NATIONAL ACCOUNTS
IN LATIN AMERICA
AND THE CARIBBEAN

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AND THE CARIBBEAN

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INTRODUCTION

Since its establishment, CEPAL has been concerned with the progress of macroeconomic measurements in the region which are crucial to the quantitative analysis of development processes on the medium and long term, the analysis of the short-term evolution of the Latin American economies, planning, and the design and evaluation of the effects of economic policies.

This concern has been reflected over the years in the analytical studies of the CEPAL Secretariat itself; in its work on producing estimates of product and income; in its technical advisory assistance to the countries for setting up their systems of national accounts and in developing their basic statistics; in the groups of experts and regional seminars which have met to analyse the possibilities for regional application of the proposals for revising the System of National Accounts of the United Nations; in its support of the training programmes of ILPES, CIENES, CEMLA and other bodies in the area of social accounting; and in its maintenance of a permanent mechanism for information and communication among technical experts and staff members in the member countries on the international recommendations and methodological advances taking place in this discipline.

Throughout this process, and in preparation for regional meetings or seminars, CEPAL has been producing documents[1] which explain various aspects of the national accounts situation in Latin America, as well as the methodological and statistical obstacles encountered in their preparation. It has also tried to promote discussion of feasible alternatives to improve the quality and relevance of the estimates of national accounts which the countries have needed in order to orient their development efforts.

This document is one more link in this chain and for the moment tries to update the guidelines and diagnoses of its predecessors on the availability of national accounts estimates and of the methods used by the countries to produce them. It also proposes to promote an extensive discussion on the possibilities of broadening the coverage of these estimates to incorporate categories which have become indispensable in the analysis of the operation of the Latin American economies and their consequences in terms of efficiency and well-being. This document also tries to point out some promising possibilities for improving the quality of current estimates. Finally, it attempts to promote a consensus between producers and users on the priorities and orientations which will govern the development of basic economic statistics so that the Latin American countries will have data bases that are relevant to analysing the problems they face, which are of appropriate quality and timeliness with regard to the complexity and urgency of these problems and whose production will be suitable to the availability of resources in the countries and will be harmoniously combined with their institutional development.

Inspired by these purposes, CEPAL combined its efforts with those of the Government of Mexico and UNDP in the joint organization of the Latin American Seminar on National Accounts, which was held in Mexico City on 10-14 August 1981 and was attended by most of the national accounts experts in the region and observers for regional and international bodies interested in the subject.

The advances made and solutions applied with respect to various problems by the Mexican Government's programme will provide experts of the region —because of the characteristics and dimensions of this effort themselves— rich material for re-examining the problems and identifying ways to improve the national accounts of the countries. In turn, a preliminary version of this document served as a basis for the seminar discussions, promoting a general exchange of information, knowledge and experiences among the participant countries on the practices followed by each in the preparation of its national accounts, and collectively evaluating the current situation and future prospects of the development of national accounts of Latin America. The revised version presented here includes the observations and explanations made in that seminar.

I. AVAILABLE ESTIMATES OF NATIONAL ACCOUNTS IN LATIN AMERICA AND THE CARIBBEAN

This chapter deals with the current state of the estimates on national accounts in the countries of Latin America and the Caribbean. For this purpose, it has adopted an essentially pragmatic approach which mainly tries to reflect the different types of macroeconomic information included in the national accounts prepared annually by each country. Thus, for the purpose of summarizing and systematizing the estimates, the frame of reference of the requirements for information on the current System of National Accounts (henceforth SNA)[2] has been used.

Although not all the countries prepare estimates in accordance with the latest SNA revision, it is possible to present a synthetic and overall view of the degree of development in each country by national accounts —in terms of categories and detailing of transactional flows— on the basis of the accounts and tables of the current SNA. This method also makes it possible to assess the degree to which the countries are applying the present SNA.

To examine each country's experience, two sources are available: official publications and the responses to the questionnaire on current accounts of the United Nations Statistical Office. The limits of such a procedure are obvious, since on the one hand it is not always possible to determine the real correspondence between the international recommendations and the criteria applied in each country and, on the other hand, it is not feasible to reflect the entire work being done on a given country, since the sources used refer only to the published estimates and not those which are in the process of being prepared.

Thus, the inventory in this chapter on the existing estimates in each country does not assume a selective evaluation based on the quality of the results obtained or the effectiveness of the procedures used in each case, nor does it make a judgement on the effective comparability among the estimates of the various countries. In many cases, it does not imply an evaluation of the comparability between similar series of a country which are recorded in different tables. As pointed out, some countries continue to apply the previous SNA[3] while others, whether because they have by now partially completed the work of revision of their historical series or because they are applying the current SNA gradually, use the new series for some areas and the old series for the rest.

The analysis includes 29 member countries of CEPAL, including the English-speaking countries of the Caribbean. The only exception is Cuba, which applies the System of Balances of the National Economy (MPS).[4]

The estimates at current prices have been classified into 24 categories, while the estimates at constant prices will include new categories, limited to the production and use of goods and services, since the SNA recommendations do not

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suggest the deflation of current prices for categories for which it is not feasible to define the quantum unequivocally. The detailed inventory of the availability of estimates for each heading is shown in the tables of the annex. The situation revealed by this inventory is summarized in tables 1 and 2, according to whether the estimates are at current prices or constant prices. In these, the cases in which the estimates essentially include the flows and details required by the current SNA for the respective categories are indicated by an X, while the cases in which such requirements are fulfilled only partially are marked with a P. When the presentation of the series has been interrupted for several years, this is noted by placing in parenthesis the corresponding X or P.

The categories inventoried refer to the series of national accounts which are normally prepared periodically, and hence do not include the product input tables or the estimates or revisions made for a given year. For Haiti, therefore, no account has been taken of the recent publication of the new estimates for the fiscal year 1975/1976 which cover 22 of the 24 categories at current prices extensively and very fully, with the exception of the classification of final private consumption by type of expenditure and the increase in stocks by type of goods; similarly, for Venezuela the estimates made only for 1968 were not recorded.

Within three major areas of analysis, the following is an explanation of the availability of estimates on national accounts under each heading, including some conclusions of the analysis at the end.

A. PRINCIPAL AGGREGATES OF THE ECONOMY

The transactional flows included in the categories to be discussed in this part provide the material for the four consolidated accounts of the nation in the current SNA (Accounts I). These accounts are designed to summarize the transactions made in an economy and to highlight the main characteristics of the economic conditions and the strategic relationships among the various facets of the economic process.

1. Gross domestic product by type of expenditure

The estimate of the gross domestic product on the expenditure side includes the estimates of final consumption expenditure of the general government, final private consumption expenditure, increase in stocks, gross fixed capital formation and exports and imports of goods and services.

(a) *Estimates at current prices*

The estimate of these aggregates at current prices is one of the most widespread among the countries of the region, as may be seen in table 1 of the annex. The only exception is Grenada, and recently Argentina, which interrupted its publication in 1975 in order to make a revision of all the series at current prices.

Of the 27 countries for which information is currently available, 7 offer partial information, since not all of the concepts mentioned are presented separately. Normally, Haiti has been presenting final consumption expenditure in aggregate form, while the Bahamas and Trinidad and Tobago have been separately presenting gross capital formation; however, the four remaining countries have reduced the degree of information in the past few years: Barbados

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Table 1

AVAILABILITY OF NATIONAL ACCOUNTS ESTIMATES
AT CURRENT PRICES

Country	Application of SNA Rev. 3	Main aggregates of the economy				
		GDP by type of expenditure	GDP by cost structure	Available national income	Capital transactions of the nation	External transactions
Argentina		(X)	(X)	(P)		
Bahamas	X	P				
Barbados		P	(P)	(P)	(P)	
Bolivia	X	X	P	P	X	X
Brazil		P	P	P	P	
Colombia		X	X	X		P
Costa Rica	X	X	X	X	P	P
Chile	X	X	X	X		P
Dominica		X	(X)	(X)	(P)	
Ecuador	X	X	P	P	P	P
El Salvador		X	P	P		
Grenada						
Guatemala		X	(P)	(P)		P
Guyana		X	X	X		
Haiti		P	P	P		
Honduras		X	P	P		P
Jamaica	X	X	X	X	P	P
Mexico	X	X	X	X		P
Nicaragua		X	P	P		P
Panama		X	X	X		P
Paraguay		X	X	P		
Peru	X	X	X	X	X	X
Dominican Republic		X	P	P		
St. Lucia		X				
St. Vincent and the Grenadines	X	P	X			
Suriname		P	X	X	P	P
Trinidad and Tobago		P				
Uruguay		X	P	P		
Venezuela	X	X	X	X	X	X
Tables of the annex		1	3	4	5	6

(Table 1 continued 1)

