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Panama

and Central American economic integration

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This article looks at the benefits that Panama could derive from its possible integration with the countries of the Central American Common Market (CACM). First of all, Panama's production structure is analysed in terms of the phenomenon known as the "Dutch disease": this reveals the de-industrializing effect that the booms in the services sector have had on the economy. An examination is then made of the advantages that Panama could derive from gradual integration with the CACM countries in terms of intra-industry exports, promotion of investments, competition and modernization of production, and it is asserted that these benefits do not exist, on a reciprocal basis, in a scheme based on unilateral trade openness. An examination is also made of the ways in which subregional integration could further a process of modernization of production which could offset the adverse effects of the Dutch disease. Finally, some econometric equations based on a gravity model are presented and a quantitative assessment is made of the appreciable improvement that Panama could secure in its trade balance with the CACM if it became a full member of that integration scheme.

1

Introduction

In October 1973, the Central American countries -Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama- signed the Protocol to the General Treaty on Central American Economic Integration, thus updating the integration process to bring it in line with the new lines of national and international economic policy. This Protocol was signed in order to broaden the sectoral and institutional field of action of integration and reflect the political will of the Central American governments to strengthen the integration process. The fact that Panama signed that Protocol could be interpreted as a step towards its adherence to the Central American integration programme. Panama and the Central American Common Market -made up of the other five Central American countries- have been cultivating closer relations for several decades past. Examples of this are Panama's participation in such bodies as the Central American Institute of Public Administration and the Institute of Nutrition for Central America and Panama; its accession to the Central American Parliament in August 1994; its attendance at Presidential and Ministerial meetings in the subregion since 1990, and the increase in its trade with the CACM countries. All this, however, has not culminated in its definitive incorporation into the Central American integration programme. ¹

In order to see what benefits Panama could obtain from its integration with the CACM, an examination will be made below of some distinctive features of the Panamanian economy and the areas in which integration could have favourable repercussions, and a quantitative assessment is made of the effect that a regime of free trade with the CACM would have on the Panamanian external sector.

H

The Panamanian economy

The economic structure of Panama reflects the big share accounted for by the services sector in its gross domestic product (approximately 80% in the early 1990s). This trend has been growing more pronounced in recent years, especially in transport, storage and communications, while the shares of agriculture and industry have gone down (table 1 and figure 1).

The share of investment in the GDP has also declined. Public investment has been going down steadily since 1976, and in 1992 it amounted to only a quarter of that year's level. Private investment also shrank between 1974 and 1991, and the recovery

registered in 1992 only managed to bring it back up to a figure below the levels of the early 1970s. The share of private investment in construction, machinery and equipment and transport equipment, as a proportion of GDP, showed a downward trend since the beginning of the 1970s, but recovered somewhat in the 1990s (figures 2, 3 and 4).

It is worth noting that investment in machinery and equipment has been identified as the type of investment that has the biggest impact on economic growth, generates substantial benefits through externalities (De Long and Summers, 1991) and has a

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¹ For an overview of the studies on Panama's relations with the CACM with regard to economic integration, see Thoumi (1994). See also Salazar-Xirinachs (1990); Lachman, Olaso and Vallarino (1991), and Lachman, Chocano, Figge and González (1992).

TABLE 1

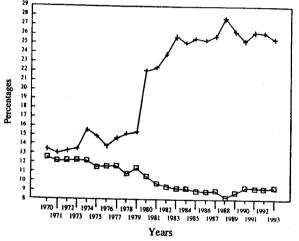
Panama: Structure of GDP (Percentages)

Sector	1970	1975	1980	1985	1990	1993
Agriculture	9.55	7.80	6.07	6.11	6.90	5.52
Manufacturing	12.53	11.50	10.49	8.96	9.30	9.29
Commerce Transport, storage and	15.84	14.34	14.77	12.57	11.69	11.87
communications	6.02	9.08	22.08	25.62	25.30	25.47
Colón Free Zone Financial institutions,	2.15	2.35	4.79	3.20	5.54	8.61
insurance and business						
services	12.01	13.99	13.08	14.16	14.22	14.87

Source: Estadística Panameña, Dirección de Estadística y Censo de la Contraloría General de la República de Panamá (various issues).

FIGURE 1

Panama: Shares of transport, storage and communications sector and of manufacturing in the GDP



+ Transport, storage and communications

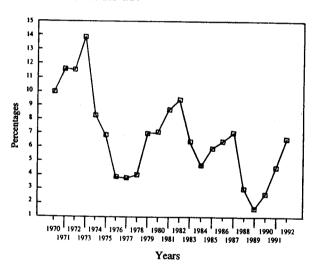
Manufacturing

Source: Estadística Panameña, Dirección de Estadística y Censo de la Contraloría General de la República de Panamá (various issues).

higher rate of social profitability than its private yield, so that policies which encourage it to rise to levels higher than the corresponding laissez-faire values help to speed up economic growth (De Long and Summers, 1992). Likewise, high prices of investment in machinery and equipment have a negative impact on growth, so that its promotion through tax policy helps to raise the economic growth rate (Jones, 1994). Other authors have found empirical evidence that investment in fixed capital, as well as

FIGURE 2

Panama: Share of private investment in construction in the GDP

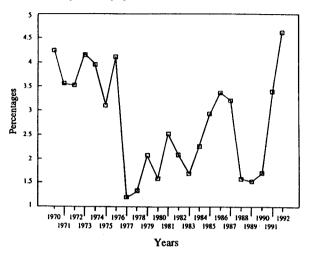


Source: Estadística Panameña, Dirección de Estadística y Censo de la Contraloría General de la República de Panamá (various issues).

expenditure on research and development, have effects that are just as significant as those of relative prices, or even more so, on the competitiveness of exports (Magnier and Toujas-Bernate, 1994).

