.

Furthermore, we assume that the social return of investment exceeds the cost of capital, because otherwise there would be no rationale for subsidies either. Throughout this article, we abstract issues of uncertainty, as well as from the well-known agency and fiscal problems that the implementation of subsidies usually entails. To simplify bargaining issues, we assume that countries have all the bargaining power vis a vis firms and can make take-it-or-leave-it transfer offers. The borrowing cost of firms is r, which puts a floor to the offers that are acceptable.

Let p be the private return of investment appropriated by the investor, $e>0$ the social externality associated with it, and t the public transfer subsidy provided, all measured per unit of investment. Then the social rate of return of FDI is $s=p+e$. We note that s measures the productivity of investment, which brings efficiency gains as long as it exceeds the cost of capital ($s \geq r$). The overall social return is then divided between the country and the firm. The corresponding net benefit to the country, per unit of investment, is $b=e-t$, and the remainder, $s-b=p+t$, is appropriated by the firm. In what follows, when necessary, we will consider investment project schedules, indexed by z, and subindexes to denote countries in which the projects localize, so that, for example, p_c [z] refers to the private return of project z localized in country c.

To simplify notation, in what follows we will not restrict the value of feasible transfers t. Therefore transfers could be negative, in which case they ought to be interpreted as taxes. Nevertheless, conclusions are not altered if they are restricted to be non-negative.

Furthermore, it is worth noting that there are alternative interpretations of these same symbols that would give rise to additional interesting conclusions. First, instead of countries we could consider regions within a country, so that transfers to investors would be extended by subnational governments. Second, the social externality e could refer to the degree of expropriation that foreign investors expect in the future, which would leave a post-expropriation return of p. In this case the transfer would be an offset of the expropriation risk, and there could be a role for transfers even in the absence of true social externalities.[4] To keep the presentation simple, in what follows we will stick to the initial interpretation.

We will consider two polar cases, those of investments for the production of non-traded and traded goods, respectively.

A. The case of non-traded goods

In this first case, investment produces non-traded goods (either due to natural or policy-driven costs to international trade). Investment projects only serve the country in which they localize, which rules out competition. An example of such investment could be investment in a supermarket chain such as Carrefour.

PROPOSITION 1. IN THE CASE OF NON-TRADEABLES, SUBSIDIES ACHIEVE FULL EFFICIENCY AND MAXIMUM NET BENEFIT TO THE HOST COUNTRY.

COROLLARY: THERE IS NO REASON TO RESTRICT SUBSIDIES TO INVESTMENT IN NON-TRADEABLES.

PROOF. In the case of non-tradeables, localization in not an international concern. Each host country considers transfers t such that:

$\text{Max}_t(e-t)$ subject to $e \geq t$ (public incentive to attract FDI)

[4] See discussion of this time inconsistency motive for subsidies in Boadway and Shah (1995)

$$p+t \geq r \quad \text{(private incentive to invest)}$$

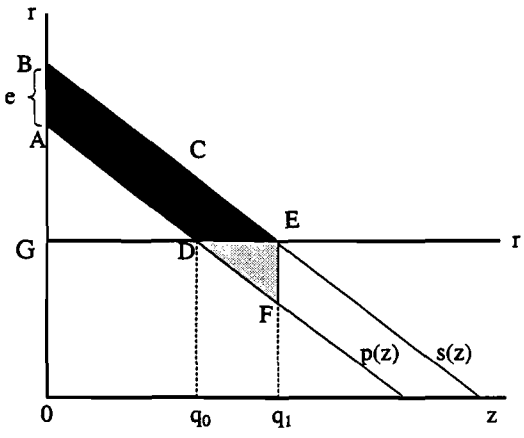
Equivalently, the transfer is minimized. Optimal transfer is $t^*=r-p$, so that that investment is made at the minimum return to the investor $p+t^*=r$. Note that since $s=p+e \geq r$, it follows that $e \geq t^*$.

Allocative efficiency is obtained because any efficient investment ($s \geq r$) is realized. The maximum net benefit to the host country is obtained, as investors make zero profit. (Note that if private returns are very high, i.e. $p>r$, the optimal transfer is negative. If negative transfers are ruled out, efficiency is preserved. The benefit to the host country is correspondingly reduced, but it still benefits from positive transfers.)

The model presented here can be easily extended to a continuum of projects. Rather than a full blown extension of the analytical model, here we will present the argument in a graphical way, focusing in particular on a simple example which can provide further intuition for the results, and at the same time offer some additional insights.

Let us assume that there is a continuum of investment projects, which we will index by z, and that these projects are ordered according to the private rate of return on the investment in the host country. For the purposes of keeping the examples as simple as possible, we will assume that all projects generate an externality of the same size, e. Investors face a flat cost of borrowing, r. An investment project z is implemented in the host country when $p(z)+t>r$, i.e. when the private rate of return of the project plus the subsidy exceeds the cost of borrowing funds. The problem is represented in Figure 3. Assuming that negative transfers cannot be imposed, the government provides a transfer of max (r-p(z), 0) just large enough for the project to be implemented. The total transfer is represented by the area DEF. If negative transfers are feasible, as in the analytical model, the transfer in each project is simply r-p(z), which results in a total transfer equal to DEF – GAD which, as is obvious from the figure, can be negative. The total number of projects implemented is given by q_1, which is the efficient allocation (as in part 1 of Proposition 1). The net benefits for the host country are given by area ABCED, in case negative transfers are not possible, or simply GBE, the area between s(z) and r, if negative transfers are feasible. In each case, the net benefits for the host country are maximized (this corresponds to the second part of proposition 1).

Figure 3: The case of investment in non-tradables



If subsidies were banned, the quantity of projects implemented would be given by q_0, that is, the projects that do not require a subsidy, for which $p(z) > r$. Notice that in this case, some projects whose social rate of return exceeds the interest rate are not implemented, i.e., the outcome is inefficient. This

reduction in the number of projects implemented when subsidies are eliminated can be thought of as a negative FDI creation (or FDI destruction) effect, since it is analogous to the concept of trade diversion developed by Viner (1950). The net benefits for the host country are, in this case, ABCD < ABCED. Thus, in the case of investment in non-traded goods, it would be harmful for host countries to restrict the use of incentives for FDI. (this corresponds to the corollary to proposition 1)

B. The case of traded goods with unrestricted subsidy competition

From now on, we consider the case in which FDI produces traded goods. We assume that there are strong economies of scale and low trade barriers, so that investments in traded goods localize in only one country, and serve the entire world. Our paradigm in this case is e-business. This opens the possibility and incentives for host countries to engage in subsidy competition, as well as the policy issue of whether to constrain competition and how to do it. In this section we analyze the case of unrestricted competition, in which each country is free to offer any level of subsidy to each FDI project. The following sections deal with deviations from this unrestricted competition benchmark.

To simplify the analysis we consider only two potential host countries in a position to compete for FDI localization, but results generalize. The notation of the previous section now applies to each country, which will be distinguished by subindices 1 and 2. Without loss of generality, we will assume that country 1 is more productive than country 2, i.e., $s_1 \geq s_2$. Country 1 complies with the assumptions of the previous section that ensure incentives to provide subsidies, i.e., $e_1 > 0$ and $s_1 \geq r$.

PROPOSITION 2. SUBSIDIES ACHIEVE FULL EFFICIENCY.

COROLLARY. IN A SYMMETRIC WORLD (IN WHICH COUNTRIES ARE BOTH SOURCE AND HOSTS OF FDI), SUBSIDIES MAXIMIZE WELFARE TO EACH COUNTRY AND, THEREFORE, THERE IS NO GROUND TO RESTRICT SUBSIDIES

PROOF. In the case of tradable goods, localization is an international concern because, by virtue of the assumption of strong economies of scale, if FDI localizes in one country no other country gets it. To simplify the proof, let's assume that there are only two relevant countries, i.e., only two countries can possibly attract the localization of FDI, denoted by 1 and 2. Country 1 and country 2 consider transfers t_1 and t_2 to compete for the localization of FDI such that:

Max $_{t1}$ (e_1-t_1) subject to	$e_1 \geq t_1$	(public incentive to attract FDI)
	$P_1+t_1 \geq r$	(private incentive to invest)
	$P_1+t_1 \geq p_2+t_2$	(private incentive to localize in country 1)

Max $_{t2}$ (e_2-t_2) subject to	$e_2 \geq t_2$
	$P_2+t_2 \geq r$
	$P_2+t_2 \geq p_1+t_1$

The key difference with respect to the non-tradable problem is the third constraint, which encapsulates the competition, or bidding war, between potential host countries.

The solution to the above problem is such that the country with the largest social return gets the localization of FDI. In other words, transfer competition results in a social return equal to Max ($s_1=p_1+e_1$, $s_2=p_2+e_2$), that is to say, allocative efficiency. Under our assumption ($s_1 \geq s_2$), without loss of generality, FDI will localize in country 1 after it makes a winning transfer offer t^*_1=Max ($r-p_1$, s_2-p_1). This offer gives the firm an overall return $p_1+t^*_1$ that matches its cost of capital r and the social return in country 2, whichever is larger. The simplest case is the one in which the social return in country 2 is insufficient for a productive investment ($s_2<r$), which effectively removes competition. In this case the problem boils down to the non-traded case analyzed in the previous section, in which in fact $t^*_1=r-p_1$, and the conclusion follows.

The more interesting case is when country 2 is also efficient ($s_2 \geq r$) and competition is relevant. In this case, $t^*_1= s_2-p_1$, larger than under no threat of competition. First we check that this is an incentive-compatible transfer, since under the assumption that $s_1 \geq s_2$, $e_1= s_1- p_1 \geq s_2 - p_1= t^*_1$ (the public incentive to attract FDI holds) and in this case $p_1+ t^*_1=s_2 \geq r$ (private incentive to invest holds). Second we check that country 2 has no incentive-compatible transfer that beats this offer (the private incentive to localize in country 1 holds). In fact, with this offer the investor gets an overall return of $p_1+ t^*_1=s_2$. It is easy to check that this can be matched by country 2 if it offers $t_2=e_2$, so that $p_2+t_2=s_2$. However, country 2 could better this offer granting all of its social return to the investor only by offering a transfer in excess of its externality, which is a losing proposition. Finally, it is also clear that any lower offer by country 1 would be bettered by country 2.

Therefore, subsidies ensure that FDI localizes where it is most productive. This efficiency result may or may not translate into welfare gains for each individual participant, an issue which is not analyzed in this proposition. Nevertheless, an important corollary of this proposition is that within a symmetric set of countries in which all of them are both source and hosts of FDI in such a way that net subsidies are null in each individual country, this full efficiency result also means maximum welfare for each one.

PROPOSITION 3. THE WINNING HOST COUNTRY CAPTURES A NET BENEFIT NOT LARGER THAN ITS EXCESS OF SOCIAL RETURN (S_1-S_2).

COROLLARY: IF HOST COUNTRIES HAVE THE SAME SOCIAL RETURN, UNRESTRICTED SUBSIDIES LEAD TO INVESTORS APPROPRIATING THE FULL COMMON SOCIAL RETURN LEAVING NO NET BENEFIT FROM FDI TO COUNTRIES.

PROOF. From Proposition 2, without loss of generality, winning host country 1 provides a transfer t^*_1= Max ($r-p_1$, s_2-p_1). Its net benefit is therefore $e_1- t^*_1$=Min (s_1-r, s_1-s_2), so that with effective competition from country 2 ($s_2 \geq r$) the net benefit to country 1 only amounts to the excess of social return over country 2. At the same time, the investor obtains an overall return of Max (r, s_2), so that, to the extent that there is effective competition, it gets the full amount of the social return in the losing country, a positive profit. Therefore if both countries have the same social return ($s_1=s_2=s \geq r$), then the net benefit of the winning country is null and the investor appropriates the entire common social return s ($p_1+ t^*_1=s$).

C. Should subsidies for FDI be banned?

If subsidy competition to attract FDI leads to bidding wars to the benefit of foreign investors, it may be expected that a ban on subsidies, if enforceable, would work to the advantage of host countries. In this section we ask ourselves what would be the efficiency and distributional implications of such a ban, in particular concerning the welfare of host countries. To simplify the analysis, like in the previous section we consider a world in which the North (the source of FDI) considers whether to locate in the South, and if so, in which of the two Southern countries, 1 and 2. It is clear that any restriction to subsidies by

Southern countries tends to reduce incentives for FDI location in the South, so that in analyzing the effects of restrictions to subsidies the interesting case is one in which under unrestricted subsidies FDI would locate in the South, which we assume. Therefore we keep the assumptions made in the previous section, which as we saw imply that FDI localizes in country 1 and that the South obtains a net benefit of Min (s_1-r, s_1-s_2), captured by winning country 1.

PROPOSITION 4. A BAN ON SUBSIDIES IS INEFFICIENT AND HAS AN AMBIGUOUS WELFARE EFFECT ON HOST COUNTRIES.

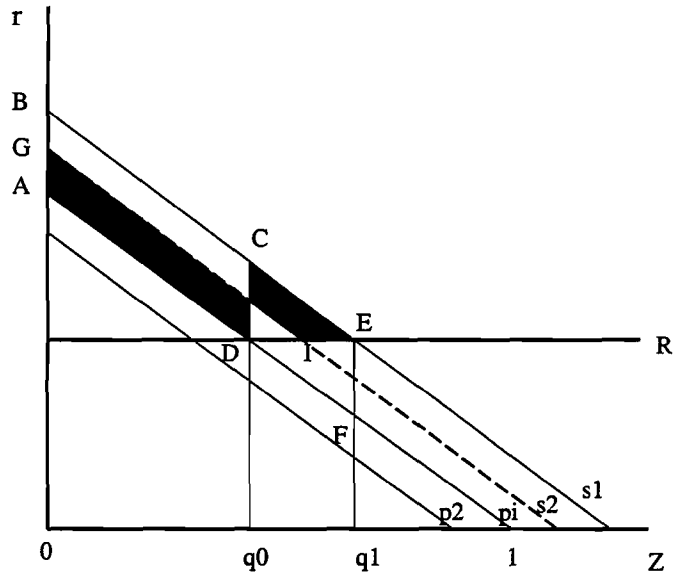
PROOF. We first determine FDI localization under a ban on subsidies. In the absence of subsidies, the relevant returns to investors are private returns p, which are not a measure of overall productivity in the presence of externalities. The loss of efficiency springs from two sources. The first case is FDI creation, or destruction in this case. FDI may fail to come to any host country because private returns are below the cost of capital ($p_1<r$ and $p_2<r$). Relative to unrestricted subsidies, this implies a loss of efficiency equal to $s_1-r\geq 0$ and a loss of host country welfare equal to Min (s_1-r, s_1-s_2)≥ 0. If social returns are different between countries, the destruction of efficient projects leads to welfare losses.

The second case is FDI diversion. FDI may come because there is a private return that is higher than the cost of capital but end up locating in the wrong host country. This would occur as long as the country with the highest productivity as measured by social returns (which gets FDI under competition in Proposition 2) is not the one with the highest private return (which would get FDI under a ban). In our case, FDI diversion takes place when $p_2>p_1$ (provided that $p_2\geq r$ so that FDI is not destroyed). In this case a ban leads to an allocative efficiency loss of $s_1-s_2\geq 0$. This switching between private and social returns is possible only if the externality in country 1 is sufficiently larger than that in country 2. The net benefit for the winning country, now country 2, is the amount of the externality e_2. Whether this benefit exceeds that obtained under subsidies by country 1, s_1-s_2, is ambiguous. However if the externality in country 1 is sufficiently larger than that in country 2, then unrestricted competition is better than a ban under FDI diversion. It is easy to check that that is the case if $e_1>2e_2+(p_2-p_1)$.

Finally, when there is no FDI destruction or diversion, then there is no allocative change and no inefficiency. This is the most favorable case for a ban on subsidies, because the elimination of transfer $t^*_1 \geq 0$ translates into additional welfare to host countries. This is certainly the case if countries are identical.

As in the case of investment in the non-traded sector, it is useful to complement the model with a graphical example for the case of a continuum of projects. The problem of the convenience of a ban in transfers is depicted in Figures 4 and 5. Figure 4 presents a simple example in which country 1 has higher private and social returns to each one of the projects, and in which the externality is constant across projects.

Figure 4: The case of investment in tradables



Unfettered competition, as always, leads to the efficient outcome. The efficient number of projects q_1 get done, and they are all located in country 1, where the social rate of return is higher (this corresponds to proposition 2). Country 1 sets the optimal transfer $t^*(z)=\min [e_1, \max (r-p_1, s_2-p_1)]$, that is, a transfer that provides enough resources for the returns to the foreign firm to reach r, or to match the highest offer of country 2, provided it does not exceed the externality e_1. The total amount of the transfer (for the case of no negative transfers) is given by the area AGIEF, and country 1 appropriates net benefits given by the area GBEIH.

Under a ban on subsidies, the outcome is inefficient (proposition 4). The number of projects implemented in country 1 is q_1. In this case, net benefits for this country are given by the area ABCD. The two shaded areas in the figure represent the gains and losses associated with the ban. The area AGHD represents the gain from imposing the ban, while the area HCEI represents of the loss of such a policy. The net result is ambiguous (second part of proposition 4) and depends among other things on the excess of social return, and on the interest rate r.[5] It is easy to see from Figure 4 that if social returns across countries were similar ($s_1(z)=s_2(z)$) any gains for the host country from competition in subsidies would dissipate, leaving host countries with no gains from FDI (corollary to proposition 3). Obviously, in this special case a ban on subsidies is convenient.

The bottom line of this section is that it is not clear whether a ban on subsidies improves upon unrestricted subsidy competition. Even if it does for the potential host countries as a whole, if there is FDI diversion the gains would be unevenly distributed. In fact, with the ban on subsidies FDI would switch from country 1 to country 2, which implies a loss to country 1. At the same time, if FDI continues to be localized in country 1, then country 1 wins from the ban. The net welfare impact on country 1 of adopting a comprehensive ban over all FDI projects depends on the distribution of projects. If this impact is negative, then such agreement would require side payments from country 2 to country 1 to make it incentive-compatible.

[5] For the example shown in the figure, with linear private and social return functions, it is easy to show that increases in r reduces the net gains from the imposition of a ban.

D. Agreements to restrict subsidy competition

As we saw in the previous section, a ban on subsidies is bad for the world and may fail to benefit host countries. While competition certainly bids up subsidies and in that way conspires against the welfare of host countries, it is also an efficient mechanism to allocate investment in countries with high (social) productivity. In that sense, a ban on subsidies appears to be a brutal method to restrict competition. In this section we examine alternative agreements that restrict competition while preserving some of its efficiency features, for which the ability to offer subsidies needs to be retained. To simplify we abstract from ex-post enforcement problems.

The first class of agreements we consider is one in which there is no restriction on the subsidy schedules that can be agreed upon and enforced among host countries. We refer to this class as unrestricted agreements. We then consider a class of agreements in which countries cannot be discriminated, and therefore the agreed upon subsidy schedules are common across countries. Subsidy agreements are to be interpreted as ceilings, so that countries retain the ability to determine their own transfers as long as they do not exceed the agreed upon caps.

LEMMA. AN UNRESTRICTED AGREEMENT ON SUBSIDIES ACHIEVES THE FIRST BEST FOR HOST COUNTRIES.

COROLLARY. IF THE COUNTRY WITH THE HIGHEST SOCIAL RETURN ALSO HAS THE HIGHEST PRIVATE RETURN, THEN AN AGREEMENT ON COMMON SUBSIDIES ACROSS COUNTRIES ACHIEVES THE FIRST BEST FOR HOST COUNTRIES.

PROOF. It is clear that an unrestricted agreement to collude to limit competition achieves the first best. The first best consists in attracting all efficient FDI projects to the most productive country in such a way that investors obtain zero profit. Under our assumptions, that means to have country 1 succeed in doing what it would be able to do in the case of non-traded goods. According to Proposition 1 this would be achieved by offering $t^*_1=r-p_1$. The only problem is that if other countries better this offer trade would be diverted. To ensure that this does not happen it is necessary to impose conditions on other countries to remove them as effective competitors. Short of a prohibition, in terms of transfers, the agreement could stipulate any transfer offer by country 2 (t^*_2) be less than $r-p_2$. (If this transfer is negative and negative transfers are ruled out, then country 2 would be assigned a zero transfer offer and country 1 would be assigned the minimum transfer consistent with being selected, that is $\mathrm{Max}(p_2-p_1,0)$).

Would this agreement be in the interest of the signatory countries? Obviously this is always the case in an efficient arrangement provided that side payments are allowed. In this case, however, side payments are not needed for ex-ante incentive compatibility. In fact, the agreement delivers a welfare improvement to country 1 and no welfare reduction to country 2. Nevertheless, it is to be expected that country 2 would like to also benefit from the agreement, which would require the stipulation of side payments payable to countries not receiving FDI.

If there is no country reswitching between social and private returns, i.e., if $p_1 \geq p_2$, then the first best can also be attained if transfer agreements cannot discriminate across countries, i.e., $t^* \geq t^*_1$ and $t^* \geq t^*_2$. In fact, with no reswitching, with a common transfer t the private incentive to localize in country 1 holds ($p_1 + t \geq p_2 + t$). Setting $t^* = r-p_1$, which replicates the previous first best assignment for country 1, the first best is achieved. This subsidy ceiling corresponds to the non-traded case of Proposition 1, in which competition is not relevant. In fact, in this case country 1 would choose to offer such ceiling ($t^*_1=t^*$) and country 2 would not be able to improve upon it. (If this transfer is negative and negative transfers are ruled out, then zero transfer is optimal.)

PROPOSITION 5. AN AGREEMENT ON COMMON SUBSIDIES ACROSS COUNTRIES IS BETTER FOR HOST COUNTRIES THAN BOTH UNRESTRICTED COMPETITION AND A BAN ON SUBSIDIES.

PROOF. The weak dominance of an agreement subject to non discrimination across countries is easily established by showing that it can always replicate the outcome obtained under both unrestricted competition and a ban on subsidies. First, a ban on subsidies is a particular case of a common subsidy agreement in which the subsidy is set equal to 0. Second, an agreement stipulating subsidy ceilings at very high levels, beyond those obtaining under unrestricted competition, would not be binding and therefore would allow unfettered competition.

However, dominance is strong. It suffices to show that in the absence of reswitching, from the previous Corollary we know that the first best is achieved setting a subsidy ceiling equal to the subsidy that country 1 would set in the absence of competition from country 2, along the lines of Proposition 1 for non-traded goods. In this region there is a strict improvement upon both alternatives.

III. Summary and conclusions

In this paper, we have examined the consequences of competition among host countries to attract foreign direct investment, as well as the convenience of limiting this competition in different ways. Unfettered competition in subsidies achieves the efficient allocation of investment projects, but under some conditions may cause harm to the host countries, as the foreign firms may end up appropriating most of the net benefits of foreign direct investment.

The first policy measure we considered was a ban on subsidies. Eliminating subsidies reduces the welfare of the world as a whole, since the efficient allocation of investment projects is no longer achieved. As in the classic contributions of Viner (1950) to the theory of customs unions, there are two different effects of banning competition: FDI destruction (or negative FDI creation) and FDI diversion. By FDI destruction we refer to the case of investment projects for which the social return (but not the private return) exceeds the interest rate, which will not be implemented. By FDI diversion we refer to the case of investments that will be allocated to "the wrong country", one that does not have the highest social rate of return. In contrast to the case of customs unions, however, in the case of FDI both effects, destruction and diversion, go in the same direction. This means that, abstracting from distributional considerations, from the perspective of the welfare of the world it would make no sense to ban subsidies for FDI

Whether such a measure makes sense for the host countries is ambiguous. If the host countries are identical, the foreign firm appropriates all the net benefits under unrestricted competition, and the ban is convenient provided there is some investment which generates positive externalities that takes place. More generally, the convenience of a ban for the host countries will depend negatively on the difference in social returns among the host countries, and positively on the number of projects for which private returns exceed the interest rate, as well as on the size of the externalities associated with those projects in the countries with the highest private returns.

Regardless of the merits of a ban for the host countries *vis a vis* unfettered subsidy competition, it is possible for host countries to do better by delegating the authority to set the transfer schedule (or more precisely, a ceiling on transfers for each project) to a supra national government. In the case in which the country with the highest social rate of return for each project is also the one with the highest private rate of return for that project (i.e. the case of non reswitching), the supra-national authority would set a ceiling on subsidies equivalent to the subsidies chosen by a country in the case of non-traded goods, i.e, transfers which cover the difference between the interest rate and the private returns, without exceeding the size of the externality. This policy achieves the efficient allocation of investment and at the same time maximizes

the welfare of the host countries. In fact, if negative transfers are not ruled out, this solution diverts all the net benefits of FDI to the host countries, leaving the foreign companies without profits.

In the case of "reswitching", i.e, when the country with the highest social return is not always that with the highest private return, delegation to a supra-national authority does not achieve efficiency, unless the supra-national authority, in addition to defining a transfer ceiling per project that does not discriminate across countries, is also allowed to allocate investment. Barring this, the efficient quantity of investment gets implemented (i.e., there is no FDI destruction), but investments are not always allocated to the country with the highest social returns (i.e., there is some FDI diversion). In addition, while they do better than they would under a ban on subsidies or under unrestricted competition, host countries cannot appropriate in this case the full benefits of FDI. In this case of reswitching, side payments among to host countries may be required in order to get every country to participate.

In the above discussion, we focused on the consequences of restricting competition between countries that compete to attract FDI. However, the same conclusions would apply for the case of competition among subnational governments of a given country. As long as there is no reswitching, delegation of power on these matters to the federal government achieves the first best outcome for the subnational units.

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SMALL ECONOMIES' TARIFF AND SUBSIDY POLICIES IN THE FACE OF TRADE LIBERALISATION IN THE AMERICAS

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Summary

The purpose of this paper is to examine from a macroeconomic perspective some of the fiscal issues which may arise from trade liberalisation in the smaller economies of Latin America and the Caribbean (LAC). The economic reforms implemented throughout the region invariably include programmes generally designed to lower tariff rates. They have important implications for the fiscal accounts of the smaller economies, traditionally more dependent on this type of revenue. The net result on government income remains an empirical question that depends on several parameters, such as price and income elasticity of the demand for imported goods, real income effects of trade liberalisation or exchange rate regimes.

Export revenues have to match the larger inflow of imports to allow a sustainable insertion into the international economy. Most smaller economies found themselves at a disadvantage when competing on international markets against their larger neighbours. Those that were successful in diversifying their non-traditional exports did so on the basis of active export promotion policies that included a sizeable component of tax subsidies and public investment.

Thus, competing in the global economy has a non-trivial impact on the fiscal balance of the small developing countries in the region. Reforming tax and export promotion policies is particularly difficult in these economies, for reasons directly linked to their small size and the fragile situation of their public finance.

Dependence on trade tax shown by most smaller economies is not only the result of historical conditions, but has practical reasons based on relative costs of tax administration. The technical complexity of implementing more neutral instruments such as value added taxes, or more equitable ones such as direct income tax, might be an obstacle for those smaller economies which cannot count on a large and well-trained public administration. Less selective export promotion policies are perhaps a better option from a theoretical perspective, but they are also more costly in the short term and their implementation is constrained by liquidity restrictions. However, looking at the future of regional and international integration, these reforms are inevitable for both legal and economic reasons. The time required and the costs of changing the present tax and incentive structure will be considerable for those countries and they should be able to count on the co-operation from their larger partners.

The first part deals with the fiscal implications of trade tax reforms on the smaller LAC economies. Following ECLAC (2000), smaller countries are defined as those with a population of 10 million or less at the beginning of the 1990s. The second part explores some of the issues linked with export diversification policies. A third section presents the conclusions of these two sections.

I. Trade reforms: Fiscal considerations and potential implications

The process of trade liberalisation (including the reduction of tariffs, the tariffication of quotas and other trade restrictive measures, the elimination of licensing requirements, exemptions and preferences) has significant budgetary implications. These budgetary considerations may, at the same time, greatly influence the process and outcome of liberalisation. This is especially true for small economies which, as we shall see, rely heavily on international trade taxes for revenue generation and whose trade regimes may still include many exemptions, preferences and trade restrictive measures, such as quotas and licensing requirements.

1. Trade and tax revenue trends

Most countries have undertaken substantial tax reforms including the restructuring of tax administration and the streamlining of the procedures for tax registration and collection. These efforts have generally resulted in an increase in central government revenues in those countries which had a weak tax basis. The average total central government revenue in Latin America increased from 15 per cent of GDP in 1990 to 17.5% per cent of GDP in 1999 with most countries falling into the 15 to 20 per cent range.[1]

A different trend was, however, detected in the Caribbean where tax revenues were historically higher than in Latin America. Average total central government revenues remained fairly constant in the 1990s (although at lower levels than in the eighties) to stand at an average of over 27 per cent of GDP. (See table 1 at the end of this section)

The wide implementation of structural reforms, especially trade liberalisation programmes, have resulted in a decrease in the share of international trade taxes in government revenues for many countries among those which have made most progress in their economic liberalisation programmes. The end result of this process has been a general shift in the tax mix of these countries from international trade taxes to domestic taxes. A significant focus of tax reforms in larger LAC countries was consumption taxes, in particular the Value Added Tax (VAT). The VAT played the most important role in improving the revenue performance of the tax system; VAT revenues levied up to the import stage, compounded by the increase in the volume of imports, compensated in many instances the loss in trade tax revenues.

Although there is an unmistakable trend towards this shift, the smaller economies of Central America and those of the Caribbean still rely much more heavily on international trade taxes than those of the rest of the hemisphere (see table 2). In particular, the countries of the Caribbean show on average the highest level of reliance on international trade taxes (averaging 8.0 per cent of GDP) in the 1990s while those of Central America averaged around 3.5 per cent of GDP. A similar pattern can be found in terms of the share of revenues from trade in the total. In Central America, trade revenues averaged around 23 per cent of total tax revenues in 1999 while in the Caribbean they averaged around 37 per cent with the Easter Caribbean OECS countries averaging around 50 per cent in 1998. This characteristic of the region's small economies has been identified as an impediment, lowering their readiness to integrate into free trade areas. As stated in a recent ECLAC study, "Greater fiscal dependence on foreign trade could involve a double cost: first, the loss of income from tariff reductions and, second, the diversion of trade that would probably occur if the tariffs applicable to the rest of the world increased (to compensate for the reduction when implementing the Free Trade Agreement for the Americas –FTAA–) or were kept relatively high when the country joined FTAA".[2]

2. Fiscal deficits and dependence on trade taxes

Obviously, the situation is potentially worse for those countries which are both dependent on trade taxes (see Box 1) and face a relatively large fiscal deficit. These countries cannot afford further expansion of their deficit and would require adjustment either through the revenues or expenditures. As shown on table 4, a group of ten countries is in the most vulnerable situation, despite having relatively high levels of

[1] For more detailed discussion see ECLAC, 1998.
[2] See ECLAC, 1996.

revenues. All of these are relatively small economies, except for Colombia.[3] These small economies also have high trade exposure and are highly dependent on imports (worth around 60% of GDP). A second group of vulnerable economies with either large deficits and moderate dependency levels or moderate deficits and high dependency levels also include mostly small Caribbean economies except for Ecuador and Venezuela[4]. On the other extreme is Trinidad & Tobago, an oil-producing country, which has high trade exposure but has managed to have a diversified tax structure with increasing revenues and stable expenditures throughout the nineties.

Table 4. Latin America and the Caribbean: Fiscal balance and dependency on trade taxes (1995-1999 averages)

DEPENDENCY ON TRADE REVENUES	SURPLUS OR LOW DEFICIT	MODERATE DEFICIT	LARGE DEFICIT
LOW	Trinidad & Tobago	El Salvador Mexico	Bolivia Brazil Costa Rica Uruguay
MODERATE	Chile	Argentina Barbados Guatemala Panama Paraguay Peru	Ecuador Guyana
HIGH	Dominican Republic	Netherlands Antilles St. Kitts & Nevis St. Lucia St. Vincent & the Grenadines Venezuela	Antigua & Barbuda Bahamas Belize Colombia Dominica Grenada Haiti Honduras Nicaragua Jamaica

Note: Deficit levels are strictly for comparison purposes and do not necessarily imply fiscal fragility. These were determined by the average deficits during the period between 1995 and 1999. Countries at the upper end of the sample had average deficits of over 2% of GDP (and/or have had volatile changes in their deficits), a middle group had deficits between 1 and 2% of GDP and another group had surpluses or deficits of less than 1%.

[3] Although Colombia's trade is quite liberalised, trade revenues are still very important to the public finances. In addition, large transfers to its local governments and provinces have kept its deficits high throughout the nineties.

[4] Venezuela is a borderline case where trade revenues are fairly important, but its fiscal vulnerability comes mostly from the volatility of its oil revenues.

Box 1 Determining the level of dependency on trade revenues

The degree to which governments have liberalized their trade (and have become less dependent on trade revenues) varies from country to country. Now, to measure this degree is a difficult task. It would involve many variables that are difficult to compare between countries since they may have unique tax structures that may distort the data. One datum such as the share of trade revenues within total revenues may not appropriately describe the degree of dependency on these revenues. For example, countries that rely heavily on oil revenues but also have relatively high trade revenues may show only a small share in total revenues. An approximation of such a dependency measure can be obtained by looking at the four indicators most closely related to the tariff system of each country, assuming that non-tariff barriers and export taxes have been reduced to a minimum.

Governments that have comparatively high levels of trade revenues (over 3% of its GDP), which amount to a substantial portion of their total revenues (over one fifth) and collect a significant amount of the total value of the imports (over 7.6%) seem to be most vulnerable to the rapid changes in the international trade scene. Such a high level of dependency will signify a greater effect on the government finances as countries in the region quickly converge to lower tariffs.

Table 5. Level of Dependency on Trade Revenues for Selected LAC countries

COUNTRY	Comparative Tariffication level indicators				
	Trade Revenues	Trade Rev/ Total Rev	Collected tariff rate	Average tariff rate	Overall ranking
Argentina	low	low	high	high	medium
Bolivia *	low	low	low	medium	low
Brazil	low	low	medium	high	low
Chile	medium	low	medium	medium	medium
Colombia	high	high	high	medium	high
Costa Rica *	medium	medium	low	low	low
Dominican Republic *	high	high	high	high	high
Ecuador *	medium	medium	medium	medium	medium
El Salvador *	low	medium	low	low	low
Guatemala *	medium	medium	medium	low	medium
Haiti *	medium	high	high	high	high
Honduras *	high	high	medium	low	high
Mexico	low	low	low	high	low
Nicaragua *	high	high	medium	medium	high
Panama *	high	high	low	low	medium
Paraguay *	medium	medium	low	low	medium
Peru	low	low	high	high	medium
Uruguay *	low	low	low	high	low
Venezuela	medium	medium	high	medium	high

Note: * Smaller economy. Based on official government data and the IDB. The measurements are relative indicators based on the average regional levels of these 19 countries. The resulting criteria were: **Trade revenues** (% of GDP): low: 0-1.4, medium: 1.5-2.9, high: 3.0 and above. **Trade revenues/total revenues** (percentage): low: 0-<10, medium: 10-20, high: 20 and above. **Collected tariff rate** (percentage): low: 0-5.4, medium: 5.5-7.5, high: 7.6 and above. **Average tariff rate** (percentage): low: 0-9.5, medium: 9.6-12, high: 12.1 and above. For countries with less information, namely the non-Latin Caribbean countries, the share of trade revenues in the total was used as a proxy for the level of dependency.