Country	GDP by kind of economic activity	GDP range of selected activities	Domestic factor incomes by kind of economic activity	Supply and utilization of goods and services	Final general government consumption	
					By purpose	By costs and purpose
Argentina	(P)		(P)			
Bahamas	P					
Barbados	P	(P)	(X)			
Bolivia	X	X	P		X	X
Brazil	P	(P)	(P)			
Colombia	P	P	X			
Costa Rica	P	P	P			
Chile	X	X	X	X		
Dominica	P	P				
Ecuador	X	X		X		
El Salvador	P	P				
Grenada	P	P				
Guatemala	(P)	(P)				
Guyana	P	P				
Haiti						
Honduras	P	(P)			(P)	
Jamaica	X	X	X			
Mexico	X	X	X	X		
Nicaragua	P	P				
Panama	P	P			P	
Paraguay	P	X				
Peru	X	X	X		X	X
Dominican Republic	P	P				
St. Lucia	P					
St. Vincent and the Grenadines	X					
Suriname	P					
Trinidad and Tobago	P	P				
Uruguay	P	(P)	(P)			
Venezuela	X	X	X		X	
Tables of the annex	7	9	11	—	12	—

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(Table 1 continued 2)

Country	*Supply and utilization of goods and services*				
	Final private consumption by object	*Final private consumption by type of expenditure*	*Gross fixed capital formation by type of goods*	*Increase in stocks by type of goods*	*Gross fixed capital formation by kind of economic activity*
Argentina			(P)		
Bahamas					
Barbados					
Bolivia			X	(P)	(P)
Brazil			(P)		
Colombia			X		
Costa Rica			P		X
Chile			X		
Dominica			(X)		(X)
Ecuador			P		
El Salvador	X		X	(X)	(P)
Grenada					
Guatemala			P		P
Guyana					
Haiti					
Honduras	(X)		X		(X)
Jamaica	X		P	X	
Mexico	X	X	X	X	
Nicaragua			P		
Panama	X	X	X	P	
Paraguay			P		
Peru			P		
Dominican Republic			P		
St. Lucia					
St. Vincent and the Grenadines			X		
Suriname					
Trinidad and Tobago					X
Uruguay			P	P	
Venezuela	X		X		X
Tables of the annex	13	15	16	18	20

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(Table 1 concluded)

Country	Institutional sectors							
	Current income and outlay				Capital transactions			
	Non-financial enterprises (corporate)	Financial institutions	General governments	Households[a]	Non-financial enterprises	Financial institutions	General government	Households[a]
Argentina			(P)	(P)				
Bahamas								
Barbados					.			
Bolivia			(P)					
Brazil			P					
Colombia			P	P				
Costa Rica			X					
Chile			(P)	(P)				
Dominica								
Ecuador	X	X	X	X	P	P	P	P
El Salvador								
Grenada								.
Guatemala								
Guyana								
Haiti								
Honduras			P	P			P	P
Jamaica			X	(P)				
Mexico								
Nicaragua			P	P				
Panama			P	P			P	P
Paraguay			P	P				
Peru			X					
Dominican Republic								
St. Lucia								
St. Vincent and the Grenadines								
Suriname			(P)	(P)				
Trinidad and Tobago								
Uruguay			(P)	(P)				
Venezuela			(X)				(X)	
Tables of the annex	—	—	21	22	—	—	23	24

[a] Including non-financial and unincorporated enterprises. Also including private non-profit institutions serving households.

Table 2

AVAILABILITY OF NATIONAL ACCOUNTS ESTIMATES AT CONSTANT PRICES

Country	Application of SNA Rev. 3	Base period	GDP by type of expenditure	GDP by kind of economic activity	GDP range of selected activities	Supply and utilization of goods and services	Final general government consumption by purpose	Final private consumption by object	Gross fixed capital formation by type of goods	Increase in stocks by type of goods	Gross fixed capital formation by kind of economic activity
Argentina		1970	X	P	X				P		
Barbados		1974		P							
Bolivia	X	1970	X	X	X				X	(P)	(P)
Brazil		1970	P	P							
Colombia		1970	X	P	P				X		
Costa Rica	X	1966	X	P	P						
Chile	X	1977	X	X	P	X			X		
Dominica		1977	P	P							
Ecuador	X	1975	X	X	X	X			P		
El Salvador		1962		P	P						
Guatemala		1958	X	P	(P)				P		
Guyana		1970	X	P	P						
Haiti		1955	P	P	P						
Honduras		1966	X	P	(P)			(X)	X		
Jamaica	X	1974	(X)	X	X			X			
Mexico	X	1970	X	X	X	X		X	X		
Nicaragua		1958	X	P	P				P		
Panama		1960	X	P	P			X	X	P	
Paraguay		1977	X	P	X				P		
Peru	X	1973	X	X	X				P		
Dominican Republic		1970	X	P	P				P		
St. Vincent and the Grenadines	X	1976		X							
Trinidad and Tobago		1970		P	P						
Uruguay		1961	X	P	(P)				P	P	
Venezuela	X	1968	(X)	X	P			(X)	(X)		X
Tables of the annex			2	8	10	—	—	14	17	19	

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and Suriname have stopped publishing separately the data corresponding to increase in stocks and gross fixed capital formation; Brazil obtains its figures for final consumption expenditure and increase in stocks together and residually; and St. Vincent and the Grenadines presents the trade balance in aggregate form.

(b) *Estimates at constant prices*

The estimates of the same aggregates at constant prices are available for only 19 countries, according to table 2 of the annex. Besides Grenada —the only country which does not have data at current prices— 9 other countries do not have estimates available at constant prices: Bahamas, Barbados, El Salvador, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and (because they interrupted their preparation) Jamaica and Venezuela.

On the other hand Argentina, which has stopped publishing its series at current prices, presents the figures at constant prices in complete form, as do the rest of the countries except Brazil and Haiti, which show the same limits as pointed out with reference to current prices, and Dominica, which does not detail the components of capital formation at constant prices.

2. Gross domestic product by type of compensation

The composition of the gross domestic product by type of compensation includes the estimates of compensation of employees, operating surplus, fixed capital consumption, indirect taxes and subsidies (see table 3 of the annex).

Eight of the 29 countries studied do not have these figures available: Bahamas, Grenada, St. Lucia and Trinidad and Tobago because they stopped publishing them, and Argentina, Barbados, Dominica and Guatemala. Of the latter, Barbados currently has data only on indirect taxes and subsidies, but in consolidated form.

In addition, of the 21 countries which currently have these estimates available, 9 have only partial information. In general, the scarcity of information is usually due to the aggregation of compensation of employees with the operating surplus or to the presentation of indirect taxes net of subsidies. The first category includes El Salvador, Honduras and recently Brazil, and the second Bolivia, Nicaragua and recently Uruguay. Both cases of aggregation are found simultaneously in the estimates published by Haiti and the Dominican Republic, and thus these two countries currently have the least detail on the cost structure of the gross domestic product. Ecuador is the only country which does not have any figures after 1970 on fixed capital consumption, and thus presents the operating surplus in gross form.

3. Available national income

The estimates shown in table 4 of the annex include the transactions of the previous table referring to the gross domestic product by type of compensation, except fixed capital consumption, by combining, in order to determine the available national income at market prices, the net income from the rest of the world for compensation of employees and for property and entrepreneurial income, as well as other current transfers.

As a result, the analysis of the availability of detailed country information on estimates of available national income refers only to transactions related to

the rest of the world, since the income originating in the domestic productive process is included in the previous item. Thus, only Bolivia, Costa Rica, Chile, Ecuador, Mexico, Peru, Suriname and Venezuela have separate data for each of the three transactions mentioned. However, these concepts are not presented by Bahamas, Grenada, St. Lucia, St. Vincent and the Grenadines and Trinidad and Tobago. Moreover, Barbados stopped its publication in 1963; Argentina and Guatemala in 1966 (these two countries with relation to factor income and in aggregate form, since they did not present data on other current transfers), and Dominica, which only published complete information for 1971 and 1973.

The 12 remaining countries present in aggregate form the compensation of employees and property and entrepreneurial income from the rest of the world, and of these, Brazil and Paraguay do not have information on other current transfers. Nor does Honduras have information in this respect since it interrupted the presentation of these data.

In brief, and considering as indicative of an adequate preparation of the estimates of available national income the detailed presentation of all the components of domestic income, net factor income from the rest of the world (although in consolidated form) and net current transfers from abroad, the following should be noted: 10 countries possess this information completely and another 10 only partially, while for the other 9 countries there is no current information. Among the latter is St. Vincent and the Grenadines, which has information related to the domestic process but not on transactions related to the rest of the world.

4. Capital transactions of the nation

The transactions included in this area, as detailed in table 5 of the annex, are those which·compose the consolidated "capital finance" account of the nation. For purposes of analysing which countries of the region have made progress in the preparation of this account, it has been considered a necessary condition that there should be information for the transactions on accumulation and its financing, which are related to the rest of the world, i.e., net capital transfers, net purchases of intangible assets (non-physical and non-financial assets), net acquisition of financial assets, net incurrence of liabilities and, as a counterpart, net lending.

With this criterion, Bolivia, Peru and Venezuela are the only countries which have all of the estimates required. Costa Rica, Ecuador, Jamaica and Suriname present their data in partial form, since they lack information on financial assets and liabilities. Brazil only has information on capital transfers and also does not determine saving, for lack of estimates on the increase in stocks. As for the rest of the countries, Dominica made special estimates for 1971 and 1973, and Barbados interrupted similar calculations in 1964.

Of the seven countries which indicate having calculated net purchases of intangible assets from the rest of the world, only Ecuador has significant amounts.