The share of exports in GDP showed an upward trend between 1970 and 1980, rising from 38% to 44.03%, but this share fell back to 35% in 1992. The share of imports also grew between 1970 and 1980 (from 41.33% to 47.35%), but it too went down to 36.36% in 1992.

FIGURE 3
Panama: Share of private investment in machinery and equipment in the GDP

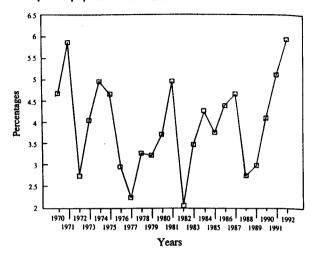


Source: Estadística Panameña, Dirección de Estadística y Censo de la Contraloría General de la República de Panamá (various issues).

Panama's economic structure may be explained as the result of a process called the "Dutch disease" in the economic literature. ² This refers to the deindustrializing, and in some cases anti-agriculture, effect that an export boom has on the domestic economy. In the case of Panama, it is necessary to take into account the role played by the Canal Zone and,

FIGURE 4

Panama: Share of private investment in transport equipment in the GDP



Source: Estadística Panameña, Dirección de Estadística y Censo de la Contraloría General de la República de Panamá (various issues).

more recently, the Colón Free Zone, which have given rise to substantial increases in income. Thus, in 1988-1990 goods accounted for only 22.7% of total exports of goods and services, whereas the transport sector accounted for 34.8%, of which 19.7% came from Canal tolls. The Colón Free Zone, for its part, accounted for 18.1% of total exports.

III

The export boom and the Panamanian economy

In order to illustrate the process of de-industrialization which has taken place in Panama, a model is presented here which divides the economy into three sectors: the booming sector (A), which may be equated with the activities in the Canal Zone or the Colón Free Zone; the lagging industrial or agricultural sector (R), and the non-tradeable goods or services sector (N). In each of these, production is determined by the capital, natural resources and labour factors. The last-

named factor is movable, seeking to match the wages paid in the three sectors in question.

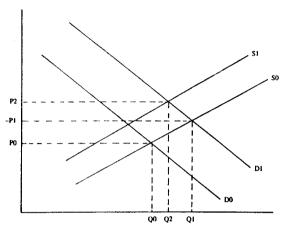
Let us suppose that the boom in sector A raises the incomes of those representing the factors used in it, and this in turn has two other effects: the expenditure effect and the resource transfer effect (Corden, 1984). On the side of the expenditure effect, as a result of the boom in sector A demand is stimulated in the services sector, N, so that prices rise, the production of non-tradeable goods is encouraged, and labour is attracted from sectors A and R, thus reducing the production of sector R. This can be seen from figure 5, where the vertical axis shows the relative

² See Gregory, 1976; Corden and Neary, 1982; Corden, 1984; Enders and Herbeg, 1983. For a summary of the experience of several developing countries, see Cuddington, 1989.

FIGURE 5

Panama: Graphic representation of the effects of the "Dutch Disease"

Prices of non-tradeables in relation to tradeables



Non-tradeables

Source: Prepared by the author.

price of a non-tradeable compared with a tradeable, while the horizontal axis shows the output of services. The supply curve is derived from the transformation function between N and the two tradeable goods sectors. The demand curve shows the demand for services at their different prices. The income effect displaces the demand curve from D_0 to D_1 , which increases the consumption of services from Q_0 to Q_1 and the price of services from P_0 to P_1 . The rise in the price of services attracts labour from the lagging sector and reduces the production of sector R.

The resource transfer effect is due to the increased demand for labour in A, which causes labour to move to it from R and N. The outflow of labour from sector R causes a further reduction in the output of that sector, which is termed "direct de-industrialization". In turn, the movement of labour from the services sector to A generates an excessive demand for services, which is represented in figure 5 by the movement of the supply curve from S₀ to S₁. This increase in demand gives rise to a fresh increase in the price of services from P₁ to P₂, and this in turn causes an additional outflow of labour from the lagging sector to the services sector, thus accentuating the contraction of the former. The combination of the expenditure effect with the effect of the transfer of labour from R to N causes what is called "indirect

de-industrialization", which is added to the direct de-industrialization caused by the movement of labour from the lagging to the booming sector.

At the same time, the profitability of sectors A and N increases because of the rise in production, while it goes down in the case of sector R. The lower profitability of the lagging sector discourages investment in it, which is attracted instead to sector N.