Differences in the structure of trade and/or government finances may still distort the comparison between countries of their level of dependency on trade revenues, either by amplifying or diminishing the measures. For example, a low value of total import of goods amplifies the collected tariff rate of a country (as in Argentina, Peru and Venezuela). Low total revenues would augment the share of trade revenues. Similarly, high values of imports and total revenues would help hide an otherwise high dependency on trade revenues. Nevertheless, these indicators as a whole give a pretty good indication of the countries reliance on these revenues.

The level of public debt is another important variable to consider when looking into the sustainability of alternative scenarios for reforms and the capacity of public sector to buffer transitory shocks arising from trade liberalisation. In the medium and long run however, because of their high external debt, balancing the fiscal budget in smaller economies would not be sufficient if the stock of public debt is not reduced. Countries such as Honduras, Jamaica and Nicaragua that face the double threat of high dependence on trade revenues and high deficits, have also large amounts of external debt (see table 4 again). The first two have had stocks of around 50% to 100% of GDP during the latter half of the nineties. While Nicaragua has had close to 300% of GDP of external debt. All three countries are above the regional average of about 50%. In terms of debt per capita, Jamaicans and Nicaraguans carry a burden of approximately USD1300, again higher than the regional average of about USD1100. While each Honduran would theoretically have an external debt of around USD 600.

3. *Some possible revenue implications of trade liberalisation*

The net impact of trade liberalisation on trade tax revenues is largely ambiguous, and depends on various factors. Trade liberalisation involves changes in the relative price structure and the removal of trade restrictions that usually increase the volume of imports. The ultimate impact of trade liberalisation on revenues will depend on the economic and trade structure of the countries, their policies and the behaviour of economic agents in response to the liberalisation process. These characteristics vary a great deal among the countries in the region and their numerical assessment is mainly an empirical question, requiring the use of country-specific macroeconomic simulation tools, such as general equilibrium models. Therefore, this section intends only to highlight some of the issues at hand.

The sequencing of the various aspects of trade liberalisation programmes and the timing of these programmes in relation to other complementary reform programmes such as tax reforms constitute some of the factors which determine the effects of trade liberalisation on the fiscal accounts. With regard to the trade programme itself, issues such as the elimination of exemptions, licensing requirements and quantitative restrictions or their tariffication before, after or at the same time as the reduction in tariffs are important considerations which have varying effects on the fiscal accounts. In addition, the volume effect of an increase in imports due to trade liberalisation may (and usually do) have a positive effect on revenues and compensate for the loss brought by the price effect of a lower tariff.

Case studies show both positive and negative effects on revenues, the net balance being difficult to forecast.[5] The reduction or elimination of tariffs on imports usually decreases revenues derived from international trade taxes. On the other hand, administrative considerations are also important in determining the final outcome of the tariff reduction, especially when it is accompanied by a more general fiscal reform.

Tariff exemptions, specially reduced tariffs and other trade discretionary measures (some of them directly related to export promotion policies, see part II) tend to have significant negative effects on the collection rate. Estimates of exemptions resulting in collection rates being 50 per cent lower than potential revenue are not uncommon.[6] The elimination of these exemptions and preferential tariff rates could enhance revenues by widening the import tax base. The increase of revenues will be proportional to the pervasiveness of these preferences in the tax system. Reduction in prohibitively high tariffs whose

[5] Pritchett and Sethi (1993) case study on three countries documents four facts: (1) there is almost no empirical relationship between the official tariffs and the collected taxes; (2) the higher the official tariff, the higher the variation of collected taxes; (3) the collected taxes increases much less than one-for-one with the official tariffs; and (4) above a certain level, collected rates do not increase at all despite increases in official tariffs.

[6] See IMF 1994

operation usually come close to shutting off imports altogether are likely to result in an increase in imports and could bring in even more revenues.

Increased revenues could also occur as a result of trade liberalisation when the simplification of tariff structures, together with the lowering of tariffs, reduces the incidence of smuggling and under-invoicing which tend to be prevalent in highly restrictive trade regimes and are responsible for significant losses of revenues. In particular, countries with high tariffs tend to experience a great deal of evasion, misclassification and smuggling because of the high returns of these activities under such tariffs.[7] Lower tariffs and simpler tariff structures are easier to administrate. Thus, they tend to be more efficient and more transparent and are more likely to enhance revenue generation.

The value and volume of imports have greatly increased in the region, especially after countries started liberalising. This surge in imports has a direct positive effect on trade revenues which prevented a further decrease in such revenues. As we saw in the previous section, countries in Central America experienced an increase in trade revenues during the nineties.

Another not less important variable that may greatly affect the level of tax revenues is the administrative capacity of governments or the quality of accompanying institutional reforms. The negligence of seeing the importance of the role of institutional environment in trade and tax reforms has put in jeopardy many economic reform programmes in developing countries. In that regard, Mr Earnest Stern, former Vice-President of the World Bank and one of the main architects of its structural adjustment lending, put it this way: " In general it is fair to say , we grossly underestimated the institutional elements of adjustment at both the macro and sectoral levels. Time and again, the best of policy intentions, the best of policy letters solemnly agreed to and signed by the Finance Minister and the Bank broke down. This often happened because of a lack of adequately trained people in the right places, the difficulty in changing bureaucratic structures and the difficulty of laying people off as functions were reduced. (Vinod et al. 1991) This practical aspect is also highlighted in the theoretical literature, as in the words of Christopher Bliss (1992) "True, the great advantage of tariffs from the point of view of administrative feasibility is that in many countries there are only a few ports through which traded goods can easily pass, so that it only requires a few customs posts and some fairly uncorrupt officials to collect tariffs. Contrast this position with the difficulties confronting VAT system, and the point is clear".

a. The relative contribution of trade and tax reforms

In order to measure the corresponding impact of the variables related to trade liberalisation and fiscal reform on trade tax revenues in the region, an econometric model was tested for 16 Latin American and Caribbean countries. Trade tax revenues as a share of GDP were regressed against a series of variables, including trade openness, GDP growth rate, trade and fiscal reform indexes, and the fiscal situation in the previous period. Trade openness, measured as the current value of import and exports relative to GDP, is a synthetic variable that captures various factors: the import and export volume effects, the change in international prices and the variation in exchange rate. An increase in this variable should, ceteris paribus, increase the value of trade tax relative to GDP. GDP growth rate, by increasing the value of domestic product, is expected to have an opposite impact.

Controlling for these effects, trade liberalisation is expected to lower trade revenues because of the lower average tariff; fiscal reform on the other hand is supposed to increase them, because of the improved efficiency in tax collection. As far as the fiscal variable is concerned, it was suspected that

[7] The relationship between tax rate and evasion is not always a rigid one and depends also on institutional and administrative arrangements. For example Chile, with one of the highest Value Added Tax in the region (18%) shows a lower rate of tax evasion than many other Latin American countries.

during the period under review, national authorities would have been tempted to increase the trade tax revenues when their fiscal situation was weak.

The results obtained pooling cross-section data over the 1981-1996 period confirmed the a priori expectations.

Table 6 Econometric Analysis of Revenue Implications of Trade and Fiscal Reforms *

Dependent Variable:	Trade Tax Revenues relative to GDP (%)	
Explanatory Variables	**Coefficient**	**t-Statistic**
GDP growth rate (%)	-0.12	-4.38
Trade value (% of GDP) **	0.83	2.67
Trade reform index***	-1.23	-4.48
Fiscal reform index***	1.18	8.66
Previous fiscal balance	-0.03	-2.35
R2 (weighted)	0.98	
R2 (unweighted)	0.90	

Notes: * Panel of 5 year average observations for 16 Latin American and Caribbean countries, 1981-1996. Regression used General Least Squares with fixed effects and cross section weights, totalling 48 observations.
** Value of imports and exports relative to GDP, in logarithm.
*** Logarithm of the corresponding reform indexes at the beginning of each period, as published in Morley S. et al: Indexes of structural reform in Latin America, ECLAC January 1999.

All coefficients have the expected sign and are highly significant. Overall explanatory power of this simple model is very good, as shown by the R-squared, albeit further econometric testing is limited by the reduced number (3) of observations for each country.

Trade reforms, which usually include a reduction in average tariff on imported goods and services and an elimination of taxes on exports, reduce the government revenue per unit of traded goods and services. As mentioned earlier, this effect can be partially offset (or even totally, as it occurred in some countries) by the impact on the volume of trade, especially the increased demand for imported goods. Fiscal reforms, once the specific impact of trade reforms and other economic variables are discounted, tend to increase the trade tax revenues (e.g., by reducing evasion). For a given external tariff, better overall fiscal administration and procedures tend to increase trade tax revenues for given levels of trade and tariff.

It is also of interest to note that countries in the sample tended to rely more on trade taxes when the global fiscal situation in previous periods was negative. This tendency has been observed in several instances, when trade taxes were raised in order to compensate for negative fiscal results, reverting –at least temporarily– the previous advance in trade liberalisation (Chile, Bolivia).

b. Average tariff and total trade revenues

In this line of thought, other empirical studies suggest that there is a tariff rate that maximises trade tax revenues: above this ceiling, revenues are lost because of evasion and low demand for imports, below this level, revenues are lost because of the low tariff. A recent IMF study, conducted world-wide on a large set of developing countries, set this optimum at 20% (Ebrill 1999).

This 20% optimal rate found at international level is also above the present regional average, which means that further reduction could have in theory a negative impact on tax revenues in Lain

America and the Caribbean. Nevertheless, empirical research conducted by ECLAC in several smaller economies of the region tend to show that trade reforms did not reduce significantly the trade tax revenues. As a matter of fact, regional averages show a moderate declining tendency of trade tax revenues as percentage of GDP, from 2.6% of GDP in the 1980s to 2.2% during the 1990s. In some individual country cases, trade tax income tended to increase after trade reform (Colombia, Dominican Republic, Nicaragua, Panama and Paraguay).

Alberro (1999) analysed the case of Mexico for three different trade regimes, and concluded that during the period of trade liberalisation before joining the GATT (1980-1987) and the period that extend from GATT to NAFTA (1988-1994), revenue collection was elastic to import intensity, i.e., that increase in import volume tended to compensate the tariff reduction effect. In the post-NAFTA period, revenue collection is inelastic to import intensity and liberalisation effects dominate volume effects to determine a drop in tax revenues. The author concludes that "in the post-NAFTA era, tariff rates seem to be at a level that maximises revenue". The weighted average import tariff for the post-NAFTA in Mexico is 10.3% (the simple average is 12.7%), this suggests that optimum tariff in Mexico is lower than the one calculated by the IMF.

From a strict public income perspective, reductions of tariffs and other duties on imports (not compensated by a nominal devaluation) [8] raise the purchasing power of domestic consumers and have positive effects on demand for goods and services, especially those from abroad, and their net effect on fiscal revenues is positive. At least as long as the related deficit in trade balance is sustainable.

Unfortunately, this trend might not be sustainable. Recent experiences in the region, where trade liberalisation coincided with capital account opening and real exchange appreciation, tend to show that imports grow more swiftly than exports, widening the trade deficit. Confronted with this, monetary policy had sooner or later to be tightened, rising interest rate to curb internal demand and attract foreign capital to avoid (or confront) a balance of payment crisis. This impacted negatively on government revenues because the lower domestic demand derived into lower internal and trade tax receipts. According to King (2000), Jamaica is an example of "inconsistencies between the structural reforms in domestic markets and international trade on the one hand, and stabilization policy on the other" which led to financial crisis, stagnating growth and low employment. From a wider perspective, the succession of boom and bust that characterised the LAC economic conjuncture during the 1990s and its external vulnerability implied also lower than expected average GDP growth and high social costs. Indeed, preventive measures to increase internal savings would be a better strategy, especially when these measure incorporate reforms designed to strengthen the public finance (see ECLAC 2000, chapter 8, on macroeconomic policies to deal with volatility in the LAC context).

[8] Accompanying devaluations, by increasing the value of trade in nominal currency, might compensate for the losses in import volumes.

Table 1 Total Tax Revenues (as a percentage of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South America and Mexico										
Average	9.9	10.6	11.3	11.8	12.3	12.2	12.0	13.0	13.4	13.4
Argentina	12.4	14.2	16.5	17.9	17.7	17.3	16.0	17.3	17.6	17.6
Bolivia	8.2	8.7	10.7	11.4	12.4	12.4	12.3	14.5	16.3	18.1
Brazil	10.2	10.0	9.4	10.6	13.2	12.6	11.8	12.6	14.5	15.0
Chile	14.5	16.7	17.3	18.0	17.5	17.0	18.2	17.6	17.8	16.9
Colombia	9.3	10.7	11.2	11.6	11.8	11.4	11.5	12.2	10.5	10.8
Ecuador	7.6	7.6	7.2	7.4	7.7	8.0	7.2	9.3	9.9	9.8
Mexico	11.5	12.0	12.4	11.4	11.3	9.2	9.0	9.8	10.5	11.2
Paraguay	9.5	9.4	9.3	9.4	10.7	12.2	11.5	11.8	11.6	10.8
Peru	7.7	8.9	10.0	10.1	11.2	11.6	12.1	12.1	12.1	11.4
Uruguay	14.4	14.3	14.9	14.7	13.1	14.6	14.9	15.8	16.1	15.4
Venezuela	3.7	4.4	5.5	7.2	8.7	8.2	7.9	9.8	10.3	10.3
Central America and Latin Caribbean (Dominican Republic and Haiti)										
Average	11.1	11.8	12.1	12.0	11.4	12.7	12.6	13.3	13.7	13.7
Costa Rica	14.0	11.4	12.0	12.1	11.7	12.5	12.7	12.6	12.8	12.5
Dominican Republic	10.5	11.8	13.8	14.8	14.0	13.8	13.1	14.7	15.0	14.4
El Salvador	9.1	9.5	9.6	10.3	10.9	12.0	11.3	11.1	10.3	10.5
Guatemala	6.8	7.3	8.2	7.8	6.7	8.0	8.8	9.4	9.6	10.0
Haiti	8.7	9.5	6.1	5.5	2.6	6.4	7.5	9.2	8.9	9.1
Honduras	14.1	14.5	15.4	14.8	14.3	15.7	14.4	14.1	17.0	17.7
Nicaragua	13.5	17.7	19.2	18.7	19.3	20.6	20.7	23.0	24.1	23.0
Panama	11.7	12.5	12.5	12.1	11.8	12.5	12.1	12.5	12.1	12.6
Non- Latin Caribbean Countries										
Average	20.9	20.9	21.4	21.9	20.8	21.1	21.2	21.3	21.6	...
Antigua & Barbuda	17.3	17.0	17.1	17.1	17.5	17.8	18.5	17.9	17.5	...
Aruba	16.6	18.2	18.5	19.4	18.5	18.2	17.9	16.9	17.4	...
Bahamas	14.2	14.3	15.3	14.7	16.5	16.7	16.5	16.7	16.5	...
Barbados	25.3	26.9	26.0	27.9	27.0	27.8	27.7	30.7	30.0	...
Belize	21.5	21.8	20.8	20.9	20.6	20.6	19.4	19.8	19.3	...
Dominica	24.7	24.3	24.5	23.2	22.0	23.3	23.5	23.4	23.8	...
Grenada	21.9	21.5	21.9	23.1	21.8	22.6	22.7	21.9	22.2	...
Guyana	28.8	25.7	35.9	35.7	29.8	31.4	32.3	29.6	28.6	...
Jamaica	23.8	22.9	22.7	25.4	24.9	26.1	24.8	24.5	26.3	...
Netherlands Antilles	6.5	6.8	7.0	7.6	7.8	7.6	8.6	10.1	10.3	...
St. Kitts & Nevis	19.9	19.3	19.5	21.2	21.1	21.3	21.5	22.2	22.7	...
St. Lucia	22.3	23.0	23.3	23.0	22.2	21.8	21.4	21.6	22.0	...
St. Vincent & the Grenadines	25.3	24.1	22.5	22.8	23.9	23.2	24.3	24.3	24.6	...
Trinidad & Tobago	24.6	27.5	24.6	25.7	17.6	17.5	17.7	18.4	21.2	...

Source: ECLAC based on official national data.

Note: Tax revenues vary among the countries but they generally include taxes on income and profits, taxes on property, taxes on domestic goods and services and taxes on international trade

Table 2 Trade Tax Revenues (as a percentage of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South America and Mexico										
Average	**1.8**	**1.6**	**1.5**	**1.5**	**1.5**	**1.6**	**1.4**	**1.5**	**1.6**	**1.4**
Argentina	1.5	0.8	1.0	1.1	1.1	0.8	0.8	1.0	0.9	0.8
Bolivia	1.4	1.1	1.3	1.3	1.4	1.4	1.3	1.4	1.5	1.5
Brazil	...	0.0	0.5	0.4	0.5	0.8	0.5	0.6	0.7	0.8
Chile	2.4	2.3	2.2	2.2	2.0	2.1	2.2	1.9	1.8	1.6
Colombia	2.4	2.8	2.4	3.0	3.2	3.1	2.8	3.0	2.8	2.2
Ecuador	2.4	2.1	1.7	1.7	1.8	1.8	1.4	2.3	3.1	2.5
Mexico	1.0	1.2	1.3	1.1	0.9	0.6	0.6	0.6	0.6	0.6
Paraguay	2.4	2.1	1.7	1.7	1.9	2.8	2.2	2.3	2.2	1.6
Peru	0.8	0.9	1.1	1.2	1.4	1.5	1.5	1.3	1.3	1.2
Uruguay	2.2	1.9	1.7	1.2	1.1	1.0	1.0	1.1	1.1	0.9
Venezuela	1.3	1.9	2.0	1.9	1.6	1.5	1.4	1.6	2.0	1.7
Central America and Latin Caribbean (Dominican Republic and Haiti)										
Average	**3.0**	**3.0**	**3.1**	**3.1**	**2.9**	**3.4**	**3.1**	**3.3**	**3.4**	**3.3**
Costa Rica	3.9	3.4	3.0	2.8	2.6	6.5	5.9	5.8	6.1	5.4
Dominican Republic	4.1	4.0	5.7	5.5	4.4	4.0	3.8	4.2	4.3	4.5
El Salvador	2.0	2.0	1.8	2.0	2.1	2.1	1.6	1.3	1.2	1.2
Guatemala	1.5	1.4	2.1	1.8	1.6	1.9	1.5	1.4	1.4	1.4
Haiti	1.6	2.0	1.0	0.9	0.3	1.2	1.2	2.0	1.9	2.0
Honduras	5.4	5.3	4.9	4.4	4.2	4.1	3.8	3.5	3.0	2.6
Nicaragua	2.9	3.6	3.9	4.0	4.2	4.8	4.7	5.5	6.7	7.2
Panama	2.6	2.4	2.5	3.4	3.4	2.4	2.5	2.5	2.7	2.5
Non- Latin Caribbean Countries										
Average	**8.5**	**8.0**	**7.9**	**8.2**	**8.2**	**8.2**	**8.1**	**7.6**	**7.7**	**...**
Antigua & Barbuda	5.3	5.0	5.0	4.8	5.2	5.3	5.8	5.6	5.4	...
Bahamas	8.8	9.5	10.1	9.5	11.2	11.2	10.8	11.1	10.9	...
Barbados	3.3	2.5	2.1	2.2	4.8	4.7	3.9	3.1	3.1	...
Belize	13.4	13.4	12.7	11.9	11.6	11.6	11.4	6.7	7.1	...
Dominica	14.3	13.3	13.5	12.9	12.4	12.6	12.5	12.7	12.8	...
Grenada	16.6	13.5	12.9	13.2	12.3	12.1	13.7	14.0	14.3	...
Guyana	4.7	4.2	4.5	5.7	4.6	4.7	4.7	4.1	4.1	...
Jamaica	5.0	5.3	5.6	7.2	6.5	8.0	7.2	7.3	7.9	...
Netherlands Antilles	3.3	3.2	3.3	4.3	4.3	4.3	3.8	2.8	3.0	...
St. Kitts & Nevis	12.9	12.1	12.1	13.6	13.0	12.6	11.7	11.9	11.3	...
St. Lucia	14.0	12.9	11.7	11.9	11.8	12.0	11.6	12.1	11.8	...
St. Vincent & the Grenadines	6.5	6.6	6.9	6.9	6.4	6.3	6.4	6.3	6.3	...
Trinidad & Tobago	2.2	2.5	2.5	2.8	2.1	1.6	1.5	1.7	2.1	...

Source: ECLAC, based on official national data.

Note: Taxes on international trade vary among the countries but generally include import and export duties, customs charges, stamp duties and currency levies.

Table 3 Trade Tax Revenues (as a percentage of total tax revenues)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South America and Mexico										
Average	**19.8**	**16.9**	**15.4**	**14.3**	**13.6**	**13.9**	**12.5**	**12.7**	**13.6**	**11.6**
Argentina	12.1	5.9	5.9	6.2	6.3	4.6	4.9	5.7	5.1	4.5
Bolivia	16.6	13.0	12.1	11.5	11.5	11.5	10.6	9.7	9.4	8.3
Brazil	...	0.0	5.0	4.2	3.9	6.0	4.6	4.7	5.0	5.2
Chile	16.6	13.8	12.7	12.2	11.4	12.4	12.1	10.8	10.1	9.5
Colombia	26.0	26.0	21.3	26.1	26.8	27.5	24.5	24.7	26.7	20.4
Ecuador	31.6	28.2	24.0	22.9	23.8	23.0	19.3	24.5	31.6	25.6
Mexico	8.4	10.1	10.6	9.3	8.2	6.7	6.6	5.8	5.3	5.3
Paraguay	25.4	22.9	18.3	18.4	18.2	22.9	19.4	19.6	19.3	14.9
Peru	10.4	10.0	10.6	12.4	12.4	13.2	12.2	10.9	11.1	10.9
Uruguay	15.3	13.4	11.2	8.0	8.2	6.8	6.4	6.7	6.8	6.1
Venezuela	35.6	42.2	37.2	25.9	18.9	18.2	17.1	16.5	19.2	16.8
Central America and Latin Caribbean (Dominican Republic and Haiti)										
Average	**26.4**	**25.2**	**24.7**	**24.7**	**23.7**	**26.1**	**24.0**	**24.1**	**24.0**	**23.3**
Costa Rica	28.2	30.2	25.1	23.3	22.4	51.8	46.5	46.0	47.6	43.2
Dominican Republic	38.7	34.0	41.0	37.1	31.5	29.1	28.9	28.6	28.6	31.3
El Salvador	21.6	21.3	18.2	19.3	19.4	17.4	14.0	11.8	11.9	11.4
Guatemala	22.5	19.2	25.4	22.7	23.6	23.6	17.5	15.0	14.5	13.6
Haiti	18.9	21.0	16.1	16.4	13.1	19.0	15.6	21.8	21.0	21.5
Honduras	38.0	36.8	31.8	29.5	29.7	25.9	26.5	24.9	17.7	14.7
Nicaragua	21.5	20.3	20.3	21.5	21.7	23.2	22.6	24.1	28.0	31.2
Panama	22.0	19.1	19.7	28.1	28.5	19.1	20.3	20.2	22.8	19.8
Non- Latin Caribbean Countries										
Average	**42.4**	**40.5**	**39.6**	**40.6**	**41.1**	**40.8**	**39.5**	**36.6**	**36.5**	**...**
Antigua & Barbuda	30.8	29.6	28.9	28.2	29.6	29.9	31.1	31.0	30.7	...
Bahamas	62.0	66.4	66.0	64.6	67.9	67.1	65.5	66.5	66.1	...
Barbados	13.0	9.3	8.1	7.9	17.9	17.0	14.2	10.2	10.4	...
Belize	62.3	61.5	61.1	56.9	56.3	56.3	58.8	33.8	36.8	...
Dominica	57.9	54.7	55.1	55.6	56.4	54.1	53.2	54.3	53.8	...
Grenada	75.8	62.8	58.9	57.1	56.4	53.5	60.4	63.9	64.4	...
Guyana	16.3	16.3	12.5	16.0	15.4	15.0	14.6	13.9	14.3	...
Jamaica	21.0	23.1	24.7	28.3	26.1	30.7	29.0	29.8	30.0	...
Netherlands Antilles	49.7	47.9	46.7	56.7	55.0	56.8	43.5	27.6	28.9	...
St. Kitts & Nevis	64.8	62.7	62.1	64.2	61.6	59.2	54.4	53.9	49.7	...
St. Lucia	62.8	56.1	50.2	51.7	53.1	55.0	54.2	56.0	53.6	...
St. Vincent & the Grenadines	25.6	27.4	30.7	30.3	26.8	27.1	26.3	25.9	25.6	...
Trinidad & Tobago	8.9	9.1	10.2	10.9	11.9	9.1	8.5	9.2	9.9	...

Source: ECLAC, based on official national data.

II. Export promotion and diversification

1. The case for export subsidies

Many of the fears related with globalisation and the possibility of a non-optimal reinsertion within the international and regional markets have to do with the challenges facing non-traditional exports from smaller countries. In the face of trade liberalisation, the sustainable strategy for smaller economies was not only to increase the volume of exports in order to match the increased demand for imports, but also for most of them to diversify their traditional export structure. [9] An illustrative example of the risks involved may be Jamaica, were Alleyne (2000), after reviewing growth and reforms in this country, concludes "the liberalisation of imports and reduction of tariff have not helped to expand the traditional export sector while the non-traditional sector has grown slowly, and this has impacted on employment since employment in the traditional sector has been in decline".

In addition of being generally unsuitable for sustaining a genuine export-led growth strategy, smaller countries' traditional specialisation in a few commodities involved a high degree of vulnerability to external shocks. As highlighted in ECLAC (1996 and 2000), systemic vulnerability is perhaps one of the most common feature of these economies. Thus export diversification became one of the priority objective of the export promotion policies we will discuss here.

This preoccupation would have been meaningless in a world of traditional growth and trade theories, based on the assumptions of perfect competition, perfect information, homogeneous products and constant returns to scale. Getting the prices right and specialising in factor-abundant exports would naturally lead to a positive outcome for the small developing economies. In this framework, the role of the state would mainly be to correct anti-export bias inherited from the previous import-substitution policies.

This laissez-faire model was apparently not consistent with the experience of the fast-growing newly industrialised countries in Southeast Asia. This experience received a formal recognition from the academic circles with models incorporating path dependency, imperfect competition and externalities in the new trade theory. [10] In this alternative framework, the small countries' industries may actually not be able to benefit from the opening of larger regional or international markets, because of the specific higher costs they face at home, which put them at a dynamic disadvantage when competing against larger countries' firms. The comparative disadvantages affecting smaller economies include, *inter alia*, high transaction costs in small islands or land locked countries, and the difficulty in obtaining the economies of scale that larger ones are enjoying. Hence, pure laissez-faire might condemn small developing countries to specialise spontaneously into unsatisfactory traditional or new export activities. [11]

One can roughly classify these structural costs in three categories. The first one is directly related to higher production costs by unit of output because of the small scale of firms producing tradable goods and services (in the LAC small economies, even large companies are small by regional standards). This disadvantage can be corrected when accessing export markets. The second one, related to the inadequacy and higher cost of non tradable domestic inputs (including finance services) entering into the production of tradable output, cannot be easily corrected by opening the domestic market. The third is related to unfavourable competitive advantage due to higher transaction costs, which is especially true in many of

[9] Very small Caribbean countries which benefit from a natural advantage in tourism, a dynamic market which open several opportunities for creating jobs and diversifying domestic activities, may not be confronted to this necessity.
[10] See Macario (2000) for a review of the literature on economies of scale and learning by exporting.
[11] Unsatisfactory they can be, from several perspectives: economic (low accumulation of human, technical and physical capital); social (low salaries, highly skewed income distribution); and/or legal (drug production and trafficking are the typical examples of undesirable spontaneous export diversification).

the smaller economies of the region which are either islands (the Caribbean) or land-locked (Bolivia, Paraguay). The higher "unit" cost of public goods or the sub-optimal level of infrastructure found in small economies because the non-divisibility of most public infrastructure can also be classified under this item.[12]

Economies of scale explain most of the stylised facts of the new developments of trade among developed countries (intra-firm trade) but also among Latin American countries. As stated by Devlin and Ffrench Davis (1999), regional integration builds on strategic considerations arising from imperfect and incomplete markets. For many non-traditional Latin American products, the access to markets is more limited and unstable, making economies of scale, the emergence of externalities of location and agglomeration and specialisation more difficult to achieve.

Empirical evidences at international level world tend to confirm that smaller developing countries have an initial disadvantage. Cross-country regressions using world-wide data show that large developing countries do have a much higher per capita income than small developing ones (if one exclude very small countries from the later group). The same patterns may be found when analysing growth rates, indicating that being a small developing country (albeit not a very small one) involves probably some disadvantage. This handicap is conditional to development level, and no such difference exists among the three groups of large, small and very small countries when running cross-country regression for developed economies (Salvatore 1997).

Correcting initial market imperfections in smaller developing economies call usually for public interventions. There is indeed a long tradition of trade subsidies in the LAC region to protect infant industries. While the cause for import-substitution related subsidies has not survived the criticism of economists on the basis of welfare enhancement, efficiency and sustainable growth, there is still a strong demand for actively promoting export interests. It should be noted that in the Hemisphere, this trend is not only present in the small developing economies but may be found in the large semi-industrialised Latin American countries and in the industrialised part of North America. [13]

2. *Trends in export diversification policies*

Although policies aiming a promoting new exports need not be restricted to public sector, the small size of the private firms in small economies means that most of them are undertaken with the participation of the state. In consequence, they usually do represent a cost to the public budget, either direct through an increase in current or capital expenses, or indirect (in the form of lost actual or future income, or increased liabilities).

a. Upgrading the productivity of domestic firms

Albeit the case of subsidies for export promotion is stronger than that for import substitution, academic economists are usually critical of export subsidies on the basis of welfare maximisation

[12] See for a review of these specific costs and vulnerabilities, the chapter 11 of ECLAC (2000), and Escaith and Pérez (1999)

[13] In the USA, the income tax benefits provided to exporters is equivalent to 1% ad valorem subsidy of total export, according to Desai and Hines (2000). This 1% subsidy represents a much higher share of the profits made on exports, and proved particularly important to promote export activities among small firms.

criterion. Export subsidies are legitimate only in very specific conditions (e.g., to correct for oligopolistic market structure or when economic policies and real exchange rate are not suitable for exports). [14]

This restriction however might not appear very relevant to practitioner economists from small open developing economies who have to design and implement economic policies that include as specific goals the diversification of the domestic export base. In this case, as recognised by Panagariya (2000), many of the objections raised by academics against subsidies are irrelevant, the question becoming more one of feasibility (legal or administrative) or efficiency (least cost, time consistency).

The first best approach to export-promotion policies, according to the academic branch of the economic profession, has been to promote widespread "across the board" productivity increases and adapt domestic tradable production to the demand of international markets. Theoretically, this policy should be able not only to increase the volume of existing exports, but also to generate new activities, in line with the business opportunities existing in the international market. The post-Uruguay Round reorganisation of the international markets, by contemplating the elimination of (non-agricultural) specific subsidies as a general rule, puts an additional legal emphasis on the desirability of this type of horizontal programmes.

A first step of measures geared at adapting the domestic supply to foreign market was to open the national economy and modify the institutional arrangements to follow international norms. The fiscal costs of doing so in small countries traditionally very dependent on trade tax revenues to finance their public budget is documented in the first section of this document. One has to note also that bringing the domestic norms (e.g., protecting investment or intellectual property) to the international standards was or is also a bigger step for small LAC economies than for larger ones. ECLAC (1996) shows that many in the former group still lag behind in terms of international norms, one of the reason been the reduced administrative ability to correct them.

An accompanying set of measures consists of those geared towards increasing total factor productivity, in particular through investment in physical and human capital. These programmes to increase national competitiveness are not different in nature from other development programmes, except that they include explicitly an overriding commitment to the export-led strategy. With respect to our present focus on smaller LAC economies, this means in particular attracting direct investment to diversify exports and incorporate technology, and promoting synergies between export firms and the rest of the economies to avoid the repetition of the "enclave economy" typical of the old colonial export model.

Once the economic policy was reformed to correct for the anti-export bias inherited from the past (see following section), one of the critical bottlenecks was the state of the infrastructure at the end of the lost decade after years of fiscal adjustment that sacrificed public investments. In smaller economies, it was particularly arduous to associate the private sector in the rehabilitation of the domestic infrastructure, as was done in many larger LAC economies through privatisation and concessions, and the governments had to finance most of the costs.

The state of the transport and communication infrastructure, in particular, is a key aspect in the promotion of competitiveness. Deregulation and the breaking-down of state or private monopolies proved especially difficult in small economies, for many reasons. The small size of the domestic private sector and the concentration of financial wealth meant that it was not possible to find an appropriate number of national investors to inject the necessary investment and maintain a minimum degree of market competition. Most foreign companies were not interested in investing in these small markets, or were ready to do that only if granted a monopolistic situation (e.g., telecommunications in Caribbean islands).

[14] See for a review Panagariya (2000).

Unfortunately, the state of the public finance of most small developing countries in the region and the urgency of other expenses did not allow for a comprehensive balanced strategy. A way of focusing the limited financial resources of the public sector was to concentrate the funds on specific investments, most directly linked with export activities: ports, export processing zones (EPZ) or the development of clusters.

b. Neutralising the existing anti-export bias and levelling the playing field

This objective is among the first one presented to defend and justify export promotion policies. The anti-export bias is still present in many LAC countries, especially in the smaller ones where tariffs are on average higher and more dispersed. Some correcting measures, such as streamlining formalities, reforming custom administration and reducing red tape, do not entail a financial cost for the state. In large semi-industrialised LAC countries, removing these obstacles and correcting the macroeconomic prices (especially the real exchange rate) were very effective in promoting non-traditional exports.[15]

Nevertheless, we saw that in the specific context of small economies, the anti-export bias argument should include also the specific costs facing domestic firms producing tradable goods and services, most of them associated with the existence of externalities and economies of scale. Providing (pioneer) companies in small economies with public assistance that enables them to start their operations allow them to reach production levels compatible with economies of scale. As recognised by Tanzi and Zee (2000), "a conceptually legitimate purpose for granting tax incentives is to rectify some forms of market failure, most notably those involving externalities" (p. 25).

Most subsidies in LAC small economies take the form of tax holidays, not only exempting capital and intermediate goods used to produce exports from tariffs but also extending profits from direct taxation. Typically, these privileges are granted only to firms operating in certain areas (export processing zones) where it is easier to control that the exempted purchases are not diverted to the domestic market. But there are numerous exceptions to this rule, and firms may benefit from the "maquiladora" regime without being physically located in the processing zones (El Salvador). In-bound firms are also exempted from direct taxes, and this subsidy is also extended to other type of export diversification, in particular to encourage investment in international hotels in Central America and the Caribbean.

A special case is the promotion of the export of services through off-shore financial services. As other EPZ, their operations are exempt of taxes. [16] In many small countries –principally Caribbean– they benefit also from "stream-lined" legal and prudential supervision. This activity is now under severe vigilance from OECD countries, for reason of tax evasion and money laundering.

3. *Selected country experiences*

The smaller economies' experience in increasing their level of export and developing a more diversified export base has been quite diverse (see table 7). The existence of preferential access to a large country' s domestic market (on the basis of close geographical proximity and/or special treatment) is one of the factor that may explain the differences. Domestic policies, and in particular export promotion, are another explicatory factor.

[15] According to Nogues (1989) in the 1980s Mexico diversified more effectively its exports by simply removing the bias against exports, without subsidising them, than did Brazil in the 1970s, relying on subsidies.

[16] Even a country like Chile had eventually to use tax subsidies to promote this type of operations, extending in 2000 tax exemptions on capital gains to non-residents.