5. External transactions

Under the heading of external transactions, all the estimates related to the rest of the world are included; these, in aggregate form, form the consolidated

account of the nation entitled "external transactions". In practical terms, these estimates originate in the preparation of the balance of payments of each country, although they require certain adjustments in order to respond to the needs of SNA and are also expressed in national currency.

Table 6 of the annex shows the five aggregates in which these transactions are grouped: current income, current outlay, accumulation, net acquisition of financial assets and net incurrence of liabilities, concepts which are included in the categories cited above. However, in this case it is interesting to note the degree of detail of each of these aggregates, according to SNA recommendations, and the request for detailed data which is annually made by the Statistical Office. Accumulation includes net transfers of capital and net purchases of intangible assets; the surplus of the nation by current account and net lending are two items of accountable balances.

In this regard, the number of countries presenting data on current transactions is much greater than that on capital transactions. Fourteen countries give information on the detail of ranges of incomes and current expenditures, eight of which complete most of the proposed detailing. On accumulation, information is available for the seven countries which, on a counterpart basis, were mentioned in point 4 on capital transactions of the nation; with respect to the detail of assets and liabilities, the three countries which were also mentioned in the previous point (Bolivia, Peru and Venezuela) present data, in addition to Mexico, which has some ranges, but not on the total changes required for the capital finance account.

In brief, Venezuela is the country which presents estimates on external transactions in most complete form, followed by Brazil and Peru, for which a greater range of financial transactions is still lacking.

B. SUPPLY AND UTILIZATION OF GOODS AND SERVICES

These 11 categories, through the respective estimates prepared in detailed form, make it possible to carry out analyses on the functions of production, productivity, participation of the factors, consumer demand and capital formation.

The transactional flows included in these estimates form the basis of the accounts of production, consumer expenditures and capital formation of the current SNA (Accounts II).

1. Gross domestic product by kind of economic activity

(a) *Estimates at current prices*

Table 7 of the annex shows the availability of estimates at current prices of the gross domestic product by sectoral origin and the principal characteristics of these in relation to the latest SNA and ISIC recommendations.[5] For this purpose, the analysis was centred on the classification by kind of economic activity and by type of producers, on the separate presentation of the imputed charges for banking services and import duties, and on the basis of valuation utilized.

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Firstly, Haiti is the only country of the region which does not have annual estimates of the sectoral product at current prices, while Argentina recently, and Guatemala since 1966, have interrupted their presentation.

In the majority of the remaining countries, the sectoral classification used responds to the major division classification of the latest ISIC revision. The only exceptions are: Guyana, which combines the sectors of manufacturing and electricity, gas and water; Paraguay, which places trade with financial establishments and insurance, and Uruguay, which since 1970 has presented in one category the activities of mining and quarrying and manufacturing.

We do not have all of the necessary elements available to investigate in detail whether the coverage of each sector is uniform and in agreement with that established by the ISIC Rev. 2 currently in use. It can only be determined that the location of restaurants and hotels in major division 6 along with trade is not widely used, and even less that of business services in major division 8, with financial establishments, insurance and real estate. These two limits bring out the fact that in some countries the earlier revision of ISIC is still being used, and in such cases the lack of comparability at the sectoral level would extend to other activities such as retail services in general, health services and veterinary services.

Also in relation to the scope or coverage of each sector, but related to the current SNA, the necessary information is not available for evaluating to what extent the countries of the region include in own-account production the first stages of processing of commodities and, among the productive activities, the renting of non-residential buildings, machinery and equipment.

In regard to the classification by type of producer, all the countries except the Bahamas identify government services separately, although the activities included are not uniform. Bolivia is the country with the widest scope, since it presents data for the division of public administration and defence, education and health services, as well as other activities in the major divisions of community, social and personal services, and those of agriculture, hunting, forestry and fishing and transport, storage and communications.

Peru has a very similar scope, with the difference that it does not include activities of the major divisions of agriculture and transport. Mexico and Trinidad and Tobago include public administration and defence, and education and health services, while Guyana, Honduras, Nicaragua, Panama, Paraguay, the Dominican Republic and St. Lucia only include public administration and defence. For the remaining countries the details of the activities considered are not known, but it is assumed that the heading of government services also includes public administration and defence, or at least education and health services.

In regard to the identification of domestic services, it may be seen that 9 countries publish data separately, although in view of the procedure by which the services are generally estimated it way be assumed that most of the countries possess this information in their domestic registries.

Ten countries of the region apply the present SNA: Bahamas, Bolivia, Costa Rica, Chile, Ecuador, Jamaica, Mexico, Peru, St. Vincent and the Grenadines and Venezuela. Of these, only Bolivia, Ecuador, Jamaica and Venezuela have independent estimates for the producers of private, non-profit services to

households. On the other hand, with the exception of the Bahamas and Costa Rica, all the others present separately the item called bank service charge imputed, but only the Bahamas, Chile, Ecuador, Peru and Venezuela adopt the same criterion for import duties.

Finally, 18 countries make these estimates at market prices, and the 11 remaining do so at factor cost; among the latter is Brazil, whose calculations are made at net factor cost. In summary, in order to measure the degree of progress of the countries in estimating the product by sectoral origin in accordance with the recommendations of the current SNA, the following characteristics have been selected as symptomatic: the application of the major ISIC divisions, the location of the restaurant and hotel activity, the coverage of government services and the separate presentation of bank service charges imputed. Bolivia, Chile, Ecuador, Jamaica, Mexico, Peru, St. Vincent and the Grenadines and Venezuela fit this criterion.

(b) *Estimates at constant prices*

Table 8 of the annex shows the analysis of the availability and principal characteristics of the estimates of the gross domestic product by class of economic activity at constant prices. This table is similar to the one used for the estimates at current prices.

Only the Bahamas, Grenada, St. Lucia and Suriname lack estimates at constant prices, although —as noted above— they do present them at current prices. On the other hand, Haiti, which made no estimates at current prices, and Argentina and Guatemala which have ceased to do so, have estimates at constant prices.

As for the principal characteristics in regard to the application of the latest SNA and ISIC recommendations, the state of the estimates at constant prices is practically the same as that indicated for the calculations at current prices, except in the following cases. With respect to classification by ISIC divisions, the limits mentioned are the same for Guyana and Paraguay; this does not occur in the case of Uruguay, which has separate information for the extractive and manufacturing activities at constant prices. However, Barbados includes in one category, at constant prices, the sectors of financial establishments, insurance, etc., and community, social and personal services; Brazil also includes government services; and Costa Rica consolidates the major divisions of mining and quarrying and manufacturing. The other different aspect is that Venezuela does not separate the bank service charge but deducts it from the financial sector.

Maintaining for this case the same criterion adopted to measure the degree of the countries' progress in preparing estimates at current prices, but accepting that Venezuela's omission of commissions charged is offset by other singular characteristics of its estimates, it is clear that the same countries cited in the calculations at current prices are those which have made the most progress in applying the current SNA recommendations to the estimates at constant prices of the product by class of economic activity: Bolivia, Chile, Ecuador, Jamaica, Mexico, Peru, St. Vincent and the Grenadines and Venezuela.

2. Detailed classification of the gross domestic product by class of economic activity

As a complement to the classification of the gross domestic product by economic sectors —major ISIC divisions— tables 9 and 10 of the annex show, for some selected activities, the countries which publish a wider range of information at current prices and constant prices, respectively.

The activities in question are agriculture, hunting, forestry and fishing, mining and quarrying and manufacturing; the greater detail refers to the division classification of ISIC. As an illustration, the electricity, gas and water and trade, restaurants and hotels sectors are added (in this case considering in one single category the two divisions of wholesale and retail trade).

3. Domestic factor incomes by kind of economic activity

These estimates refer to the measuring of the components of the sectoral value added. Table 11 of the annex shows whether there is separate information for each economic sector —major divisions of the current ISIC— on the compensation of employees and the operating surplus; as this latter concept must be expressed net and at factor cost, it implies having sectoral estimates of indirect taxes net of subsidies and consumption of fixed capital.

In this respect, eight countries of the region currently have data on the breakdown of sectoral value added, but really only Colombia, Chile, Jamaica, Mexico, Peru and Venezuela have adequate estimates; Bolivia calculates the gross operating surplus and Costa Rica only estimates the compensation of employees.

Argentina in 1973 and Uruguay in 1967 interrupted the publication of these estimates, which qualified as partial since Argentina estimated the gross operating surplus and Uruguay did not have separate data for all the economic sectors. Barbados had complete data only for 1974 and 1975, and Brazil had partial data for 1970 and 1973.

4. Supply and utilization of goods and services

The only countries having annual estimates on the origin of supply and structure of final demand —at current and constant prices— are Chile, Ecuador and Mexico. Goods and services are classified in categories according to the class of economic activity in which such products are the typical production; supply is broken down into domestic production, imports and trade and transport margings; utilization is classified into intermediate consumption and each of the components of final demand. Ecuador presents these figures in the form of an annual input-output tables for 32 typical branches of activities and typical products.