In the model, it is considered that both agricultural and industrial production go down even in conditions of unemployment, if it is assumed that the movement of labour primarily affects skilled workers. If it is assumed that the booming sector does not attract labour from the other sectors, then the resource transfer effect would not occur. The expenditure effect would occur, however, as a result of the increase in the prices of N, thus causing revaluation of the real exchange rate and a consequent reduction of R. In this case, the expenditure effect could also take place through increased public sector consumption due to possibly greater fiscal revenue thanks to the boom in A.

It should be noted that expectations that the economic boom would continue could give rise to a tendency to spend beyond the means of the economy. This would not only accentuate the contraction of the industrial and agricultural sectors but could also create a chronic situation of low rates of saving, current account deficits, and external indebtedness.

Although the "Dutch Disease" model does not analyse the repercussions on the demand for and supply of credit, the increased demand for the goods of sector N could raise the demand for credit to finance that sector's production. Thus, the financing that might have gone to sector R would be displaced to sector N, and this would further accentuate the former's contraction. In Panama, credit to the agricultural and industrial sectors represents 4% of the total (Loehr, 1991).

Furthermore, in view of the tendency towards contraction the lagging sector might demand protection, to which end a number of measures to inhibit competition might be applied. Thus, in Panama there has been a rigid system of quotas, customs tariffs and support prices. This has been a factor in creating a situation in which the prices of some agricultural products are as much as three times higher than the Central American average (Loehr, 1991). Tariff protection for the manufacturing industry, weighted by production, has averaged 66.8%, but the effective level of protection has been much higher, since industrial

inputs have been exempt from customs duties. The fact is that Panama has higher and more dispersed customs tariffs than the CACM countries (Loehr, 1991), and according to Thoumi (1994) it has been one of the most protectionist countries in the whole continent.

This high level of protection could explain the concentrated structure of manufacturing, but on the other hand this structure could itself be responsible for the high protection, since it has been observed in various countries that the greater the concentration of industry, the more intensive are the campaigns for higher protection (Connolly and de Melo, 1994).

It should be noted, however, that Panama's export boom is not necessarily a negative factor. On the contrary, its good effects are reflected in the high per capita income levels, the level of social development, and the rates of growth attained. At the same time, however, in view of the progress being made all over the world in economic liberalization, the fact of remaining aloof from an important source of benefits deriving from industrial production could represent a high opportunity cost for the country. It should be noted that manufacturing has been recognized as a source of technological change which benefits the economy as a whole, specifically through reductions in costs, improvements in quality, and the acquisition of new skills. The expansion of the services sector, on the other hand, has been criticised because it does not make possible the cultural, technical and intellectual development that only a sound and vigorous manufacturing sector, and the urban development associated with it, can bring (Kaldor, 1981). It has also been noted that an economy accustomed to receiving a steady inflow of rents runs the risk of being incapable of generating its own income when the source of those rents disappears (Ellman, 1981).

Furthermore, recent studies have shown that the expansion of the services sector does not generate economic growth (Dutt and Lee, 1993). In particular, Harry Johnson (1976) has expressed his pessimism about the effects of the financial sector on the Panamanian economy. This is why it is important to strengthen the country's productive sector and at the same time correct the constraints imposed by the Dutch Disease.

In other words, it would be desirable to put the Panamanian economy on a new track, both in order to help surmount the protectionism and stagnation of its productive sector and in order to take advantage of the benefits of competition and productivity. Panama should not remain aloof from the integration movements which have grown up in the subregion. These movements, based on open regionalism, seek to promote efficiency through subregional competition and coordination and are effective means of securing better linkages with the international economy (ECLAC, 1994; Fuentes, 1994).

For these reasons, if the country is to take full advantage of its geographical location it must take a number of measures to endow its production apparatus with competitiveness and innovative capacity. This modernization of the national economy would not only lead to a faster increase in productivity but also to the consolidation and expansion of Panama's role as an international centre. In the following paragraphs we will see whether integration with the CACM can be an effective means of furthering the modernization of the Panamanian economy.

IV

Would integration with the CACM bring benefits for Panama?

Subregional integration could complement the structural reforms needed in Panama and make them more sustainable, while at the same time contributing to the modernization of production, social progress and the development of the country's export sector.

It has been observed that trade among members of integration schemes is basically of an intraindustry nature (Balassa and Bauwens, 1987; Cáceres, 1994) and that this type of trade takes place because of the similar levels of per capita income and GDP of the member countries (Forster and Ballance, 1991; Greenaway, Hine and Milner, 1994). Similarly, according to customs union theory, the more similar the member countries are, the greater will be the amount of new trade created in an integration scheme (El-Agra, 1989), and the same will be true if the coun-

tries already have substantial trade relations (ECLAC, 1994). The integration scheme whose members have the levels of GDP most similar to those of Panama is the CACM, and several of its members already have substantial trade links with Panama. Consequently, if Panama linked up with the CACM this could be most beneficial in terms of the generation of trade.³