Table 7 Export diversification (goods) in selected small LAC countries, 1990-1999

	1990				1999			
	Traditional		Non traditional		Traditional		Non traditional	
	millons of dollars	percent.	millons of dollar	percent.	millons of dollar	percent.	millons of dollar	percent.
Costa Rica	635	38	1 018	62	975	15	5 674	85
El Salvador	348	54	295	46	848	34	1 649	66
Guatemala	645	70	280	30	941	48	1 015	52
Honduras	650	78	182	22	372	20	1 456	80
Nicaragua a/	247	74	86	26	351	58	251	42
Dominican Republic	628	86	106	14	374	7	4 653	93
Jamaica b/	968	81	223	19	979	58	721	42
Bolivia	634	69	288	31	471	46	564	54
Ecuador	2 345	86	380	14	3 200	76	1 029	24
Paraguay	868	91	90	9	597	81	144	19
Uruguay	624	37	1 069	63	582	26	1 655	74

Source: ECLAC Economic Survey of Latin America and the Caribbean, 1999-2000
Note: a/ 1990-1998; b/ 1990-1997, based on Alleyne (2000). Non traditional exports for 1990 do not include Freezone exports. (17% of total exports of goods in 1997, 15% in 1999).

Excluding Panama which build its economy on the concept of tax holidays for processing goods and exporting services (finance and shipping), Costa Rica is perhaps the most successful example of export diversification in Central America. She was the first Central American country to abandon fixed exchange rate and adopt a pro-export policy. [17] The strategy was based on intense investment in human capital, preserving a high standard of public governance. Fiscal incentives were also quite generous, and geo-political considerations helped the country to gain tax free access to the US market thanks to the Caribbean Basin Initiative (CBI).

The figure of export processing zones was created in 1981, and three years later, a new law co-ordinated and rationalised the existing export subsidies, creating a tax shelter for export processing (*regimen de admisión temporal*) and incorporating a tax credit, *Certificados de Abono Tributario* (CAT) in the export contracts. As a matter of fact, the subsidies proved successful also for diversifying the exportation of goods. While in 1984, non traditional exports represented 34% of total exports, in 1994 they reached 59%. Incentive to develop the tourism industry were also quite generous, and included an exemption of direct taxation for a period of 12 years. According to CEPAL (1999), they effectively contributed to the development of this activity in the late 1980s.

Nevertheless, the CAT represented a heavy burden for the public finance, estimated at 5% to 9% of tax revenues. In 1998, the law governing export promotion became stricter, albeit it was extended to new service activities. The Costa Rican example was followed by many Central American countries,

[17] In Central America, Costa Rica was the first to devalue (in December 1980), when many other countries maintained fixed official parities during the 1980s, at the cost of *de facto* or *de jure* multiple (and sometimes widely divergent) exchange rates, administrative restrictions on imports and serious internal and external disequilibria. In the Caribbean, the larger among the small economies also defended during many years their parity (Jamaica, Guyana, Trinidad & Tobago, Dominican Republic, Haiti) at the cost of severe overvaluation, only to give way at some point to devaluation and adjustment programs.

competing on lower salaries and more generous subsidies. [18] Maquiladoras represent now 25% of formal industrial employment in Central America. Costa Rica was nonetheless able to maintain its advantage when it up-graded into high value added maquiladora with Intel investing 500 million dollars to develop high technology activities in EPZ. The exports from EPZ jumped from 891 millions dollars in 1997 to3 567 millions in 1999, contributing 54% of the total exports of goods.

Haiti was in fact the pioneer in basing its industrial strategy on export processing zone, and created in 1971 a quite successful EPZ for assembly plants. Nevertheless, the adverse political situation that has affected this country led to the gradual disappearance of these industries. It is now the neighbouring Dominican Republic that represent in the Caribbean context the most successful example of adaptive transition into the international economy through export diversification. Exports from the EPZ grow at a yearly average of 38% between 1986 and 1989, 35% between 1990 and 1994, only to slow down at a healthy 10% between 1995 and 1999 (CEPAL, 2000). 200 000 people worked in the free zones in 1999, and the national value added to these exports (salaries, services and other inputs) represent 20% of the total.

Other success story of this Caribbean country is the development of its tourism industry, which in 1999 generated income for more than 2.5 billions of US dollars, against 820 millions in 1990 and 450 in 1985. This was made possible by huge investments in tourism infrastructure. Hotel capacity increased by 120% in the second half of the 1980s, between 1986 and 1990, and registered an healthy 160% growth during the 1990s.

The diversification into new export activities was helped by generous fiscal incentives, tax holidays (10-year holiday for the payment of corporate income tax, exemption of duties, tax credit for 15% of non-traditional exports), and financial subsidies to build the necessary infrastructure (hotels in particular, but also roads and others). Two of these funds (FIDE and INFATUR) represented a value of 1.1% of GDP in 1986. Thanks to the existence of multiple exchange rate, export activities in the Dominican Republic benefited also from a quasi fiscal subsidy, buying inputs at the official exchange rate but selling the proceedings at the extra-official one.

The export promotion programmes implemented in Central America and the Caribbean during the last two decades were closely related to the preferential treatment these countries received in the US sponsored CBI.[19] This preferential access (which amounted to an export subsidy, but financed by the importing country [20]) was instrumental in promoting export diversification in those countries that were able to seize the opportunities. As illustrated by the table 8, market shares gained with this preferential treatment have been eroded by the signature in 1993 of the NAFTA. According to the organisation representing EPZ in the Dominican Republic, it represented a 14% loss in potential exports for the year 2000 (CEPAL, 2000). The preference was partially up-graded in October 2000, reducing –with some restrictions– the gap between the preferential treatment offered on the US market for CBI and NAFTA imports. Nevertheless, the extension of the tariff exemption has a time limit, up to September 2008 or the signature of the Free Trade Agreement for the Americas (FTAA), scheduled for 2005.

[18] CEPAL (1999) signals that, as in the 1970s, Central American countries are once again immersed into an inefficient competition to attract foreign investment, where the generosity of the tax subsidies contrast with the precarious situation of the public finances.

[19] Caribbean countries received also preferential "ACP" treatment from the European community, under the successive Lomé agreements. Nevertheless, these mainly benefited their traditional (especially banana, but also sugar and rum) exports under the special protocols. These agreements have been recently renegotiated to follow the guidelines of the WTO, but the banana regime remains an object of conflict with the USA.

[20] Albeit the programme allowed the US textile industry to find a market for their products which were previously displaced by imports of Asian garments made of non-US inputs. See Gereffi (2000).

Table 8. Garment imports from Mexico and CBI countries into the US under the programme 807/9802, 1994-1998

	Value in millions of dollars		Market share in percent.	
Year	Mexico	CBI	Mexico	CBI
1994	1 470	3 617	25.8	63.4
1995	2 282	4 497	29.9	58.9
1996	2 967	4 999	34.0	57.3
1997	4 096	6 411	36.2	56.6
1998	5 102	6 929	39.9	54.2

Source: Based on Gereffi (2000)

Smaller economies in South America could not count on similar preferential access to the US market under the CBI, nor to the European one under the Lomé agreements. [21] Export diversification is still highly linked to natural resources in Bolivia, Ecuador and Paraguay. While the first two countries have large oil or natural gas deposits, formal exports in the latter are predominantly agricultural (cotton and soybeans). These products have suffered from adverse internal and external conditions, and their share in total exports is a little over a fourth of total exports. Spontaneous export diversification in Paraguay is quite *sui generis* and was mainly attributable to an informal type of tax subsidy. It flourished on the basis of large scale smuggling of imported goods into Argentina and Brazil, at the cost of the three countries' fiscal sectors. It is unquestionably non sustainable under the present international arrangements and regional Mercosur discipline. The value of Paraguay total exports was reduced by 40% from 1997 to 2000. This trend will continue as long as Brazil and Argentina keep restricting the entrance of re-exported goods from Paraguay, which means that Paraguay has to design a more formal approach to trade diversification.

Uruguay in contrast started formal export promotion policies (subsidies, tax rebates and temporary admission schemes) as early as 1974, before the crisis of the import substitution model. The "industrial law" was set to correct the anti-export bias inherited from previous macroeconomic policies and promote diversification into non-traditional export activities. In the nineties, export promotion measured were reduced, in part due to the convergence to the Trade Common Policy agreed within the MERCOSUR countries. There still exist some measures, in particular the devolution of indirect tax for exports for a long list of products and the use of temporary admission for imported inputs (20% of the imports used by productive sector).

Most of these programmes in small economies were focused towards non-traditional manufacture or service exports. The case of agriculture is a special one, which would require a special study because of its complexity and its social dimension. The future of the domestic agricultural sector in a globalised world –a problem that even large developed countries could not resolve under the general WTO directives– pass through the modernisation and diversification of the sectoral production, something which requires public sector involvement and investment (see box 2). This might prove a formidable issue for the LAC smaller economies, characterised by a larger than average rural population.

[21] Even if some received preferential treatment under the provisions of their regional integration scheme (e.g., Bolivia and Ecuador in the Andean countries integration treaty).

BOX 2 The special case of subsidising agriculture

With a few exceptions, most economic reforms in the agricultural sector were implemented during the second half of the 1980s or later, coincidental with (albeit without obvious causal relationship, because the trend occurred in an unfavourable national and international environment) a contraction in agricultural GDP and rapid recovery of agricultural exports.

The opening of the national markets linked to the structural reform process or the signature of regional trade agreements shacked the domestic price structure and put some domestic producers in difficulties (maize in Mexico vs. US production, soy in Colombia vs. the Bolivian production). Caribbean countries present a specific case where one of the consequences of the Uruguay Round Agreements is the reduction and dismantlement of the preferential access to the European market their traditional banana producers were granted under the Lomé agreements.

Adjusting production to the new market signals is always a challenge for private industrial enterprises, but it is even more difficult in agriculture, due to the heterogeneity of the sector. Traditional farmers in particular face serious challenges when trying to diversify into non traditional products due to the lack of capitalisation, the unavailability of funds, inadequacy of production technologies or weaknesses in the processing, transport and marketing services. An additional argument for protecting domestic agriculture is that agricultural exports are heavily subsidised by the more developed trading partners, thus domestic producers cannot compete at the artificially low international price. However, Panagariya (2000) maintains that in this case, subsidising exports to neutralise the effect of this subsidy would be a looser strategy for the smaller country.

Agriculture is a sector where state initiative definitely crowds-in private investment. The sectoral data review in Spoor (2000) suggest that there were several instances in which public intervention in "market led" reforms have paid off. In the region, Chile is the archetype of successful diversification of agricultural exports, including forestry and fisheries. In this country, state initiatives were fundamental to assist in the deployment of private initiatives in fruit and tomatoes production, salmons and forestry, all directed towards the export market (CEPAL, 1997). Same thing occurred in Colombia for cotton, palm, sugar and coffee, the extension of the production frontier in Brazil or the development of non traditional agricultural exports in Costa Rica. What is more, there are indications from the above mentioned sectoral review that the early optimism regarding small farmers and peasants options for modernising through marked-led spontaneous commercial contracts with agribusiness seems to be largely unfounded. After two decades of adjustment, the wave of second generation of reforms is likely to place a renewed emphasis on the role of public intervention in agricultural development.

III. Conclusions

This section presents the conclusions on the future of the smaller LAC countries' trade tax and export diversification policies in the perspective of increasing trade liberalisation.

1 Trade taxes

The smaller economies in the region with a high level of dependency on trade revenues and a fragile fiscal situation are most vulnerable to the possible negative effects of eminent tariff reforms. From a macroeconomic point of view, the best alternative is to reform the tax system, to increase domestic taxes even when the trade tax revenues are not expected, at least in the short run, to be negatively affected by trade liberalisation. Moreover, a sounder fiscal base would improve long term growth prospects, while

strengthening the tax base would have also the benefit of correcting the pro-cyclical bias found in many national fiscal policies in the region.

However, tax reforms in countries highly dependent on trade revenues will not be a simple process. The cost of switching to other sources of public revenues will be higher for the countries of the Caribbean and Central America, which tend to have a generally higher share of international trade taxes in total tax revenue than the countries of the rest of the hemisphere. For example, Pérez Caldentey (1999) indicates that the administrative costs of trade in the Dominican Republic revenues range between 1 and 3% of collected income, while the range is 5-10% in the case of domestic taxes. The same observation has been made in Jamaica, where custom expenditures represent on average 3% of collected trade taxes, while domestic tax compliance is relatively low.[22]

International trade taxation had the advantage of being easier to administer. This was especially appealing for those countries with limited administrative capacity and lesser developed institutions and whose capacity to efficiently collect non-trade taxes is limited. Although domestic taxes which are applied to both domestically produced goods and imports are usually considered more efficient and a better method of revenue generation, the switch to and the implementation of these taxes usually require time for preparation, planning and implementation. These factors, among others, may be responsible for the high percentage of trade taxes in the total tax revenues of some of the countries of the hemisphere.

Shifting to a less trade-dependent tax structure will imply for those small countries a special effort to improve public administration. The importance of the administrative capacity of tax organizations and the institutional environment in which they operate are crucial for the success of tax reforms. This tends to be especially true for countries which are seeking to orient their tax system towards new sources of revenue generation which were either little used in the current system or completely new (e.g., introducing Value Added Tax). In some developing countries, administrative capacity constraints have been the main cause of slippages in trade policy reforms. For example, it is reported by Nur et al. (1994) that in a number of IMF supervised trade liberalisation programmes, most delays were attributed to the limitation of administrative capacity rather than policy failure.

Administrative capacity and the institutional environment are likely to be important considerations in any regional trade agreement especially for the smaller economies which tend to display weaknesses in these areas. Changing the present tax structure to comply with common requirements of a regional trade agreement is likely to be more difficult for those countries suffering from a weak administration of their public sector. To tackle all of these problems may require intra-regional co-operation between governments and international organisations.

In addition there are other important emerging issues accompanying the globalization/liberalization process with possible repercussions on government finances and further reform efforts. Expanding the direct taxation base will face new and still unknown obstacles (or opportunities). For example, the growth of e-commerce may greatly reduce transaction costs and may potentially increase trade of goods and services, which theoretically expands the taxation base. However, it also creates mobility of companies since the place of registration of the company does not affect the electronic transactions. Hence, companies may choose low-taxing countries that may cause problems in determining the location of the company. In addition, difficulties in taxing purchase of goods or services over the internet may make evasion easier. Similarly, with globalization, movement of labour may become

[22] Out of 950 000 employed workers in Jamaica, only 350 000 paid income tax in 1998. Out of 59 000 firms in the wholesale and retail sector, a mere 20% paid taxes (Watson 1999).

easier and more common in the medium term with an increasing number of labourers eventually moving to lower tax countries.

Furthermore, regional pressure to work towards balanced budgets from both external (international financial institutions, macroeconomic convergence or eligibility criteria) and domestic sources (fiscal discipline laws) make it imperative and urgent that governments have more robust revenues since expenditure needs are also on the rise (social and infrastructure needs).

2 Export promotion

Like the other LAC countries, most of the smaller economies in the region went through a series of structural reforms from a phase of import substitution to market oriented economy. Yet, stylised facts from the successful stories of export diversification during the last two decades point to the active role of government export promotion programmes and fiscal subsidies in setting the necessary conditions for a dynamic and diversified export-led economy.

The shortcomings of a pure market (laissez-faire) approach to guaranty their successful reinsertion into the global economy may be linked to the incomplete market structure of these small economies, the small size of the domestic industrial base in these countries and the higher marginal production cost inherent to the low scale of production. They made it almost mandatory to use active export promotion programmes, including fiscal subsidies, to diversify the export base.

First best export promotion public sector policies are believed to be of the horizontal type, from providing an adequate level of infrastructure, reducing bureaucratic red-tape, co-operating in research and development programmes or giving assistance for gathering information on market opportunities. Financial types of export "subsidies"[23] seem also to be gaining acceptance in recent years, in particular export-credit financing and insurance at international market rate.

Nevertheless, these unfocused horizontal policies may represent an important cost for the public finance of many small LAC countries while benefits are diffuse and uncertain. For much of the same reason that unit production costs are higher in small firms than in larger ones, the expenses for providing public goods such as infrastructure, consular services, trade negotiation expertise, are comparatively higher than in larger countries. Peres and Stumpo (2000), reviewing the behaviour of small and medium sized companies in the region, recognise that (even in large countries), public policies based on new efficient instruments had little impact on this segment of firms because lack of financial and human resources for implementation. Horizontal type of public programmes are also believed to be effective only in the longer run, while economic and political considerations in these small economies, heavily dependent on their foreign sector, call for faster responses.

The financial capacity of the public sector to undertake new programmes in small economies is also limited by their weaker financial situation. Non-discriminating approaches (e.g., through large scale investment in human and physical capital) have a cost that many public budget cannot afford. In contrast to large developing economies, shallow domestic financial markets and the small size of the private sector restrict the possibility of transferring part of the cost to the private sector through privatisation or concessions.

In this framework of liquidity restrictions, tax holidays and investment subsidies warranted to a specific group of exporters, despite all the risks in terms of rent seeking and time consistency, remains the best feasible option: direct costs in public infrastructure are focused and limited to certain areas (ports,

[23] At rates that are competitive internationally, but not further subsidised in order to remain compatible with WTO rules.

export processing zones) while costs in missing revenues are postponed and uncertain (they materialise only if and when the exporting firms are successful).

In a not so distant future, the possibility of export promotion programmes using fiscal preferences will be seriously reduced. On one hand, the combination of lower tariff and the multiplication of tax exemptions for what became –at least for the successful diversifiers– the most dynamic sectors of the industry, erodes the tax base. On the other, the trend set internationally by the WTO regulations will be reinforced by the regional dynamic of integration schemes, from Mercosur to FTAA. Moreover, the preferential access to industrialised markets that many LAC small countries enjoy through the CBI initiative or the Lomé agreements are programmed for cancellation in 2008.

Therefore, before the end of this decade, small economies will have to revise their present export diversification policies and rely more on horizontal export promotion schemes. Some specific export promotion programmes for developing countries, that are still acceptable under the Uruguay Round Agreements under the terms of the *de minimis* clause, may be retained. [24] To respect this clause and minimise financial and economic costs, they should remain moderate and transparent, focusing on new products. [25]

Combining the two aspects of taxes and subsidies, the conclusion could be that while switching to more WTO-compatible horizontal programmes in order to enhance international competitiveness is comparatively more costly for the public budget, the traditional trade tax income structure of many LAC smaller economies has been eroded with liberalisation. Hence, sustainability calls for promoting a global approach to trade liberalisation, taxes and subsidies in these small economies, mixing a tax reform to strengthen the domestic tax base with a well-designed export promotion programme. For many of those small economies, these reforms will prove a formidable task. For this reason, efforts to improve domestic policies should be matched by regional and international solidarity, granting technical assistance and preferential treatments in a transitory phase, while preserving and increasing the level of development assistance and debt reduction.

[24] Countervailing investigation against a developing country will be ended once it is determined that the subsidy level is not greater than 2% of unit value, or when the volume of the subsidised sales from the developing country is below a threshold of 4% of the imports of a product in the importing nation (Carla Macario, 2000).

[25] See Macario (2000) pp 157 and 158 for an example of guidelines to be followed when establishing specific export promotion programmes.

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SESION 5

E-GOBIERNO Y GOBERNABILIDAD: PERSPECTIVAS Y EXPERIENCIAS NACIONALES EN OPERACIONES DE TIPO G2G, G2P Y G2C (CON ENFASIS EN CONTEXTOS DE GOBIERNOS FEDERALES)

DIGITAL GOVERNMENT AND E-GOVERNANCE: PARTNERSHIPS, PEOPLE AND PROSPECTS

By
Jeffrey Roy

Abstract

The objective of this discussion paper is to examine the capacity of government to effectively harness information technology (IT) as an enabling force in order to meet the new challenges of a digital age. Yet, there is a considerable risk that effective adaptation and change may be blocked by an administrative culture ill suited for the new world of e-governance. In terms of how state organizations and democratic institutions respond, two sets of explanatory factors will be determinant. First, partnerships, and the emergence of new collaborative dialogues within government, between governments, and across sectors (such as industry and community) are a critical dimension. The second, and quite related variable lies in the necessary leadership of people: new skill sets, and new leaders will be required to both empower knowledge workers and defend experimental action. At the same time, it is not only the skills composition of workers altering in a digital era, but rather the broader transformations of both everyday and organizational life that. In this sense, digital government must reposition itself to become an engaged and constructive partner in shaping the new governance patterns emerging today. Government must produce a new "culture" in order to harness the enormous potential of being digital: technology alone is insufficient. The paper concludes with some preliminary propositions as to how governments might address these important challenges.

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This discussion paper is based, in part, on a forthcoming article entitled, *E-Governance & Government On-line in Canada: Partnerships, People & Prospects* (prepared by Barbara Ann Allen, Luc Juillet, Gilles Paquet, and Jeffrey Roy, Fellows of The Centre on Governance, The University of Ottawa). The paper will be published in Government Information Quarterly, an American scholarly journal, in the spring of 2001 as part of a special issue on E-Government.

Digital Government & E-Governance: Partnerships, People & Prospects

Moving industrial society government onto a digital platform would simply produce a digitized industrial government—a form of governance that would be increasingly out of step with the changing realities of citizens and businesses alike. 1

1) Introduction

The objective of this discussion paper is to examine the capacity of government to effectively harness new information technology (IT) as an enabling force in its efforts to meet the present and emerging challenges of a digital age. Such challenges are fundamentally rooted in the extraordinary expansion of e-commerce, the rise of e-communities, the growth of virtual organizations,, and the development of a truly commutative revolution that carries the potential for new network based capacities to establish, maintain and modify the relationships of any governance system. [Guillaume 1999]. This paper will consider issues that have a general applicability to all governments, even though it is important to underscore that specific example may be drawn from the current Canadian context.

For public sector leaders, the adaptive challenges of e-governance go far beyond technology per se. They call for new organizational structures and skills, new forms of innovation and learning, and perhaps even a redefinition of purpose. They also call for a significant broadening and transformation of public-private sector partnerships (PPP) and the relational dynamics which underpin them. The new dynamics are very far from traditional public sector processes for procuring and contracting [Rosenau 2000]. Yet, while the potential for a recasting of both public management and political accountability is real, the transition is fraught with uncertainty.

Governance may be defined as effective coordination in an environment where both knowledge and power are distributed. Every organization is built on governance, whether formal or informal, ineffective or successful. The rise of *e-governance* refers to the new patterns of decision-making, power sharing, and coordination - made possible, or even necessary by the advent of IT. In the private sector, for example, e-commerce is much more than transactions on-line: it encapsulates the range of new organizational models built on technological architectures, such as the internet, that allow governance to be redefined in new ways.

The public sector is not immune to such forces. Indeed, government finds itself under the dual strain of becoming both a partner and de facto competitor with business in an on-line environment, while also needing to understand the complex and profound implications of new technologies and their impacts on public interest issues. As a result, *digital government* (a term that we deploy in place of e-government) refers to an IT-led reconfiguration of public sector governance – and how, knowledge, power, and purpose are redistributed in light of new technological realities.

Digital government must also be viewed as much more than moving existing public services on-line: it is about government harnessing IT to redefine its "social technologies" in order to remain relevant in a more participative, more interactive and more informational era [Tapscott and Agnew 1999]. Importantly, the OECD [1997] has reported that IT is becoming the critical agent of change, the

1 Harris, B. [2000] "E-Government: Beyond Service Delivery" in *e.gov* (supplement to *Government Technology* Magazine, spring issue: egov.govtech.net).

availability of a new digital infrastructure and the Internet's impacts on a changing set of public expectations are overtaking fiscal pressures as the primary impetus for public sector managerial reform.

Nonetheless, the deployment of IT both in and across public sector organizations is driven by a variety of factors, and it may face resistance. The main danger is that the necessary transformation in public sector governance and accountability is likely to be blocked by an administrative culture that may be ill suited for a digital world. Whereas nearly everything about the connected (or digital) state requires horizontal governance, government has relied upon a vertical architecture of power and decision-making.

While this quandary is recognized to some degree, the central task facing both policy-makers and political leaders, at least those interested in leading the transition to the digital age, lies in orchestrating effective responses.

2) Partnerships

The new digital architecture driving e-governance creates both pressures and opportunities for new partnerships - internally and externally. Within government, IT fosters new horizontal opportunities by shifting away from traditional bureaucratic structures toward alternative delivery arrangements. The growing possibilities for consultations with both stakeholders and the citizenry are also expanded with new technologies. Moreover, on-line delivery implies integrative channels within government, linking external users to a variety of sources and systems internally.

Organizationally, these trends mean IT forces are both dispersing and centralizing – fostering a need for integrative action. Put another way, these forces create tensions between vertical governance of traditional government and the horizontal governance implied by digital government. The emergence of digital government will therefore require actions and strategies at the level of individual departments and agencies: but such efforts must be orchestrated within the parameters of government-wide leadership and coordination.

Accountability is a key element of such a balance. The manner by which accountability is perceived and exercised by government leaders will determine the degree to which it embraces more collaborative models of governance. Traditionalists invoke the underlying principle of Ministerial Accountability based on a clear and rigid view of vertical control and risk-minimization in order to serve and protect the interests of the publicly accountable political leader.

The rise of e-governance, with its pressures for a variety of initiatives introducing alternative models of decision-making and service delivery, implies a sharing of accountability. The need for collaboration, partnerships and joint ventures grows -both within government, and often between private and public organizations.

There are also important debates around the issue of whether accountability is at risk when external partners become involved in the governing and shared delivery of government programs and services. According to some, new governance arrangements threaten to undermine key institutions and practices of democratic accountability [Globerman and Vining 1996]. This camp believes that any change to the existing system of ministerial accountability will damage the integrity of the system. There is some question as to whether the *ad hoc* nature of the ever-increasing number of partnership arrangements between sectors challenges accountability mechanisms or can be absorbed in traditional models of decision making with adaptations to risk mitigating strategies.

An alternative view is that collaborative arrangements can make government more accountable [Armstrong and Ford 1999]. These proponents of collaborative arrangements insist that involving external stakeholders strengthens accountability to citizens by virtue of the addition of partners, and in particular, private sector partners, pressure for accountability to customers or clients is increased. Notwithstanding legitimate concerns about new ways of doing things, it is difficult to conclude from these debates that the virtues of traditional accountability, namely their clarity and simplicity, can serve as justifications for their extension into an e-governance era.

These tensions form the parameters around which new ties are being formed between governments and the vendors of IT systems and solutions. IT solutions, however, are more pervasive in demanding closer collaboration between private vendors and public sector clients [Mornan 1998]. The complexity and sophistication of such solutions produce many strategic choices for governments about how to deploy IT both in and across public sector operations.

Contracts versus partnerships - Any move toward IT outsourcing, meaning a reliance on external service providers, most often found in the private sector, is likely to be both controversial and consequential for government, particularly from a human resources perspective. The advantages of outsourcing IT and its management to external parties are derived from the opportunity to leverage the competencies of specialists. The disadvantages are rooted in concerns about control and performance measurement, while underlying questions of cost often become the resulting sources of friction.

The main challenge is relational: *new collaborative capacities are requires*. Partnerships require shared purposes and agendas, as well as trust and an integrative mind set. The implication here is that both the skill sets of the individuals involved and the mechanisms guiding their relational activities must be conducive to such an effort. The main challenge facing all parties engaged in today's increasingly complex forms of IT partnerships is that despite a recognition of the need to work together in new ways, most organizational processes and most people reside within the realm of contracting, with an emphasis on both cost and control. Although common to all sectors, this point is particularly prevalent in the public sector, as the extra burden of transparency and fairness, the basis of traditional assurances of public accountability, loom large.

Current examples of outsourcing are a case in point, as any such decision by a government department is bound to be both strategic and controversial. The transfer of assets, including people, is a process with potentially huge consequences on government's capacity to act in the public interest. In a world of markets and contracts, the outsourcing path is fraught with risks and uncertainty: the response is often a quagmire of control efforts and validation. Moreover, even if such agreements are forged operationally, public sector approval requires additional scrutiny and explanations to public chambers - and it should come as no surprise that many deals are unable to withstand such pressures.

Recently, the state of Connecticut in The United States spent millions of dollars and over three years negotiating one of the most ambitious outsourcing deals of a government ever, only to see the deal collapse before completion. Both parties, the government and the primary vendor, provide amicable, though contrasting explanations for the deal's demise. While no single factor is evident, it is fair to conclude that the requisite mix of political acceptability and profitability could not be achieved in an adequate fashion due, in part, to a tremendous emphasis on contracting specifications, objectives, terms and conditions - a process fundamentally at odds with the trust and collaboration required to partner on such a massive scale. A federal public servant in Canada commented privately that in his mind, profit always wins out over partnership in such cases.

Nonetheless, perhaps due to the strengthening pressures of e-governance, the trend toward outsourcing-type arrangements grows unabated. Tying itself directly to the experiences of Connecticut,

the San Diego County government is now six months into the largest municipal outsourcing experience. While these experiences are unique in scope, they present elements common to all governments, at all levels, as IT becomes a strategic imperative for effective governance. Such tensions have led to growing calls for partnerships in place of contracts. The differences may be subtle in terms of words, but the consequences of this contrast are far reaching. Poupart and Austin compare two modes of relationships:

> *Partners respond to a need in a changing world by sharing control in the context of an assertive relationship to offer a future that facilitates innovation in a world of possibilities. Contractors respond to a request in a procurement world by giving up control in the context of a collaborative relationship to provide help, assistance, pairs of hands that facilitate project management in a world of deliverables [Jelich & al. 2000, p.52].*

Our claim is that the realization of digital government remains at odds with a traditional public sector apparatus firmly rooted in hierarchical traditions. The resulting challenge of shifting from incremental procurement reform to genuine collaboration lies in the need to rebalance purchasing safeguards with partnering opportunities. Equally important are the new skill sets of public managers and leadership requirements that result.

3) People

The digital era rises hand in hand with the knowledge workforce. Conceptually, Rifkin envisions growing ranks of knowledge workers who will forge new communities of interest - only some of which are likely to resemble traditional employee - employer relationships of the past. He argues that "people of the twenty-first century are as likely to perceive themselves as nodes embedded in networks of shared interests as they are to perceive themselves as autonomous agents in a Darwinian world of competitive survival" [Rifkin 2000, p.12].

How will public sector organizations deal with what Rifkin sees as a new human archetype where people are more autonomous, better educated, more mobile, and less rooted by traditions of place (either geographically or organizationally). These conceptual issues intimately link the workforce challenges of digital government with those of cultural reform (in an organizational sense). Whereas Westminster systems continue to emphasize vertical accountability, government on-line is (correctly) being pursued in a horizontal fashion.

An international study by Essex and Kusy [1999] underlines the views of executives from both government and industry, for whom an increasing reliance on the external workforce is a significant trend. They report that from 1997-2002, leaders are expecting an increase from 10 per cent to 25 per cent in non-core (meaning non-traditional full-time, or external) workers. This crescendo of the external workforce may well accelerate with the technology-induced pressures for organizational innovation and flexibility. The result is a complex mix of agendas and incentives that explains the growing emphasis on inter-personal skills such as negotiation, facilitation, and consultation.

These skills are forming the basis of "new public servant" – one who is much more collaborative and comfortable with technology, and the consequences of these shifts for human resource in management in government will be profound [Moritz and Roy 2000]. Thus, government is becoming both more fluid internally and more networked externally, as distributed governance models drive the move toward a flexible and modular workforce.

As a result, the role of the public servant must adapt; governments must effectively couple new forms of community-wide strategies that are both horizontal and potentially centralizing, with recent trends toward empowerment and flexibility - and the decentralizing nature of such pressures (i.e. agencies seeking greater autonomy). Governments must learn to benefit from heightened worker mobility – viewing such trends as strategic imperatives for public service innovation.

A challenge for many governments in doing so lies in more direct competition with industry. In the Canadian government, for example, the Computer Systems (CS) Community is based heavily in and around Ottawa-Hull, the National Capital Region (NCR). In 1999, 67% of all CS employees were located in the NCR, compared to 34% for the entire PS [ibid.]. As CS employment increases, more workers are located in the NCR which give rise to new managerial challenges – namely, an intensifying labour market that also serves as a common pool of competencies for both industry and the government. Consequently, a major challenge of digital government lies in this competition for human capital, a dynamic particularly acute in national capitals such as Washington D.C. and Ottawa which seem to couple growing professional mobility and inter-sectoral proximity.

The governance implications of such trends are perhaps contradictory: a paradoxical impact of IT may be that while it enables more organizational flexibility and decentralization across the public sector, particularly with respect to service delivery, leadership patterns also have centralizing tendencies. This factor could impact both the presence and effectiveness of national governments operating across their country, and their ability to recruit specialized workers in limited urban centers (particularly national capitals) where labour markets are most competitive.

In a world of e-governance, an appropriate response by government in meeting this dynamic must be based on the understanding of both the complexity and contradictions at work. On the one hand, the move toward greater usage of PPP's suggests that labour mobility and geographic proximity could complement one another – and create a common environment more conducive to trust and collaboration. On the other hand, the very real danger is that the most entrepreneurial employees will leave the public service, seeking either higher compensation or more flexible work environments than government is able to accord to them.

As important as the technology itself, government must address the people and performance challenges of digital government in the next few years. Adapting the role and profile of the public servant is critical to realising the needed administrative cultural shift associated with horizontal governance and collaborative partnerships.

4) Prospects

The effectiveness of any government in responding to its digital agenda is clearly multi-faceted and highly strategic and central to the public sector's relevance in the millennium. We summarize our observations into three rather intuitive scenarios for the road ahead for any government, and then provide a set of key variables likely to determine the relative likelihood of each path emerging.

The three scenarios include: i) a resistance or regressive deployment; ii) status quo or incrementalism; and iii) radical adaptation for a digital world.

In the first instance, the most dangerous possibility does not lie in traditional public servants and politicians rejecting IT as a significant force (as it is practically impossible to do so). Rather, more subtle forms of regressive behaviour would emerge if IT is viewed as largely a mechanism of control and automation, rather than an enabling presence.

This form of control can be pursued either at the operational level of government, by managers over subordinates, or politically by leaders who, by reflex, look to IT to centralize and control both power and information. Such attempts, of course, will prove increasingly futile, and they can only weaken the public sector as its credibility and performance steadily erode.

In the second scenario, some change is accepted but incremental strategies are formulated to achieve it. The potential for this scenario lies with traditionalists, whose cautionary claims may be partially legitimized by making a case that government is not private enterprise; as such, e-governance, and promises of Internet speed may not be fully appropriate for serving the public interest.

The resulting caution in IT planning and an emphasis on contracting over partnerships in outsourcing arrangements are likely to limit government's capacity, with arguments for the preservation of clear public accountability used to justify inaction. The media may also contribute to the traditionalist's cause, as the British government discovered recently when it was (somewhat unfairly) profiled in CIO Magazine (cio.com) for alleged failures in its IT initiatives. An important lesson of the digital age is the interdependence of these first two scenarios: the more defensive, cautionary or manipulative a government appears, the more hostile the media reaction is likely to be, creating a vicious circle of paranoia and defensiveness.

The third scenario is perhaps uncomfortable given it carries risks. Yet, those public managers and political leaders who have it right are those who claim that the risk of inaction is greater than moving forward boldly. The key to this scenario is a fundamental renewal of administrative culture in order to better learn how to share accountability, to better coordinate activities in more flexible and more effective way, and to better empower public servants and their partners, allowing new solutions for come forward in a dispersed and open matter.