5. General government final consumption expenditure by function

The classification by function of the general government final consumption expenditure used in table 12 of the annex shows the degree of progress of the countries in this area and corresponds to the original proposal made in the current SNA.[6] This classification of nine purposes has up to now been a guide for these estimates, although new recommendations have recently been published for the future.[7]

Bolivia, Venezuela and Peru are practically the only countries which supply these figures at current prices with the required ranges of categories, since the first two are only lacking information for the other purposes, and Peru needs only to separate defence from general public services. However, the presentation made by Panama is more limited, since on the one hand it categorizes general public services with those of defence, and on the other hand it groups together the purposes of social security and welfare services, housing and community amenities and other social and community services. Honduras also made these estimates for several years at current prices with a range of six purposes, but it stopped publishing them in 1975.

To date, no country has made estimates of final consumption expenditure of the general government by purpose at constant prices.

6. Final general government consumption expenditure by composition of costs and functions

Bolivia and Peru have these estimates, which are only required at current prices. The classification by purposes is the same as presented in the previous item; the structure of costs for each purpose is in both cases complete, and includes estimates of intermediate consumption, compensation of employees, fixed capital consumption and other expenditures, minus sales of other (non-commodity) goods and services, and commodities produced.

7. Final private consumption expenditure by object

The structure of final private consumption expenditure according to the principal objectives for which the goods and services are acquired, that is the purpose, is estimated by classifying purchases in the domestic market into eight major categories and adjusting this total by the direct purchases made by resident households abroad, minus the purchases made by non-resident households in the domestic market. The detail of the categories used is shown in tables 13 and 14 of the annex, which indicates which countries have these estimates at current prices and which at constant prices.

Jamaica, Mexico and Panama are the only countries which currently publish estimates at current and constant prices, whereas El Salvador and Venezuela only present them at current prices. Venezuela has information up to 1969 at constant prices and Honduras interrupted both calculations in 1976.

8. Final private consumption expenditure by type of expenditure

These estimates refer to the classification of the final private consumption expenditure in the domestic market on commodities and other goods and services, dividing the commodities into durable goods, semi-durable goods, non-durable goods and services. As in the previous case, purchases in the domestic market were adjusted by the direct purchases of resident households abroad and those of non-residents domestically, in order to arrive at a total of final private consumption expenditure.

Normally these estimates are required at current prices, and of the countries of the region only Mexico and Panama have them (see table 15 of the annex).

9. Gross fixed capital formation by type of goods

The availability and range of estimates of gross fixed capital formation by type of goods at current and constant prices are detailed in tables 16 and 17 of the annex, respectively.

Thirteen countries currently have estimates available at current and constant prices, while Argentina has stopped making estimates at current prices and Venezuela estimates at constant prices. Another six countries have only developed data at current prices; of these, Brazil stopped publishing them in 1969 and Dominica presented them only for 1971 and 1973. The remaining countries —Barbados, Bahamas, Grenada, Guyana, Haiti, St. Lucia, Suriname and Trinidad and Tobago— have made no type of estimate in that area.

A good indicator of the progress made by countries in estimating the composition of gross fixed capital formation is the presentation of the expenditure on housing separately from the rest of construction, and that of transport equipment from investment in machinery and other equipment. On the basis of this criterion, the tables of the annex show the efforts that have been made by Bolivia, Colombia, Chile, Honduras, Mexico and Panama, both at current prices and at constant prices, and by El Salvador, St. Vincent and the Grenadines and Venezuela at current prices.

10. Increase in stocks by type of goods

Tables 18 and 19 of the annex show in detail the estimates on the composition of the increase in stocks of the goods producing sectors (classified into four classes of products), that of the trade sector that of other industries and that of government services.

Jamaica and Mexico complete the whole range of categories, although they only have estimates at current prices. Panama, on the other hand, has estimates at current and constant prices, although without classifying the stocks of the goods producing industries by type of product. Uruguay also has both estimates, but only provides information on the total of stocks in the goods producing sectors, including those of other industries and of trade.

El Salvador stopped making estimates at current prices in 1975, and Bolivia made estimates at current and constant prices until 1969, although it only recorded data classified as materials and supplies and as finished goods for the activities as a whole.

11. Gross fixed capital formation by kind of economic activity

Table 20 of the annex shows the estimates on gross fixed capital formation by type of producer at current prices; the division by economic sectors used to classify the industries —goods producing sectors— corresponds to the major divisions of the present ISIC.

In this respect, as shown by the estimates of the sectoral product, sufficient information is not available to verify whether the scope of this sector corresponds to the coverage recommended by ISIC Rev. 2. In addition, in the special case of these estimates, it is not known whether the measures refer to capital formation by the economic sectors which use the goods or by the class of economic activity of the owners of the latter.

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Now that these limitations have been clarified, it can be seen that four countries present estimates at current prices; the figures of Costa Rica, Trinidad and Tobago and Venezuela have full sectoral detail, while those of Guatemala are less detailed. Bolivia interrupted its publication in 1969, El Salvador in 1972 and Honduras in 1975; Dominica only presented data for 1971 and 1973.

On the other hand, only two countries prepared estimates at constant prices with the same structure as their respective figures at current prices: Venezuela, which keeps its figures up-to-date, and Bolivia, which stopped publishing them in 1969.

Venezuela is the only country which presents data separately for private non-profit services and on the other hand, while it has up-to-date estimates at constant prices by kind of economic activity, has interrupted the presentation of fixed capital formation by type of goods, as well as of the product by type of expenditure. Trinidad and Tobago, which estimates the fixed capital formation by class of economic activity at current prices, does not have figures by type of goods.

C. INSTITUTIONAL SECTORS

The estimates commented on in this part are the respective accounts for income and outlay and capital finance of each institutional sector of the current SNA (Accounts III). The sector called private non-profit institutions serving households is consolidated with the household sector.

In each case, the detail on the flow of transactions has been limited to the principal items belonging to each sector. With respect to the coverage of each sector, as well as the scope of each of the items selected —aspects which are common to all the institutional sectors and all the transactions correspondingly recorded in them— it is important to clarify that all the necessary judgemental elements are not available at this time to analyse and evaluate the real correspondence between the estimates made by each country and the international recommendations; as a result, it is difficult to determine the degree of comparability which exists in practice among the estimates of the various countries of the region.

Ecuador is the only country in this inventory of periodical series which shows for each of the four institutional sectors the respective accounts of income and outlay and capital finance. However, it is interesting that Venezuela published —although only for 1968— the estimate of detailed accounts for each sector and Haiti has just done so for the fiscal year 1975/1976. In this case, it separates the accounts corresponding to the private non-profit institutions serving households sector, as well as production accounts for each institutional sector and the development of complete accounts for the public sector. In addition, Colombia —which has been revising its historical series since 1970 and preparing new estimates in the framework of the current SNA— also plans soon to publish annual and detailed accounts for each institutional sector.

1. Incomes and expenditures of non-financial enterprises (corporations and quasi-corporations) and financial institutions

Ecuador has information on the current incomes and expenditures for these two institutional sectors, separately presenting the operating surplus, property income, insurance transactions, direct taxes and other current transfers. The sector of non-financial enterprises is divided into public and private enterprises, while the sector of financial institutions is divided into public monetary entities, private monetary entities and insurance companies.

2. Incomes and expenditures of the general government

The availability of detailed information on current incomes and expenditures of the general government is presented in table 21 of the annex. This table shows that Costa Rica, Ecuador and Peru have separate data for all the items selected and that, in practical terms, the same may be stated for Jamaica. On the other hand, Brazil, Colombia, Honduras, Nicaragua, Panama and Paraguay are lacking separate data for some items which are important for analysing the behaviour of this sector; the least frequent transaction is that of outlay for social security benefits.

On the other hand, it may be seen that Argentina, Chile and Venezuela have recently interrupted the publication of their estimates in this area; Bolivia's series were interrupted in 1969, as were those of Uruguay in 1970. Suriname alone made estimates for the period 1972-1975.

As additional information, it should be noted that Ecuador and Panama also currently have detailed data for the central government, local government and social security system; Colombia for the first two levels mentioned, and Costa Rica only for the central government.

3. Incomes and expenditures of households, including non-financial enterprises and unincorporated enterprises

This sector also includes, in practice, the sector of private non-profit institutions serving households. Table 22 of the annex details the items which have been selected to show the range of estimates for each country.

Ecuador completes practically all the items, while Colombia, Honduras, Nicaragua, Panama and Paraguay have less detail. Of the remaining countries of the region, Argentina, Chile, Jamaica and Uruguay have interrupted the series they had been developing. Suriname, in the same way as for the general government, had data for the period 1972-1975.

Among the transactions which were least recorded were those related to social security; in the case of benefits received, of the eleven countries mentioned, only Ecuador had detailed information.

4. Capital transactions of non-financial enterprises (corporations and quasi-corporations) and financial institutions

As already pointed out, only Ecuador has capital finance accounts for these two institutional sectors. It makes a detailed accounting of the composition of

gross accumulation, separating information on fixed capital formation, increase in stocks, net purchases of land, net purchases of intangible assets (non-physical and non-financial assets) and net lending, a balance item in this account. On sources of financing, it only presents data for net capital transfers and gross saving, lacking information on fixed capital consumption. On the other hand, it does not have data on net acquisition of financial assets nor for net incurrence of liabilities.