Integration with the CACM would also give Panama a broader market, which would not be the case if the country opted for unilateral trade liberalization. 4 Specifically, the CACM would give Panama, under conditions of reciprocity, a market of 22 million people, which would facilitate its exports. This is of special importance in view of the high degree of variability of Panama's terms of trade (Leamer, Guerra, Kaufman and Segura, 1995): in order to stabilize this indicator, these authors recommend the export of manufactures, which would be made possible by the broader Central American market. The terms of trade would also improve because Panama could sell its products at "protected" prices by virtue of the common external tariff, whereas the countries exporting to the CACM and to Panama would be obliged to lower their prices in order to remain competitive. 5

Within the CACM, the expansion of the market through integration gave rise to increases in private investment (Cline, 1978). Indeed, the recent reformulation of the theory of the "Big Push" within a context of imperfect competition (Murphy, Sheleifer and Vishny, 1989) holds that simultaneous investments in different sectors of a country generate reciprocal markets by simultaneously increasing demand for products by those sectors, so that companies can make profits that

they would not achieve without this set of investments. This complementarity of effective demand, which is connected with market size, can be generated in a subregional setting through integration. Thus, the geographical proximity of Panama to the CACM countries would enable it to receive the spillover of investments from those countries and thus sustain an effective capital formation effort.

Furthermore, integration with the CACM would prepare Panama for possible future integration with more developed markets—for example, with that arising from the North American Free Trade Agreement (NAFTA)— and would serve as a learning mechanism for the development of competitive advantages which, with time, would allow it to successfully join other economic blocs. ⁶

At the same time, broadening of the market would reduce national industrial concentration, since concentration of firms in the market at the Central American level would tend to prevail. This would facilitate exports, because of the inverse relation between industrial concentration and the price/cost spread (Sleuwaegen and Yamawaki, 1988; Forster and Ballance, 1991). Indeed, it has been suggested that economic integration has a stimulating effect, because greater competition gives rise to extra efforts on the part of companies and managers (Pelkmans, 1982), while at the same time integration reduces production costs and increases company productivity (Venables, 1994). In the case of Central America, integration has helped to bring down inflationary pressures through competition (Cáceres, 1978). Likewise, in the case of the EEC, calculations of the dynamic effects of integration in terms of greater efficiency, increased saving and economies of scale show that these benefits are of significant magnitude (Péres, 1993). All this shows that integration is an effective means of offsetting the tendencies towards stagnation associated with the Dutch Disease.

Figure 6 shows what integration can do to offset the harmful effects of this disease. In that figure, which for reasons of brevity shows only the functioning of the expenditure effect, labour market wages W are shown on the vertical axis and the labour supply OsOt is shown on the horizontal axis. The labour input of the services sector is represented by the dis-

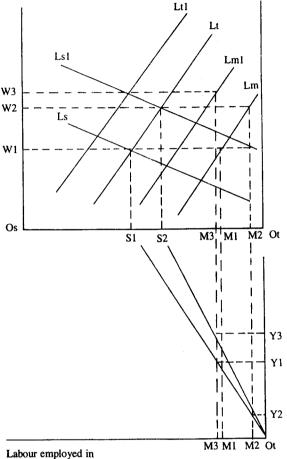
³ Forster and Ballance (1991) note that the magnitude of specialization and intra-industry trade tends to be greater among countries which are of similar size or income levels. Furthermore, the higher the per capita income and the bigger the market, the greater will be the degree of intra-industry specialization for most industries. Cáceres (1994), for his part, gives an analysis of intra-industry trade flows in the case of Central American integration.

⁴ When considering a scheme of unilateral trade liberalization for Panama, it is worth bearing in mind the question posed by Dornbusch (1989): "...it has been suggested that Argentina should adopt a position of unilateral free trade. But what industry could survive under such a scheme, and would such a result come within the limits of the politically acceptable? If the answer is no, then a customs union could be a very important alternative for reducing the costs of protection".

⁵ Wonnacott and Wonnacott (1981) and Dornbusch (1989) analyse the question of the terms of trade in an economic integration scheme.

⁶ Cáceres (1993 and 1994) highlights the opportunity to prepare for a future good performance in integration schemes with more developed countries, pointing to the complementarity between subregional integration and subsequent global liberalization.

FIGURE 6 Panama: Expenditure effect and integration



Labour employed in industrial sector

Source: Prepared by the author.

tance from Os, while that of the manufacturing sector corresponds to the distance from Ot. The lower quadrant contains the production function of the manufacturing sector, where production Y corresponds to different levels of labour. The curve Ls represents the demand for labour in the services sector, while Lm refers to the demand for labour in the industrial sector. The total of the demand for labour in the industrial sector and the demand for labour in the booming sector gives the total demand for labour of the export sector, Lt.

When we look at the income effect, we can see in the figure how the export boom gives rise to an increase in the consumption of services; this stimulates the demand of this sector for labour, which shifts the curve from Ls to Ls₁. Balance is restored at a wage level W_2 . At this wage level, employment in services increases from S_1 to S_2 , while employment in industry goes down from M_1 to M_2 , giving rise to a contraction in industrial production from Y_1 to Y_2 .

If the country joins the CACM, labour productivity in the industrial sector will rise. This increase in the marginal product of labour is represented in the figure by the shift of curve Lm to Lm_1 , which in turn causes curve Lt to shift to Lt_1 . The new balance is established at wage level W_3 , which causes a decline in employment in services and an increase in employment in industry, from M_2 to M_3 , as a result of which industrial production rises from Y_2 to Y_3 . We see, then, that integration has increased both industrial production and employment from Y_2 to Y_3 and from M_2 to M_3 , respectively, thus offsetting the effects of the Dutch Disease.