This latter point may well be the secret to the digital transformation – that is to say, nobody can claim to have a clear road map of public sector renewal in this scenario. Acceptance of this point, publicly as well as privately, will mark members of those espousing such change.

In terms of how governments respond, our two sets of explanatory factors will be determinant. First, partnerships, and the emergence of new collaborative dialogues within government, between governments, and across sectors are a critical dimension. The second, and quite related variable lies in the necessary leadership of people – new skill sets, and new leaders will be required to both empower knowledge workers and defend experimental action. This new leadership must also be political in order to engage the public in this new journey, challenging them to be constructive and raising the collective intelligence of all stakeholders, including the citizenry.

Which scenario will define our governments in the world of e-governance? The evidence presented here would place many governments in North America (i.e. federal and provincial/state) somewhere between the first and second scenario, with some important challenges requiring further action if the third path is to emerge. The current blockages surrounding IT procurement reform are indicative of an administrative culture blocking the acceptance of a new governance regime that would find a place for partners as well as contractors.

Similarly, after years of downsizing and adjustment, the process of public service renewal, and its necessary emphasis on more collaborative and digitized skill sets remains at an early stage. Filling the void that will be created by demographics is only one half of the task; the other, more complicated task is to retool existing public servants and effectively empower them to work in a more complex, fluid and virtual environment underpinned by IT and driven by information.

Yet, empowerment requires leadership, and the most central challenge for any government lies with those leading it presently – and politically. For any country or sub-national jurisdiction, the absence of a public discussion at the political level is perhaps the most ominous sign that more fundamental change may remain elusive – at least, in the short term. The real danger of subsequent experiments in digital government becomes enhanced. Costly mistakes, created and magnified by the built in inertia of traditional governance systems, could re-enforce the position and power of those resisting change.

5) Conclusion

Perhaps the most encompassing aspect of IT challenges is its permeation of all aspects of public sector management and reform. Understanding IT is no longer a skill for the technical component of the workforce, but rather its integration with information management and strategic change is determinant as all dimensions of public sector activity are affected by technology.

In the digital era, government must not only prepare leaders to face uncertain times. It must also sensitize these leaders on the importance of creating learning environments for workers at all levels of their organization and the numerous partners attached to any particular initiative. As government engages in new forms of collaborative arrangements, work teams comprise sets of individuals with a variety of formal, informal and overlapping reporting relationships. Yet, it is not only the skills composition of workers altering in a digital era, but rather the broader transformations of both everyday and organizational life that are also at play.

In this sense, digital government must reposition itself to become an engaged and constructive partner in shaping the new governance patterns that will otherwise render it rudderless. These governance patterns must bridge traditional administrative and political-cultural frameworks to the adaptive and collaborative requirements of e-governance to produce *a new culture in government*, one open and enabled to take advantage of the enormous potential of the digital and information age.

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EL GOBIERNO EN LA ERA DIGITAL
AVANCES EN EL CASO DE ARGENTINA

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ABSTRACT

El vertiginoso avance de las Tecnologías de la Información y Comunicación (TIC) está provocando profundos cambios en el sistema económico internacional y en la sociedad en general. El *e-government* representa el impacto más importante de las TIC en el Sector Público, y se refiere a la utilización de las mismas -y más específicamente de Internet- para la prestación de servicios y presentación de información. Estos cambios no se limitan a la forma en que el Estado presta sus servicios, sino que influyen profundamente en la relación de éste con los ciudadanos.

El *e-government* muestra diferentes grados de desarrollo alrededor del mundo, pero se observa una tendencia generalizada a su adopción, al percibir los gobiernos que pueden participar activamente en la transformación que las TIC han provocado en el sector privado, mejorando la calidad de los servicios prestados y obteniendo importantes beneficios en términos de eficiencia y transparencia en la gestión pública.

El gobierno electrónico en Argentina -al igual que en la mayoría de los países de América Latina- se encuentra en las primeras etapas de desarrollo, y por lo tanto están surgiendo las primeras iniciativas relacionadas al tema. La evolución de esta nueva herramienta dependerá fuertemente de la capacidad del gobierno de sortear las barreras a su avance y de adaptarse al nuevo contexto.

I. Introducción

Las TIC, y más específicamente Internet, están provocando profundos cambios en la sociedad, y el Sector Público no ha quedado al margen de dicho impacto, siendo uno de los principales el surgimiento y adopción del *e-government*. Este nuevo escenario plantea la necesidad de una redefinición del rol del Estado en la sociedad de la información y el cuestionamiento de qué actividades debe encarar el sector público y cuáles no.

La adopción de las TIC para la prestación de servicios promete la posibilidad de obtener importantes beneficios potenciales en términos de eficiencia, mejora en la calidad de los servicios prestados e incrementos en la transparencia de la gestión pública. Sin embargo, el desarrollo exitoso del e-*government* y la materialización de los cuantiosos beneficios esperados, plantea la necesidad de sortear importantes barreras que podrían limitar su avance y adopción generalizada.

En el ámbito internacional se observan importantes avances en la utilización de Internet por parte de los gobiernos y los proyectos encarados muestran diferentes grados de desarrollo. El presente trabajo analiza la situación actual y las perspectivas del gobierno electrónico en Argentina a través de: i) una revisión de los principales proyectos relacionados, ii) un relevamiento del estado actual del portal principal de acceso del gobierno nacional y iii) del análisis de los principales determinantes de su desarrollo, estado actual de los mismos y su comparación con los observados para Brasil y Chile.

El presente trabajo se estructura en seis capítulos. El Capítulo II realiza una revisión teórica del impacto de las TIC en el Sector Público y del rol del gobierno en la nueva era digital. El Capítulo III analiza el surgimiento del *e-government*, sus principales beneficios y costos esperados y las barreras más importantes a su desarrollo. El Capítulo IV presenta el nivel de desarrollo actual del gobierno electrónico a través de un repaso de los avances realizados a nivel internacional (Sección A) y en el caso de Argentina (Sección B). El Capítulo V repasa los principales determinantes del desarrollo del e-*government* y la situación actual de los mismos en la Argentina -comparándolos con los de Brasil y Chile (Sección A)-, para luego describir las perspectivas de evolución (Sección B). Por último, se presentan las conclusiones en el Capítulo VI.

El gran dinamismo del tema tratado y el hecho que la mayoría de los proyectos están en su etapa de desarrollo ha dificultado evaluar objetivamente la situación actual y el grado de avances alcanzado, por lo que las consideraciones contenidas en el presente trabajo se refieren a un momento determinado del tiempo (Diciembre de 2000) y están sujetas a constantes y profundos cambios.

II. El Gobierno y la revolución de las TIC.

El vertiginoso crecimiento de las TIC (Tecnologías de la Información y Comunicación) en el mundo está provocando profundos cambios en el sistema económico internacional, conduciendo al desarrollo de lo que ha dado en llamarse la *sociedad de la información, sociedad digital o sociedad del conocimiento.* En el campo de la economía, sus efectos se mencionan con el nombre genérico de *economía digital.*

El avance de las nuevas tecnologías genera cambios con impactos comparables al de las grandes innovaciones tecnológicas de la historia (The Economist, 2000 [b]).

El sector gobierno no se encuentra al margen y experimenta alteraciones en su funcionamiento, tanto en la forma en que presta sus servicios, cuanto a un replanteo de su rol tradicional en la sociedad. En versión vanguardista hay quien sostiene que "La Internet cambiará la naturaleza del gobierno y la estructura del estado" (Fountaine, 2000).

La actuación asignada al gobierno en la economía ha evolucionado a través del tiempo y el presente escenario que incorpora a las TIC le plantea nuevos desafíos e interrogantes, inexistentes hasta el presente.

La teoría económica ha desarrollado los principios básicos para una potencial intervención del gobierno, basados en la existencia de *fallas de mercado y bienes públicos*. También es claro que las denominadas *fallas del gobierno* sugieren cautela y rigurosidad en definir *el cómo intervenir* en tales acontecimientos potenciales, concluyendo que dicha intervención, en su caso, debe realizarse sólo si tendrá éxito en la corrección de las distorsiones de los mercados privados. Asimismo, la eventual intervención no necesariamente implicará *producción* (sustitución al mercado privado), sino que puede ser por *provisión* ("a la Musgrave") vía financiamiento, aplicación de impuestos/subsidios o regulación (complementación al mercado privado).

De lo anterior se desprenden dos preguntas centrales a las que se enfrentan los tomadores de decisión:

- ¿Debe intervenir el gobierno en la economía digital?
- ¿Qué actividades deberían ser gubernamentales y cuáles provistas por el sector privado?

En un reciente trabajo, Stiglitz J., Orzag, P. y Orzag J.[1] abordaron el desafío de las respuestas analizando las características distintivas de la economía digital con las herramientas que la teoría económica provee y sugieren -a modo de orientación para la resolución caso por caso- tener presente una canasta de principios que podrían ser adoptados por los gobiernos a fin de establecer qué actividades e información debe ofrecer on-line y cuáles no. Los principios están divididos en tres categorías: (i) Actividades de "luz verde", las cuáles *deben ser prestadas con un mínimo de precaución*, (ii) Actividades de "luz amarilla", las cuáles *deben ser prestadas con precaución* y (iii) Actividades de "luz roja", las cuáles generalmente *no deberían ser prestadas por los gobiernos.*

En este contexto, las estrategias gubernamentales adoptadas por la mayoría de los países desarrollados tienen un punto en común: "el desarrollo de la sociedad de la información será responsabilidad exclusiva del sector privado, limitándose el rol del gobierno a la promoción, utilización y regulación de las nuevas tecnologías de la información " (OECD, 1997).

Aún así, para asegurar una performance económica exitosa, el debate sobre cómo deberá desarrollarse el rol del gobierno en una economía crecientemente dirigida por la información, se revela como incipiente.

III. E-government[2]

A. ¿En qué consiste?

El impacto de las TIC en el sector público puede apreciarse a través de los cambios que éste experimenta a través del desarrollo e implementación del *e-government.*

El *e-government* se refiere a la utilización de Internet como medio para la prestación de diversos servicios y para la diseminación de información relacionada al sector público y su accionar. El mismo supone un cambio no sólo en la forma en que los servicios públicos son prestados, sino además en la relación fundamental entre el gobierno y los ciudadanos.

En un paralelismo importante con el e-business, el *e-government* es tipificable en tres grandes categorías:

- *government to citizen* (G2C), está relacionado a la interacción entre el gobierno y el ciudadano por medio de la red.
- *government to business* (G2B), hace referencia a la relación entre el gobierno y el sector empresas (negocios), y

[1] Ver Stiglitz, Orzag y Orzag; 2000.
[2] Adoptamos la expresión en inglés, por dos razones: (a) su internacionalización y (b) la dificultad para traducirla sintéticamente al castellano.

- *government to government* (G2G), se refiere a la interacción entre los diferentes niveles y entre los diferentes organismos del gobierno.

El *G2C* propone cambios que en términos de expectativas pueden calificarse como radicales en la forma tradicional de relación entre el gobierno y los ciudadanos.

En este nivel del *e-government* son *objetivos centrales* lograr: i) una mejora en la calidad de los servicios prestados, ii) aumentos en la eficacia y eficiencia de la gestión gubernamental, y iii) un aumento de la participación ciudadana en el funcionamiento del sistema democrático.

Una derivación importante de la utilización de las TIC en la interacción del gobierno con los ciudadanos es el surgimiento de la llamada Democracia Electrónica (*e-democracy*). Este concepto se refiere a teorías que consideran a las computadoras y a las redes informáticas como una herramienta fundamental en el funcionamiento del sistema democrático y en la mayoría de las funciones del mismo, a saber: provisión de información, comunicación entre los distintos actores, proceso de toma de decisiones (deliberación y voto), entre otros.

Los objetivos fundamentales de la Democracia Electrónica son la *reducción del costo y el aumento del beneficio de participación de los ciudadanos en el proceso democrático*, y por esta vía un incremento de dicha participación.

Como principal campo de acción para los desarrollos de *G2B* se revela el proceso de compras y contrataciones del estado. Son diversas las ventajas que puede obtener el gobierno al realizar sus compras a través de Internet, dentro de las cuales se destacan dos principales:

- Logra aumentos de eficiencia mediante la concentración de las compras de las diferentes agencias en un solo sitio, reduciendo los tiempos y costos de transacción, disminuyendo los inventarios (orientación just-in-time) y aumentando el poder de negociación de los organismos - reduciendo los precios pagados-.

  Esta forma de contratación aumenta la competencia entre los proveedores e incrementa la eficiencia con que opera el mercado, al disponerse de mayor información, más oportuna y de mejor calidad.

- Permite incrementar la transparencia del sistema de compras y contrataciones a través del flujo de información actualizado y detallado de cada una de las etapas de este proceso. Este escenario reduce la posibilidad de malas prácticas e incentiva la accountability (responsabilidad del agente público de rendir cuentas de su accionar).

El G2G posibilita la conformación de un aspecto básico que es el disparador de, quizás, formidables beneficios potenciales, cual es la centralización y unificación de la información en bases de datos comunes de acceso conjunto que eviten duplicaciones y que aumenten la eficiencia en el uso de dicha información. Desde el punto de vista del federalismo fiscal, estos sistemas de información podrían ayudar a mejorar la capacidad teórica de recaudación de las jurisdicciones menos favorecidas y a reducir los niveles de evasión y elusión fiscal a través de convenios interjurisdiccionales.

Por otro lado, la adopción del G2G dependerá fuertemente del éxito del G2C, ya que, según el nivel de demanda de los ciudadanos, los portales deberán ser más funcionales y consiguientemente requerirán una mayor integración y cooperación entre los organismos.

Actualmente, a nivel federal en los Estados Unidos, el 74,6% de los servicios prestados a través de Internet se orientan a los ciudadanos (G2C), el 19,2% a compras gubernamentales (G2B) y el 6,2% a operaciones intergubernamentales (G2G).

B. Las etapas de su desarrollo.

La evolución observada en el desarrollo de los sitios gubernamentales sugiere la existencia de etapas basadas en los criterios de *complejidad y tipos de servicios prestados*.

Un marco lógico estaría constituido por las siguientes cinco:

i. *Información institucional.* Esta primera etapa es de experimentación y comprende solamente el uso de Internet para la diseminación de información acerca del gobierno y de sus acciones. No existe retroalimentación por lo que la comunicación es de tipo unidireccional.

ii. *Servicios básicos.* La comunicación continúa siendo en general de tipo unidireccional (sin retroalimentación), pero respecto a la anterior, se avanza en la prestación de ciertos servicios simples como descarga de formularios, cálculos de tasas e impuestos, entre otros. Pueden encontrarse algunos servicios de consulta interactiva, pero no representa una completa comunicación bidireccional, no son complejos, ni requieren grandes transformaciones estructurales internas.

iii. *Comunicación bidireccional.* A esta altura, al permitir la retroalimentación de información por parte de los ciudadanos, se convierten en sitios de comunicación bidireccional. Se prestan servicios de complejidad media, tales como: renovación de licencias, emisión de permisos o cambios de domicilio. Aquí ya surgen riesgos referidos a la integridad, seguridad y confidencialidad de la información y se torna necesaria la implementación de sistemas que los neutralicen.

iv. *Transacciones complejas.* En este nivel, los sitios contienen mayor valor agregado y hacen posible un relevante intercambio entre el gobierno y la comunidad. Aquí se produce un importante cambio en las prácticas y procesos de la gestión gubernamental, sustituyéndose formas manuales de producción (léase actividades realizadas en forma tradicional) por prácticas de producción on-line. Son necesarios importantes sistemas de información y contabilización. En este contexto, adquieren vital importancia los mecanismos de seguridad, autenticación de la información y procesos. Seguramente, la mayoría de los países que han logrado este estadio han enfrentado la restricción de la inadecuación de los marcos legales vigentes, y los que aspiran a lograrlo tropezarán con la misma restricción que muy probablemente dificultará su avance.

v. *Portal completo.* También llamado Portal único, es el de mayor avance que ha alcanzado el *e-government* y comprende el funcionamiento de portales integrados que idealmente permiten la realización on-line de todas las gestiones que los ciudadanos necesiten realizar con su gobierno.

Las primeras etapas del desarrollo comprenden emprendimientos modestos y de bajo riesgo, no ponen en amenaza la privacidad del ciudadano, no requieren la implementación de mecanismos de autentificación y no provocan grandes cambios en las prácticas existentes.

A medida que esta herramienta evoluciona, se producen períodos de transición y de adaptación al uso de las modernas tecnologías, en los cuales los nuevos métodos coexisten con las viejas prácticas.

Por último, en las etapas finales, las antiguas metodologías son sustituidas por las nuevas.

Por otra parte, es esperable que tales etapas tengan un avance diferenciado según se trate de G2C, G2B y G2G. De acuerdo a las proyecciones realizadas por Fountain[3] para EE.UU. las diferencias actuales en la adopción de los distintos tipos de *e-government* se espera que persistan a través del tiempo, aunque con una tendencia a la convergencia.

[3] Proyecciones de la penetración de G2C, G2B y G2G 1998-2025. Para más detalles ver Fountain, Jane (2000).

C. Los beneficios y costos esperados

1. Los beneficios

El surgimiento e implementación del *e-government* son recientes y aún se encuentran en sus primeras etapas de desarrollo en la mayoría de los países del mundo, aún en los más desarrollados, circunstancia que explica la escasa elaboración de análisis cuantitativos del tipo costo/beneficio.

1.1. Experiencias relevantes

La observación internacional muestra numerosas experiencias aisladas acerca de los ahorros en ciertos servicios específicos derivados de su implementación on-line, las cuales, aunque parciales e incompletas, sirven como indicadores de los beneficios potenciales.

- El Gobierno de Chile a partir de Octubre de 1999 puso en funcionamiento el Sistema Electrónico de Compras y Contrataciones del sector público[4]. *Los beneficios derivados del sistema se estiman en aproximadamente U$S 200 millones anuales,* provenientes principalmente de la disminución de precios y del uso de la tarjeta de compras para la transferencia electrónica de fondos (Comisión Presidencial de Nuevas Tecnologías de Información y Comunicación, 1999).
- De acuerdo a estimaciones en base a información proporcionada por la Secretaría de Comercio Electrónico de EE.UU., *el pago de facturas on-line es entre un 67,2% y un 95,6% más eficiente que el método tradicional* (impreso), ya que permite importantes ahorros en el costo de procesamiento. El Cuadro N° 1 presenta los costos de procesamiento de facturas por ambos métodos.

Cuadro Nº 1
COSTO DE PROCESAMIENTO DE UNA FACTURA EN EE.UU.
MÉTODO TRADICIONAL VS MÉTODO ON-LINE - EN U$S

Costo	En u$s				Variación
	Tradicional		On-line		% Promedios
	Valores Extremos	Promedio	Valores Extremos	Promedio	
Costo del emisor	1,65 - 2,70	2,18	0,60 - 1,00	0,80	-63,3%
Costo del cliente	0,42	0,42	0	0	-100,00%
Costo del banco	0,15 - 0,20	0,175	0,05 - 0,10	0,075	-55,56%

Fuente: Elaboración propia en base a Fountain, 2000.

1.2. Un análisis cuantitativo global

Una estimación del ahorro de costos resultante de la implementación del *e-government* en los niveles de gobierno federal, estatal y local en EE.UU. (Fountain, 2000[5]), muestra los cuantiosos beneficios que se espera de la utilización de esta herramienta.

A partir de una proyección de la penetración del gobierno electrónico en los distintos organismos, se estimaron los ahorros que traería la adopción del G2B y del G2C en el período 1998-2024. Utilizando una tasa de descuento del 5% para el cálculo del Valor Presente y del Valor Anualizado Equivalente de dichos ahorros, se obtuvieron los resultados que se presentan en el siguiente cuadro:

[4] http://www.compraschile.cl
[5] Para un análisis detallado de la metodología empleada y su enfoque matemático, véase Appendix I y Apendix II de J. Fountain (2000).

Cuadro Nº 2

ESTIMACIÓN DE AHORROS POR IMPLEMENTACIÓN DEL E-GOVERNMENT EN LOS EE.UU., EN LOS TRES NIVELES DE GOBIERNO - PERÍODO 1998 /2024.

Tipo	Valor Presente de los Ahorros (n=25; r= 5%)	Valor Anualizado de los Ahorros	Ahorros Anualizados como % del PBI de 1999.	Ahorros Anualizados como % del Gasto Público en Consumo e Inversión de 1999
G2C	4.909 mil millones	196,4 mil millones	2,11%	4,00%
G2B	682,3 mil millones	27,3 mil millones	0,29%	1,66%
Total	5.591,30 mil millones	223,70 mil millones	2,40%	5,66%

Fuente: Fountaine (2000), "The Economic Impact of the Internet on the Government Sector", Tabla 13 y elaboración propia sobre Tabla 13 y Tabla 9

Como se observa, los ahorros esperados son cuantiosos, *representando anualmente el 2,4% del PBI estadounidense (para el año 1999) y el 5,66% del presupuesto del gasto público en consumo e inversión de los tres niveles de gobierno, para el mismo año.*

No obstante, tales resultados podrían considerarse *subestimados* debido a dos razones principales: i) En virtud de que no se considera en los cálculos las operaciones comprendidas en G2G y, ii) no se considera el ahorro (beneficio) que la implementación del *e-government* provoca/provocará directamente en gastos atribuibles al sector privado.

A manera de ejemplo, supongamos una actividad cualquiera: la recaudación de impuestos. Aquí el sector público afronta los gastos de administración del impuesto, incluida su cobranza. Pero este valor (supongamos presupuestado), no constituye la totalidad del costo de su actividad. Para lo mismo, el sector privado debe dedicar tiempo/costo para su información, tiempo/costo para la confección de las eventuales declaraciones, tiempo/costo para la presentación y pago de las mismas, y en algunos casos para la contratación de expertos. En todas las circunstancias, tales costos del sector privado son de importante magnitud.

1.3. Algunas conclusiones sobre los beneficios

Si bien no existe evidencia de cuantificaciones precisas generalizadas, es amplia la idea que el *e-government* promete cuantiosos beneficios potenciales.

Tampoco existe consenso acerca de si estos beneficios se materializarán a través de ahorros sustanciales de tipo pecuniario por parte de los gobiernos, pero sí hay una coincidencia generalizada acerca de las posibilidades de mejoras en la calidad de los servicios prestados y en el costo para la ciudadanía de cumplimiento de sus deberes con el estado y acceso a la información.

La literatura es convergente en cuanto a los beneficios esperados, centrándose en i) la mejora en la calidad de los servicios prestados, ii) la mayor eficacia y eficiencia en la gestión pública y iii) la transparencia fiscal

i. *Mejora en la calidad de los servicios prestados.* La posibilidad de mejorar la calidad de los servicios prestados a los ciudadanos es el objetivo principal de la mayoría de los proyectos de

gobierno electrónico alrededor del mundo. La integración horizontal (entre las distintas reparticiones de un mismo nivel de gobierno) y vertical (entre los distintos niveles de gobierno) facilita el acceso y simplifica sustancialmente la realización de trámites, reduciendo los tiempos/costos, tanto desde el punto de vista del organismo gubernamental involucrado, cuanto del ciudadano.

ii. *Mayor eficacia y eficiencia en la gestión pública.* Un incentivo importante que alienta la adopción del *e-government* es la posibilidad de reducir costos. Dichos ahorros pueden materializarse a través de procesos más eficientes -tanto en el ámbito de G2C, G2B y G2G- y consecuentemente lograr incrementos en la productividad.

Esta nueva forma de interacción entre los ciudadanos y sus gobernantes le brinda mayor dinamismo al proceso de participación ciudadana, reduciendo el costo tanto a) del ejercicio de la ciudadanía[6], cuanto b) del cumplimiento de las obligaciones con el Estado.

iii. *Transparencia Fiscal.* La adopción del *e-government* brindará una mayor transparencia a la gestión pública, permitiendo el ejercicio adecuado de la accountability. La divulgación de la información vía Internet facilita la participación de los ciudadanos en el control de la función pública y en cierta forma a colaborar con los órganos encargados de dicha función. Esta aplicación está en línea con las recomendaciones que en los 90´ han desarrollado los organismos internacionales[7].

2. Costos de implementación.

Los costos asociados a la implementación del *e-government* varían sustancialmente de acuerdo a las dimensiones y complejidad de los proyectos encarados, destacándose la inversión necesaria para generar e implementar una infraestructura con estándares tecnológicos adecuados. Un paso previo importante es la adecuación de los sistemas de información y comunicación de la Administración Pública, a través de la implementación de redes internas.

En el período de transición, hasta la consolidación de las nuevas prácticas, puede que se observen aumentos de costos de funcionamiento en el corto plazo, por la coexistencia de nuevos y viejos métodos, y su falta de coordinación y aprovechamiento integral, hasta que se obtengan los aumentos en la eficiencia, los cuáles se materializan con cierto retardo. Entre los aumentos de costos en el corto plazo puede mencionarse el mantenimiento de infraestructura y personal para la prestación de servicios por ambos métodos, y la posibilidad de un aumento de las preguntas y pedidos a los empleados, tanto en las oficinas públicas como por vía telefónica.

En muchos casos los gobiernos utilizan un modelo de *"riesgo compartido"* con las empresas de alta tecnología, las cuales se encargan tanto de construir como de mantener los sitios gubernamentales. Este modelo se aplica con particular eficacia en transacciones con volúmenes elevados de operaciones entre ciudadanos y el gobierno (G2C), o en transacciones entre el gobierno y proveedores (G2B). Las compañías desarrollan los portales con costos muy bajos o nulos para los gobiernos, ya que en la mayoría de los casos el pago a la empresa proviene de porcentajes por transacción y/o reducciones logradas en los costos.

La falta de una estrategia para un desarrollo sistemático y organizado del gobierno electrónico puede conducir a resultados indeseables desde el punto de vista social, con importantes aumentos de costos (debido a la duplicación y superposición de información), bajo nivel de participación ciudadana y deficiencias en la calidad y posibilidad de acceso a la información.

[6] Se entiende como ejercicio de la ciudadanía al tiempo insumido en actividades de adquisición de información sobre acciones de naturaleza pública, en la adopción de una posición crítica en relación con las mismas y en la actitud activa de participación a través de la cual se puede interferir en el resultado final de la acción pública (Ferreira y Araujo, 2000)

[7] A manera de ejemplo, véase FMI. Manual de Transparencia Fiscal y Código de Buenas Prácticas para la Transparencia Fiscal.

D. Barreras a su desarrollo

Existen numerosas barreras que en algunos casos dificultan y en otros pueden impedir la generalización e implementación exitosa de las nuevas prácticas.

Estas barreras están íntimamente relacionadas con i) la necesidad de asegurar el acceso universal a los bienes públicos, ii) con la seguridad y privacidad de la información y iii) con la adecuación del marco legal y regulatorio al nuevo contexto.

1. Posibilidad de acceso (brecha digital)

Las posibilidades de acceso son una preocupación fundamental para los gobiernos, y un punto crítico al analizar la evolución de las TIC es lo que se conoce como "brecha digital". Ésta hace referencia al acceso diferenciado a los beneficios que brindan las nuevas tecnologías y las inequidades que pueden resultar entre las personas que tienen acceso a una computadora e Internet y las que no.

Las principales variables determinantes de la brecha digital son i) el costo de acceso y ii) el nivel educativo de la población. Las personas que no tienen acceso a Internet son aquellas cuyo poder adquisitivo y/o nivel educacional son bajos, lo cual les dificulta alcanzar los estándares de avance tecnológico que goza el resto de la comunidad. El nivel educativo cobra mayor relevancia como determinante de la brecha digital, debido a que la imposibilidad de acceso por bajo poder adquisitivo puede resolverse a través de políticas que promuevan el acceso público. En cambio, el bajo nivel educativo es una barrera mucho más difícil de sortear.

Una barrera adicional a la brecha entre los que poseen acceso a las nuevas tecnologías y los que no, es la predisposición de los ciudadanos a la adopción de las mismas. Los principales elementos que crean una reticencia al uso de estos avances son: el temor a que las computadoras son muy complicadas, la idea que no son útiles y que son muy costosas. Además debe tenerse en cuenta que cierto porcentaje de la población -que varía de acuerdo a las características socioculturales de cada país- nunca aceptará el uso de estos avances, por lo que las prácticas tradicionales no desaparecerán. Sin embargo, aún estas personas que no participen activamente del gobierno electrónico se beneficiarán de esta innovación a través de una mejora en la calidad de los servicios prestados respecto a la forma tradicional.

La adopción de las nuevas tecnologías si no van acompañadas de estrategias que aseguren el acceso universal, puede conducir a un agravamiento de la situación de acceso diferenciado a los bienes públicos, logrando solamente mejorar los servicios prestados a aquellas personas que ya tienen acceso a los mismos.

El beneficio social de la inversión tendiente a asegurar el acceso universal a las nuevas tecnologías es considerable en los países como los Latinoamericanos en donde persisten altos niveles de desigualdad en la distribución del ingreso y en el nivel educativo. Por lo tanto, el gobierno tiene un importante rol que cumplir para asegurar el acceso universal y como promotor de la adopción de las nuevas tecnologías.

2. Seguridad y privacidad de la información.

La utilización de la web como medio para la prestación de servicios y diseminación de información permitirá a los gobiernos disponer de una mayor cantidad de datos acerca de los ciudadanos y realizar un uso mucho más eficiente de dicha información. Como contrapartida esto plantea la necesidad de una mayor transparencia, privacidad y seguridad en el uso de dicha información, de lo contrario el desarrollo y generalización del gobierno electrónico continuará siendo limitada.

Las amenazas que enfrenta el manejo adecuado de la información, tornan necesaria la elaboración de sistemas que contemplen los principios básicos de seguridad para la misma[8]:i) Integridad, ii) confidencialidad iii) disponibilidad y iv) autenticidad.[9]

[8] Para un análisis más detallado de los principios básicos de seguridad de los sistemas de información ver Ministerio do Planejamiento, Orcamento e Gestao (2000), en http://www.redegoverno.gov.br

Cabe destacar que la mayoría de los avances tecnológicos relacionados con la seguridad de la información -como protocolos de seguridad, infraestructura de firma digital, entre otros- ya están disponibles en el sector privado y necesitan pocas adaptaciones para su uso por parte del sector público.

3. Marco legal y regulatorio.

El marco legal y regulatorio puede constituirse en una importante barrera al avance del gobierno electrónico, especialmente en las etapas de mayor complejidad.

Es indispensable la aprobación y promulgación de las leyes necesarias que brinden un marco de legalidad a las actividades y procedimientos realizadas on-line, otorgándole el mismo carácter que las realizadas a través de los métodos tradicionales. Entre las principales adecuaciones necesarias se destacan la infraestructura de firma digital[10], la legalización de los documentos electrónicos y la posibilidad de realizar licitaciones a través de Internet, entre otros.

De cualquier manera, la utilidad esperada del sistema es tan elevada que presenta un ambiente propicio para observar casos en que "la necesidad (utilidad) se anticipa a la ley".

4. Infraestructura de comunicaciones.

La existencia de una infraestructura de comunicaciones con estándares tecnológicos adecuados es un requisito indispensable para el éxito de los proyectos de gobierno electrónico.

Dicha infraestructura hace referencia tanto al ámbito nacional -amplias redes de telecomunicaciones accesibles a la mayor parte de la población- cuanto al nivel gobierno -ya que la existencia de redes gubernamentales internas que funcionen eficientemente en la transmisión de información es otro factor fundamental para permitir su desarrollo-.

El avance tecnológico no es una barrera importante para el desarrollo del *e-government* actualmente, ya que la mayoría de las innovaciones necesarias para su implementación ya están siendo utilizadas exitosamente en el *e-commerce.*

5. Incentivos de los agentes.

La implementación del *e-government* requiere de un cambio de cultura en los agentes públicos en cuanto a la forma de realizar sus actividades y en las capacidades necesarias para ocupar los cargos. Las reestructuraciones necesarias en la burocracia gubernamental requiere de un alto grado de predisposición y un gran poder de adaptación por parte de los agentes públicos, que generalmente está ausente en la mayoría de ellos.

El proceso de cambio puede implicar no sólo cambios en la forma de realizar las tareas, sino que además puede conducir a reubicaciones de personal entre las distintas áreas y hasta pérdida de puestos de trabajo, con la consiguiente oposición por parte de los grupos involucrados.

El gran desafío que deben resolver los gobiernos es cómo estimular a los agentes a adoptar los cambios radicales que implica el *e-government* ante la ausencia de incentivos y presiones de mercado. En este sentido, la solución al rechazo a las nuevas prácticas debe provenir de la *generación de los incentivos* adecuados para estimular a los agentes.

[9] i) La integridad hace referencia a la necesidad de garantizar que la información es recibida como fue enviada, sin duplicaciones, agregados, modificaciones, reordenamientos ni repeticiones. ii) La confidencialidad se refiere a la protección de informaciones contra ataques y análisis de mensajes cuando se encuentran en tránsito en las redes o contra su divulgación indebida cuando se encuentra almacenada. iii) El principio de disponibilidad se refiere a los mecanismos necesarios para prevenir la pérdida o reducción de la disponibilidad a la información. iv) La función de la autenticación consiste en garantizar al receptor que la información es realmente originaria de la fuente informada.

[10] Firma Digital es el mecanismo de identificación de un usuario de un Sistema Informático. La sofisticación para la identificación y la seguridad de una firma digital, dependerá de la sensibilidad y confidencialidad de la información manejada por el Sistema. (Crespo, Bernard y Bertona; 1999)

IV. Situación de desarrollo actual del Gobierno Electrónico.

Los gobiernos están mostrando una creciente participación en Internet a través de sitios que presentan diferentes grados de desarrollo, que van desde la simple presentación de información de tipo institucional, hasta portales que ofrecen los más variados servicios on-line.

En esta sección se realizará una revisión de los avances realizados en materia de *e-government* a nivel internacional y especialmente en el caso argentino.

A. Avances a nivel Internacional.

El uso de Internet por los gobiernos ha aumentado rápidamente en los últimos años, pero la incursión de los mismos en Internet es bastante posterior a la del sector privado por diversas razones: problema informático del año 2000 (Y2K), aversión al riesgo, cuestiones de seguridad y privacidad de la información, y en especial, falta de incentivos.

El ingreso relativamente tardío de los gobiernos a Internet puede observarse analizando el relativamente bajo número de organismos gubernamentales en Internet en el año 1999.

Cuadro Nº 3

Cantidad de Organismos Gubernamentales on-line -Año 1999.

PAIS	Cantidad de Organismos Gubernamentales on-line
Estados Unidos	205
Canadá	153
Australia	104
Francia	73
Inglaterra	38
Alemania	38
Argentina	35
Brasil	34

Fuente: INAP 2000.

En Estados Unidos durante el período 1998-1999 la tasa de crecimiento de los sitios punto.gov fue de 38%, mientras que la cantidad de sitios punto.com creció a una tasa del 280% (Fountain, 2000). Sin embargo, se espera que en los próximos años se acelere el proceso de adopción del *e-government*, debido a que los gobiernos perciben que el sector público, adoptando y haciendo uso de las nuevas tecnologías, puede participar activamente en la transformación que estas han provocado en el funcionamiento del sector privado.

En el ámbito internacional se observan grandes disparidades en el grado de desarrollo y avances realizados en la aplicación de Internet al Sector Público. Ciertos países son líderes en este sentido destacándose Singapur[11] y Austria.

[11] Una investigación internacional de sitios gubernamentales llevada a cabo en 1999 por America´s General Services Administration (GSA) concluyó que el sitio del Gobierno de Singapur e-citizen (http://www.ecitizen.gov.sg/) era el ejemplo más evolucionado e integrado de prestación de servicios a través de Internet (The economist, 2000 [a]).