5. Capital transactions of the general government

As can be seen in table 23 of the annex, only Ecuador, Honduras and Panama currently have estimates on accumulation and its financing for the general government. Ecuador in this case presents the same detail of items as mentioned in the previous point for the sectors of non-financial enterprises and financial institutions. Honduras and Panama limit the composition of gross accumulation to gross capital formation but on the other hand complete the detail of the sources of financing, lending separately from saving, fixed capital consumption and capital transfers. None of the three countries has information on variations in financial assets and liabilities.

Venezuela is the only other country of the region which has prepared estimates on this area, although their most recent available data is for 1975. Unlike the coverage for the countries cited above, Venezuela completed practically all the items, accounting for the variations in financial assets and liabilities, with a published range of five and six classes of instruments, respectively. The only information lacking is on net purchases of intangible assets.

6. Capital transactions of households

For this sector of households, including non-financial and unincorporated enterprises, the only countries that have made and updated the corresponding estimates are Ecuador, Honduras and Panama, with the same degree of detail as those presented for the general government sector (see table 24 of the annex).

D. CONCLUSIONS

Tables 3 and 4 summarize the availability of estimates for the region as a whole, measured on the basis of the number of countries which have information for each category.

The major efforts —or perhaps the greatest possibilities for calculation— occurred in the sphere of the sectoral origin of production and its utilization by major components of final demand. However, information is very scarce on the detailed structure by type of goods or by purpose of domestic demand, with the exception of fixed capital formation.

In addition, almost all the countries have data on the functional distribution of the income generated for the whole economy; however, only half have made progress in measuring the cost structure by economic sectors.

A similar situation exists in determining the available national income and its utilization. The great majority of the countries obtain estimates for the nation

as a whole by combining the corresponding transaction flows at aggregate levels and not by the consolidation of the current income and outlay accounts of the institutional sectors. In only one case are the accounts estimated for the whole of these sectors. A few countries obtain estimates separately for households and the general government, whereas others only prepare the accounts of the government.

Table 3

SUMMARY OF THE AVAILABILITY OF ESTIMATES AT CURRENT PRICES BY CATEGORY

(Number of countries)

Category	Estimates						No information
	Available			Interrupted			
	Total	Complete	Partial	Total	Complete	Partial	
GDP by type of expenditure	27	20	7	1	1	-	1
GDP by type of compensation	21	12	9	4	2	2	4
Available national income	20	10	10	4	1	3	5
Capital transactions of the nation	8	3	5	2	-	2	19
External transactions	14	3	11	-	-	-	15
GDP by kind of economic activity	26	8	18	2	-	2	1
GDP range of selected activities	18	8	10	5	-	5	6
Domestic factor income by kind of economic activity	8	6	2	4	1	3	17
Supply and utilization of goods and services	3	3	-	-	-	-	26
Final general government consumption by purpose	4	3	1	1	-	1	24
Final general government consumption by costs and purpose	2	2	-	-	-	-	27
Final private consumption by object	5	5	-	1	1	-	23
Final private consumption by type of expenditure	2	2	-	-	-	-	27
Gross fixed capital formation by type of goods	18	9	9	3	1	2	8
Increase in stocks by type of goods	4	2	2	2	1	1	23
Gross fixed capital formation by kind of economic activity	4	3	1	4	2	2	21
Current income and outlay							
(a) Non-financial enterprises (corporate)	1	1	-	-	-	-	28
(b) Financial institutions	1	1	-	-	-	-	28
(c) General government	10	4	6	6	1	5	13
(d) Households	6	1	5	5	-	5	18
Capital transactions							
(a) Non-financial enterprises	1	-	1	-	-	-	28
(b) Financial institutions	1	-	1	-	-	-	28
(c) General government	3	-	3	1	1	-	25
(d) Households	3	-	3	-	-	-	26

Table 4

SUMMARY OF AVAILABILITY OF ESTIMATES AT
CONSTANT PRICES, BY CATEGORY

(Number of countries)

Category	Estimates						No information
	Available			Interrupted			
	Total	Complete	Partial	Total	Complete	Partial	
GDP by type of expenditure	19	16	3	2	2	-	8
GDP by kind of economic activity	25	8	17	-	-	-	4
GDP range of selected activities	18	7	11	3	-	3	8
Supply and utilization of goods and services	3	3	-	-	-	-	26
Final general government consumption by purpose	-	-	-	-	-	-	29
Final private consumption by object	3	3	-	2	2	-	24
Gross fixed capital formation by type of goods	14	6	8	1	1	-	14
Increase in stocks by type of goods	2	-	2	1	-	1	26
Gross fixed capital formation by class of economic activity	1	1	-	1	-	1	27

The least analysed area in the national accounts of the region is that of capital transactions, both for the nation as a whole and for each institutional sector. Note that some countries could complete the consolidated account of capital financing basically on the basis of the transactions which they currently estimate for the other consolidated accounts of the nation.

Tables 5 and 6 summarize the availability of estimates by countries at current prices and at constant prices, respectively, and show the areas in which these estimates are completely or partially available and those whose preparation has been interrupted. The degree of development of these is shown, from a formal point of view, by the national accounts of each country.

The 29 countries included in the inventory have estimates at current prices (including Argentina, whose series was interrupted by a total revision process); four countries, on the other hand, do not have any type of estimates at constant prices.

In general, there seems to be a greater homogeneity in the current availability of categories by country at constant prices than at current prices. Of the nine categories at constant prices, 19 countries show between three and six, while at current prices only 10 countries currently show between 10 and 16 categories of a total of 24 into which SNA recommendations divide them. However, considering the two basic areas in both types of estimates —gross domestic product by type of expenditure and by sectoral origin— it can be seen that 25 countries publish information at current prices while only 19 have current data at constant prices.

In relation to the estimates at constant prices, 9 countries use, as a base, a year previous to 1970 (the earliest base cases are those of one country in 1955 and two in 1958). On the other hand, eight countries base their series at constant prices on the year 1970, while another eight use as a base one year of the period 1973-1977 (see table 2). In the past two years, six countries have revised their estimates at constant prices and have updated the period adopted as base year.

Beyond the essentially enumerative analysis —by categories and by countries— of the situation revealed by these summary tables, the interruptions in series and the partial estimates merit special attention, with respect to continuity of efforts and comparability among countries.

Although in this study the situational state is not presented at two different times —which would have made possible a better evaluation of the

Table 5

SUMMARY OF THE AVAILABILITY OF ESTIMATES AT CURRENT PRICES, BY COUNTRY

(Number of categories)

Country	Category available			Category interrupted		
	Total	Estimates		Total	Estimates	
		Complete	Partial		Complete	Partial
Argentina	-	-	-	8	2	6
Bahamas	2	-	2	-	-	-
Barbados	2	-	2	5	1	4
Bolivia	11	8	3	3	-	3
Brazil	6	-	6	3	-	3
Colombia	10	5	5	-	-	-
Costa Rica	11	5	6	-	-	-
Chile	9	8	1	2	-	2
Dominica	3	1	2	5	4	1
Ecuador	17	8	9	-	-	-
El Salvador	7	3	4	2	1	1
Grenada	2	-	2	-	-	-
Guatemala	4	1	3	4	-	4
Guyana	5	3	2	-	-	-
Haiti	3	-	3	-	-	-
Honduras	10	2	8	4	2	2
Jamaica	12	9	3	1	-	1
Mexico	12	11	1	-	-	-
Nicaragua	9	1	8	-	-	-
Panama	15	6	9	-	-	-
Paraguay	8	3	5	-	-	-
Peru	12	11	1	-	-	-
Dominican Republic	6	1	5	-	-	-
St. Lucia	2	1	1	-	-	-
St. Vincent and the Grenadines	4	3	1	-	-	-
Suriname	6	2	4	2	-	2
Trinidad and Tobago	4	1	3	-	-	-
Uruguay	6	1	5	4	-	4
Venezuela	12	12	-	2	2	-

Table 6

SUMMARY OF THE AVAILABILITY OF ESTIMATES AT CONSTANT PRICES, BY COUNTRY

(Number of categories)

Country	Category available			Category interrupted		
	Total	Estimates		Total	Estimates	
		Complete	Partial		Complete	Partial
Argentina	4	2	2	·	·	·
Barbados	1	-	1	·	·	·
Bolivia	4	4	-	2	-	2
Brazil	2	-	2	·	·	·
Colombia	4	2	2	·	·	·
Costa Rica	3	1	2	-	-	-
Chile	5	4	1	-	-	-
Dominica	2	-	2	-	-	-
Ecuador	5	4	1	-	·	-
El Salvador	2	-	2	-	·	·
Guatemala	3	1	2	1	-	1
Guyana	3	1	2	-	-	-
Haiti	3	-	3	-	-	-
Honduras	3	2	1	2	1	1
Jamaica	3	3	-	1	1	-
Mexico	6	6	-	-	-	-
Nicaragua	4	1	3	-	-	-
Panama	6	3	3	-	-	-
Paraguay	4	2	2	-	-	-
Peru	4	3	1	-	-	-
Dominican Republic	4	1	3	-	-	·
St. Vincent and the Grenadines	1	1	-	-	-	·
Trinidad and Tobago	2	·	2	·	·	·
Uruguay	4	1	3	1	·	1
Venezuela	3	2	1	3	3	·

changes which occurred through time— it is very significant to observe the cases of interruption which are currently recorded. Some countries have stopped making basic aggregate estimates, such as product by class of economic activity or by type of expenditure, gross fixed capital formation by type of good, composition of the sectoral value added or current income and outlay of the general government. These discontinuities, in most cases, did not occur as a result of the adoption of the current SNA and its application in stages, but rather because of the lack of updating of some of the historic series which were being developed.