Furthermore, as an additional benefit, integration would give Panama a further incentive to maintain macroeconomic discipline, for economic liberalization in a multilateral (subregional) framework would be more effective than at the national level, because of the strict discipline and compliance demanded by the multilateral supervision (Wolf, 1986; Genberg and De Simone, 1993). Likewise, reforms in a subregional framework would generate greater credibility, which, together with sustainability, is one of the determining factors in the success of reform programmes (Rodrik, 1990) and 1991; Funke, 1993). Furthermore, it would facilitate Panama's access to the store of experience of the CACM countries on economic reform, as well as easing its participation in the effort to change production patterns. This could be easier for it because the other countries have already gone through this same process and because of the international support that the Central American integration programme has received. Panama's geographical proximity to the CACM countries would also stimulate its exports, for distance and transport costs have been identified as the factors which do most to inhibit intra-Latin American trade (Primo Braga, Safadi and Yeats, 1994). In addition, because of the boost it would give to exports, integration would be effective in mitigating the adverse effects of the structural adjustment process. 7

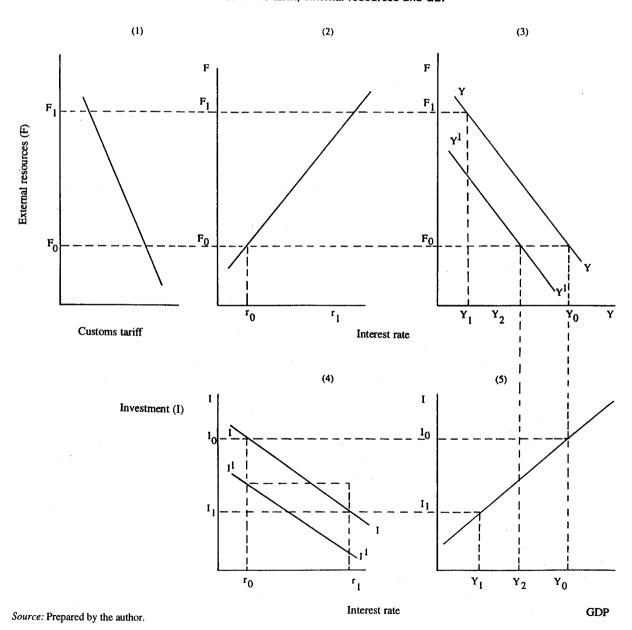
⁷ Greenaway and Hine (1991) argue that in the case of the EEC the economic adjustment costs have been reduced by trade integration. It may be noted that in El Salvador the Salvadorian Economic and Social Development Foundation (FUSADES, 1991) carried out a survey of 323 firms in November 1991, and their responses on the main benefits of Central American integration were as follows: more exports (21.1%); cheaper imports (53.9%); possibilities of investment in the subregion (17.0%); no benefits (15.2%), and miscellaneous other benefits (10.5%).

For Panama, economic integration with the CACM countries would be a "market swap" among countries with similar levels of development, and this, together with the common external tariff, would enable it to keep its trade account at manageable levels. This is a very different matter from unilateral liberalization, where the lack of reciprocity as regards tariff preferences and the imbalances with the rest of the world could lead

to a serious deterioration in the trade account. This is precisely what has happened in the region since 1989, when most of the trade liberalization programmes started (Gana, 1994). It should be noted that in order to finance the trade deficit it is possible that very high interest rates which would attract foreign capital might be needed, and this could tend to bring on contraction or stagnation of the economy (figure 7).

FIGURE 7

Panama: Customs tariff, external resources and GDP



Ouadrant 1 of that figure shows the inverse relation between the trade deficit and the level of customs tariffs. Initially, in order to finance the trade deficit an inflow of external resources F_0 is required, which is obtained by offering an interest rate r_0 , as may be seen from quadrant 2. Quadrant 4 shows the level of investment I_0 corresponding to interest rate r_0 . This investment gives rise, through the multiplier, to a level of product Y_0 , which is shown in quadrant 5. It may be noted that when there is a tariff reduction, the resulting larger trade deficit will make necessary a larger inflow of external resources F_{i} , which would be obtained at a higher interest rate r_1 and would lead to a lower rate of capital formation I_1 and a smaller product Y_1 . It may be seen from quadrant 3 that in these circumstances there is an inverse relation between the inflow of external resources and the gross domestic product, since the external resources are bolstering up an economy which is contracting and has a decreasing rate of capital formation. Furthermore, the greater need for external resources will be reflected in a growing external debt, which, coinciding with stagnating levels of GDP, could mean a deterioration in credit-worthiness. This process may be described as irreversible. This happens when, on restoring the trade deficit to its original value F_a , it is not possible to recover the original value of the product Y_0 because the uncertainty caused by the recession has led to a structural change in the relation between investment and interest rates, so that, for a given interest rate, the rate of investment is less than it was before. 8 This is shown, in quadrant 4, by the shift of curve I I to I^1I^1 . It may be seen that if the trade deficit is brought back to its value F_o , the product would only recover to value Y_2 , which is less than the initial level Y_{o} .