La estrategia predominante en los sitios gubernamentales prestadores de servicios on-line en los países desarrollados, muestra que los gobiernos poseen un *único portal de acceso a todos sus servicios e informaciones.*

En cuanto a la estructura interna de los portales gubernamentales, existen dos formas básicas de ordenar la información y los servicios prestados: i) portales de estructura horizontal y ii) portales de estructura vertical.

Los sitios de tipo horizontal clasifican todos los servicios e informaciones del gobierno de acuerdo a su tipo o tema relacionado, facilitando la búsqueda y acceso a los clientes-ciudadanos. Los portales de tipo vertical presentan los servicios y la información ordenada de acuerdo al organismo que los provee, es decir que no se accede directamente a ellos, sino a través de la página correspondiente al organismo pertinente. El primer tipo de estructura tiene la ventaja de que los usuarios no deben conocer previamente el organismo que presta el servicio en el que están interesados.

Un estudio reciente de la Brown University (Septiembre de 2000) analiza la situación y condiciones actuales del *e-government* en Estados Unidos a través de una investigación en los gobiernos estatales y en el federal. Los hallazgos más sobresalientes de esta investigación se resumen en los siguientes puntos[12]:

- 22% de los sitios ofrece por lo menos un servicio on-line[13].
- Solamente 5% de los sitios gubernamentales contenían algún tipo de política de seguridad y 7% políticas de privacidad de la información.
- El 91% de los sitios respondió a un pedido de información realizado, de los cuales el 75% lo hizo en menos de un día y sólo el 1% demoró más de seis días en responder.
- 15% de los sitios ofrece algún mecanismo de acceso para discapacitados.
- 4% de los sitios ofrece traducción a un idioma extranjero.
- En general los sitios del Gobierno Federal tuvieron un mejor desempeño que los pertenecientes a los Estados. Lo mismo ocurre entre los sitios de los poderes Ejecutivo y Legislativo con respecto al Poder Judicial.
- La variable explicativa más relevante de la posición ocupada en el ranking es el tamaño de la población. Los estados más pequeños en términos poblacionales *disponen de menores recursos y no tienen acceso a las economías de escala que gozan los estados grandes en las iniciativas tecnológicas.*

En términos generales, el estudio concluye que los gobiernos en Estados Unidos -tanto Federal como Estaduales- i) no han aprovechado aún todo el potencial de desarrollo del *e-government*, ii) no utilizan plenamente las tecnologías disponibles y iii) persisten problemas en términos de acceso y alcance democrático[14].

B. El caso argentino

El gobierno electrónico en Argentina se encuentra en las primeras etapas de desarrollo, y por lo tanto están surgiendo las primeras iniciativas relacionadas al tema. A continuación se realiza un análisis del estado actual del *e-government* en la Argentina para los diferentes niveles de gobierno (nacional, provincial y municipal). Para el estudio se tomó como base las experiencias del Gobierno Nacional y de la

[12] La investigación se basó en el estudio de 1.813 sitios gubernamentales en Internet (1.716 de gobiernos estatales, 36 de los poderes Ejecutivo y Legislativo del nivel Federal y 61 del Poder Judicial Federal).
[13] A los fines de la investigación se considera servicio on-line a aquellos que son concretados íntegramente vía Internet.
[14] Ya que ciertas minorías gozan de muy bajas -o nulas- posibilidades de acceso debido a discapacidades u otros factores como el idioma.

Provincia y Municipalidad de Córdoba. Asimismo, en los casos nacional y provincial, se tuvo en cuenta los avances realizados en los distintos poderes (Ejecutivo, Legislativo y Judicial).

1. Nivel Nacional

1.1. Poder Ejecutivo

El proyecto de Gobierno Electrónico argentino se encuentra en el marco del Plan Nacional de Modernización del Estado, y es considerado una herramienta central para la concreción de las reformas horizontales y verticales que este plan contempla.

El organismo promotor y coordinador del proyecto es la Subsecretaría de la Gestión Pública, y el mismo se basa en la idea que la integración entre los distintos niveles de gobierno (nacional, provincial y municipal) es esencial para facilitar el acceso del administrado a los servicios del estado.

La *estrategia* del proyecto presenta dos pilares fundamentales:

i. La implementación de una *infraestructura tecnológica y normativa* que permita montar sobre ella el resto de las actividades propias del gobierno electrónico.

ii. El desarrollo de iniciativas particulares tendientes a implementar trámites on-line y/o a digitalizar procedimientos internos de los organismos.

El gobierno intenta lograr que las iniciativas de los cambios a implementar surjan de cada una de las jurisdicciones a través de la presentación de proyectos, quedando a la Subsecretaría de la Gestión Pública la función de asistencia técnica y control de calidad y oportunidad del proceso.

El proyecto contempla un portal único de ingreso (http://www.gobiernoelectrónico.ar) para el acceso a todos los servicios del Gobierno Nacional y posee diversos subproyectos relacionados. Dentro de estos subproyectos se destaca el de Red Telemática Nacional de Información Gubernamental -cuyo principal objetivo es la interconexión en tiempo real de las bases de datos de los distintos organismos a través de una Intranet-, la Utilización del Correo Electrónico en los Organismos de la Administración Pública Nacional, la Digitalización del Proceso de Contrataciones del Estado, entre otros.

En cuanto al uso de la Firma Digital, el Decreto P.E.N. N° 427/98 autoriza la utilización de la Firma Digital en la instrumentación de los actos internos de la Administración Pública Nacional, otorgándole los mismos efectos que la firma ológrafa y establece las bases para la creación de la Infraestructura de Firma Digital aplicable a la Administración Pública Nacional (I.F.D.A.P.N.). Actualmente se encuentran en funcionamiento diversas iniciativas de Firma Digital dentro de las cuales se puede mencionar: i) *el Ministerio de Economía y la Comisión Nacional de Energía Atómica* utilizan un circuito interno de *e-mail* firmado digitalmente y ii) *la Comisión Nacional de Valores* a través de la Autopista de la Información Financiera (AIF) recibe y publica por Internet estados contables, estatutos, actas de asamblea, calificaciones de riesgo, entre otros, firmados digitalmente.

El portal principal de acceso argentino posee una estructura de tipo vertical, lo cual reduce considerablemente la facilidad de búsqueda y acceso a los servicios e informaciones requeridos. Las principales ventajas y desventajas de este portal pueden resumirse en el siguiente cuadro.

Cuadro Nº 4

Ventajas y desventajas del portal argentino.

ARGENTINA	
Ventajas	**Desventajas**
▪ Posibilidad de acceso a todas las páginas de los diferentes niveles de gobierno (nacional, provincial y municipal) y a los diferentes poderes (ejecutivo, legislativo y judicial).	▪ Portal de tipo Vertical.
▪ Contiene un solo sitio en donde realizar todas las quejas para cualquier organismo o dependencia.	▪ No contiene la política de privacidad y seguridad del sitio.
▪ Ofrece la posibilidad de inscripción para recibir información periódica vía e-mail.	▪ El portal no presenta todos los servicios disponibles en los diferentes sitios del gobierno y los mismos están clasificados por agencias prestadoras y no por tipo de servicio.
▪ Se pueden bajar formularios y programas con distintas utilidades.	
▪ Posee información interactiva[15].	
▪ Posee mail para efectuar comentarios.	
▪ Tiene links externos, mapa del sitio, buscador, acceso a otros sitios de interés del gobierno y servicio de noticias.	▪ No tiene lista con las preguntas más frecuentemente realizadas (FAQ) por los visitantes ni guía de ayuda.
▪ Tiene publicaciones y proyectos referidos a *e-government*.	

El sitio principal se complementa con portales específicos referidos a diferentes temas de particular interés entre los que se destacan[16]:

Transparencia Fiscal: www.cristal.gov.ar

El portal Cristal es un sitio de presentación de información gubernamental y tiene como principal objetivo aumentar la transparencia de la gestión pública y estimular la accountability de los funcionarios. Este sitio pretende ser el principal medio de difusión de la gestión del Estado Nacional Argentino y apunta a acercar al ciudadano información del sector público.

El "Compromiso Federal por el Crecimiento y la Disciplina Fiscal" firmado entre los Gobiernos Provinciales y el Gobierno Federal en Noviembre de 2000 establece que: "*Los gobiernos de la Nación, de las provincias y de la Ciudad Autónoma de Buenos Aires acuerdan establecer procedimientos para posibilitar una amplia difusión de sus cuentas fiscales, incluyendo presupuesto corriente, su ejecución, deuda y la proyección de sus servicios mediante sistemas informáticos*". Dicho compromiso detalla cierta información que tendrá carácter público y será de libre acceso para cualquier institución o persona interesada en conocerla. El sitio Cristal se presenta como un instrumento importante para el cumplimiento de dicha obligación.

Los contenidos del sitio se estructuran alrededor de tres ejes temáticos principales: i) cuentas públicas, ii) gestión pública y iii) control de los representantes, de manera de poder cumplir con el

[15] Se considera interactiva a aquella información que para ser visualizada requiere del llenado de ciertos datos por parte del usuario.
[16] La lista de sitios presentada dista mucho de ser exhaustiva, y sólo incluye a aquellos considerados de mayor interés para el presente trabajo.

propósito de informar al ciudadano acerca de los diferentes conceptos y matices de los temas abarcados y así llegar a convertirse en la principal fuente de referencia sobre los mismos en Internet.

Educación: www.educ.ar

Este sitio es un proyecto conjunto entre el Gobierno Argentino, empresas privadas, instituciones y empresas punto com, y tiene como objetivo la difusión educativa y se propone permitir el acceso a Internet a la totalidad del sistema educativo de la República Argentina.

Educ.ar está basado sobre tres basamentos: i) un portal de contenidos educativos, ii) un plan de capacitación docente y iii) un plan de conectividad.

El *portal* es un generador de contenidos educativos, diseñado para los protagonistas del sistema educativo: docentes, padres y estudiantes de todos los niveles.

El *plan de capacitación docente* tiene como objetivo promover el uso apropiado de las tecnologías disponibles y, en particular, el aprovechamiento de los contenidos ofrecidos en el portal.

El *plan de conectividad* apunta a proveer las herramientas necesarias para que la mayor parte de la población pueda acceder a los beneficios de las nuevas tecnologías: proveer a las escuelas de computadoras y conexión a Internet e implementar un plan nacional de capacitación informática dirigido a docentes, padres y alumnos.

Promoción de Títulos Públicos: www.ahorr.ar

Este portal brinda información a los ahorristas acerca de los principales bonos del Estado argentino que actualmente se comercializan en el mercado financiero y sus características. El sitio consta de cuatro grandes partes: Preguntas Básicas, Productos, Cifras y Capacitación, en las cuales se presenta información relevante para los inversores tales como monto de la deuda, composición y vencimientos, entre otros. Además, ofrece la posibilidad de acceder a cursos de capacitación que pueden ser impresos.

1.2. Organismos Descentralizados.

Los sitios de Internet de los Organismos Descentralizados muestran un relativamente alto grado de avance en la prestación de servicios *on-line*, aunque aún no se encuentran centralizados[17] en un único portal como muestra la experiencia de los países desarrollados.

Administración Federal de Ingresos Públicos: www.afip.gov.ar

La experiencia internacional muestra que la mayoría de los países están implementando mecanismos que permitan el pago de impuestos a través de Internet. La Administración Federal de Ingresos Públicos lanzó en Diciembre de 2000 un sistema que permite el pago de impuestos vía Internet[18], sumando este servicio a la posibilidad de presentación de declaraciones juradas a través de la red que ya venía siendo empleada.

El sistema permite realizar el pago de impuestos a través de la web bajo el sistema *home banking*, y requiere que el contribuyente tenga una cuenta corriente habilitada de la cuál se debitará el pago. El requisito de contar con una cuenta corriente habilitada para el pago se convierte en una traba importante para el acceso de muchos contribuyentes, pero éstos seguramente representan una baja proporción respecto de la recaudación total.

El Gobierno nacional está realizando importantes esfuerzos tendientes a la unificación y homogeneización de los sistemas informáticos de los organismos recaudadores de las diferentes

[17] En vistas de centralizar y homogeneizar la información disponible, actualmente se está desarrollando el Sistema de Identificación Nacional Tributario y Social, cuyo objetivo es identificar los atributos sociales y fiscales de las personas, mediante un sistema de intercambio coordinado y continuo de información contenida en las bases de datos en poder del Estado, con el objeto de detectar evasión y mejorar la focalización del gasto social, resguardando el derecho a la privacidad. (Decreto PEN N° 812/12)

[18] El sistema se implementó a través de la Resolución General 942 de la AFIP.

jurisdicciones. En este sentido, se prevé la transferencia e implementación del Sistema OSIRIS[19] a las diferentes Direcciones de Renta provinciales.

Administración Nacional de Seguridad Social: www.anses.gov.ar

El sitio Ansesnet es un portal de información y servicios de la Administración Nacional de la Seguridad Social, que brinda información y asesoramiento sobre los trámites que se llevan a cabo en este organismo. El portal brinda ciertos servicios *on-line*, los cuales se dividen según sus prestatarios en: i) Servicios para Personas: Constancia del CUIL (Código Único de Identificación Laboral), Registro único de Beneficiarios, Calendarios de Pagos, Formularios y ii) Servicios para Empresas: Posibilidad de consultar las bases de datos del ANSES y un servicio de Conexión Directa, que permiten la transferencia de archivos entre las PC de los usuarios y los computadores centrales de ANSES.

1.3. Poder Legislativo.

Las importantes oportunidades que presenta el *e-government* para mejorar la relación entre los ciudadanos y sus legisladores no han sido explotadas aún por el Poder Legislativo nacional.

El Congreso de la Nación ha comenzado a prestar ciertos servicios básicos a través de sus páginas web[20], pero las mismas son en su mayor parte de presentación institucional.

La página del Senado muestra un mayor grado de desarrollo que su par de Diputados. En ella se puede acceder a información acerca de la composición de la Cámara y actividad de los legisladores, y entre los servicios que presta puede mencionarse la búsqueda de proyectos de Ley y la posibilidad de acceder a las versiones taquigráficas completas de las sesiones[21]. Además, la página cuenta con una función general de búsqueda, links con otros organismos públicos y con páginas externas, el listado de direcciones de correo electrónico de los senadores y una sección donde se publican las licitaciones para contratos de provisión de bienes y servicios a la Cámara.

En cuanto a la página de Diputados, esta presenta información de la Cámara y su composición, brinda acceso a las versiones taquigráficas, posee el listado de los diputados y su correo electrónico, links con sitios de interés y un servicio de intranet para uso exclusivo de sus miembros.

Si bien ambas Cámaras poseen el listado de los legisladores con su dirección de correo electrónico - lo cuál representa un avance-, se debe lograr que esta herramienta sea utilizada como un instrumento para mejorar la comunicación con los ciudadanos, lo cuál no ocurre en la actualidad.

En cuanto a la legislación relacionada a la adopción y difusión de las nuevas tecnologías, se pueden citar: i) la Ley de Habeas Data y ii) los proyectos de Ley de Firma Digital.

i. En octubre de 2000 se aprobó la ley que reglamenta la recopilación y comercialización de los datos personales por empresas privadas, organismos públicos y particulares. Ésta es la herramienta legal para que la gente pueda controlar quiénes tienen sus datos personales y para qué los usan. La reglamentación del *Habeas Data* establece un fuerte control estatal sobre empresas y organismos públicos, para evitar que se almacene información confidencial de personas sin que éstas se enteren y den su consentimiento.

ii. Actualmente existen varios proyectos de Ley y un proyecto de modificación del Código Civil con el objetivo de *ampliar la admisión de la firma* en los casos que intervienen medios electrónicos como instrumento, siempre y cuando se utilice un método para identificarla y ese método asegure razonablemente la autoría e inalterabilidad del instrumento. Estos proyectos se basaron en los antecedentes de la Ley de UTAH (EE.UU.), la Ley alemana de Firma Digital y las recomendaciones de la Comunidad Europea al respecto (Velázquez, 2000).

[19] El OSIRIS es un sistema informático para la presentación de declaraciones juradas y pagos, impositivos y previsionales, actualmente en uso por la AFIP/DGI.
[20] (http://www.senado.gov.ar y http://www.hcdn.gov.ar)
[21] Se puede acceder a las versiones taquigráficas posteriores a Febrero de 1998.

1.4. Poder Judicial.

El Poder Judicial nacional se encuentra desarrollando diferentes iniciativas relacionadas con el Gobierno Electrónico[22], dentro de las cuáles se puede mencionar las más importantes: i) Proyecto de Convenio de Comunicación Electrónica Interjurisdiccional, ii) Sistema de Información para la Justicia Argentina, iii) Sistema de Consulta de Expedientes a través de Internet y iv) Experiencia piloto de notificación por Correo Electrónico. Se espera que en conjunto estos proyectos permitan una mejora sustancial del servicio de justicia.

El *Proyecto de Convenio de Comunicación Electrónica Interjurisdiccional* se basa en la realización de convenios entre el Ministerio de Justicia y Derechos Humanos de la Nación y los Poderes Judiciales de las distintas Provincias para hacer un uso racional y adecuado de las nuevas tecnologías de comunicación. Dicho proyecto tiene como principal objetivo agilizar el intercambio de información entre las distintas unidades Interjurisdiccionales a través de la adopción de estándares comunes tanto para los dominios (URL) de los Poderes Judiciales como de las direcciones de correo electrónico.

A través del *Sistema de Información para la Justicia Argentina* se pretende lograr un mejoramiento en el uso de la información estadística de los distintos poderes judiciales. La optimización en la obtención, procesamiento y uso de la información estadística a través de la implementación de indicadores comunes permite un adecuado seguimiento y control de la gestión. Esto permitiría la contrastación de los resultados obtenidos con los objetivos propuestos, y la elaboración de políticas encaminadas a mejorar los servicios prestados.

El programa Integral de Reforma Judicial en 1999 puso en marcha *Sistemas de Consulta al Público sobre la Gestión procesal de las Causas* de los Juzgados de Primera Instancia de los fueros Civil y Comercial[23], los cuales permiten a los interesados (abogados, litigantes, etc.) la consulta en tiempo real y en forma remota[24] a los despachos diarios de los juzgados. En la actualidad 16 de los 26 Juzgados del Fuero Comercial de la Capital Federal permiten la consulta de expedientes *on-line* y se puso en marcha un proyecto para el desarrollo de un *Sistema de Consultas Públicas para las causas que se tramitan en la Corte Suprema de Justicia y Fueros*, el cuál apunta a mejorar el acceso a la justicia y a lograr una más fácil y transparente gestión de los procesos.

En cuanto al *uso del correo electrónico como medio de notificación* se observan numerosas iniciativas y proyectos en tal dirección, pero las experiencias concretas hasta el momento han sido desarrolladas en forma aislada y descoordinada. El Programa de Reforma Judicial está encarando una experiencia piloto de notificación por correo electrónico con el objetivo fundamental de evaluar el impacto en términos de tiempos, costos y formas de trabajo -en la perspectiva tanto de los profesionales particulares como del Poder judicial- del reemplazo de los tradicionales métodos de notificación por la utilización del correo electrónico. Los beneficios esperados más importantes de la notificación vía correo electrónico son: reducciones de los tiempos requeridos para impulsar el trámite de los expedientes, del tiempo total de duración de los procesos y de los costos que acarrea para la justicia.

2. Provincia de Córdoba.

2.1. Poder Ejecutivo.

El Poder Ejecutivo Provincial está impulsando una serie de reformas que permitirán un cambio estructural en el funcionamiento del Estado y en su relación con el ciudadano; de manera de lograr un "*Estado orientado al ciudadano*".

La mayoría de las reformas previstas se basa en la utilización de las TIC para mejorar la calidad de los servicios prestados y la eficiencia de la gestión gubernamental.

[22] Estos proyectos se desarrollan en el marco del Programa Integral de Reforma Judicial.
[23] Para el fuero Comercial el Sistema fue implementado en mayo de 1999, mientras que para el fuero Civil fue puesto en marcaha en Diciembre de 1999.
[24] La consulta puede realizarse por tres vías diferentes: Modem telefónico, touch screen e Internet.

Uno de los ejes principales del proyecto es la implementación del *Sistema Único de Atención al Ciudadano* (SUAC), el cual empleará al teléfono y a Internet, como los principales medios para la interacción entre el gobierno y los ciudadanos. La utilización de los Centros de Atención Telefónica -Call Centers- se plantea como la alternativa de uso masivo, debido a la baja penetración de Internet que se observa en la Provincia de Córdoba[25]. Uno de los requisitos previos a la implementación de las reformas previstas es la creación de una base de datos única para todos los sistemas.

Dentro de los avances realizados referidos a *e-government* cabe destacar:

- La generalización del uso del correo electrónico para la comunicación interna entre los agentes.
- La creación de una Red Provincial de Búsqueda de Empleo (*Córdoba Empleo*), en la página del Gobierno Provincial[26] que brinda diversos servicios tanto a trabajadores cuanto a empresas interesadas en contratar personal, tales como búsquedas personalizadas, agenda de cursos de capacitación, entre otros.
- La implementación del Seguimiento Electrónico de expedientes.

El Gobierno provincial está por implementar un sistema de gestión de compras a través de Internet que consta de cuatro ejes fundamentales, a saber: i) *Catálogo*, que comprende la calificación y clasificación cualitativa de los productos; ii) *Proveedores*, que contempla la calificación de los proveedores en términos de calidad de cumplimiento de las condiciones pactadas; iii) *Cotización*, se refiere a la compulsa de precios entre los distintos proveedores y iv) *Founding*, que hace referencia a la posibilidad de disponer de los fondos de financiamiento necesarios.

Un punto considerado importante en la relación entre el Gobierno Provincial y los municipios es la firma de convenios para la unificación de criterios y para la transferencia de tecnología, de modo de impulsar el proceso de informatización y modernización en los diferentes niveles de gobierno.

2.2. Poder Legislativo.

La Legislatura Provincial se encuentra actualmente en la etapa de adecuación de su estructura informática, habiendo desarrollado un nuevo sistema informático[27], el cual se encuentra en las etapas previas a la implementación y permitirá el acceso a una completa base de datos que posibilitará conocer en tiempo real las características y situación de cada uno de los proyectos presentados.

En cuanto a los sitios de ambas cámaras[28], estos se centran en brindar información de tipo institucional, presentando la lista legisladores que las componen con información personal de los mismos y sus direcciones de correo electrónico.

En términos generales el Poder Legislativo provincial muestra un escaso grado de desarrollo en la utilización de las herramientas del *e-government* para mejorar la interacción de los legisladores con los ciudadanos.

2.3. Poder Judicial.

El Superior Tribunal de Justicia de la Provincia de Córdoba está llevando adelante el proyecto de *Optimización de la Gestión Administrativa y Jurisdiccional del Poder Judicial de la Provincia de Córdoba*[29], el cuál tiene como objetivo la incorporación de tecnología que permita dotar de mayor eficiencia a la gestión judicial. Dicho proyecto contempla la utilización de diversas herramientas, entre ellas Internet, para la prestación de servicios y agilización de los procedimientos.

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[25] De acuerdo a datos proporcionados por la Subsecretaría de la Función Pública la penetración de Internet es del 4% de la población para el Gran Córdoba y de sólo 0,8% para el interior provincial.
[26] http://www.cba.gov.ar
[27] El nuevo sistema fue desarrollado con financiamieto del Banco Mundial.
[28] http://senadorescba.gov.ar y http://www.diputadoscba.gov.ar
[29] El proyecto comenzó a implementarse en 1997 y es financiado por el Banco Mundial.

Se espera que la informatización permita reducir costos y aumentar los ingresos del Poder Judicial, ya que permite acelerar los procesos de verificación y búsqueda de información y llevar un control estricto de la recaudación de la tasa de justicia. El proyecto prevé que la implementación de las reformas previstas logrará: i) incrementar el número de causas tramitadas en un 11%, ii) reducir sustancialmente la evasión de la tasa de Justicia[30] y iii) implicar un menor tiempo de respuesta a la sociedad.

En la actualidad se está desarrollando la etapa de tipo estructural del proyecto, que contempla la implementación de una Intranet que conecte los diferentes edificios de la ciudad de Córdoba y la adecuación del equipamiento y de la infraestructura de comunicaciones.

Actualmente el sitio de Internet[31] del Superior Tribunal presenta información de tipo institucional y brinda ciertos servicios como acceso a la información de Tasa de Justicia, actualización de capitales, días inhábiles, jurisprudencia, biblioteca, entre otros. Se espera que esta página web se convierta en una herramienta útil para la interacción entre los distintos actores del sistema (empleados de Tribunales, funcionarios, magistrados y abogados en una primera etapa, y el público en general en una segunda).

El proyecto prevé brindar a través de Internet información referida al avance de las causas para ser consultada por los interesados, y contempla la posibilidad de que -una vez resueltas las trabas legales- se pueda realizar las notificaciones y demandas vía Internet.

3. Municipalidad de Córdoba.

Los lineamientos generales de la política municipal referida a *e-government* están contenidos en la Ordenanza del *Municipio Digital*[32], la cuál considera a la organización del mismo como una "*herramienta instrumental y tecnológica que posibilite la interacción permanente entre el gobierno y el ciudadano, la simplificación de los procedimientos administrativos, la reestructuración de los servicios y la reorganización de las funciones y actividades en base a la medición de desempeño y resultados*".

Dentro de los objetivos relacionados con el *e-government* contenidos en dicha Ordenanza cabe destacar:

- La efectiva interacción electrónica de trámites, solicitudes, peticiones, quejas, reclamos, por tecnología de Internet, correo electrónico, puntos de acceso multimedia, centros tecnológicos comunitarios y bibliotecas populares.
- Sistematizar y simplificar el trámite administrativo, incorporando procesos electrónicos y el sistema de firma digital de conformidad a la legislación vigente.

El Municipio de la Ciudad de Córdoba apunta a posibilitar el acceso a través de Internet y del teléfono a los mismos servicio -en calidad y oportunidad- que los prestados en dependencias municipales; además de acceder a toda la información disponible en el Municipio.

En la actualidad se está encarando el proceso de informatización y modernización, pero aún no se han producido avances sustanciales referidos a *e-government* y el grueso de las reformas estipuladas en el Municipio Digital aún no se han concretado.

Una de las primeras iniciativas referidas a la implementación de expedientes electrónicos pertenece a La Casa del Emprendedor, organismo municipal encargado de otorgar las habilitaciones comerciales en la Ciudad de Córdoba. A través de la implementación del *Sistema de Trámite Único y Seguimiento Electrónico de Expedientes,* dicho organismo logró reducir el tiempo de otorgamiento de las habilitaciones de actividades comerciales simples[33] de 15 días a 48Hs.[34]

[30] La evasión de la Tasa de Justicia se estima en un 20% de la recaudación total por dicho concepto.
[31] http://juscordoba.gov.ar
[32] Ordenanza N° 10.207 de Marzo de 2000.
[33] Las habilitaciones de actividades comerciales simples representan el 40% del total.
[34] Fuente: Casa del Emprendedor, Municipalidad de la Ciudad de Córdoba.

Dentro de los principales objetivos del Municipio Digital se encuentra la implementación de una "Tarjeta Digital" para la identificación operativa del ciudadano y la realización de todo tipo de trámites administrativos.

V. Desarrollo potencial y perspectivas.

A. Principales determinantes de su desarrollo.

Son numerosos los factores que influyen directamente en las posibilidades de desarrollo y éxito de las políticas tendientes a difundir el uso de Internet como herramienta para la prestación de servicios y diseminación de información por parte del sector público. Muchos de estos determinantes son similares a los que influyen en la adopción de computadoras y de Internet. La materialización de los cuantiosos beneficios potenciales que promete el gobierno electrónico depende del impacto conjunto de los mismos.

Los principales determinantes del grado de generalización y éxito de estas políticas son: i) costo de acceso a Internet, ii) Infraestructura de comunicaciones del país, iii) Grado de penetración de Internet y de las TIC y iv) Las características sociodemográficas de la población.

A continuación se presenta un análisis detallado de cada uno de estos factores, de manera de conocer la situación actual y extraer conclusiones acerca de la importancia de los mismos y las posibilidades de desarrollo potencial del gobierno electrónico en Argentina. En la mayoría de los puntos, para formar una visión adecuada de la situación actual en el caso de Argentina, se realizan comparaciones con otros países latinoamericanos, específicamente Brasil y Chile.

1. Costo de acceso.

El costo de acceso a Internet es un factor de gran importancia en lo que se refiere a la posibilidad de conectarse a la red, y por consiguiente de acceder a los beneficios del *e-government*. Este costo de acceso incluye no sólo el cargo pagado por el usuario al proveedor de Internet por la conexión, sino además todo el equipamiento necesario para acceder a la misma.

El *Costo Total* de acceso puede descomponerse en tres elementos principales:

- *Costo Telefónico*: representa el costo de mantener una línea telefónica y el valor de los minutos de llamada.
- *Costo de acceso:* representa el cargo por los servicios de conexión del Proveedor de Servicios de Internet (ISP).
- *Costo de hardware y software*: representa la amortización del hardware (PC, modem, etc.) y del software necesarios para conectarse.

A pesar de la reducción de las tarifas telefónicas evidenciadas en la mayoría de los países de América Latina como consecuencia de las privatizaciones, desregulaciones y crecimiento del sector de las telecomunicaciones, el *costo telefónico* continúa siendo una barrera importante al acceso a Internet en la mayoría de ellos.

La generalización de las líneas de acceso exclusivo a Internet (líneas 0610 para el caso de Argentina) produjo una caída sustancial de los costos y es uno de los factores que impulsó un incremento en la cantidad de usuarios.

El *costo de acceso* también ha evidenciado un rápido descenso en los últimos años, debido a la mayor competencia entre proveedores; y han surgido firmas que ofrecen el acceso gratuito. Sin embargo, aún existen ciertos diferenciales de costos entre los proveedores de Internet latinoamericanos y los de los países desarrollados, los cuáles no harían posible, en el corto plazo, una convergencia de los precios de acceso. Esto determina que el acceso a Internet en países latinoamericanos continuaría siendo relativamente oneroso en comparación con los países desarrollados.

Del análisis de los datos de informes realizados por International Data Corporation (IDC) y Boston Consulting Group (BCG)[35], se desprende que entre 1999 y 2000 el *costo total* de acceso cayó en un 22,73% en Argentina.

Otra conclusión importante es la disparidad que existe entre los países latinoamericanos, como lo presenta el Cuadro N° 5, que muestra el costo total de acceso a Internet desagregado para algunos países latinoamericanos.

Cuadro Nº 5

Costo Mensual Total de Acceso a Internet. Comparación Internacional en U$S. (1999).

País	Costo Telefónico	Costo de acceso	Costo telefónico más Costo de acceso	Costo de PC	Costo Total
Argentina	48	28	76	18	94
Brasil	29	18	47	22	69
Chile	25	17	42	S/d	S/d

Fuente: IDC (International Data Corporation) Project Atlas 2000 y BCG (Boston Consulting Group, 1999.

Puede observarse la desventaja relativa que enfrentan los usuarios argentinos de Internet con respecto a los usuarios de los demás países considerados -el costo total de acceso en Argentina es aproximadamente un 34% mayor que en Brasil-, lo cual influiría negativamente tanto en la penetración de Internet cuanto en la posibilidad de adopción masiva del *e-government*. Esta desventaja está explicada en su mayor parte por el elevado costo telefónico, el cual es 65% superior al de Brasil, y 92% superior al de Chile.

La importancia relativa de cada uno de los componentes del costo total de acceso varía en los países analizados, pero existe coincidencia en que el costo telefónico es el más importante. Este último representa en promedio el 45% del costo total de acceso, mientras que el costo de acceso y el de PC representan en promedio el 29% y el 26% respectivamente.

2. Infraestructura de telecomunicaciones.

La existencia de una infraestructura de comunicaciones adecuada es un requisito básico para la expansión y generalización del uso de las TIC, y por consiguiente para el éxito del *e-government*.

El acceso a Internet puede realizarse a través de distintos tipos de conexión: a través de la línea telefónica, a través de una conexión directa con el Proveedor de Internet (Internet Service Provider-ISP-), a través de la empresa proveedora de televisión por cable, entre otros. Debido a que actualmente en América Latina la forma más común de acceso es a través de la línea de teléfonos, cobra especial interés conocer la teledensidad (número de líneas telefónicas cada cien habitantes) de los países analizados, y sus proyecciones para el futuro.

[35] IDC (International Data Corporation) Project Atlas 2000. (www.idc.com) y BCG (Boston Consulting Group 1999 (www.bcg.com)

Cuadro Nº 6

Cantidad de líneas telefónicas y teléfonos celulares cada 100 habitantes. 1999 y proyecciones 2003.

País	1999		2003		Tasa de variación (1999-2003) -%-	
	Teléfonos Fijos	Teléfonos Celulares	Teléfonos Fijos	Teléfonos Celulares	Teléfonos Fijos	Teléfonos Celulares
Argentina	20	7.0	23.2	8.9	16	27
Brasil	14.3	4.6	23	8.7	61	89
Chile	20.4	8.9	26.1	19.1	28	114
Promedio América Latina	12	S/d	17	S/d	42	S/d

Fuente: Elaboración propia en base a Morgan Stanley Dean Witter (1999) y CEPAL (1999).

Actualmente Argentina y Chile muestran niveles similares de teledensidad (aproximadamente veinte líneas telefónicas cada cien habitantes), mientras que Brasil muestra un nivel considerablemente menor, lo cual lo posicionaría en una situación de desventaja relativa. De todos modos, las diferencias observadas en la actualidad tenderían a desaparecer en poco tiempo. De acuerdo a las proyecciones de la Consultora Morgan Stanley Dean Witter, Brasil muestra una tasa de crecimiento esperada de la teledensidad entre 1999 y 2003 (61%) muy superior a las correspondientes a Argentina y Chile (16% y 28% respectivamente). Estos tres países se encuentran por encima de la media latinoamericana de teledensidad, tanto en la actualidad cómo en las proyecciones, aunque esta brecha tiende a atenuarse.

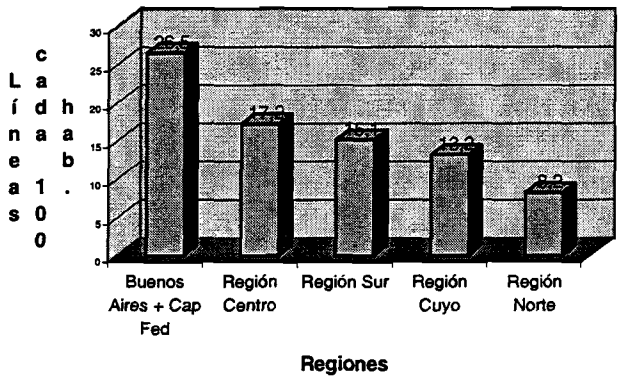
Si bien los elevados costos de acceso a la tecnología actual no permiten un uso masivo de Internet a través de teléfonos celulares, es de esperar que esta modalidad se generalice en los próximos años. El elevado crecimiento esperado en la cantidad de teléfonos móviles (Véase Cuadro Nº 6) puede ayudar a incrementar la penetración de Internet en América Latina, aún cuando su uso se limite sólo a algunas aplicaciones (uso de e-mail, lectura de información, entre otros)

Cabe destacar que no sólo es importante el nivel de teledensidad del país, sino además la distribución regional de las líneas telefónicas. En el caso de Argentina, si bien muestra un nivel relativamente alto de teledensidad para América Latina, presenta una distribución regional muy dispar, concentrándose las líneas telefónicas en aquellas regiones de mayor desarrollo relativo.