Although the real causes of the interruptions indicated are not always known, they lead one to suspect that some countries of the region have undergone a stagnation or perhaps a regression in the development of their national accounts.

On the other hand, the qualification as being partial, which many estimates deserve because they do not correspond at least to the internationally

recommended classifications and ranges, points up the lack of comparability which may exist in various categories among the results of the different countries of the region. In some areas the lack of correspondence may be due only to a lower degree of detail than that normally proposed, but in other areas, such as the case of product by class of economic activity, it is obvious that the discrepancies imply basically different and not strictly comparable estimates.

Finally it may be stated that the development of the national accounts in the countries of the region is far from homogeneous. While some countries have made significant progress, others do not show major innovations, and some have decreased the degree of information in their estimates. There remains an emphasis on the production sphere, but the information contributed for other areas of the economic analysis is scanty. Moreover, taking into consideration that national accounts are the expression of the availability of adequate and timely basic statistics, the situations described would lead to the conclusion that the coverage of the statistical systems of the countries of the region is far from complying with many of the principal requisites of economic analysis.

II. METHODS OF ESTIMATING THE SECTORAL PRODUCT AND FINAL DOMESTIC EXPENDITURE

This second part succinctly describes the general methods and principal procedures applied for developing the estimates of the sectoral product and the domestic utilization of goods and services. To achieve this purpose, the methodological explanations provided by some countries in their official publications have been used, as well as the compendium of national practices made by the United Nations Statistical Office[8] and the information existing in the CEPAL Secretariat. Accordingly, the methodological explanations included in previous CEPAL studies[9][10] are updated.

A. ESTIMATES AT CURRENT PRICES

In most of the countries of the region, the production method is used to estimate the gross domestic product at current prices originating in the goods producing sector and from most service producing sectors. Secondly, for some service activities, the product is usually calculated by the income method, by adding up the factor remunerations. As may be seen in table 7, of the countries considered, only Brazil uses this method to estimate the product of a large group of activities.

Since the basic method used for estimating the sectoral product is based on the value of production, almost all the countries supplement this basic data by the commodity flow method to obtain estimates of the components of the gross fixed capital formation and, in a few cases, breakdowns in private consumption by type of goods.

As may be seen in table 8, almost all the countries in question obtain the national and imported components of investment in machinery and equipment by the commodity flow method; most of them calculate by the same method the value of private construction; naturally, the estimates of public construction are obtained on the basis of the expenditure recorded in government accounting. Only Venezuela estimates total gross fixed capital formation by type of goods by using the direct method of measuring the expenditures recorded under this heading in the accounting system of the purchasers.

Practically all the countries have statistics on the stocks of some important products, either export commodities such as cattle and fuel, or even some industrial products. The estimates based on the variations recorded by these statistics are congruent with the commodity flow method. Some countries limit the coverage of their estimates of the increase in stocks to these groups of commodities, because the variations which may occur in the stocks of other goods are included in the residual measures of private consumption. Other

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countries supplement these estimates with data on surveys of establishments or on balances, which are aimed at broadening the coverage of the aggregate. Finally, taking into account the difficulties which usually exist in combining both sources without duplications, some countries prefer to estimate the totality of this component of final demand by using data exclusively from surveys or purchasers' balances which is equivalent to applying the expenditure method. Mexico is the only country which determines the total value of the increase in stocks residually, but which calculates directly the final private consumption expenditure by the commodity flow method; by directly calculating the changes which have occurred in the stocks of agricultural, mining and industrial products, it verifies the consistency of the total results obtained by difference. All the other countries of the region obtain the total value of private consumption residually, since they do not have annual, direct and independent estimates. However, of the countries considered —as can be seen in table 8— Chile, El Salvador, Honduras (until 1976), Panama and Venezuela use the commodity flow method to estimate private consumption by classes of goods and services which, once they have been made compatible with the total of this aggregate obtained residually, serve to break down the final private consumption expenditure by purpose.

Logically, the countries determine the value of government consumption expenditure on the basis of the expenditure recorded by the corresponding budgetary units.

Table 7

GENERAL METHODS USED TO ESTIMATE THE GROSS DOMESTIC PRODUCT BY KIND OF ACTIVITY AT CURRENT PRICES, AND TO EXPRESS IT AT CONSTANT PRICES

Country[a]	Current prices		Constant prices		
	Production	Income	Extrapolation base year	Deflation	Double deflation
Argentina	P	S	P	S	
Brazil	P	P	P	S	
Colombia	P	S	P	S	
Chile	P	S	P	S	S
El Salvador	P	S	P	P	S
Guatemala	P	S	P	S	
Haiti	P	S	P	S	
Honduras	P	S	P	P	
Mexico	P	S	S		P
Panama	P	S	P	S	
Paraguay	P	S	P	S	
Peru	P	S	P	S	S
Dominican Republic	P	S	P	S	
Uruguay	P	S	P	S	S
Venezuela	P	S	S	P	

Note: P: Principle method.
  S: Secondary method.
[a]Countries for which methodological information could be obtained.

All these estimates, supplemented with those corresponding to the compensation of employees and the other components of the value added, provide the fundamental elements for completing Account II and the complementary tables on production and supply of goods and services of the new SNA. The account for the gross domestic product for the economy (SNA Account I.1) is the consolidated expression of these accounts.

B. ESTIMATES AT CONSTANT PRICES

The estimates at constant prices are limited to the items in the SNA accounts and tables of production, supply and use of goods and services. As already pointed out, the current international recommendations do not suggest the deflation of flows, balances or aggregates whose value cannot be broken down between price and quantity. These estimates of the flows of goods and services in real terms have limitations inherent in the valuation of the flows of each period at the constant prices of a base period, in order to eliminate the effect of the change in prices on comparisons between different time periods. However, they also pose difficulties in the construction of index numbers: the objectives and scope of the index, the balance between precision and scope, the

Table 8

GENERAL METHODS USED TO ESTIMATE THE GROSS DOMESTIC PRODUCT BY TYPE OF EXPENDITURE AT CURRENT PRICES

| Country[a] | Gross fixed capital formation | | | | Increase in stocks | General government consump- tion ex- penditures | Private consump- tion expendi- tures |
| | Construction | | Machinery and equipment | | | | |
	Public	Private	National	Imported			
Argentina	(G)	(M)	(M)	(M)	(M)	(G)	(R)
Brazil	————M————		M	M	(G, M)	G	R
Colombia	G	M	M	M	G, M	G	R
Chile	G	M	M	M	G	G	R, M
El Salvador	G	M	M	M	G, M	G	R, M
Guatemala	G	M	M	M	M	G	R
Haiti	————M————		M	M	G	G	R
Honduras	G	M	M	M	M, G	G	R (M)
Mexico	G	M[b]	M	M	R, M	G	M
Panama	G	M	M	M	G	G	R, M
Paraguay	————M————		M	M	M	G	R
Peru	G	M[b]	M	M	G	G	R
Dominican Republic	G	M[b]	M	M	M	G	R
Uruguay	G	M	M	M	M	G	R
Venezuela	————G————		————G————		G	G	R, M

Notes: G: Direct method, or by using expenditures recorded in the accounting system of the buyers.
    M: Commodity flow method.
    R: Obtained by difference.
[a] Countries on which methodological information could be obtained.
[b] Total construction was obtained by using input flow, and private construction by difference.

selection of representative indicators, the specification of the basic units of measurement, the changes in quality and their incorporation, the treatment of unique goods, the seasonality of some goods and the problems of formula and weighting.[11]

1. Estimates of the product by class of economic activity

Ideally, to obtain the product of a productive sector at constant prices, it would be necessary to use estimates independent of the production and intermediate consumption of each activity, at constant prices, and in relation to an input-product table. This double deflation method is not applicable in the cases in which the product is calculated by the income method. However, even in the cases in which the product is calculated by the production method, it is essential to have valid and reliable indicators of quantities or prices, relative to gross production and intermediate consumption, since errors in these may become cumulative.[12] On the other hand, based on experience, the use of the double deflation method does not appear to be suitable for industries whose value added represents only a small part of the value of production and in those in relation to which, as a result, errors in the input indexes —usually greater than in those of production— have an important impact on the estimate of the real product.[13] Taking into consideration these difficulties, most of the countries of the region use approximate estimation methods, based on the sectoral value added, either by extrapolating the aggregate value of the base year or by deflating the value added at current prices.

As can be seen in table 7, only Mexico uses double deflation as the principal method of estimating the real product by sectoral origin, whereas Chile, El Salvador, Peru and Uruguay use it secondarily for some activities. The majority of the countries in question use extrapolation as the principal method of estimating the sectoral product and deflation as the secondarily applied method for some activities. El Salvador and Honduras, however, apply deflation to a greater number of activities, while Venezuela uses this method to estimate the real product of most of the sectors and only secondarily applies the extrapolation method. Table 9 summarizes the methods used for each country to estimate the real product originating in each one of the principal productive sectors.