\mathbf{V}

Towards a regional structural reform agenda within the framework of integration

Panama's integration with the CACM should be a gradual process which makes it possible to take advantage of benefits in certain areas while promoting a context of free trade in the medium term. This would mean establishing a generalized tariff reduction programme to be applied to a growing range of products. The present trade treaties between Panama and the CACM do not promote competition: on the contrary, as Thoumi (1994) points out, they are veritable instruments of protection due to collusion between producers on both sides, who share out the markets in accordance with their own regulations. This author also notes that this form of trade reflects exchanges among subsidiaries of transnational corporations on the basis of negotiated trade. This is why it would be desirable to progress gradually towards free trade with the CACM while establishing a level of protection against the rest of the world –until such time as the necessary reforms have been consolidated—which is lower than the present one. Without the minimum protection that needs to be applied against the developed countries, the resulting trade deficits would make it necessary to adopt high domestic interest rates to attract foreign capital in order to help finance those deficits. The high cost of capital would lead to the stagnation of private investment and, ultimately, to loss of credibility of the macroeconomic reforms, thereby further accentuating the contraction.

Because of its excellent port facilities and its status as an important international financial centre, Panama has special advantages to offer in the services sector. Its integration with the CACM could therefore be based on this sector. However, the cost of Panama's sea transport facilities is extremely high, so that there would be little incentive for the CACM countries to use those facilities. Moreover, land transport in Panama is also more costly than in the other Central American countries and has a rigid oligopolistic structure (ROCAP, 1987). A joint programme of integration and deregulation of the services sector

⁸ Pyndyck and Solimano (1993) give an analysis of the negative impact that higher risk and lower credibility have on investment. The structural change that occurs as a result of the persistence of economic shocks is analysed in Cáceres (1985 and 1991).

could be organized in order to promote competition and make economic integration more feasible and fruitful. A priority measure in such a programme would be the implementation of national and subregional policies on competition.

The effort to bring about a structural change in the Panamanian economy cannot be restricted exclusively to policy reforms. It will also be necessary to take action in other fields, especially in export promotion, the dissemination and adaptation of technology, and the training of high-quality technicians and managers. Indeed, the impressive growth of the Asian developing countries has been based on the adoption of policies that strengthen the functioning of the State as well as the market, thereby making possible an economic and institutional framework which furthers equity and international competitiveness (Lim, 1994). The levels of protection applied in these economies have not been excessive, but have served to make up for the absence of market mechanisms in some cases and to improve their functioning in others. Transparent protection schemes have been established, human resources have been trained, support has been given to the development of new technologies, fiscal reforms have been applied, and market information has been provided. Furthermore, the coordination of private investment through subsidies has been carried out under the guidance of public-sector professionals of high technical calibre, thus ensuring the success of State action in this respect (Rodrik, 1995).

In view of the importance of making structural changes, it would be desirable for Panama, in conjunction with the CACM countries, to promote a subregional strategy for economic and social reform. Such a strategy could be carried out through joint efforts to facilitate intra-regional and international cooperation, exchanges of experience, and coordinated progress in national reforms to make the individual economies really capable of being integrated as well as bringing them closer to the possibility of integration with other regions. A relevant example is that of Chile, whose series of important economic reforms is generally recognized as an advance which will facilitate its integration with NAFTA (*The Economist*, 25 February-3 March 1995, p. 29).

Such a strategy would mean clearly identifying the objectives that each country wants to reach through integration and deciding on the reform measures that need to be applied in order to arrive at

a productive and social system in keeping with those of the subregion and of other schemes, such as NAFTA or the Andean Pact, for example. It would also mean differentiating between measures of national, subregional and international scope; establishing time schedules for each measure, differentiated by countries; and specifying the authorities responsible for carrying them out. The strategy could be formulated by the Central American Economic Cabinet, which could also be responsible for monitoring its execution. Within this framework, each country would identify the national scope of the reforms, programme the corresponding action, and make sure that they fitted in with the requirements at the subregional and international levels. The starting point could be the preparation of subregional-scope sectoral diagnostic studies which would make it possible to identify the reforms needed at the national level to meet given economic modernization objectives and goals within a framework of regional and international coordination. The measures resulting from the regional diagnostic studies would be applied at the national level according to what needed to be done in each country and the respective time schedule. In the execution of national reform measures emphasis would be placed on the elimination of obstacles to regional and international integration. This approach could also be useful for establishing a subregional dialogue with international sources of finance and technical cooperation, as well as with countries in other regions.

Likewise, when shaping this strategy the Central American countries could suggest to the NAFTA member countries that they participate as observers in the process of economic and social change, so as to establish an ongoing dialogue with a view to the future incorporation of Central America into that integration scheme. Such a multilateral framework for the reforms, with the participation of the NAFTA member countries, would give the process greater credibility. Furthermore, this joint dialogue would increase the bargaining power of the first-named countries and could help to make possible reforms of special importance in their economies.