El Gráfico Nº 1 presenta la teledensidad por regiones[36] para la República Argentina, el cual muestra una considerable disparidad entre las mismas –la cantidad de líneas telefónicas cada 100 habitantes en Buenos Aires y la Capital Federal (26,5) es más de tres veces superior a la correspondiente a la Región Norte (8,2).

[36] Las regiones argentinas se componen de la siguiente manera: *Región Centro* –Córdoba, Entre Ríos y Santa Fe-, *Región Cuyo* –Mendoza, San Juan y San Luis-, *Región Norte* –Catamarca, Corrientes, Chaco, Formosa, Jujuy, La Rioja, Misiones, Salta, Santiago del Estero y Tucumán- y *Región Sur* –Chubut, La Pampa, Neuquén, Río Negro, Santa Cruz y Tierra del Fuego e Islas del Atlántico Sur-.

Gráfico Nº 1:Teledensidad por regiones argentinas -1999-



Fuente: Instituto de Investigaciones Económicas (IIE). 2000.

Esta desigual distribución regional es una barrera adicional al avance del *e-government* y puede considerarse un potencial generador de inequidades en el acceso a la información y a los servicios prestados.

3. Penetración de Internet y de las TIC.

La infraestructura de telecomunicaciones y los mercados de TIC han evidenciado un crecimiento explosivo en América Latina en los últimos años, impulsados por el proceso de privatizaciones y por la creciente desregulación y apertura a la competencia.

La penetración de las TIC y más precisamente de Internet en la población es un factor determinante del éxito que tendrá el gobierno en Internet, ya que éste debe asegurar que los servicios prestados y la información proporcionada estén disponibles para toda la población.

El grado de *penetración de las TIC* suele medirse a través de la cantidad de PC cada 100 habitantes.

Cuadro Nº 7

Cantidad de PC y PC cada 100 Habitantes. Año 1998.

País	Cantidad de PC	PC c/ 100 Hab.
Argentina	1.500.000	4.15
Brasil	5.000.000	3.01
Chile	714.000	4.82
Canadá	10.000.000	33.06
EE.UU.	124.000.000	45.58
Singapur	1.450.000	45.84

Fuente: Unión Internacional de Telecomunicaciones, 2000.

Existe una gran disparidad entre la cantidad de PC en uso en Argentina, y en general en todos los países latinoamericanos, con respecto a los avanzados, lo cuál da una idea de las diferencias en el grado de penetración del uso de computadoras. *La cantidad de PC por habitante en Argentina es aproximadamente 11 veces menor que en Estados Unidos o Singapur.*

Los niveles de penetración de PC tanto para Argentina como para Chile son similares (4,15 y 4,82 PC cada 100 habitantes respectivamente), siendo sensiblemente menor para el caso brasilero (3,01 PC cada 100 habitantes).

El grado de *penetración de Internet* puede medirse a través de la cantidad de usuarios de Internet y de la proporción que estos representan dentro de la población total. Los estudios realizados difieren sustancialmente en la estimación, no sólo por lo dinámico que es este mercado, sino además por la metodología empleada para estimarlos.

Las estimaciones moderadas de la cantidad de usuarios arrojan los valores mostrados en el Cuadro N° 12. Cabe destacar que más relevante que el número absoluto de usuarios, lo es el porcentaje que estos representan dentro de la población total.

Cuadro Nº 8

Usuarios de Internet como porcentaje de la Población (1999).

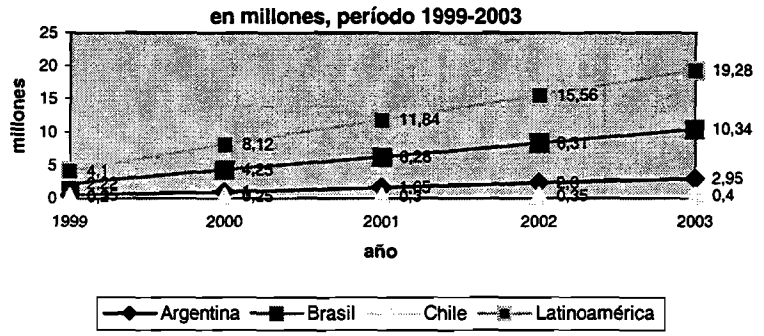
País	Usuarios	% de la Población
Argentina	900.000	2.5
Brasil	4.000.000	2.4
Chile	625.000	4.2
EEUU	110.000.000	40.7

Fuente: UIT (Unión Internacional de Telecomunicaciones) Indicadores de Telecomunicaciones De las Américas2000.

El grado de penetración de Internet de Argentina y Brasil es de aproximadamente 2,5% de la población, mientras que Chile presenta un porcentaje sensiblemente mayor (4,2%), lo cuál le brindaría un mayor potencial de desarrollo del *e-government.*

Las proyecciones para América Latina en el período 1999-2003 muestran un sostenido crecimiento del número de usuarios adultos activos, pasando de 4,1 millones en 1999 a 19,28 millones en el año 2003, lo cuál representa una tasa variación de 370% en dicho período. Argentina es el país -de los tres presentados- con mayor tasa de crecimiento esperada (743%), seguida de Brasil (365%) y Chile (100%).

Gráfico Nº 2: Número de usuarios adultos activos en Argentina, Brasil, Chile y América Latina y proyecciones.

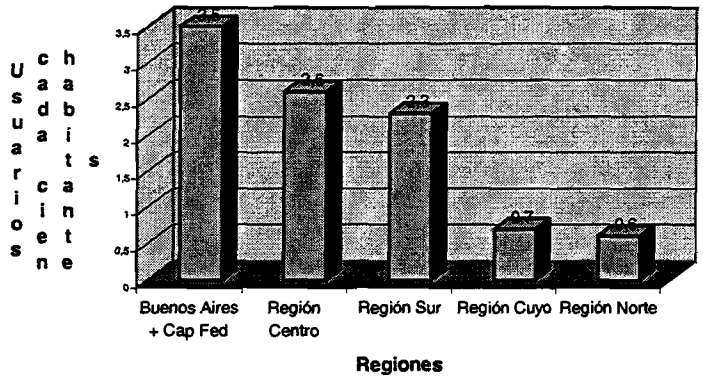


Fuente: e-marketer 2000.

La gran diversidad y heterogeneidad de las estimaciones y proyecciones disponibles no permiten realizar comparaciones entre países que conduzcan a conclusiones definitivas acerca de la penetración de Internet y las expectativas hacia el futuro. Sin embargo queda claro que el potencial de crecimiento de Internet en América Latina es enorme y se espera que el número de usuarios se incremente fuertemente en todos los países de la región, lo cual representa un escenario promisorio para el desarrollo del *e-government*.

Además del grado de penetración, es importante analizar *la distribución geográfica de los usuarios de Internet* para determinar las posibilidades de acceso de los habitantes de las diferentes regiones. Para el caso argentino -y se espera que lo mismo ocurra en Brasil y Chile- se observa una desigual distribución de los usuarios de Internet, presentando una alta concentración en las regiones de mayor grado de desarrollo relativo. Mientras la provincia de Buenos Aires y la Capital Federal poseen en conjunto 3,5 usuarios cada cien habitantes, la Región Norte sólo presenta 0,6.

Gráfico Nº 3: Usuarios de Internet cada cien habitantes en Argentina por regiones -1999-



Fuente: Instituto de Investigaciones Económicas, 2000.

Al analizar el nivel de generalización del uso de Internet en la sociedad, además de los factores antes mencionados, debe destacarse el efecto que provocan las *externalidades de red* sobre el grado de penetración de Internet. La probabilidad de adopción de computadoras tiene una relación directa con el nivel de conectividad (porcentaje de la población que ya la adoptó): mientras mayor el nivel de conectividad (ceteris paribus), mayor es la probabilidad de adoptar las computadoras. Sin embargo, a pesar de la importancia empírica del efecto de las externalidades de red, estas no justifican por sí solas la intervención del estado (IERAL, 2000).

4. Características sociodemográficas.

Las características sociodemográficas de la población son un determinante importante de las posibilidades de adopción masiva de las nuevas tecnologías. Las principales características de los usuarios de Internet en América Latina pueden resumirse en las siguientes: i) están concentrados en la población joven, ii) pertenecen a los segmentos de mayor poder adquisitivo, iii) gozan de un nivel educativo avanzado (educación secundaria o universitaria), iv) están representados por una proporción levemente superior de hombres (60% de hombres y 40% de mujeres aproximadamente) y v) son en su mayoría residentes urbanos.

Si bien el nivel económico es una barrera importante a la adopción masiva, puede resolverse en el corto plazo a través de políticas tendientes a asegurar el acceso universal en forma gratuita, por ejemplo a través de la instalación de puestos públicos de Internet.

El nivel educativo de la población es considerado la variable más importante que puede limitar la difusión de las nuevas tecnologías, ya que puede corregirse solamente en el largo plazo. El manejo de las herramientas necesarias para el uso de las nuevas tecnologías requiere de un grado de calificación mínimo. Por lo tanto, un mejor nivel educativo de la población facilita la asimilación de las prácticas necesarias para la interacción entre los ciudadanos y el gobierno a través de Internet.

Además de los condicionantes antes mencionados, existe cierta proporción de la población -que varía de acuerdo a los países- que nunca adoptará las nuevas tecnologías ya sea por razones culturales, de costumbre, etc. Una de las variables principales que explica el rechazo a la utilización de las nuevas tecnologías es la edad. Los usuarios de Internet se concentran en la población joven y la proporción de usuarios se reduce considerablemente en los grupos de mayor edad.

Argentina, Brasil y Chile -y en general toda América Latina- poseen la particularidad de que su población es mayoritariamente joven. Los habitantes menores a treinta años en Argentina representan el 53,3% de la población total, en Brasil el 62,8% y en Chile el 53,7% (e-marketer, 2000). De lo anterior pueden deducirse dos cuestiones: i) la explicación de porqué el usuario medio en América Latina tiene entre 24 y 27 años, y ii) las buenas expectativas de crecimiento de Internet -y por consiguiente del *e-government*- en la región.

B. Perspectivas futuras: Estrategias para un desarrollo exitoso y prescripciones de política pública.

El potencial de desarrollo del *e-government* es enorme, pero su éxito dependerá crucialmente de la capacidad de adaptación de los gobiernos y de su habilidad para adoptar una estrategia que le permita sortear las principales barreras a su desarrollo. Dicha estrategia debe contemplar un proyecto de mediano/largo plazo que establezca los lineamientos fundamentales para todas las iniciativas relacionadas al gobierno electrónico y que contemple el establecimiento de un órgano director y coordinador.

La implementación de proyectos TIC a gran escala plantea grandes riesgos para los gobiernos[37], y la incapacidad de éstos de manejarlos adecuadamente se plantea como una amenaza al desarrollo del *e-*

[37] Generalmente se considera que el riesgo de fallar es prácticamente directamente proporcional al tamaño del proyecto encarado (OCDE, 2000).

government. Por lo tanto, la identificación y el manejo adecuado de los riesgos implícitos es un requisito fundamental para el cumplimiento de los objetivos propuestos.

El resultado de los proyectos generalmente se evalúa a través de tres variables fundamentales: i) Adecuación al *presupuesto* estipulado, ii) cumplimiento de los *plazos* de implementación y iii) *calidad* de los servicios. El éxito o fracaso puede medirse como los desvíos porcentuales de los valores previstos para cada una de dichas variables. La experiencia internacional muestra que la mayoría de los países desarrollados ha experimentado dificultades en la implementación de proyectos a gran escala (OCDE, 2000).

Es importante que la adopción del *e-government* se inicie a través de proyectos modestos y de bajo riesgo, antes de embarcarse en emprendimientos mayores. Además debe tenerse en cuenta el momento adecuado para implementar las reformas, ya que la acelerada obsolescencia tecnológica puede determinar que sea socialmente óptimo esperar un tiempo antes de iniciarlas.

Existen tres dimensiones que afectan el *tiempo* y la *forma* en que se desarrolla un proyecto de *e-government* -y las posibilidades de éxito del mismo-, a saber: i) *Tecnología*: hace referencia al grado de acceso y calidad del uso de Internet por parte de los ciudadanos, al grado de infraestructura tecnológica del gobierno y al nivel de capacitación de los recursos humanos; ii) *Management*: se refiere a las características de cultura organizacional del gobierno y a la capacidad interna de adaptación y manejo del cambio; y iii) *Viabilidad política*: surge de la interacción de tres elementos: 1) la predisposición de los *actores políticos*, 2) el grado de aceptación y asimilación de los *agentes* y 3) la percepción, aprobación y adopción por parte de los *ciudadanos* (Fountain, 2000).

La estrategia para un desarrollo exitoso contempla ciertos puntos esenciales:

- Se debe considerar al desarrollo de la infraestructura nacional de telecomunicaciones como un tema de agenda nacional, facilitando todas aquellas medidas que otorguen competitividad al mercado y representen incentivos al sector privado para la inversión en redes y tecnologías que mejoren la calidad de conexión.
- Los servicios de *e-government* deben adecuarse a las necesidades de los usuarios -ciudadano, empresa u organismo gubernamental-, ser de fácil acceso y funcionar eficientemente de manera de estimular su adopción, a través de la eliminación de la burocracia, redundancia y confusión en los procedimientos.
- El Gobierno debe convertirse en precursor del uso de las nuevas tecnologías a través de su adopción intensiva.
- La inversión en nuevas tecnologías debe basarse en la utilización de estándares informáticos ampliamente conocidos y aprobados.
- Cobra vital importancia la adecuación del marco legal de manera de otorgarle el mismo carácter de legalidad a los procedimientos realizados por medios electrónicos que a los realizados de la forma tradicional.
- Diseño de políticas que apunten a reducir las barreras más importantes de acceso y a disminuir la brecha digital, haciendo especial hincapié en la implementación de cambios en los sistemas educacionales.

Las políticas de desarrollo deben contemplar las características particulares de cada una de las agencias y niveles de gobierno, de manera de permitir el máximo aprovechamiento de los beneficios potenciales del gobierno electrónico. Dentro de las principales medidas que los gobiernos pueden adoptar se puede mencionar:

- El establecimiento y consolidación de intranets que funcionen eficientemente, con un alto grado de seguridad y que permitan la comunicación e interacción entre los distintos organismos. La

existencia de un sistema de información contable integral y adecuado, que refleje todas las transacciones gubernamentales, es una condición necesaria para el desarrollo de las etapas más avanzadas.

- Estimular la transición de los sitios institucionales (de presentación de información) a sitios prestadores de servicios.
- Orientar las políticas hacia el logro del acceso universal a las TIC a través, por ejemplo, de puestos públicos de acceso.

VI. Conclusiones.

Argentina, y en general los países Latinoamericanos, muestran diferentes grados de avance en la utilización de las TIC por parte del sector público. A través del presente trabajo se pretendió brindar una visión global del *e-government* y sus avances en Argentina.

El gran dinamismo del tema, la existencia de ciertos retardos de implementación y el hecho que la mayoría de los proyectos se encuentran en su etapa de desarrollo no permiten llegar a apreciaciones concluyentes acerca de los avances alcanzados.

El análisis aislado de la situación actual del portal principal de acceso del gobierno nacional, no es un indicador adecuado del grado de desarrollo del *e-government*, pero sirve para visualizar a grandes rasgos la visión y la forma de estructurar las iniciativas de prestación de servicios.

Por otro lado, el estudio de los proyectos de *e-government* plantea la dificultad de diferenciar cuáles son puramente expresiones de deseo y cuáles son planes con una visión clara del gobierno electrónico y sus ventajas.

El análisis de los principales determinantes del desarrollo, sugiere que Argentina posee ciertas ventajas relativas en cuanto a infraestructura y al nivel socioeconómico de su población. Sin embargo deberá apuntar a políticas que conduzcan a una reducción de los costos de acceso a Internet y a aumentar la competencia en el mercado de las telecomunicaciones, para incentivar un aumento en la penetración de las TIC y de Internet. Esto permitiría una disminución del impacto de la brecha digital y así ayudar al cumplimiento del principio social de brindar y mejorar la calidad de sus servicios a los ciudadanos.

En cuanto al desarrollo e implementación de iniciativas, se observa que si bien la mayoría de los organismos han introducido nuevas tecnologías de gestión, el alcance de las mismas no fue generalizado ni regulado de forma tal de aprovechar integralmente sus ventajas. En general, la implementación de las nuevas tecnologías, estuvo asociada a la mayor o menor disponibilidad de recursos financieros de los organismos y no a un plan estratégico tendiente a aumentos en la eficiencia y transparencia de la gestión pública y a un mejoramiento de la calidad de los servicios prestados. De esta manera no se aprovecharon, diseminaron ni compartieron las experiencias entre los organismos en los diferentes poderes y niveles de gobierno.

La inexistencia de una política de armonización y regulación en la incorporación tecnológica, derivó en el agravamiento de diversas deficiencias: la ausencia de estándares tecnológicos básicos, la duplicación de tareas, la falta de seguridad de las redes y la incompatibilidad de las mismas. Sin embargo, actualmente se observan importantes esfuerzos tendientes a unificar programas, compatibilizar sistemas y a armonizar la información disponible, lo cual contribuiría, al menos en parte, a resolver los problemas observados.

En la mayoría de los países del mundo -incluso en los más desarrollados- el *e-government* se encuentra en las primeras etapas de desarrollo, propone un elevado potencial de crecimiento y promete el logro de cuantiosos beneficios esperados. Sin embargo, si bien la sociedad del conocimiento tiene la potencialidad de generalizar el bienestar, puede derivar en el agravamiento de la desigualdad y

segmentación social si no existen políticas apuntadas a atenuar la concentración en el acceso a las nuevas tecnologías.

La responsabilidad final para un desarrollo equilibrado y exitoso del gobierno electrónico, recae en última instancia en la voluntad política, en la flexibilidad de las administraciones públicas y en la capacidad tecnológica de un país. Son los mismos gobiernos los que decidirán el futuro del *e-government.*

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E-GOVERNO NO BRASIL

Estudo da Secretaria para Assuntos Fiscais do Banco Nacional de Desenvolvimento Econômico e Social (SF/BNDES), elaborado por Andréa Gomes Fernandes e autorizado por José Roberto Rodrigues Afonso*

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Abstract

This paper describes the situation of *e-government* in Brazil. The first section brings some theoretical considerations on functions and typical stages of development of *e-government*. In the second section, the main national programs and guidelines on the subject are described. Finally, the paper provides a summary of best practices of *e-government* at the federal and at the subnacional levels.

Resumo

O trabalho procura descrever o estágio atual do *e-governo* no Brasil. A primeira parte traz algumas considerações sobre as funções do governo eletrônico e os estágios típicos de desenvolvimento de portais governamentais. Na segunda parte, são descritos os principais programas nacionais que devem orientar as próximas ações voltadas para a consolidação do *e-governo* no país. A terceira parte apresenta uma descrição sintética de experiências bem-sucedidas de *e-governo* tanto no nível federal quanto no âmbito dos governos subnacionais. O artigo discute ainda as implicações da implantação do governo eletrônico no que concerne à infoinclusão e ao federalismo.

Introdução

O uso, pelos governos, das novas tecnologias da informação na prestação de serviços e informações para cidadãos, fornecedores e servidores constitui o que se convencionou chamar de *e-governo*. No Brasil, a melhor estratégia para a disseminação do uso da Internet na função pública e a definição de qual é o papel do Estado neste campo vêm sendo objeto de crescente interesse e debate.

Vários estudos[1] indicam que tanto o governo federal quanto os governos subnacionais já estão consideravelmente envolvidos com a aplicação das novas tecnologias da informação na administração pública. Grandes dificuldades, porém, persistem. De um lado, está o desafio da ampliação do acesso à Internet no país. De outro lado, a interoperabilidade[2] entre os diversos órgãos da administração pública- sem a qual não é possível atingir estágios mais avançados de *e-governo*- depende de investimentos consideráveis na modernização administrativa da União, estados e municípios.

Com relação ao primeiro problema, o Programa *Sociedade da Informação no Brasil* (http://www.socinfo.org.br/), cujo *Livro Verde* foi lançado recentemente pelo Ministério da Ciência e Tecnologia, tem como objetivo principal articular e coordenar o desenvolvimento e a utilização de produtos e serviços avançados de computação, comunicação e conteúdos, visando à universalização do acesso e à inclusão de todos os brasileiros na Sociedade da Informação.

O aumento da interoperabilidade, por sua vez, vem sendo perseguido de diversas maneiras. Linhas de financiamento foram criadas[3] para fomentar a modernização administrativa de estados e municípios. No nível federal, foi lançado recentemente o programa piloto *Rede Br@sil.gov* (http://www.governoeletronico.gov.br/).

[1] Farto material pode ser encontrado na página sobre Governos on-line do *site* Banco Federativo (http://federativo.bndes.gov.br/). Ver apresentação *Governo Eletrônico no Brasil*, do chefe da Casa Civil, Ministro Pedro Parente, mostrando a posição oficial do Governo Brasileiro sobre o tema.

[2] Sobre o conceito de interoperabilidade e para uma comparação interessante sobre estratégias governamentais nesse campo, ver documento oficial do Governo do Reino Unido *E-government Interoperability Framework* (Central IT Unit- Cabinet Office, 2001).

[3] Como os programas PMAT do BNDES e PNAFE e PNAFM, do Ministério da Fazenda.

Finalmente, pode-se dizer que acesso universal e aumento da interoperabilidade vão de par com um outro aspecto fundamental do *e-governo* que diz respeito à transparência fiscal. O uso da Internet na função pública cria possibilidades extraordinárias de ampliar o controle da gestão fiscal por parte da população, facilitando o exercício do que tem se convencionado chamar de *accountability*, isto é, a obrigatoriedade de prestação de contas ao cidadão (votante, consumidor e financiador dos bens públicos).[4] Também neste ponto o governo brasileiro tem inovado. No segundo semestre deste ano, lançou o programa *Brasil Transparente* (http://www.brasiltransparente.gov.br/). Trata-se de um conjunto de medidas para o aperfeiçoamento da gestão dos recursos públicos e o combate à corrupção e ao desperdício, a ser atingido por meio da contínua divulgação de informações ao cidadão em todas as fases do ciclo de gestão dos recursos públicos. Deve valer-se, para tanto, de novas ferramentas, especialmente da Internet.

O objetivo deste artigo é descrever estas experiências e mostrar o atual estágio do *e-governo* no Brasil. A primeira parte traz algumas considerações gerais sobre o *e-governo*, indicando que tipos de transações são mais usuais neste domínio, as funções mais comuns desempenhadas pelo Estado por meio das novas tecnologias da informação, os estágios típicos de desenvolvimento dos portais governamentais e os princípios que normalmente norteiam a implantação do *e-governo*.

Na segunda parte, são descritos os principais programas de âmbito nacional, que devem orientar as ações voltadas para a consolidação do *e-governo* no Brasil, notadamente o *Sociedade da Informação*, o *Brasil Transparente* e o *Rede Br@sil.gov*.

A terceira parte do artigo traz uma descrição sumária de exemplos bem-sucedidos de *e-governo* no Brasil em cada um dos níveis de governo. No nível federal, destacam-se o portal de informações e serviços, *Rede Governo*, bem como outras iniciativas já em operação nos diversos ministérios e órgãos da administração direta e indireta. No que concerne aos governos subnacionais, mencionam-se alguns portais de prefeituras que já propõem serviços *on-line* aos cidadãos. Em seguida, são listados todos os portais ativos dos governos estaduais, com as características gerais de cada um e a identificação de em quais pontos alguns estão realmente inovando.

I. *E-governo*: Definições e Estágios de Desenvolvimento

Como se sabe, o *e-governo* envolve basicamente três tipos de transações: **G2G,** quando se trata de uma relação intra ou intergovernos; **G2B,** caracterizado por transações entre governos e fornecedores; e **G2C,** envolvendo relações entre governos e cidadãos. Estas transações ocorrem não apenas por meio da Internet, mas também por meio de telefonia móvel, televisão digital, *call centers* e outros tipos de aplicações ligadas aos computadores pessoais.

Em linhas gerais, as funções características do *e-governo* são:

a) prestação eletrônica de informações e serviços;
b) regulamentação das redes de informação, envolvendo principalmente governança, certificação e tributação;
c) prestação de contas públicas, transparência e monitoramento da execução orçamentária;
d) ensino à distância, alfabetização digital e manutenção de bibliotecas virtuais;
e) difusão cultural com ênfase nas identidades locais, fomento e preservação das culturas locais;
f) *e-procurement*, isto é, aquisição de bens e serviços por meio da Internet, como licitações públicas eletrônicas, pregões eletrônicos, cartões de compras governamentais, bolsas de compras públicas virtuais e outros tipos de mercados digitais para os bens adquiridos pelo governo;

[4] Ver Informe-SF n. 17 (Agosto, 2000).

g) estímulo aos *e-negócios*, através da criação de ambientes de transações seguras, especialmente para pequenas e médias empresas.

O desenvolvimento do *e-governo* passa, geralmente, por quatro estágios.[5] O primeiro consiste na criação de *sites* para a difusão de informações sobre os mais diversos órgãos e departamentos dos diversos níveis de governo. Eventualmente, esses *sites* são reunidos em um portal que, neste estágio, consiste apenas em uma espécie de catálogo de endereços dos vários órgãos do governo.

No segundo estágio, estes *sites* passam também a receber informações e dados por parte dos cidadãos, empresas ou outros órgãos. A comunicação neste caso torna-se uma via de mão dupla. O contribuinte pode enviar sua declaração de imposto de renda ou informar uma mudança de endereço; são criados endereços eletrônicos para receber reclamações ou sugestões nas diversas repartições; firmas se cadastram eletronicamente para o fornecimento de certos serviços; dados são transferidos, usando a Internet, de um departamento ou de uma prefeitura ou de uma unidade hospitalar, por exemplo, para um órgão central, e assim por diante.

Na terceira etapa de implantação do *e-governo*, as transações se tornam ainda mais complexas. Neste estágio, são possíveis trocas de valores que podem ser quantificáveis. São realizadas operações como pagamentos de contas e impostos, educação à distância, matrículas na rede pública, marcação de consultas médicas, compras de materiais, etc. Em outras palavras, além de informações, valores são trocados e serviços anteriormente prestados por um conjunto de funcionários atrás do balcão são agora realizados usando uma plataforma de rede e uma interface direta e imediata com o cidadão ou empresa. Isto implica adaptações nos processos de trabalho.

Estas modificações tornam-se ainda mais complexas e radicais no quarto estágio de implantação do *e-governo*. Nele, é desenvolvido um tipo de portal que não é mais um simples índice de *sites* do governo com centenas de endereços, mas um lugar de convergência de todos os serviços prestados pelo governo. Neste estágio, o serviço é disponibilizado por funções ou temas, e não segundo a divisão real do governo em ministérios, departamentos, etc.[6]

Assim, ao lidar com o governo, cidadãos ou empresas não precisam mais dirigir-se a inúmeros órgãos diferentes para procedimentos como mudar de estado civil, requerer seguro-desemprego, abrir uma firma ou obter uma determinada licença. É possível resolver tudo em um único lugar, com uma única senha. O usuário não tem de saber quais órgãos ou departamentos, de quais níveis de governo e em que seqüência são mobilizados para a realização de um determinado serviço ou a prestação de uma informação. O que acontece por detrás da interface eletrônica (*off-line*) não interessa a ele.

Para que isso seja possível, contudo, é necessária uma mudança radical nos bastidores, pois muitos dos serviços a serem realizados exigirão uma intensa colaboração entre os diversos órgãos e repartições, por meio de uma Intranet governamental segura, que integre todos eles. Em outras palavras, num estágio avançado do *e-governo*, automação de atividades e racionalização dos procedimentos implicam transformações radicais dos processos de trabalho, e não apenas agilização destes processos. O desenvolvimento da interoperabilidade entre os vários órgãos da administração pública, enfim, torna premente uma verdadeira reforma administrativa do Estado. E não é possível levar esta tarefa a cabo sem um intenso programa de treinamento e reciclagem de todos os funcionários públicos.

De forma geral, pode-se dizer que, na maioria dos países, os princípios gerais que orientam o *e-governo*, qualquer que seja o seu estágio, são a democratização do acesso à informação, a universalização na prestação dos serviços públicos, a proteção da privacidade individual e a redução das desigualdades sociais e regionais.

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[5] Para uma visão geral destes estágios em diversos países, ver *The Next Revolution: a Survey of Government and the Internet*, em The Economist, 24/06/2000.

[6] Ver exemplo do eficiente portal de serviços do governo de Singapura (http://www.ecitizen.gov.sg/); ver ainda o portal institucional do governo deste país (http://www.gov.sg/).

Para isso, são pré-requisitos básicos do desenvolvimento do *e-governo* uma avançada infra-estrutura de redes e de computação e um quadro jurídico-institucional adequado. Finalmente, vale lembrar que o desenvolvimento do *e-governo* deve acompanhar as transformações da sociedade. Por um lado, o governo tem de estar apto para seguir o ritmo das mudanças tecnológicas que estão ocorrendo na economia interna e de outros países, dando respostas rápidas e adequadas às demandas daí decorrentes, por parte tanto dos cidadãos quanto das empresas. Por outro lado, ele deve garantir que todos possam ser capazes de interagir com ele por meio destas tecnologias. Em outros termos, o governo deve assegurar a educação digital de toda a população, preservando o exercício pleno da cidadania.

II. Programas e Diretrizes Nacionais para o Governo Eletrônico

Atualmente, existem no Brasil três grandes conjuntos de iniciativas que definem as linhas mestras da implantação do *e-governo* no país: o Programa *Sociedade da Informação*, o conjunto de medidas conhecido como *Brasil Transparente* e o projeto de governo *Br@sil.gov*. Estes programas compartilham alguns objetivos comuns e são complementares entre si.

A grande meta de todos os três é permitir que, em pouco tempo, qualquer cidadão brasileiro tenha acesso às novas tecnologias da informação, estando preparado para participar das novas dimensões da vida democrática que estas tecnologias estão instaurando no país e no mundo.

O acesso universal, ou acesso eqüitativo, ou, ainda, infoinclusão, implica que o maior número possível de pessoas em uma sociedade tenha igual oportunidade de utilizar as redes públicas de comunicação e informação. Em oposição a esta situação ideal, pode-se definir a infoexclusão como a impossibilidade de utilizar os recursos dessas redes.[7]

O objetivo da infoinclusão não deve ser pensado exclusivamente em termos de acesso individual, ou seja, de conexão de cada usuário individualmente à Internet. As estratégias efetivamente viáveis de infoinclusão devem procurar disseminar o acesso a atores sociais (institucionais e individuais) que possam agir como multiplicadores, atingindo, por sua vez, um número crescente de pessoas. Muitas vezes, estas pessoas jamais chegarão a tocar num teclado ou navegar na Internet, mas poderão de algum modo participar dos benefícios aportados pelas novas tecnologias da informação.[8]

No combate à infoexclusão, há pelo menos quatro componentes interdependentes que devem ser considerados:[9]

- <u>infra-estrutura e acesso</u>– facilidades coletivas e individuais de acesso local a baixo custo,
- <u>capacitação</u>– treinamento no uso do meio e formação de quadros para configurar, operar e desenvolver serviços e sistemas,
- <u>gestão e sustentabilidade</u>– viabilização econômica e financeira para garantir a manutenção e atualização dos serviços locais,
- <u>conteúdo</u>- oferta de conteúdos locais, serviços e sistemas de informação em idioma nacional, democratização de todas as informações públicas, facilidades para a produção e disseminação de conteúdos locais.

Em outras palavras, o ideal da infoinclusão exige um conjunto de pré-requisitos: o acesso precisa de estar disponível (de modo individual ou comunitário); deve ter um custo viável para os usuários finais

[7] Ver *A Internet no Brasil: o acesso para todos é possível?* (Afonso, 2000: 10).
[8] (idem: 11).
[9] (idem: 10).

(devendo-se considerar, por seu turno, as disparidades regionais e de renda) e deve ser irrestrito (igualdade de oportunidade).

Assim, o acesso universal[10] exige tanto a superação das dificuldades infra-estruturais relativas ao desenvolvimento de redes de telecomunicação e ao acesso democrático a elas; quanto, principalmente, a educação digital da população, isto é, a sua capacitação para usar e manejar os novos meios de comunicação. Na verdade, pode-se dizer que o horizonte das políticas federais voltadas para o governo eletrônico é a infoinclusão.

Considerando, porém, os graves problemas de desigualdade na distribuição da renda, as dimensões continentais do país, o tamanho da população e a grande autonomia financeira, política e administrativa dos governos subnacionais, o governo federal optou por estabelecer diretrizes nacionais, ao invés de impor políticas centralizadoras na matéria, de mais a mais completamente incompatíveis com o espírito da Internet.

Esta é a orientação para os três programas citados acima, que descreveremos a seguir.

A. Sociedade da Informação
(http://www.socinfo.org.br/)

Com a abertura da Internet à operação comercial, a partir de meados de 1995, o governo brasileiro cumpriu o primeiro ciclo de desenvolvimento das redes nacionais. O programa *Sociedade da Informação no Brasil* (http://www.socinfo.org.br/) visa a propor alternativas para a próxima fase da Internet no país.

Ele é fruto dos esforços do Conselho Nacional de Ciência e Tecnologia (CTT). O programa, que é coordenado pelo Ministério da Ciência e Tecnologia, foi instituído por um decreto-lei em dezembro de 1999 e faz parte do conjunto de projetos que compõem o Plano Plurianual 2000-2003 (PPA), tendo um aporte de recursos previsto da ordem de R$ 3,4 bilhões. Seu detalhamento foi confiado a um grupo de implantação, composto por representantes do governo, setor privado, comunidade acadêmica e terceiro setor.

O programa *Sociedade da Informação* está estruturado em sete grandes linhas de ação:

a) mercado, trabalho e oportunidades;
b) universalização dos serviços e formação para a cidadania;
c) educação na sociedade da informação;
d) conteúdos e identidade cultural;
e) governo ao alcance de todos;
f) P&D, tecnologias-chave e aplicações;
g) infra-estrutura avançada e novos serviços.

Cada linha de ação tem seus próprios mecanismos de execução que incluem parcerias com o setor privado e cooperação internacional, em combinações apropriadas à natureza de cada atividade. A fase de implantação, que se iniciou em 2000 e continua neste ano, compreende três momentos: a elaboração de uma primeira proposta detalhada do programa, o chamado *Livro Verde*; amplo processo de consulta à sociedade e consolidação, em um *Livro Branco*, de um plano definitivo de atividades para o programa, gerado a partir da incorporação ao *Livro Verde* das idéias e opiniões colhidas na consulta pública.

[10] "A Lei Geral de Telecomunicações (LGT), de 16/07/1997, considera serviço público- para o qual se exige universalização- apenas o serviço telefônico fixo comutado. A lei não abrange a telefonia móvel celular, nem a comunicação de dados, nem a Internet. A inclusão formal e concreta do acesso à Internet no conceito de universalização ainda é um enorme desafio para a sociedade brasileira". *Sociedade da Informação no Brasil- Livro Verde* (2000: 36).

O *Livro Verde*, cuja versão final já está disponível, é o resultado de um processo de criação de grupos temáticos, contratação de estudos e análises de outras experiências internacionais, que contou com o envolvimento de mais de 300 especialistas no Brasil e no exterior. Ele pode ser considerado a súmula consolidada de possíveis aplicações de tecnologias da informação e deve orientar o Governo e a Sociedade Civil nas ações visando ao estabelecimento das condições necessárias ao florescimento da chamada Nova Economia no país e à extensão dos benefícios aportados pelas novas tecnologias a todos os brasileiros.