2. Components of final domestic expenditure

Independent estimates of the real value of the components of final domestic expenditure in the product may be made by extrapolation of its value in the base year or by deflation of its current values. In the cases in which the commodity flow method is used to estimate some of the components of final expenditure, the obtaining of its values at current and constant prices is the result of the same basic process, depending on whether it is the main procedure used to calculate domestic supply of each class of commodities, either by extrapolation of the values of the base year by using indicators of quantity and valuation at current prices through price indexes, or by estimation of current values and their deflation by using price indexes.

As may be seen in table 10, the countries of the region use a variety of solutions to produce their estimates on the composition of final domestic expenditure at constant prices.

In a subset of the countries considered (Argentina, Colombia, Chile, Guatemala, Honduras and Uruguay) public and private construction are estimated separately; the real value of the former is obtained in all cases by deflation of current values, while the expression of the value of private construction at constant prices is estimated by extrapolation of the values of the base year, except for Honduras, which does this by deflating the current values. The other countries, however, calculate the total investment in construction by the input flow method. Among these, Brazil, Haiti and Paraguay do not break it down into public and private, and they express it at constant prices by extrapolating the value of the base year through quantum indicators; on the other hand, Mexico, Panama, Peru and the Dominican Republic determine the public component by the expenditure method (and its real value by deflation), obtaining by difference the value of the private construction.

Some countries estimate the real value of the gross capital formation in machinery and equipment without distinguishing its national or imported origin, and almost all use the deflation of current values. The majority of the countries considered in table 10 make the estimate at constant prices, treating these components separately: in general, for goods of national origin, extrapolation is applied, while for goods of imported origin, deflation of current values is used.

Table 9

PROCEDURES USED TO CALCULATE THE GROSS DOMESTIC PRODUCT BY KIND OF ACTIVITY AT CONSTANT PRICES

Country[a]	Agri-cul-tural	Manu-factur-ing and mining	Cons-truc-tion	Basic serv-ices	Com-merce	Finance	Govern-ment serv-ices	Per-sonal serv-ices
Argentina	E	E	D, E	E	E	E	E	E, D
Brazil	E	E	E	E, D	E	...	...	...
Colombia	E	E	D, E	E	E	E, D	D	E
Chile	DD	E	D, E	E	E	E, D	E	E,D
El Salvador	E	DD, E	D	E, D	E, D	E, D	D	E
Guatemala	E	E	D, E	E	E	E	D	E
Haiti	E	E	E	E	E	D	D	E
Honduras	E, D	E	D	E, D	E, D	E	D	E
Mexico	DD	E	DD	DD	DD	DD	E	DD
Panama	E	E, D	D	E	E	E	E	E
Paraguay	E	E	E	E, D	D	E	D	E, D
Peru	E	E	DD	E	E	E	E	E, D
Dominican Republic	E	E	D	E	E	E	E	E
Uruguay	DD	E	D, E	E	E	E	...	...
Venezuela	D	D	D	D	D	D	D, E	D

Note: E: Extrapolation method from base year value added.
    D: Deflation method of the value added at current prices.
    DD: Double deflation method.
[a] Countries for which methodological information could be obtained.

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Venezuela is the only country which estimates the real value of gross fixed capital formation by deflating the values of fixed investment by class of economic activity.

Almost all the countries in question calculate final consumption expenditure of the general government at constant prices by separately treating the values of compensation of employees and the value of intermediate purchases. In order to obtain the first component at constant prices, some countries extrapolate the values of the base year and others deflate the current values. For the second component, however, all use deflation.

The countries which use the expenditure method to estimate increase in stocks at current prices obtain their expression at constant prices by deflating these values. Those which mainly use the statistics of physical stocks naturally apply extrapolation of the values of the base year, while in those countries where the increase in stocks is calculated from accounting information, its expression at constant prices is achieved by deflation.

Mexico residually obtains the increase in stocks by calculating private consumption at constant prices directly by the commodity flow method; Venezuela used the same procedure in its previous estimates which have now been interrupted. All the other countries of the region obtain the real value of

Table 10

GENERAL METHODS USED TO ESTIMATE THE GROSS
DOMESTIC PRODUCT BY TYPE OF EXPENDITURE
AT CONSTANT PRICES

Country[a]	Gross fixed capital formation				In-crease in stocks	General government consumption expenditures		Private consumption expenditures
	Construction		Machinery and equipment			Salaries and wages	Intermediate purchases	
	Public	Private	National	Imported				
Argentina	D	E	E, D	D	E	E	D	R
Brazil	———— E ————		E	E	(D)	———— D ————		R
Colombia	D	E	D	D	D, E	D	D	R
Chile	D	E	E	D	D	E	D	R
Guatemala	D	E	E	E	E	D	D	R
Haiti	———— E ————		———— E ————		D	D	D	R
Honduras	D	D	———— D ————		D	D	D	R, (E)
Mexico	D	E	E	D	R	E	D	E, D
Panama	D	D	———— D ————		D	E	D	R, E
Paraguay	———— E ————		———— D ————		D	D	D	R
Peru	D	D	E, D	D	D	E	D	R
Dominican Republic	D	D	...	D	...	D	D	R
Uruguay	D	E	E	E	E	E	D	R
Venezuela	——————— D ———————				—	—	—	—

Note: E: Extrapolation method from base year.
   D: Deflation method of current prices.
   R: Obtained residually.
[a]Countries for which methodological information could be obtained.

total private consumption residually, the same way as its current value. However, the few countries which use the commodity flow method to make alternative or control estimates of final private consumption expenditure obtained by difference at current prices, are in a position to make their classification by purpose of the expenditure at constant prices; Honduras (until 1976) and Panama do this mainly by using the extrapolation of the values of the base year by means of quantity indicators.

III. POSSIBILITIES FOR EXPANDING THE COVERAGE
OF NATIONAL ACCOUNTS

Because of its characteristics, the current SNA is particularly suited to stage-by-stage development, in view of the interrelationship there is between the items making up the accounts and supplementary tables of the system, and the different levels of aggregation envisaged for the preparation of the different tabulations. Moreover, in the current SNA the definitions and classifications of all flows of goods and services and financial flows are integrated and linked in a coherent structure and it therefore serves as an excellent tool for organizing and programming the collection and processing of the necessary basic data series, detecting their deficiencies and omissions, and verifying the coverage and coherence of the national statistical system. [14]

With more than 10 years having elapsed since SNA was put into effect, it has become evident that some of its concepts and classifications must be revised and clarified. Among the most important subjects the revision of which has been discussed recently are those relating to coverage and the treatment of unmarketed output, gross fixed capital formation, the scope and composition of value added, the problems posed by double sectorization to link the production and the income and outlay accounts, classification by institutional sectors and subsectors and the problems of valuation arising as a result of inflation. With these difficulties in mind, the United Nations Statistical Commission, at its twentieth session in 1979, decided that the time had not yet come to introduce basic changes in the structure of SNA. Instead, it convened a group of experts to examine the status of the international work being done in connection with SNA; in general, the conclusions of this group[15] were supported by the Statistical Commisssion which, at its twenty first session, took the following decisions: [16]

— The Commission considered that SNA, by reason of its comprehensiveness, should rank ahead of standards developed for particular fields of economic statistics; when such other standards were under review, the organizations responsible for them should endeavour to achieve consistency with SNA (or MPS) and, where differences remained, explain the reasons for them and provide a full reconciliation with SNA (or MPS);

— It urged that specific proposals be developed with regard to needed short-term clarification and updating of SNA, if possible for submission to the Commission at its twenty-second session, with the assistance of *ad hoc* expert groups on external transactions and possibly other topics;

— It recognized the need, within the limits of available resources, to initiate research studies with a longer time horizon, in order to meet demands for new kinds of information.

Despite the aforementioned problems posed by the application of SNA, its practical development in the Latin American countries has been hindered by the

lack of relevant basic information or the underutilization of existing data, more than by the difficulties involved in interpreting and adapting the conceptual framework and the accounting structure proposed by SNA.

Despite the practical problems involved in estimating the supply and use of goods and services with regard, for example, to subsistence production, the treatment of livestock, classification by economic activity, classification of taxes or different types of imputation, almost every country in the region tries to estimate the three main subdivisions of the gross domestic product: by final use, by type of compensation and by class of economic activity. However, as mentioned in chapter I, estimates are only rarely made of other aggregates and almost never of those pertaining to the institutional sectors.

This situation shows that efforts are concentrated on organizing and systematizing existing data relating to the production and use of goods and services and also perhaps, that the countries have only a limited operational capability for dealing with the organization and processing of data which frequently exist, although with greater restrictions as regards coverage and requirements, for other areas of the macroeconomic analysis. On the other hand, this to a certain extent reflects the fact that in the development of statistics during the postwar period, greater emphasis has been placed on the measurement of growth processes as opposed to welfare considerations, financial relations or relations between institutional sectors.

With this imbalance, this chapter discusses the possibilities of expanding the coverage of national accounts estimates in the Latin American countries and gradually including other areas of SNA.