The multilateral strategy would embrace economic reforms and especially social ones, so as to lay the foundations for a more equitable economy which would also help to consolidate the economic modernization process. In some countries, special emphasis would be placed on social development, in order to

correct long-standing shortcomings and promote the convergence of social indicators throughout the sub-region. In other words, emphasis would be placed on national integration. ⁹ Within this framework, support

for the development of human capital is particularly important, since this resource is of decisive significance for the export of manufactures (Wood, 1994; Wood and Berge, 1994; Balassa and Bauwens, 1988).

VI

The increases that would be registered in Panama's exports and imports to and from the CACM if it were a member of that group

In order to estimate what Panama's performance within the CACM would be if it became a member, econometric gravity models were applied. In this kind of model, the trade between two countries is a direct function of their respective "economic masses" and the "distance friction" between them.¹⁰

In order to represent the "economic masses", the amounts of human capital in the exporting and importing countries (Hi and Hj, respectively) and their corresponding gross national products (Yi and Yj) were used. The "distance friction" affecting trade was represented by the distance in kilometres between the respective capital cities (Dij). "

As a first approach, a cross-section equation was estimated to explain intra-Central American exports,

excluding those of Panama. With the parameters of this equation, the values of Panama's exports to the CACM countries were then calculated. The exports thus calculated would reflect a situation in which Panama was a member of the CACM; the difference between these estimated exports and the real exports would correspond to the additional exports that Panama would make if it became a full member of the CACM.

The estimated equations for exports, *Eij*, do not include Guatemala because no information was available on the human capital indexes of that country (table 2). It will be noted that both equations confirm that distance tends to reduce trade and that the elasticity of exports with respect to human capital is greater than their elasticity with respect to GDP.

TABLE 2

Central America, excluding Panama and Guatemala: Gravity model

Dependent variable		Independent variables ^a						
	c	Hi	Нј	Yi	Yj	Dij	R2	DW
(1) Log Eij	-9.08 (1.45)	3.03 (2.90)	1.09 (1.05)			-1.04 (1.28)	0.53	2.30
(2) Log Eij	-7.03 (1.61)			1.27 (4.25)	0.28 (0.94)	-0.42 (0.98)	0.44	2.09

Source: Prepared by the author.

^a Logarithms of the independent variables.

⁹ Ranis (1993) has given a very full description of the domestic requisites for regional economic integration. It may be recalled in this connection that in order to make possible the establishment of the Single Market in 1992, the EEC had already adopted a set of 282 measures as far back as 1985 (Pelkmans, 1991).

¹⁰ Markheim (1994) gives an assessment of the reliability of gravity models for estimating the effects of integration on trade.

¹¹ In this study, the human capital index has been quantified as the enrolment rate in secondary education, plus five times the enrolment rate in the tertiary level. These human capital indexes were calculated on the basis of data from the World Bank (1993). The data on GDP, intra-regional trade and the distances between countries were taken from SIECA (various issues).

On the basis of equation (1), the values of Panama's exports to four Central American countries were calculated (table 3). From these values, it was estimated that if Panama's exports were made under the provisions of the CACM, they would amount to US\$149 million: i.e., approximately three times the actual value registered in 1992. This is explained by the relatively high levels of human capital of Panama and Costa Rica, its main trading partner and closest neighbour.

Another approach used to measure the possible impact of Panama's entry into the CACM was the estimation of cross-section equations for the exports of the CACM countries and for Panama's exports to the

CACM, introducing dummy variables to measure the particular values of intercept (D1) and the distance coefficient (D2) when applying the model to the latter country's exports. The qualitative variables were significant in all the equations (table 4). Thus, equations (3) and (5) show that, as regards Panama's exports, their constant terms are lower by -1.66 and -1.38, respectively. These negative terms could be interpreted as a penalty on Panama's exports for not being a member of the CACM. Equations (4) and (6), for their part, indicate that Panama's exports suffer "frictions" of -0.23 and -0.19, respectively, because of the greater distance than that of the CACM countries.

Panama: Estimates of the country's exports if it were a member of the CACM (Millions of dollars)

Exports to:	Estimated amount using equation (1)	Estimated amount using equation (4)	Estimated amount using equation (6)	Actual amount (1992)
Costa Rica	96.54	139.00	105.6	29.1
Nicaragua	28.22	7.35	5.5	1.4
Honduras	1.08	5.52	13.4	3.2
El Salvador	23.10	70.30	51.9	12.3
Guatemala	-	-	16.8	3.9
Total	148.94	222.17	193.2	49.9

Source: Prepared by the author.

TABLE 4 Gravity model, including Panama, with qualitative variables for intercept (D1) and distance (D2)

Dependent		Independent variables ^a								
variables	С	Hi	Hj	Yi	Yj	Ďij	DI	D2	R2	DW
(3) Log Eij	-11.33	3.16	1.47			-1.11	-1.66		0.61	2.32
	(1.88)	(3.36)	(1.92)			(1.67)	(2.17)			
(4) Log Eij	-11.03	3.09	1.40			-1.07		-0.23	0.60	2.29
	(1.83)	(3.29)	(1.81)			(1.56)		(2.11)		
(5) Log Eij	-7.92			1.33	0.46	-0.59	-1.38		0.62	2.15
	(1.93)			(4.44)	(1.69)	(1.45)	(2.33)			
(6) Log Eij	-8.13			1.33	0.46	-0.57		-0.19	0.62	2.16
	(1.98)			(4.46)	(1.71)	(1.36)		(2.40)		2

Source: Prepared by the author.

a Logarithms of the independent variables.