Com relação ao primeiro ponto, são prioridades do programa o desenvolvimento de infra-estrutura avançada e o fomento à implantação de redes de processamento de alto desempenho e à experimentação de novos protocolos e serviços genéricos; além, é claro, da consolidação da infra-estrutura básica nacional de informações, integrando as diversas estruturas especializadas de redes- governo, setor privado e P&D. De fato, uma das metas do *Sociedade da Informação* é contribuir para a transferência acelerada de tecnologia de redes do setor de P&D para as outras redes e para o fomento à integração operacional das mesmas.[11]

O *Livro Verde* faz também uma menção explicita à integração e cooperação latino-americanas. O *Livro Verde* lembra que o Mercosul é uma importante iniciativa de países latino-americanos diante da tendência mundial de formação de blocos e megamercados regionais. "As novas tecnologias de informação e comunicação são estratégicas nesse esforço, pois constituem um dos elos básicos na quebra de barreiras espaço-temporais, facilitando a comunicação e o intercâmbio regional em todas as áreas de atividades e contribuindo para a intensificação do comércio na região". (idem: 10)[12]

Finalmente, no que concerne à chamada *inserção digital* ou *infoinclusão*, uma das recomendações mais interessantes diz respeito às novas formas de participação democrática abertas pela Internet. A orientação do programa *Sociedade da Informação* é que "o conceito de universalização deve abranger também o de democratização, pois não se trata tão somente de tornar disponíveis os meios de acesso e de capacitar os indivíduos para tornarem-se usuários dos serviços da Internet. Trata-se, sobretudo, de permitir que as pessoas atuem como provedores ativos de conteúdos que circulam na rede. Nesse sentido, é imprescindível promover a alfabetização digital, que proporcione a aquisição de habilidades básicas para o uso de computadores e da Internet, mas também que capacite as pessoas para a utilização dessas mídias em favor dos interesses e necessidades individuais e comunitários, com responsabilidade e senso de cidadania". (*Livro Verde*, 2000: 31)

B. Brasil Transparente
(http://www.brasiltransparente.gov.br/)

Um outro aspecto importante da *e-democracia* é a possibilidade que as novas tecnologias oferecem de expandir e aperfeiçoar o controle social. Neste sentido, no segundo semestre do ano passado, o governo federal deu início à preparação de um conjunto de medidas voltadas para o aumento da eficiência da gestão dos recursos públicos e o combate à corrupção e ao desperdício, com ênfase na prestação de contas eletrônica e no controle social direto, que deverá se beneficiar das possibilidades de interação oferecidas pela Internet. Trata-se do *Brasil Transparente* (http://www.brasiltransparente.gov.br/)

[11] Para maiores detalhes, ver *Sociedade da Informação no Brasil - Livro Verde*, capítulo 8.

12 Neste ponto é importante lembrar que muitos especialistas têm chamado a atenção para a urgência de integrar as redes e espinhas dorsais (*backbones*) regionais. Um deles adverte que "no caso da América Latina, como ocorria até recentemente em outras regiões mais desenvolvidas, praticamente não há conectividade intraregional- a quase totalidade desta porção do tráfego internacional passa pelas espinhas dorsais norte-americanas. Ao contrário do que já ocorre na Europa e Ásia, não há na América Latina nenhuma iniciativa regional de interconexão. Ou seja, continuaremos pagando aos EUA para trocar tráfego com os chilenos, argentinos, mexicanos, etc". (Afonso, 2000: 5) E acrescenta ainda: "Por ser inexistente uma infra-estrutura de rede integrada na região, todo o tráfego internacional de informação (incluindo transações confidenciais) não só passa pelos EUA, como depende da lógica de desenvolvimento (e portanto do plano de negócios) da Internet norte-americana". (idem)

A primeira dessas medidas foi a aprovação do Código de Conduta da Alta Administração Federal[13], que tem como principais objetivos:

a) tornar claras as regras éticas de conduta da Alta Administração Pública Federal, para que a sociedade possa aferir a integridade e lisura do processo decisório governamental;

b) contribuir para o aperfeiçoamento dos padrões éticos da Administração Pública Federal;

c) preservar a imagem e a reputação do administrador público;

d) estabelecer regras básicas sobre conflitos de interesses públicos e privados e limitações às atividades profissionais posteriores ao exercício do cargo público;

e) minimizar a possibilidade de conflito entre o interesse privado e o dever funcional das autoridades públicas;

f) criar mecanismo de consulta destinado a possibilitar o prévio e pronto esclarecimento de dúvidas quanto à conduta ética do administrador.

Este último ponto remete diretamente a uma das principais funções de *e-governo* mencionada acima, que é a de promover maior *accountability* na gestão pública. Este também é o objetivo das demais medidas do *Brasil Transparente*, que consistem em duas propostas de mudanças legais- uma emenda constitucional e uma lei complementar- destinadas a reforçar os mecanismos de responsabilização, de controle interno e externo sobre a gestão dos recursos públicos e de controle social.

A responsabilização só pode ser atingida, com efeito, por meio de normas legais mais claras e precisas sobre a aprovação de despesas no orçamento e sobre a prestação de contas ao final de cada exercício financeiro. Como os três poderes- executivo, legislativo e judiciário- possuem autonomia administrativa na gestão dos seus recursos assegurada pela Constituição, é fundamental aperfeiçoar ainda mais os mecanismos e as instâncias de aprovação e acompanhamento das despesas.

De igual modo, deverão ser fortalecidos tanto o controle interno, no âmbito de cada poder, quanto o controle externo, realizado pelos Tribunais de Contas, que com estas medidas terão condições de agir com muito mais eficácia no combate às irregularidades.

Deste modo, o Anteprojeto de Emenda à Constituição propõe regras para a prestação de contas, a atuação integrada entre os órgãos de controle, o fortalecimento técnico e institucional dos Tribunais de Contas e a responsabilização solidária dos dirigentes dos Tribunais em relação ao processo orçamentário, no âmbito do poder judiciário. Os pontos mais relevantes do anteprojeto, no que concerne ao tema do governo eletrônico, são:

- integração entre os órgãos de controle: determina a articulação entre os órgãos de controle interno dos três Poderes. Eles terão prazo de 30 dias para dar ciência ao Tribunal de Contas da União e ao Ministério Público das irregularidades na gestão dos recursos públicos de que tomarem conhecimento. Essas regras são extensivas aos estados, municípios e Distrito Federal;
- controle social: prevê o controle social das contas públicas, permitindo o acesso da sociedade às contas por meio da Internet, sendo que este canal poderá ser usado para recebimento de denúncias de irregularidades. Fixa prazos de apuração e divulgação das conclusões sobre as denúncias.

Como se observa facilmente no Anteprojeto de Emenda à Constituição, os princípios de transparência fiscal e controle social direto, facilitados pela expansão do governo eletrônico, são alçados a nível constitucional. Mais detalhes aparecem no Anteprojeto de Lei Complementar, que trata dos princípios e mecanismos de controle dos orçamentos e da prestação de contas anual, aplicando-se à União, estados, municípios e Distrito Federal.

[13] As normas deste código se aplicam às seguintes autoridades públicas: Ministros e Secretários de Estado; titulares de cargos de natureza especial e secretários-executivos; presidentes e diretores de agências nacionais, autarquias, fundações mantidas pelo Poder Público, empresas públicas e sociedades de economia mista.

No que diz respeito ao controle social, a Lei Complementar deverá introduzir princípios gerais para a elaboração, aprovação e implementação dos planos plurianuais, diretrizes orçamentárias, orçamentos e demonstrativos das contas públicas. O acesso às informações pela Internet é assegurado.

O Anteprojeto de Lei também dispõe sobre a fiscalização contábil, financeira, orçamentária, operacional e patrimonial da administração direta e indireta, que será exercida pelo controle externo do legislativo e pelo controle interno de cada Poder. Ainda quanto à fiscalização, o Anteprojeto de Lei Complementar prevê que seja assegurado o acesso às informações por todos os órgãos de controle e estende a fiscalização aos beneficiários, nos casos de renúncia de receita ou subvenção.

Finalmente, o Anteprojeto define critérios para a nomeação do responsável pelo controle interno de cada Poder, obedecendo aos mesmos requisitos exigidos dos ministros do TCU. O Anteprojeto também fixa o prazo de seis anos de mandato para os dirigentes de órgãos de controle interno e institui o Conselho de Dirigentes do Controle Interno, que reunirá titulares dos órgãos centrais de controle interno dos três Poderes.

No momento, os dois anteprojetos estão sendo submetidos à consulta pública, inclusive, coerentemente com o espírito geral das reformas, via Internet. Para isso foi disponibilizado um *site* (http://www.brasiltransparente.gov.br/), onde qualquer cidadão pode dar sua contribuição antes que as medidas sejam levadas à votação no Congresso Nacional.

Estão também previstas uma série de medidas administrativas que virão completar estas medidas legais. Elas estão voltadas para o desenvolvimento de sistemas de controle que utilizem, de forma intensiva, as novas tecnologias da informação. Sua implementação é considerada prioritária pelo governo federal, e eles irão operar de forma descentralizada, apoiando os gestores públicos e criando filtros de controle automáticos na aprovação de licitações e na liberação de recursos para obras ou pagamentos de contratos. Dentre as inovações previstas, estão:

1. serviço de atendimento ao cidadão: será criado para proporcionar o acesso a qualquer serviço ou informação disponível na administração federal, empregando múltiplos canais, tais como telefone, Internet, fax, correio e, ainda, balcão de atendimento. O portal *Rede Governo* (ver abaixo) continua sendo a base desses serviços e será aperfeiçoado. O serviço de atendimento prestará a orientação inicial, encaminhando o cidadão, conforme a sua demanda ou necessidade, ao órgão responsável pela prestação de serviços, fornecimento de informação ou recepção de reclamações e denúncias. No caso do atendimento por telefone ou Internet, esse encaminhamento será automático, com o redirecionamento da ligação ou com *links* inseridos no portal *Rede Governo*;

2. oferta de serviços na Internet e por telefone: o governo federal estabelecerá diretrizes e metas para a implantação progressiva de todos os seus serviços prestados ao cidadão por via eletrônica;

3. qualidade no atendimento: um órgão de supervisão técnica da qualidade do atendimento ao cidadão fixará padrões de desempenho, que serão permanentemente acompanhados e divulgados. Cada órgão, entidade ou unidade administrativa que preste serviços ao cidadão desenvolverá, com autonomia, seu plano de qualidade, sujeitando-se a diretrizes gerais e à avaliação permanente de desempenho, que será tornada pública;

4. implantação de Ouvidoria: atuará no recebimento de queixas e denúncias, promovendo o seu acompanhamento até a solução da demanda. A Ouvidoria intervirá nos casos de atendimento não-resolutivo que tenha sido previamente solicitado pelo cidadão diretamente com o órgão responsável.

Também serão aperfeiçoados os sistemas já em funcionamento de controle de compras governamentais (ver abaixo, especialmente *Comprasnet*), além de estar prevista a criação de um sistema informatizado para o acompanhamento e fiscalização das obras públicas. Este sistema, denominado

Obrasnet reunirá informações sobre todas as etapas da obra- projeto inicial, indicadores de custos, pareceres técnicos do controle interno e externo. O sistema disporá ainda de um banco de dados com informações sobre preços de mercado, que servirá de parâmetro para a correta avaliação e definição de custos de obras públicas.

Finalmente, o *Brasil Transparente* também se insere no esforço nacional de ampliar o acesso à Internet, trazendo menção explícita a dois aspectos fundamentais da questão, qual sejam a redução de custos da Internet (estão previstos vários estudos) e o aumento dos pontos públicos de acesso.

Vale aqui lembrar que para que a Internet possa cumprir o papel de auxiliar na construção de uma gestão pública participativa e transparente, é fundamental a existência de um sistema de contabilidade pública bem organizado, que registre todas as transações fiscais e parafiscais de modo apropriado. Sem este pré-requisito, a prestação de contas será deficiente, quer por mecanismos tradicionais de comunicação, quer via Internet.

De fato, esta tem sido uma preocupação de vários países, que para isso contam, por exemplo, com iniciativas como o *Manual de Transparência Fiscal* e o *Código de Boas Práticas para a Transparência Fiscal* do Fundo Monetário Internacional.

O manual não apresenta instruções específicas sobre como implementar as boas práticas, mas fornece numerosas referências e endereços na Internet que podem ser úteis na implementação prática do Código. Segundo o manual, "A informática também pode desempenhar uma função importante na eliminação de oportunidades para a tomada de medidas discricionárias, bem como para permitir o monitoramento eficaz de atrasos, isenções, recursos e pagamentos. (...) Os sistemas computadorizados também devem permitir a troca instantânea de informações entre as administrações fiscais, respeitadas as disposições de confidencialidade e as restrições jurídicas de cada país". (p. 25) Nenhum dos dois documentos, porém, faz menção explícita ao papel do *e-governo*.

Nesta matéria, pode-se, portanto, concluir que o Brasil está em posição de relativo avanço, o que é confirmado pela aprovação no ano passado da Lei de Responsabilidade Fiscal. Trata-se, como se sabe, de um código de conduta para administradores públicos de todo o país, que vale para os três poderes (executivo, legislativo e judiciário), nas três esferas de governo (federal, estadual e municipal). A Lei fixa limites para despesas com pessoal, para dívida pública e ainda determina que sejam criadas metas para controlar receitas e despesas. Além disso, segundo a Lei, nenhum governante pode criar uma nova despesa continuada (por mais de dois anos), sem indicar sua fonte de receita ou sem reduzir outras despesas já existentes. Pela LRF ainda, são definidos mecanismos adicionais de controle das finanças públicas em anos de eleição.

Uma das grandes inovações da Lei é a participação dos cidadãos no controle das ações dos governantes. Com efeito, o próprio processo de elaboração da Lei envolveu uma consulta pública, realizada através da Internet, onde foram registrados mais de 5000 acessos.

A Lei determina que o acesso público às contas deve ser amplo, inclusive por meio eletrônico, via Internet. Mais precisamente, de acordo com a Lei de Responsabilidade Fiscal, cada governante terá de publicar a cada quatro meses o *Relatório de Gestão Fiscal*, que vai informar, em linguagem simples e objetiva as contas da União, estados, municípios e Distrito Federal, do Ministério Público e dos Poderes legislativo, executivo e judiciário de todas as esferas de governo.

A Lei de Responsabilidade Fiscal não apenas representa um enorme avanço na forma de administrar os recursos que os contribuintes põem à disposição dos administradores públicos, mas também instaura uma nova cultura fiscal no país. E isto passa, evidentemente, pelo desenvolvimento e consolidação do *e-governo* nos três níveis da Federação.

C. Br@sil.gov
(http://www.governoeletronico.gov.br/)

As diretrizes dadas tanto pelo programa *Sociedade da Informação*, especialmente na sua linha de ação "Governo para Todos", como pelo *Brasil Transparente,* culminaram no projeto *Br@sil.gov.*[14]

O*Br@sil.gov* parte da constatação que, face à Nova Economia e às transformações sociais, políticas e culturais resultantes da introdução das novas tecnologias da informação, o papel do Estado deve se modificar de modo profundo nos próximos anos. Informação pública, gratuita, abundante e acessível será um dos bens mais importantes a serem oferecidos aos cidadãos pelo Poder Público. Por outro lado, este novo modelo informacional vai exigir novas formas de regulamentação, codificação e legislação. Finalmente, o Estado tem também a obrigação de combater a infoexclusão e a chamada brecha digital. Deste modo, pode-se dizer, sumariamente, que são quatro as novas dimensões do papel do Estado neste contexto:

a) agente estratégico de articulação do cidadão com as esferas de poder (local, regional, nacional e global);

b) agente promotor do controle social, o que, por sua vez, envolve três dimensões: o aumento das informações em rede, o aumento da transparência e a redução da burocracia;

c) agente regulador com foco nos usuários de serviços;

d) agente fomentador de capacitação para o tratamento de informações.

Além disso, o governo brasileiro se propõe ainda a servir como um exemplo indutor para a sociedade na utilização de documentos eletrônicos e novas aplicações de suporte aos processos de trabalho. Para tanto, o governo federal tem atuado em três frentes fundamentais, cada uma delas relativas aos tipos de transações descritos acima (**G2C, G2G** e **G2B**). São elas: a interação com o cidadão, a melhoria da gestão interna e a integração com parceiros e fornecedores. Com relação ao cidadão, foram desenvolvidos portais na Internet que funcionam com balcões virtuais de informação e serviços. O próximo passo é a integração desses portais em um único portal universal de informações e serviços (nos moldes da fase 4 vista acima).

Desta forma, o *Br@sil.gov* estabeleceu os princípios gerais que devem nortear as políticas federais de desenvolvimento do *e-governo* no país. São eles: a universalização dos serviços, o aumento da prestação de informações, a implantação de uma estrutura avançada e a ampliação da competitividade e da produtividade.

A partir destes princípios, foram definidos os objetivos gerais do projeto, a serem alcançados nos próximos anos:

a) universalização e democratização do acesso aos serviços;
b) melhoria da gestão e qualidade dos serviços públicos;
c) transparência;
d) redução dos custos unitários;
e) simplificação de processos;
f) informação como fator estratégico e
g) convergência e integração das redes e sistemas de informação.

Com efeito, a ênfase na meta da interoperabilidade é, sem dúvida, a grande inovação do projeto *Br@sil.gov*. Embora este tema seja sempre mencionado como uma das prioridades do governo eletrônico

[14] Ver Documento de Referência *Proposta de Política de Governo Eletrônico para o Poder Executivo Federal*, (Ministério do Planejamento, Orçamento e Gestão, 2000).

e iniciativas das mais relevantes tenham surgido ligando vários ministérios e departamentos, só agora, com o *Br@sil.gov*, a interoperabilidade aparece como uma política de governo prioritária.

O governo federal diagnosticou que, atualmente, existe um enorme descompasso entre os órgãos no ritmo de implantação de soluções de integração. Por outro lado, as redes são isoladas, não podendo muitas vezes comunicar-se entre si, dada a falta de padronização e a falta de regulamentação da autenticação de documentos eletrônicos. Na prática, isto significa que para atingir o estágio 4 acima descrito (convergência para um portal de informações e serviços únicos), um grande esforço de integração destas redes terá de ser feito, além, é claro, do desenvolvimento e aprovação do quadro jurídico-institucional adequado.

No que diz respeito precisamente aos aspectos legais da questão, pode-se dizer que o Brasil tem avançado significativamente nos últimos anos. Além do Decreto de criação do Comitê Executivo do Governo Eletrônico, vários outros decretos e leis foram aprovados recentemente visando a montar o arcabouço legal do *e-governo* no país. Entre eles, a Lei 9.983, que define os crimes eletrônicos contra a administração pública; o Decreto 3.505, que estabelece a política de gestão da informação; o Decreto 3.585, que regula a tramitação de documentos por meio eletrônico, e o Decreto 3.587, que cria a infra-estrutura de chaves públicas.

Os próximos passos, no que concerne às medidas legais, são, de um lado, a viabilização da certificação e da assinatura eletrônicas e, de outro, a elaboração de um projeto de lei que assegure a validação dos documentos eletrônicos.

Com estes fundamentos jurídicos bem consolidados será possível atingir as metas estabelecidas para os próximos dois anos. O Plano de Metas – 2000-2002 para o Governo Eletrônico no Brasil compreende dois conjuntos de metas: a) metas voltadas para o cidadão/cliente e empresas e b) metas para a gestão interna do governo.

Metas para o cidadão/cliente e empresas:

- popularização do acesso à Internet;
- aperfeiçoamento das políticas de divulgação de informações e de prestação de serviços via Internet;
- consolidação da Rede Nacional de Informações em Saúde;
- unificação dos diversos cartões (previdência, saúde, etc) no Cartão do Cidadão;
- criação do Catálogo de Informações;
- instalação de PEP's[15] nas representações do governo federal;
- PEP's instalados em todas as localidades com mais de 600 habitantes;
- Programa de Informatização das Ações Educacionais;
- criação do Portal de Apoio à Procura de Emprego.

Por sua vez, são metas para a gestão interna do governo:

- efetivação do Comitê Executivo do Governo Eletrônico;
- orientação e padronização para o desenvolvimento de *sites*;
- criação da Infra-estrutura de Chaves Pública;
- inventário dos recursos disponíveis atualmente de tecnologias de informação e comunicação (TCI);
- individualização no orçamento dos recursos de TCI;
- consolidação do sistema de pregão eletrônico e dos outros sistemas de compras governamentais;
- desenvolvimento do Sistema de Informações Estratégicas;
- divulgação de Modelos de Referência para a Contratação de Redes;

[15] Ponto Eletrônico de Presença – PEP- é o local onde redes inteiras ou máquinas individuais conectam-se a uma rede maior ou *backbone*.

- Integração dos Sistemas de Gestão;
- Projeto Piloto da *Rede Br@sil.gov*;
- Projeto *Rede Multiserviço.*

Estes últimos pontos- integração dos Sistemas de Gestão, criação da *Rede Multiserviço* e unificação de todas as redes por onde circulam dados e informações governamentais na *Rede Br@sil.gov*- representam, sem dúvida, um passo definitivo rumo à interoperabilidade e uma redução de custos de milhões de reais, em serviços de telecomunicação, sobreposição de tarefas, etc.

De fato, como veremos abaixo, o portal *Rede Governo* oferece centenas de serviços e informações, mas é possível constatar que a oferta de serviços ainda é concentrada em poucos órgãos. No que diz respeito à interoperabilidade, pode-se dizer que falta comunicação e permuta de dados entre os sistemas governamentais. Existem sistemas governamentais informatizados poderosos, mas, muitas vezes, centralizados e pouco integrados entre si. Isto só poderá resolver-se na medida em que forem interligados.

O Projeto Piloto da *Rede Br@sil.gov* consiste na elaboração e implantação do projeto piloto da rede multiserviço do governo federal, envolvendo o Ministério do Planejamento, Orçamento e Gestão, o Serviço Federal de Processamento de Dados- Serpro, a Empresa de Processamento de Dados da Previdência Social- Dataprev e órgãos que ainda não disponham de infra-estrutura de comunicação de longa distância.

O Projeto *Rede Multiserviço*, por sua vez, prevê a definição de uma solução de rede de comunicações multiserviço (com tráfego de voz, dados e imagem), em âmbito nacional, que possibilitará o suporte às diversas aplicações, sistemas e serviços do governo federal, inclusive telefonia, integrando seus ministérios e demais órgãos, e baseada na utilização de redes privativas e/ou públicas, ajustadas às necessidades da administração federal.

A idéia é que no futuro a *Rede Br@sil.gov* possa tornar-se uma efetiva infovia de abrangência nacional, orientada para a atuação governamental integrada e para a prestação de serviços ao cidadão brasileiro. A meta do projeto é a total integração das redes existentes no âmbito da Administração Pública Federal, bem como dos sistemas de gestão administrativa governamentais até dezembro de 2001.

Para dar o exemplo e mostrar como esta é realmente uma prioridade do governo federal, a partir deste mês de janeiro de 2001, a Casa Civil da Presidência da República não mais receberá dos ministérios nenhum documento em papel. O sistema de tramitação eletrônica de documentos da alta cúpula da administração federal permitirá que a entrega seja feita por meio eletrônico, e os documentos (projetos, decretos, medidas provisórias) tenham assinatura digital, que garantirá a autenticidade da transmissão. Para isso, o Presidente da República assinou, 3/1/2001 o decreto que dispõe sobre a assinatura e remessa eletrônica de documentos para a Casa Civil da Presidência da República.

III. Experiências Brasileiras

A. Governo Federal

Praticamente não existe hoje nenhuma repartição pública federal que não tenha sua *página web* ou em que os funcionários não disponham de algum serviço de mensageria eletrônica. Os serviços oferecidos na Internet, pelo Governo Federal, já se tornaram parte da rotina de milhões de brasileiros, como o envio da declaração do imposto de renda, a utilização de urnas eletrônicas nas eleições, a obtenção de certidões negativas, a abertura e o acompanhamento de processos previdenciários, a consulta à lista de medicamentos genéricos e de medicamentos suspensos, etc.

Seria impossível descrever nos estreitos limites desse trabalho tudo o que já existe a nível federal em termos de *e-governo*; ainda mais considerando a enorme diversidade dos órgãos, fundações, universidades públicas, autarquias, empresas publicas e outras unidades da administração pública direta e indireta federal. Vale a pena, entretanto, mencionar algumas experiências importantes pelo seu caráter inovador e pelo seu êxito indiscutível.

Rede Governo (http://www.redegoverno.gov.br/)

O *Rede Governo* é o portal de entrada para todas as páginas do governo federal na Internet[16]. A sua implantação teve início em 1995, quando a prestação de serviços governamentais pela Internet era ainda não mais que uma promessa. O portal (www.redegoverno.gov.br), oferece conexões diretas com 641 páginas de serviços e 3.683 *sites* de informações, distribuídos em 31 grandes grupos temáticos. Dispõe ainda de ferramentas de pesquisa em assuntos variados da administração pública.

Atualmente, os órgãos que disponibilizam mais informações e serviços são, em ordem decrescente, aqueles ligados à educação, à fazenda, ao poder judiciário, à previdência social, às comunicações, à justiça, à minas e energia, ao planejamento e ao trabalho. Infelizmente, os serviços, que muitas das vezes ainda não são efetivamente realizados em tempo real, estão muito concentrados nestas poucas áreas.

Além de procurar resolver essas dificuldades, o governo federal vai fortalecer e ampliar o seu portal de serviços, tornando-o mais conhecido e incentivando a sua utilização pela população, através de grandes campanhas publicitárias e instalações de Pontos de Presença e infoquiosques nas repartições públicas federais.. O *Rede Governo* será, então, efetivamente, o grande canal de acesso a todos os serviços, assegurando padrões de funcionalidade e confiabilidade da informação, com funcionamento durante as 24 horas do dia, nos sete dias da semana e além disso, protegido contra invasões ilegais e outros crimes eletrônicos. Legislação sobre a privacidade das informações fornecidas pelos usuários já está sendo preparada nesse sentido.

É importante destacar que muitos serviços estarão sendo ampliados e aperfeiçoados. São serviços tais como a consulta à situação do contribuinte perante a Receita Federal, a solicitação de passaportes, o acesso aos saldos das contas do Fundo de Garantia por Tempo de Serviço (FGTS), o conhecimento dos avisos de licitações governamentais, o cálculo do tempo para aposentadoria, o acesso à lista de medicamentos genéricos, informações sobre as condições das estradas do país, a divulgação de concursos públicos e de oportunidades de trabalho no setor privado, consultas processuais, bibliotecas virtuais, diários oficiais, etc.

Além da oferta de serviços, a Internet também deverá, como vimos, ser o canal privilegiado para o exercício do controle social pelo cidadão. Os sistemas de gestão e de controle da administração federal, em áreas como orçamento, finanças e compras e contratações, já dispõem de *sites* na Internet, acessíveis pelo portal *Rede Governo.* O governo está atualmente implantando serviços de acesso direto às informações sobre a gestão dos recursos públicos e de recepção de denúncias e de solicitações de informação. Dessa formal, o portal *Rede Governo* deverá se consolidar como o principal canal para a interação entre o cidadão e o governo.

Imposto de Renda (http://www.receita.fazenda.gov.br/)

A informatização do imposto de renda no Brasil iniciou-se em 1964 e praticamente coincide com o início das atividades do Serviço Federal de Processamento de Dados (SERPRO). No princípio, a

[16] Para uma comparação com outros portais governamentais de prestação de informações e serviços, além do já citado portal de Singapura (http://www.ecitizen.gov.sg/), ver também, entre outros, os portais do Reino Unido (http://www.open.gov.uk/) e dos Estados Unidos (http://www.firstgov.gov/).

tecnologia utilizada consistia em cartões perfurados para a entrada de dados, a partir dos formulários, e computadores centrais sem capacidade alguma de teleprocessamento para o tratamento dos dados e listagens impressas para comunicações e controles. Com o passar dos anos, como era de se esperar, a tecnologia empregada no planejamento, arrecadação e controle do imposto de renda evoluiu consideravelmente. O que surpreende é que atualmente a imensa maioria das declarações é entregue em meio eletrônico, isto é, em disquetes ou via Internet.

De fato, já desde 1995, o imposto de renda pode ser entregue via transmissão de dados, e, desde 1997, via Internet. Em 2000, mais de 10,1 milhões de declarações foram enviadas pela Internet, ou seja, pouco mais de 80% dos cerca de 12 milhões de contribuintes enviaram seus dados pela rede. Cerca de 200 mil contribuintes preencheram o formulário *on-line* ou entregaram a declaração em disquete. Para o ano que vem, está prevista a possibilidade de efetuar também o pagamento através da Internet.

Comprasnet (http://www.comprasnet.gov.br/)

O *Comprasnet* é o *site* na Internet que presta serviços e divulga informações sobre as licitações do governo federal. No *Comprasnet* os fornecedores podem tomar conhecimento das licitações em andamento, com rapidez e simplicidade, e sem necessidade de se deslocarem até o órgão público. Todos as modalidades de licitação competitivas - os pregões, convites, tomadas de preços e concorrências- no âmbito da administração federal direta, autarquias e fundações, são obrigatoriamente divulgados no *Comprasnet*. É um instrumento de ampliação de oportunidades de participação das empresas, sobretudo as de pequeno porte, nas compras governamentais.

O *Comprasnet* oferece ainda outros serviços que facilitam a participação nas licitações, como a consulta ao cadastro de fornecedores do governo federal, que permite ao empresário conhecer prontamente sua situação, identificando previamente eventuais pendências que possam impossibilitar a sua participação nas licitações públicas. Além disso, o *site* permite ainda a retirada de editais pela Internet, a divulgação dos resultados das licitações e o acesso a publicações e à legislação vigente sobre compras e contratações. Para os servidores públicos com responsabilidades na área de compras, o *site* oferece informações sobre preços praticados, fornecedores, listas de materiais e modelos de documentos.

Esta experiência terá sua abrangência ampliada. Os serviços do *Comprasnet* serão também oferecidos futuramente aos governos estaduais e municipais, que poderão se beneficiar da consulta ao cadastro de fornecedores.

Os controles sobre as compras governamentais também serão aprimorados com o uso intensivo das tecnologias da informação. Assim, o registro de preços será expandido para abranger os 3 últimos preços praticados em todas as licitações e incluirá a comparação com os preços de mercado dos bens e serviços. A verificação do cumprimento das obrigações fiscais pelos fornecedores, que ainda exige trabalhoso levantamento de certidões junto a diversos órgãos, será agilizada ao mesmo tempo em que se tornará mais rigorosa. Os cadastros da Receita Federal, do INSS, da Dívida Ativa e do FGTS estão sendo interligados eletronicamente, de modo a permitir uma consulta única, com rapidez e segurança. Como resultado, os fornecedores que cumprem suas obrigações serão valorizados, e a participação de sonegadores nas licitações será dirimida.

Além disso, foi criada ainda uma nova forma de licitação- o pregão. Ele foi instituído pela medida provisória n°2.026, de maio de 2000, e regulamentado pelo decreto n°3.555 de agosto do mesmo ano. O pregão é a modalidade de licitação para aquisição de bens e serviços comuns em que a disputa pelo fornecimento é feita em sessão pública, por meio de propostas e lances para classificação e habilitação do licitante com a proposta de menor preço. A grande inovação, porém, foi introduzida mais recentemente, em dezembro de 2000, com o decreto n°3697, que regulamenta o chamado *pregão eletrônico*, isto é, por meio da Internet. Por enquanto, o pregão foi instituído exclusivamente no âmbito da União, ou seja, só pode ser aplicado na administração pública federal, compreendidos os três poderes. A idéia, porém, é estendê-lo aos outros níveis de governo.

Por fim, será adotado, em breve, o *cartão de crédito do governo*. Ele será usado, como já acontece em outros países, para compras de passagens aéreas em condições mais vantajosas para a administração federal, porque dispensa o tradicional sistema de faturamento. Além disso, o cartão será empregado para a realização de despesas com suprimento de fundos, substituindo o cheque. O suprimento de fundos é uma modalidade de compras de pequeno valor, realizadas pelos "ordenadores de despesa"[17], quando a implementação de algum projeto ou atividade da administração pública requer a pronta aquisição do bem ou serviço. Nestas situações, a utilização do cartão permite ainda um controle mais ágil e detalhado da despesa.

Vale ressaltar, que o *Comprasnet* e as outras iniciativas de compras governamentais só puderam ser implantadas, porque vários sistemas estruturadores haviam sido antes desenvolvidos no âmbito do governo federal. Em primeiro lugar, o SIASG (Sistema Integrado de Administração de Serviços Gerais).

O SIASG foi instituído por um decreto de 23/04/1994 e foi definido como uma ferramenta informatizada para operacionalizar o funcionamento sistêmico das atividades de gestão de materiais, serviços, edificações públicas, veículos oficiais, comunicações administrativas, licitações e contratações, atribuídas e concentradas em um outro grande sistema do governo federal, o SISG (Sistema de Serviços Gerais).

O SIASG, atualmente, é formado por vários módulos que foram sendo construídos e aperfeiçoados ao longo do tempo:

- em 1991, quando o sistema ainda não havia sido formalmente constituído, foi criado um Sistema de Catalogação de Material e Serviço com o objetivo de definir padrões de qualidade para os materiais e serviços adquiridos pelo governo;
- entre 1994 e 1995, foram desenvolvidos e implantados em escala nacional o COMUNICA e o SICAF. O COMUNICA propicia e agiliza a troca de informações entre as unidades integrantes do SIASG. O SICAF é um sistema operado *on-line* que cadastra e habilita as pessoas físicas e jurídicas interessadas em participar das licitações promovidas pelos órgãos e entidades integrantes do SISG;
- entre 1997 e 1999, foram desenvolvidos o SIDEC, SIREP e o SICON. O SIDEC oferece rotinas automatizadas para a publicação dos avisos de licitações na Imprensa Oficial. O SIREP atende às consultas dos gestores públicos sobre preços praticados nas licitações realizadas no âmbito do SISG. O SICON registra e acompanha os contratos firmados pela administração federal;
- em 2000, foi concluída a implantação do módulo EMPENHO que possibilita a geração automática de minutas de empenho de forma interligada com o SIAFI.

Por sua vez, o SIAFI- Sistema Integrado de Administração Financeira do Governo Federal- foi desenvolvido em 1986 e implantado em janeiro de 1987, visando a suprir o governo federal de um instrumento moderno e eficaz no controle e acompanhamento dos gastos públicos.

Depois de ter sido aperfeiçoado ao longo de mais de uma década de existência, atualmente, o SIAFI é um sistema *on-line* que se constitui no principal instrumento de administração orçamentária e financeira da União, provendo os órgãos centrais, setoriais e executores da gestão pública de mecanismos adequados à realização, ao acompanhamento e ao controle da execução orçamentária e financeira, tornando a contabilidade fonte segura de informações gerenciais.

Sem o desenvolvimento prévio e o aperfeiçoamento de todos esses sistemas, o governo federal não poderia levar hoje adiante os diversos projetos pioneiros no campo das compras governamentais, ou *e-procurement* governamental.

[17] *Ordenadores de Despesa* são servidores encarregados da realização dos gastos e prestação de contas.