On the basis of these results, an estimate was made of the difference that integration could make for Panama's exports. For this purpose, it was assumed first of all that Panama's entry into the CACM would eliminate the negative additional terms of the constants in equations (3) and (5). Thus, on the basis of equation (3) it was calculated that if Panama entered the CACM its exports would increase by a factor of 5.26, while on the basis of equation (5) it was estimated that exports would increase by a factor of 3.97 (exp. (1.38) = 3.97). ¹² An estimate was also made of the extent to which Panama's exports would increase through entry into the CACM, on the basis of equations (4) and (6). In this case, likewise, it was

assumed that the terms penalizing Panama's exports (-0.23 Log Dij and -0.19 Log Dij) would not exist if Panama were a member of the CACM. In the case of equation (4), it was estimated that Panama's exports would increase by a factor of 4.8, while in the case of equation (6) it was estimated that they would increase by a factor of 3.8.

In order to estimate Panama's imports from the CACM, assuming that the country entered that integration scheme, a method similar to that employed for exports was used. Thus, equations were estimated for Panama's imports from the CACM, using the qualitative variables *D1* and *D2* for Panama as an importing country (table 5). ¹³

TABLE 5

Gravity model for imports, specifying Panama with qualitative variables for intercept (*D1*) and distance (*D2*)

December 2011			l	ndependent var	iables ^a			
Dependent variables	<i>C</i>	Hi	Hj	Dij	D1	D2	R2	DW
(7) Log (Mij)	-7.9227 (1.60)	1.4551 (1.88)	2.3896 (3.78)	-1.0581 (1.94)	1.0713 (1.71)		0.70	2.36
(8) Log (Mij)	-7.7607 (1.57)	1.4171 (1.84)	2.3458 (3.70)	-1.0204 (1.83)		-0.1483 (2.81)	0.69	2.35

Source: Prepared by the author.

Equation (7) was used to calculate the probable increase in Panama's imports if that country joined the CACM. It was estimated that the increase would be US\$198 million, which is less than the increase of US\$241.96 million in the country's exports calculated on the basis of equation (3). This indicates that if it entered the CACM, Panama would be able to close its trade deficit with that market, which came to US\$36 million in 1992.

Similarly, using equation (8), Panama's imports from four CACM countries were calculated (table 6). It may be noted that if Panama entered this integration scheme, these imports would amount to US\$191.72 million, in contrast with a total of US\$222.17 million for its corresponding exports.

Thus, the estimated models indicate that Panama would improve its trade balance with the CACM if it joined the group.

TABLE 6

Panama: Estimate of the country's imports if it were a member of the CACM (Millions of dollars)

Imports from:	Estimated amount (equation (8))	Equation of actual amount		
Costa Rica	155.36	56.7		
Nicaragua	2.91	1.0		
Honduras	9.12	3.0		
El Salvador	24.32	7.9		
Total	191.72	68.6		

Source: Prepared by the author.

^a Logarithms of the independent variables.

¹² The main explanatory variables in equations (3) and (5) are the amount of human capital and the size of GDP, respectively, and in both these cases Panama registers relatively high values, thus explaining the substantial increase that Panama's exports would register if it were a member of the CACM.

¹³ The results are not presented using the GDP as an explanatory variable because the coefficients of determination and the statistical significance of the estimators proved to be very low.

VIII

Final considerations

The Panamanian economy has registered export booms which could give rise to a relative contraction in the manufacturing and industrial sectors. This would also contribute to a contraction in investment and exports of goods. Within this context, a very marked demand for protection has arisen. This reaction, which is not in keeping with the regional and international trends towards modernization and competition, confirms the need to change the structure of the country's economy.

Economic integration could be a valuable means for aiding in the tasks of modernizing production. Firstly, the economic liberalization process would enjoy greater credibility, because there would be a multilateral commitment to adjustment; secondly, the cost of the adjustment could be reduced by increasing exports, and thirdly, it could serve to promote increased productivity, which would be an effective means of offsetting the ill-effects of the "Dutch Disease".

Of the various integration options that Panama might consider, the Central American integration programme could be the most promising, since there would be greater creation of trade and intra-industry trade would develop more among countries with similar levels of GDP and per capita GDP. Panama's integration with the CACM should be viewed as a measure which would bring that country closer to its national goals, especially through the acquisition of export experience and the strengthening of its competitiveness, as a first step towards integration with other schemes (such as NAFTA).

Panama's participation in a subregional structural reform scheme would allow it to take advantage of other countries' experience and gain access to international technical cooperation. This regional framework of change should cover both economic and social reforms, in order to consolidate the national integration needed to sustain regional integration.

Econometric estimates show that Panama could have a favourable export performance if it entered the CACM, because it has human capital of higher level than the present CACM countries (except Costa Rica), and human capital is the main determining factor of export capacity.

(Original: Spanish)

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