UniRede (Universidade Virtual Pública do Brasil) (http://www.unirede.br/)

Uma experiência pioneira e de grande relevância em educação à distância no âmbito federal é a *UniRede*. Trata-se da primeira universidade virtual pública do país. Ela é formada por um consórcio de 61 instituições públicas de ensino superior (Ipes), entre as quais universidades federais, universidades estaduais e Cefets (Centros Federais de Educação Tecnológica). O objetivo principal da *UniRede* é democratizar e ampliar o acesso ao ensino superior de alta qualidade e ser um canal privilegiado de capacitação do magistério, através da oferta de cursos à distância nos níveis de graduação, pós-graduação, extensão e educação continuada.

O programa a ser desenvolvido pela *UniRede* vai aproveitar a infra-estrutura e o potencial docente das instituições que fazem parte do consórcio, a fim de racionalizar a utilização dos recursos existentes nas universidades públicas e assegurar a qualidade dos cursos ofertados. Para cada tipo de curso serão utilizadas tecnologias de informação e comunicação específicas como áudio, videoconferência, material impresso, CD-Rom e Internet.

Portas Abertas (http://www.correios.com.br/servicos_quiosque)

Um dos esforços mais importantes atualmente no sentido de encontrar soluções de telecentros ou infoquiosques[18] está sendo realizado pelos Correios. Trata-se do *Projeto Porta Aberta* que objetiva estender o acesso à Internet usando as agências postais. Cem quiosques experimentais foram inaugurados recentemente. Os quiosques vão funcionar nas agências, e neles os usuários poderão navegar e pesquisar na Internet, acessar serviços públicos enviar e receber *e-mails*. O cadastramento do endereço eletrônico gratuito deverá ser feito obrigatoriamente numa agência dos Correios, mas o acesso ao mesmo, mais tarde, poderá ser feito de qualquer ponto de acesso à Internet. As pessoas com dificuldade para operar computadores recebem apoio de um monitor, além de um manual simplificado.

Estas são apenas algumas das experiências federais de *e-governo*. Pela sua abrangência, elas mostram que o governo federal, no Brasil, já está apto a oferecer todo tipo de serviço característico do governo eletrônico, entre os quais prestação eletrônica de informações, interação direta com o contribuinte, regulamentação das redes, certificação, ensino à distância, etc. Além disso, elegeu a infoinclusão e a transparência fiscal como prioridades nacionais e tem mostrado, com medidas concretas, a enorme preocupação em assegurar o acesso universal às novas tecnologias da informação.

B. Governos Subnacionais[19]

Uma lista completa dos portais municipais e estaduais pode ser encontrada no portal institucional do Governo Brasileiro: http://www.brasil.gov.br/.[20] Uma análise, mesmo preliminar e não exaustiva de alguns destes portais, indica que a disseminação do uso da Internet na administração dos governos subnacionais

[18] O problema da universalização do acesso à Internet têm sido, obviamente, uma preocupação crescente de governantes do mundo todo, especialmente a nível local. O telecentro é uma solução de conectividade e de capacitação, usado em países tão diferentes quanto Canada, Cambodja, Peru, Itália, Senegal, Austrália, etc. Trata-se de um espaço para uso coletivo de recursos de acesso à Internet. É multipropósito, além de pontos de acesso, pode ter áreas de treinamento e facilidades de processamento e impressão de documentos. Pode ter ou não fins lucrativos. Pode estar localizado em uma escola, casa paroquial, biblioteca, prefeitura ou qualquer outro espaço comunitário. Em países em desenvolvimento, a experiência mais interessante é a do Peru (http://ekeko.rcp.net.pe/). O International Development Research Centre (IDRC) do Canadá acompanha iniciativas de telecentros na África, Ásia, América Latina e Caribe (http://www.idrc.ca/acacia) e regionalmente o intercâmbio de experiências neste domínio é coordenado por uma instituição baseada no Equador, a TELELAC (http://www.tele-centros.org/). (Afonso, 2000: 12)

[19] Esta seção reproduz basicamente o Informe-SF n.20 (outubro, 2000)

[20] O portal de informações e serviços do governo federal é, como visto acima, o *Rede Governo* (http://www.redegoverno.gov.br/).

já é considerável, tendo, muitas vezes, até mesmo atingido estágios relativamente avançados de *e-governo*.[21]

1. Municípios

No que diz respeito ao nível municipal, em uma pesquisa recente, realizada a partir de uma amostra de 83 municípios dos estados de São Paulo, Minas Gerais e Santa Catarina, estimou-se que 72% das prefeituras com mais de 200 mil habitantes já devem estar utilizando a rede para serviços e informações à população.[22] A complexidade e a qualidade das informações prestadas aos usuários variam muito entre os *sites* e relativamente poucas prefeituras prestam serviços efetivamente em tempo real.

Contudo, muitos municípios, especialmente capitais e os de regiões metropolitanas, já estão preparados para receber dados dos usuários, atingindo os estágios dois e três descritos acima. É o caso, por exemplo, do *site* da Prefeitura de Manaus (http://www.pmm.am.gov.br/). Lá existe o SACnet, onde o contribuinte, através, de uma senha, consulta, tira dúvidas, atualiza dados cadastrais e acompanha processos junto à prefeitura. Serviço semelhante é oferecido por outras prefeituras, como a do Rio de Janeiro (http://www.rio.rj.gov.br/) e de Porto Alegre (http://www.portoalegre.rs.gov.br/). Neste último *site*, entre outras coisas, é possível ainda realizar boa parte dos procedimentos para a obtenção de alvará, notificar um óbito e acionar um serviço funerário, acompanhar o tráfego da cidade, avisar sobre uma fuga de água, calcular o IPTU e obter a guia eletrônica para recolhimento do ICMS (que, contudo não pode ainda ser entregue via Internet).

No *site* da Prefeitura do Rio, é possível pedir certidões via *e-mail* ou ainda solicitar, via Internet, o serviço de um eletricista, bombeiro hidráulico, pintor, técnico de geladeira, etc, do *Programa de Apoio do Trabalhador Autônomo.*

Em Vitória (http://www.vitoria.es.gov.br/) é possível solicitar eletronicamente serviços, tais como, poda de árvores, desobstrução de bueiros, cálculo de tributos devidos e parcelamento da dívida, envio de livros editados pelas secretarias da cultura e do esporte, etc. Solicitação de audiências com o prefeito também podem ser feitas pela Internet, bem como vários tipos de denúncias. O *site* de Vitória mantém um serviço de ouvidoria da prefeitura e traz ainda uma página com informações sobre as compras municipais e licitações.

A Prefeitura de Betim (http://www.betim.mg.gov.br/) está instalando um portal em que o usuário procura os serviços por tema, recebe um passo a passo para obter o que deseja, com indicações de quais etapas pode realizar imediatamente, *on-line*. Uma vez efetivamente implantado este portal terá atingido, na prática, a fase 3 descrita acima.

Estes são apenas alguns exemplos de *sites* e portais municipais. Na verdade, o grande problema, a nível municipal, são as pequenas localidades. Uma boa parte dos 5507 municípios brasileiros ainda não dispõem sequer de sistemas administrativos informatizados, apesar do grande esforço do governo federal e de outras instituições para acelerar a modernização da gestão municipal.[23] Esta questão é crucial, considerando a importância do nível local na alfabetização digital dos cidadãos. Sem o desenvolvimento de uma cultura local favorável à absorção das novas tecnologias da informação e sem a criação de postos locais de acesso à rede, muitos habitantes de pequenos municípios estarão simplesmente alijados da chamada Nova Economia, sem falar no considerável prejuízo ao exercício pleno da cidadania.

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[21] Para uma comparação com a situação norte-americana, ver *Assessing E-government: the Internet, Democracy, and Service Delivery by State and the Federal Governments*, West (2000).

[22] Ver «E-Gov: a Nova Fronteira da Internet», em O Prefeito, 17 de julho de 2000.

[23] Esta tem sido também uma preocupação do BNDES, que desde de 1997 dispõe de uma linha de crédito (PMAT- Programa de Modernização da Administração Tributária e da Gestão dos Setores Sociais Básicos) voltada para a modernização da administração tributária e dos setores sociais básicos dos municípios. (http://www.bndes.gov.br/atuar/municip.htm)

2. Estados

No que se refere aos estados, aparentemente, apenas duas unidades da federação- Alagoas e Espírito Santo- ainda não têm *sites* ou portais dos respectivos governos estaduais[24]. Amazonas não tem portal, mas tem alguns serviços *on-line* na secretaria de fazenda (http://www.sefaz.am.gov.br/). Quanto aos demais, mais uma vez, há grande variedade no grau de desenvolvimento dos *sites* e portais. Alguns não ultrapassaram o primeiro estágio, trazendo apenas informações genéricas sobre a história, geografia, economia do estado, ou ainda dados sobre hotelaria e turismo. Muitos ainda são bastante focados na agenda dos respectivos governadores e servem apenas como um canal de notícias das principais ações do governo. Outros, porém, constituem verdadeiros portais de serviços *on-line*, com experiências que podem ser consideradas de excelência.

2.1.Estados com E-gov incipiente

No primeiro grupo de *sites* estão os dos Estados de Tocantins, Roraima, Piauí, Paraíba, Pará, Acre, Maranhão, Mato Grosso do Sul, Sergipe, Pernambuco, Rio Grande do Norte, Ceará e Distrito Federal. O *site* de Tocantins (http://www.to.gov.br/) é muito simples, traz somente alguns dados históricos, geográficos e culturais, além de informações sobre os municípios e nações indígenas da região. Roraima (http://www.seplan.rr.gov.br/) não tem um portal próprio do governo, mas o *site* da secretaria de planejamento faz um pouco este papel. Este também é o caso da Paraíba, onde o governo não tem um *site* próprio, mas o *site* da companhia de dados do estado, Codata (http://www.codata.pb.gov.br/), tem *links* para os serviços públicos prestados no estado.

Piauí (http://www.pi.gov.br/) tem também um *site* muito simples, com alguns dados e mensagens do governador ; não oferece nenhum serviço *on-line*. O mesmo acontece com o *site* do Estado do Pará (http://www.governodopara.pa.gov.br/), que traz apenas notícias ou dados genéricos sobre o estado.

Embora apresente grande qualidade gráfica, o *site* do Governo do Acre (http://www.ac.gov.br/) também não oferece nenhum serviço, apenas *links* para as principais secretarias de governo. Maranhão (http://www.maranhao.gov.br/) apresenta dados sobre o estado e informações sobre editais e licitações. Mato Grosso do Sul (http://www.ms.gov.br/) traz dados, *links* para os três poderes, mas não tem serviços *on-line*. O mesmo vale para o Governo do Distrito Federal (http://www.df.gov.br/).

2.2. Estados com E-gov com alguns serviços *on-line*

No segundo grupo, estão os portais que já possibilitam troca de informações com os usuários. Este é o caso de estados, por exemplo, que permitem aos usuários o acompanhamento de processos através da Internet. Além das informações usuais nos seus portais, Ceará (http://www.ceara.gov.br/) e Goiás (http://www.goias.gov.br/) têm sistemas de protocolo único. O sistema eletrônico de protocolo tem como finalidade servir de canal entre o governo e a comunidade, na informação sobre processos que estejam transitando na administração pública. Isso confere aos processos maior transparência e agilidade, mas exige uma integração maior entre os diversos órgãos e serviços do governo. No caso de Goiás, o sistema interliga inclusive os três poderes estaduais : executivo, legislativo e judiciário.

[24] Pelo menos, não há *links* para portais destes estados no portal institucional do Governo Brasileiro.

Pernambuco (http://www.pernambuco.gov.br/), além de informações para investidores potenciais e notícias sobre o governador, oferece alguns serviços da Secretaria de Fazenda, como a emissão de DAE (documentação de arrecadação estadual) virtual. Outros estados como Mato Grosso (http://www.mt.gov.br/) e Sergipe (http://www.se.gov.br/) têm portais relativamente simples, mas oferecem serviços *on-line* em áreas de alguma forma coordenadas pelo nível federal. No primeiro caso, além do pacote típico (notícias, agenda do governador, dados sócio-econômicos, estrutura de governo, etc), o *site* do Mato Grosso permite a consulta ao cadastro do Detran[25] para multas e infrações, licenciamento e outros serviços. Em Sergipe, por sua vez, além dos serviços ligados ao Detran, é possível acessar vários serviços fazendários através do Sintegra.[26]

Um estado merece aqui destaque, já que, além de serviços *on-line* fazendários permitidos pelo Sintegra ou relativos ao Detran, usa a Internet para desempenhar outra função de *e-governo* da máxima importância : a prestação de contas públicas. Trata-se do *site* do governo do Rio Grande do Norte (http://www.rn.gov.br/), que já apresenta os relatórios resumidos da execução orçamentária, conforme determina a Lei de Responsabilidade Fiscal.

Por fim, pode-se incluir também neste segundo nível de *e-governo* estadual, Rondônia e Amapá. Rondônia (http://www.rondonia.ro.gov.br/), embora tenha um *site* ainda muito simples, consistindo basicamente num grande banco de endereços eletrônicos, tem uma página especial denominada *Contas Públicas- Transparência*, onde as contas do estado são apresentadas à população. Além disso, um avanço que pode ser considerado ainda mais significativo, existe uma página especial sobre Lei de Responsabilidade Fiscal, que é usada pelo estado como meio para prestar assistência técnica aos municípios nesta matéria, com manuais e dicas de implantação da lei.

Finalmente, no grupo intermediário de *e-governo* estadual, pode ainda ser citado o caso do Amapá (http://www.amapa.gov.br/). Embora este estado também tenha um *site* relativamente simples (é inclusive um *site* que se apresenta não como um portal do governo, mas como o *site* da companhia de dados do estado) e trazer apenas serviços relacionados ao Sintegra, tem duas iniciativas que sinalizam já algum desenvolvimento na direção de uma atuação mais elaborada de *e-governo*.

Primeiro, para maior transparência, o governo estadual tem uma página chamada *Gestão do Dinheiro Público*, com demonstrativos sobre receitas, despesas e endividamento. Segundo, o Amapá desenvolve ainda uma iniciativa local muito criativa no que concerne à universalização do acesso à Internet: o *Projeto Navegar* (http://www.amapa.gov.br/pnavegar-geral.htm) Trata-se de uma embarcação regional, adaptada com equipamentos e acessórios de informática, conectados à Internet, via satélite, que procura integrar as comunidades da região ribeirinha do Arquipélago do Bailique, localizado a cerca de 150 km de Macapá nas proximidades da Foz do Rio Amazonas (aproximadamente 12 horas de transporte hidroviário bastante precário por causa das condições de navegabilidade). O objetivo principal da iniciativa é garantir o acesso às informações necessárias para o pleno desenvolvimento sustentável da região. Trata-se de um bom exemplo de como o governo pode, usando as novas tecnologias, integrar populações localizadas em regiões de difícil acesso.

[25] Na maior parte dos estados, o Detran já conta com serviços efetivamente *on-line*, que vão desde a consulta de multas até o agendamento eletrônico de vistoria.

[26] O Sintegra (http://www.sintegra.gov.br/), Sistema Integrado de Informações sobre Operações Interestaduais com Mercadorias e Serviços, consiste num conjunto de procedimentos administrativos e de sistemas computacionais compartilhados pelas administrações tributárias de vários estados. O sistema visa a simplificar e homogeneizar as obrigações relativas a compras, vendas e prestação de serviços interestaduais. Mais detalhes podem ser encontrados em *Governo Eletrônico e as Administrações Tributárias Estaduais Brasileiras: Evolução e Benchmark*, (UCP/PNAFE, 2000).

2.3. Estados com iniciativas mais complexas de E-gov

No grupo dos estados que se encontram num estágio mais avançado de *e-governo*, estão Minas Gerais, Paraná, Bahia, Santa Catarina, Rio Grande do Sul, Rio de Janeiro, São Paulo.

Minas Gerais (http://www.mg.gov.br/)

O Estado de Minas Gerais desenvolve um programa chamado *Minas Interativa*, regulado por dois decretos que colocam todos os serviços prestados pelo governo em um único endereço e determinam a divulgação, via Internet, de dados da execução orçamentária. Os objetivos gerais do programa são:

i) atendimento ao cidadão 24 horas todos os dias;
ii) prestação de serviços em todo o estado;
iii) redução do tempo de atendimento;
iv) controle dos serviços prestados;
v) eliminação de intermediários;
vi) transparência nos serviços e conseqüente redução de custos para o governo.

A primeira etapa de implantação do programa, já realizada, contemplou a elaboração e divulgação no portal de todos os serviços prestados pelo governo do estado e sua classificação em duas categorias: *informações* ou *serviços on-line*. A segunda prevê a transformação progressiva de todas as *informações* em *serviços on-line*.

De fato, depois da primeira etapa do programa, poucos dos 1200 serviços classificados estão disponibilizados em tempo real na rede. Porém, mesmo quando este ainda não é o caso, o usuário já pode encontrar na Internet, no mínimo uma descrição geral do serviço, os documentos necessários para demandá-lo, os pré-requisitos para obtê-lo, os prazos para a execução e seus custos. No momento, o esforço principal do programa é aumentar rapidamente o número de serviços *on-line*.

Das 19 áreas temáticas nas quais estão divididos os serviços, uma que chama atenção, por não ser tão comum em outros portais governamentais, é a área de Agricultura, em que dezenas de serviços são propostos, alguns inclusive em tempo real. Entre eles está o *Shopping Rural*. Trata-se de uma espécie de *market place* virtual coordenado pela EMATER de Minas. Os anúncios de *CD's*, vídeos, publicações, cursos e treinamentos, imóveis, máquinas e implementos, animais, *softwares*, sementes e mudas, serviços agrícolas e pecuários, etc, são enviados eletronicamente, com dados, fotos, valores, referências, e disponibilizados para os compradores na tela.

O portal de Minas é um bom exemplo de como organizar a informação em áreas temáticas, pois facilita a consulta e a interação. Infelizmente, áreas importantes como educação e saúde não têm ainda serviços propostos em tempo real neste estado.

Paraná (http://www.pr.gov.br/)

O Paraná, tal como Minas Gerais, tem um programa específico para a implantação do *e-governo* no estado. Trata-se do *Rede Cidadão*. O objetivo do programa também é disponibilizar, a partir da Internet, serviços prestados pelos órgãos da administração pública estadual, reduzindo o deslocamento das pessoas e as filas nos balcões de atendimento. O portal tem as informações e os serviços usuais de *e-governo* de tipo um pouco mais complexo : solicitações relacionadas às companhias de energia elétrica, água e esgoto, informações sobre veículos e habilitação, dados e imagens em tempo real sobre o tráfego na capital, mapas e roteiros sobre a malha rodoviária estadual, consulta à lista, Procon *on-line*, situação da balneabilidade, acompanhamento de processos no judiciário e protocolo eletrônico na administração estadual, etc.

O *Rede Cidadão* paranaense tem também um balcão de empregos eletrônico e um serviço de consulta às bibliotecas do estado. Este último, chamado *Libr@rium*, também disponibiliza *softwares* grátis para a automação de bibliotecas.

Algumas iniciativas interessantes foram desenvolvidas na área de saúde. Entre julho de 1995 e fevereiro de 1996, a secretaria de saúde do estado implantou 11 centrais informatizadas de marcação de consultas especializadas e 13 para leitos e internações, com o objetivo de organizar a oferta e a utilização desses serviços pela clientela do Sistema Único de Saúde (SUS). Estas centrais funcionam com 13 centrais telefônicas, com aproximadamente 120 linhas telefônicas, 13 redes de processamento (servidores, micros e impressoras), operadas por cerca de 250 servidores. As centrais atendem também solicitações de consultas e internamentos das secretarias ou departamentos municipais de saúde, bem como de hospitais cadastrados na sua área de abrangência.

No Paraná, existe, ainda, uma rede de controle homoterápico, que conecta todas as 568 unidades homoterápicas, públicas e privadas, do estado e pode ser acessada pelo portal estadual. Na página do *Sangue no Paraná*, cada unidade pode solicitar ao órgão central responsável a impressão das etiquetas para as bolsas de sangue. Por meio da referência básica- o número da Etiqueta-bolsa, que é controlada pela Vigilância Sanitária- o sistema coleta as informações que contribuirão, posteriormente, entre outras coisas, para a rastreabilidade do sangue, investigação epidemiológica, análises estatísticas e controle e avaliação do pagamento de procedimentos homoterápicos.

Existe ainda um sistema de ouvidoria e informação, o *Telecidadão*, que funciona por meio de ligação telefônica gratuita e é estruturado a partir de central telefônica informatizada.

A experiência acumulada nesses anos de formação desta rede e, sobretudo, da de marcação centralizada de consultas e internações deverá servir de base para a disponibilização futura desses e outros serviços via Internet. De qualquer modo, pode-se dizer que, no caso da saúde, o conceito de *e-governo* já está bastante desenvolvido no Paraná, tendo-se alcançado provavelmente o limiar do estágio 4. Vários serviços, departamentos e unidades, de vários pontos do estado, foram informatizados e conectados em redes. Os processos de trabalho foram profundamente alterados *off-line* e o atendimento ao cidadão tornou-se mais rápido e eficiente.

Bahia (http://www.bahia.ba.gov.br/)

Na área de saúde, a Bahia também desenvolveu experiência interessante em atendimento centralizado informatizado. Trata-se do serviço *Disque Maternidade*, que visa a melhorar o atendimento nas principais maternidades da rede pública estadual de Salvador e região metropolitana e consiste em um sistema informatizado que liga os 10 principais hospitais da rede a uma única central telefônica. Quando a gestante começa a sentir as dores do parto, ela liga para a central e é encaminhada para a maternidade mais próxima. Em seguida, após o parto, um oficial de registro civil fornece a certidão de nascimento ao recém-nascido na própria unidade de saúde. Em outras palavras, a informatização do serviço, a interligação das unidades e o atendimento via telefone permitem não apenas que seja resolvido um problema que tem se mostrado difícil em outros estados- a busca de leitos em obstetrícia- mas possibilita também que o recém-nascido tenha seus direitos de cidadão assegurados desde as primeiras horas de vida.

Nesta iniciativa bem-sucedida de *e-governo*, tal como no caso paranaense do *Telecidadão* e do sistema de solicitação de consultas e internações descritos acima, o acesso ainda é por telefone, via uma unidade de *call center*. Mas a base está dada para uma migração futura para acesso direto via portal estadual.

De fato, na Bahia, existe um grande esforço para unificar o atendimento aos cidadãos em um único ponto. O SAC- Serviço de Atendimento ao Cidadão- é um sistema integrado de serviços públicos, funcionando no estado desde 1995. Os postos SAC reúnem em um mesmo espaço físico vários órgãos e entidades das esferas federal, estadual e municipal. Além disso, existem áreas apropriadas para a espera e serviços de apoio: fotocópia, posto bancário, foto, etc.

Além dessas unidades físicas, existem postos volantes montados em caminhões, que percorrem o estado seguindo itinerários específicos, que abrangem todos os municípios. E, o que interessa mais como experiência de *e-governo*, existe uma versão virtual do SAC baiano.

No portal do Estado da Bahia (http://www.bahia.ba.gov.br/), o SACnet propõe aos usuários informações sobre os serviços, alguns dos quais podem ser obtidos em tempo real. A Bahia também tem, como o Paraná, um serviço de ouvidoria e vários serviços de denúncia (fiscal, criminal, agropecuária, ao Procon, ao Instituto Baiano de Metrologia, etc). A partir do portal, pode-se também ter acesso a uma série de serviços fazendários.

Outro ponto interessante do SACnet baiano é a seção de documentos. Lá é possível não apenas obter certidões negativas de débito de pessoas físicas e jurídicas, mas também verificar a autenticidade de uma certidão negativa. Por último, cabe mencionar que existe, no portal do Estado da Bahia, uma página totalmente dedicada ao esforço de padronizar, visual e conceitualmente, todos os *sites* e portais da administração pública estadual. Esta iniciativa fixa um padrão visual para as *home pages* governamentais do estado e, sobretudo, determina quais são as páginas residentes, de acordo com o conteúdo, de temas de interesse comum a vários órgãos da administração pública, a fim de evitar duplicidade de informações e definir responsabilidades.

Rio Grande do Sul (http://www.rs.gov.br/)

O portal do Rio Grande do Sul também dá acesso a uma série de serviços fazendários *on-line*: entrega eletrônica de guias, emissão de certidões negativas, consulta de cadastros, etc. O portal permite ainda consulta aos cadastros do Detran, traz informações sobre concursos, preços agrícolas e eventos no Mercosul. Na prática, porém, nos demais setores, o portal gaúcho não propõe nem muitas informações efetivamente sistematizadas em temas claros e fáceis de pesquisar, nem serviços propriamente disponíveis em tempo real.

Existe, entretanto, um ponto forte a ser destacado. Trata-se da CELIC (*Central de Licitações*), um sistema eletrônico para aquisição de materiais. No sistema anterior, manual, os expedientes eram formados por requisições de um mesmo órgão, e os materiais deveriam ser comuns ao mesmo tipo de fornecedor. Isso acarretava a existência simultânea de vários processos contemplando o mesmo tipo de material, com valores unitários diferenciados. As requisições de compra são, agora, feitas via terminal conectado ao serviço de processamento de dados do estado. Os processos de compra são realizados por famílias de materiais e obedecem a datas preestabelecidas (calendário de compras) durante o mês. As requisições são incluídas por famílias e aguardam no sistema o dia quando serão montados os processos de compra. Na data prevista, o sistema reúne todas as requisições em uma única compra, que formará o edital. O sistema prevê ainda vários mecanismos de redução de custos, como por exemplo, um teto de preço para cada item.

São Paulo (http://www.saopaulo.sp.gov.br/)

Ainda no campo do chamado *e-procurement* governamental, o Estado de São Paulo tem desenvolvido várias experiências excelentes. Seguindo o modelo proposto pelo Governo Federal e com o objetivo de facilitar o monitoramento dos preços praticados nas aquisições dos seus respectivos órgãos governamentais, o estado criou um sistema de compras que permite identificar e confrontar várias informações relativas a preços.

Os esforços culminaram, em 1998, na implantação do SIAFISÍCO, um sistema eletrônico operado em computadores de grande porte semelhante ao SIAFI federal. Os três poderes do estado devem registrar no sistema o item que estão comprando, a quantidade, o fornecedor e o preço praticado por unidade de medida. Isto só não acontece quando as compras são por antecipação, mas para estes casos será implantado brevemente um sistema de cartão de compra governamental.

Por meio do SIAFÍSICO, a Coordenadoria Estadual de Controle Interno pode checar os distintos preços praticados na aquisição de um mesmo item e, com isso, averiguar os casos onde há uma discrepância muito grande. Para que isso fosse possível, porém, foi necessário criar um cadastro de materiais e serviços (que uniformiza os itens de compra) e um cadastro de fornecedores (que dá maior transparência ao processo de compra e evita o favorecimento de um fornecedor).

A adesão de praticamente todos os órgãos da administração pública ao SIAFÍSICO permite que o monitoramento dos preços praticados no setor seja bastante amplo. Cada órgão público possui uma dotação orçamentária e as compras são feitas de forma descentralizada. Um regime de conta única, porém, obriga que todos eles registrem todas as transações em um mesmo sistema.

Mais recentemente, São Paulo inaugurou a Bolsa Eletrônica de Compras, um sistema para compras limitadas até R$ 8.000, que estão dispensadas de licitação. No momento estão inscritos 28 mil fornecedores para disputar 88 mil itens.

Somadas às compras por cartão eletrônico, o montante negociado pelo estado pode chegar a R$ 1 bilhão.[27] De fato, um dos principais objetivos de todos estes esforços (além, é óbvio, de aumentar a transparência e a lisura das transações) é tirar proveito deste enorme poder de compra do governo para reduzir custos.

Todas estas iniciativas em São Paulo só foram possíveis porque desde meados da década de 90, o estado vem passando por um processo de intensa modernização administrativa. A modernização da Secretaria de Fazenda do Estado permitiu que, em 1996, fosse iniciada a digitalização do relacionamento entre contribuinte e Estado.

São Paulo também é modelo em termos de portal governamental. Recentemente inaugurado, o novo portal do estado (http://www.saopaulo.sp.gov.br/) traz informações e serviços em tempo real, organizados por temas. Destacam-se as páginas relativas à prestação de contas (todos os relatórios da execução orçamentária já conforme a Lei de Responsabilidade Fiscal) e as páginas voltadas para as crianças e jovens, que propõem serviços variados, que vão desde a educação sexual até a inserção profissional de jovens no mercado de trabalho. O sistema *Jovem Cidadão- o Primeiro_Emprego* oferece vagas para jovens, conectando, via Internet, empresas, escolas e o governo. O portal de São Paulo é, sem dúvida, modelo de excelência e em muitos aspectos (como por exemplo interface gráfica simplificada e amigável, velocidade e facilidade de acesso à informação desejada) está até à frente do portal do governo federal.

Santa Catarina (http://www.sc.gov.br/)

Embora o portal de Santa Catarina seja um pouco mais simples que os dos estados mais desenvolvidos em *e-governo*, ele merece estar incluído neste grupo pela experiência pioneira na área de educação. Neste domínio, onde os esforços de adaptar as novas tecnologias às práticas governamentais têm recebido ainda pouca atenção, Santa Catarina tem um exemplo interessante na criação e desenvolvimento da *Net Escola.*

A *Net Escola* é o resultado de um conjunto de inovações tecnológicas que tem como objetivo democratizar as informações educacionais da rede estadual de ensino. As informações, disponíveis pela Internet para a consulta de todos os cidadãos, referem-se a :

i) dados cadastrais e escolares dos alunos,
ii) dados cadastrais das escolas e coordenadorias regionais de educação,
iii) estatísticas escolares.

[27] Este valor foi fornecido recentemente pelo Secretário de Fazenda do estado de São Paulo. Ver *Governos economizam com leilões on-line*, Gazeta Mercantil, 2/10/2000.

Rio de Janeiro (http://www.governo.rj.gov.br/)

O Estado do Rio de Janeiro tem um grande portal com muitos *links*, muitas informações e com acesso a inúmeros tipos de serviços em tempo real, que vão desde os já típicos de *e-governo* no Brasil, como aqueles relacionados à Secretaria de Fazenda e ao Detran, até aqueles propostos por uma Delegacia Virtual, onde é possível fazer denúncias e registrar ocorrências.

No entanto, o ponto que merece destaque é, tal como em Santa Catarina, o relativo à área de educação. O Rio de Janeiro é o único estado no Brasil que já está realizando a matrícula *on-line* na rede estadual de ensino.

A página para as inscrições para o ensino fundamental e para a primeira série do ensino médio (http://www.matricula2001.rj.gov.br/) traz uma relação completa das escolas de todo o estado e informações sobre os turnos. No *site,* pode-se verificar o status da pré-matrícula, fornecendo-se a data de nascimento do estudante e/ou CPF da mãe. Anteriormente, as matrículas vinham já sendo realizadas por meio de uma central telefônica informatizada. Para todos aqueles que ainda não têm acesso à Internet, a matrícula continua a ser feita através de ligação telefônica gratuita.

A centralização da matrícula pressupõe naturalmente um grande esforço prévio de modernização e informatização da Secretaria de Educação. Esta iniciativa constitui, sem dúvida, um avanço considerável em termos de *e-governo*, pois, neste caso, os ganhos com a racionalização de processos e redução de custos podem beneficiar imediatamente a população mais necessitada.

IV. Considerações Finais

Esse breve inventário das experiências brasileiras do governo federal e dos governos subnacionais mostra que, numa primeira fase, iniciativas pioneiras surgiram por todo o território nacional nos três níveis de governo. Isto está perfeitamente de acordo com o espírito descentralizado da Internet, mas não deixa de surpreender quando se leva em conta a extensão territorial do Brasil e as graves disparidades regionais. Mesmo sem nenhuma padronização e com poucos recursos voltados especificamente para a implantação do governo eletrônico, estados distantes como, por exemplo, o Amapá, têm conseguido estender o acesso à Internet e informações governamentais a populações muito isoladas, enquanto outros igualmente pequenos, como Rondônia e Rio Grande do Norte, já publicam, na Internet, seus relatórios de prestação de contas de acordo com a nova Lei de Responsabilidade Fiscal.

Atualmente, inaugura-se um segundo período, com a definição de programas e metas nacionais para o desenvolvimento do *e-governo* no país. São evidências dessa mudança de paradigma os programas *Brasil Transparente* e o *Rede Br@sil.gov*, sem falar nas determinações explícitas da Lei de Responsabilidade Fiscal sobre a prestação de contas na Internet e nas recomendações sobre *e-governo* presentes no *Livro Verde da Sociedade da Informação no Brasil.*

Considerando, porém, as particularidades do federalismo brasileiro, no qual estados e municípios têm grande autonomia política, financeira e administrativa, o governo federal terá muito menos um papel impositivo e centralizador, que a função de indutor de novos comportamentos, criando padronizações e propondo soluções de excelência. Esse, aliás, é o caso de muitas iniciativas de sucesso, como aquelas ligadas ao Sintegra e aos Detrans estaduais e, sobretudo, ao SIAFI e ao sistema de compras governamentais Comprasnet, que não apenas poderá ser utilizado por outros estados e municípios, como já serviu de modelo para outras experiências excelentes como a Bolsa de Compras do Estado de São Paulo.

Em síntese, o grande desafio é preservar o caráter descentralizado do *e-governo* na Federação Brasileira, respeitando a autonomia constitucional dos três níveis de governo e dos três poderes, mas, ao mesmo tempo, assegurar que soluções de conectividade e interoperabilidade sejam encontradas para que o

estágio 4 possa ser alcançado. Em outras palavras, todo cidadão deve ter acesso na Internet a um serviço de qualidade, sem se preocupar com que órgão e que nível de poder resolverá o seu problema.

Isto só será possível se for realizada com êxito a modernização da administração pública, especialmente de estados e municípios. Programas como o PMAT do BNDES são, com efeito, pedra angular desse processo, e deverão ser reforçados. Como para os outros aspectos da questão, cabe ao governo federal, também no que concerne ao financiamento, estabelecer uma política ordenada, mas sem implantação centralizada, respeitando o ritmo e as prioridades locais.

Além disso, do outro lado da linha, está a alfabetização digital da população, sem a qual a infoexclusão virá somente reforçar as demais graves desigualdades da sociedade brasileira. De fato, fomentar a universalização de serviços públicos eletrônicos "significa conceber soluções e promover ações que envolvam desde a ampliação e melhoria da infra-estrutura de acesso até a formação do cidadão, para que, informado e consciente, possa utilizar os serviços disponíveis na rede". (*Livro Verde*: 31)

Em outras palavras, de um lado será necessário aumentar os Pontos de Presença (PEP's) e criar soluções de telecentros e infoquiosques. De outro, contudo, não se pode negligenciar o enorme esforço que será necessário para educar a população para a utilização consciente e responsável das novas tecnologias de informação e comunicação.

Concluindo, pode-se dizer, como no *Livro Verde*, que "o governo, nos níveis federal, estadual e municipal, tem o papel de assegurar o acesso universal às tecnologias de informação e comunicação e a seus benefícios, independentemente da localização geográfica e da situação social do cidadão, garantindo níveis básicos de serviços, estimulando a interoperabilidade de tecnologias e redes. Além disso, cabe ao governo estimular e viabilizar a participação de minorias sociais e outros segmentos marginalizados, os pequenos negócios, bem como as organizações sem fins lucrativos, de modo a que esses segmentos possam ter acesso aos benefícios que a sociedade da informação possa proporcionar. Cabe ainda estabelecer condições equânimes de competição entre os diferentes agentes econômicos, sem inibir as iniciativas de investimento e de novos negócios e implementar não só políticas públicas, mas também um aparato regulador e legal, harmônico e flexível, que proteja os interesses dos cidadãos e estimule o desenvolvimento do setor privado". (*Livro Verde*: 11)

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