1. Use of goods and services

The preparation of annual estimates on the supply and use of goods and services is very useful, not only as an instrument for monitoring global and sectoral estimates of the gross domestic product obtained from the standpoint of production or from the standpoint of income, but also to obtain measurements of the relevant components of final demand by type of goods and even for attempting to estimate it by object or purpose.

Although estimates obtained by the commodity-flow method are based on estimates of production for each class of commodity, to some extent they provide a means for monitoring the global values of the gross domestic product obtained by aggregating estimates of the sectoral product, even though these may in turn be figured mainly from the standpoint of production, since they test the consistency —at the aggregate level— between estimates of sectoral inputs and hypotheses and available data on the intermediate uses of the supply of commodities.

Detailed estimates of the use of the supply of goods and services provide a framework for monitoring the consistency between the estimates of production and imports of various classes of commodities and the data available on exports, intermediate consumption and increase in stocks. Perhaps the most important application of the commodity-flow method, however, consists of the estimation of the components of expenditure in the gross domestic product, both global and by type of goods.

The point of departure consists of the estimates of production at producer prices and of imports of different classes of commodities. In order to obtain the value of the supply of each class at purchaser prices, it is necessary to add estimates of the corresponding transport and distribution margins. In order to break down the supply of each class of commodity according to use it is necessary, first of all, to incorporate the values of those uses for which it is possible to make independent estimates, as is frequently the case with regard to exports, possibly also intermediate consumption of producers of government services and perhaps the increases in stocks (at least of primary export goods). The supply of each class that is not explained by these independent estimates must be distributed among the remaining uses: probably intermediate consumption of producers of commodities, private consumption expenditure (of households and of private non-profit institutions) and gross fixed capital formation.

The accuracy of the results obtained from applying the commodity-flow method will depend, fundamentally, on the number of classes of commodities considered in the analysis. The greater the number analysed, the greater will be the number of classes that can be indentified with a single habitual use on the basis of its physical characteristics and state of processing.[17] The assignment by habitual use of the remaining classes should be based on some independent point of reference or, less probably, on basic annual data on the relative magnitude of each alternative use. On the other hand, if only a small number of classes is used to make the annual estimate of the commodity supply, there will be too much of an assumption of non-variance of the mix of goods and this will invalidate the estimates obtained for each component of the final demand.

Naturally, if an input-output table is available —as well as the more disaggregated information on which to construct it— this will provide a very important aid in making annual estimates of the use of goods and services by the commodity-flow method.

As was pointed out in chapter I, the Latin American countries often make estimates of fixed capital formation by type of goods, and these are obtained from the commodity flow that is usually identifiable with that use. However, if this method is only used to obtain estimates of fixed capital formation, part of its potential is wasted and this will inevitably affect the very quality of the estimates.

On the other hand, the countries of the region do not often show private consumption according to object or purpose, since the great majority of them obtain this aggregate as a remainder. This is an area in which it is clearly feasible to expand coverage and detail in the national accounts estimated in the region. The use of the commodity-flow method makes it possible to obtain private consumption expenditure (when no distinction can be made between final consumption expenditure of households and expenditure of private non-profit institutions) without having to rely so much on the other components of expenditure; above all, it can be classified by class of commodity in a manner consistent with the composition of the supply and of the other aggregates of final demand. On the basis of this classification, and depending on the degree of detail available, it is possible to obtain private consumption expenditure by object or purpose, in accordance with the classification proposed by SNA.[18]

Final consumption expenditure of households by object or purpose can be estimated directly from the results of income and expenditure surveys. In Latin America, the use of this type of survey has been limited by its cost, by the difficulty of ensuring nationwide coverage, and by the fact that such surveys are not a part of the regular survey programmes of the countries (which means that each income and expenditure survey is a unique operation the procedures and results of which are not comparable with those of previous surveys) Moreover, in some countries, the carrying out of household surveys in no way guarantees a minimum standard of quality in the results of an income and expenditure survey. [19]

This, however, is no justification for the failure to use the results of income and expenditure surveys in preparing national accounts estimates, in cases in which the statistical system is equipped to carry out this type of survey. Although because of their sporadic nature, they cannot be used as a basis for yearly estimates of consumption expenditure of households, there is no reason for not using them with some regularity to produce estimates that may be used as points of reference. Furthermore, these surveys may be used in combination with the commodity-flow method. Ideally, the results of income and expenditure surveys may be used to disaggregate classes of commodities according to the purpose of expenditure and to convert the classification of consumption expenditure by origin and class of commodity into a classification by object or purpose. The main difficulties that arise in such an operation are, on the one hand, the fact that the surveys rarely disaggregate all categories of expenditure (which are based on groups of needs) by class of commodity; on the other hand, there is the fact that usually there is no independent information on intermediate consumption expenditure of private non-profit institutions which could be used to determine separately, for each commodity flow, how much is accounted for by consumption of households for purposes of comparison —taking into account the consumption of institutional households— with the results of the survey.

Perhaps a more pragmatic approach might be to use the annual estimates obtained by the commodity-flow method as indicators from which an estimated reference point may be extrapolated by combining them with the results of the income and expenditure survey.

The estimation of increases in stocks is another area of expenditure in which progress can be made in most countries of the region. To the extent that the commodity-flow method is applied to total supply, it is necessary to systematize the information —usually available— on increases in stocks of important primary commodities or their by-products and in stocks of certain industrial goods the production of which is highly concentrated. By the same token, however, estimates must be made of the kind and probable magnitude of the increase in stocks in other classes of commodities, in order to prevent this component from "contaminating" the estimates of final expenditure for private consumption or of intermediate consumption. Hence, a way must be found to make use of the data to be found in balances or surveys of enterprises carried out for other purposes. This would make it possible to expand the actual coverage of the usual estimates of increases in stocks —which, strictly speaking, only cover the flows mentioned in the first place— and also to show their classification by type or nature of goods.

In most Latin American countries, there is a potential for making progress in the coverage and detail of expenditure estimates by incorporating the classification of final consumption expenditure of general government by function. [20] Actually, the problem lies in the classification of the producers of government services —and of the value of these services— according to the main functions of government. For this it is necessary to resort to programme budgets or, in their absence, any more analytical records that might exist in government budgets, in order to overcome the limitations of the traditionally used institutional classification.

2. Sectoral value added by type of compensation

As indicated above, most Latin American countries do not show sectoral value added by type of compensation. The main difficulties encountered in obtaining the necessary disaggregation lie, on the one hand, in the calculation of net indirect taxes of subsidies and, on the other, in the estimation of consumption of fixed capital in respect of each productive sector, since the value of compensation of employees for the economy as a whole is usually obtained by aggregating sectoral estimates.

In general, compensation of employees is based on acceptable estimates obtained from direct surveys of establishments, supplemented with data on sectoral occupation (in practice, the economically active population) and estimates of average compensation.

In assigning indirect taxes by sector of economic activity, alternative and mutually complementary calculations are usually made. On the one hand, it is feasible to assign taxes which are imposed on certain products or productive sectors, according to a tax base or to tax regulations. On the other hand, it is possible to distribute by sectors the remaining indirect taxes collected by government by using the administrative records pertaining to tax returns submitted by enterprises or the data collected through periodical surveys of certain sectors.

There are certain aspects of indirect taxes that have made it necessary to reconsider some SNA definitions; among these, because of its quantitative importance, is the value-added tax. When the current revision of SNA was made, the value-added tax was not in general use and was therefore not analysed in a specific manner. At the present time, the countries of the European Economic Community have adopted the criterion of indicating net collections of the value-added tax in the same way as import duties, as a component of the total gross domestic product and without itemizing it by sector. This criterion is based on the idea that the value-added tax does not seem comparable to other forms of indirect taxation; the main argument against this procedure and in favour of itemizing it by sector is based on the idea that national accounts must provide comparability with countries applying other types of indirect taxation. [21]

The estimation of fixed capital consumption by sectors presents greater difficulties. Nevertheless, this is also an area in which most of the countries of the region can make progress. With a few exceptions, in Latin America the global fixed capital consumption is estimated as a component of the gross domestic product, on the basis of accounting records of producers. Thus, in order to obtain a global estimate by aggregating sectoral estimates having a similar degree of reliability, all that is necessary, on the one hand, is to expand the

combined data base of balances or surveys to enterprises that will provide for a reasonable coverage of the main productive sectors and, on the other hand, to be more specific and provide greater sectoral detail when making the adjustments. The latter is necessary because of the difference in the assumed useful life of goods and the changes in prices that occur between the time of purchase and the current time, which are necessary in order to approximate the estimates based on cost of origin used in accounting records to the concept of replacement value of that part of the assets that is consumed in current production, as required by SNA. Moreover, the preparation estimates of fixed capital consumption at the sectoral level can only improve the quality of estimates at the global level.

A further step, which some countries might be in a position to take, would be to introduce the permanent inventory method, which not only makes it possible to obtain estimates of fixed capital consumption at replacement values, but also to lay the foundations for making periodical estimates of renewable fixed capital. Although it is difficult, by this method, to assign by sector the values of fixed capital consumption obtained for the economy as a whole, if they are combined with the values obtained from the accounting records of enterprises, through available data on class and age of assets, more reliable estimates could be obtained of the economic value of fixed capital consumption in each sector and, at the same time, the foundations could be laid for analysing the financial implications of practices currently used to calculate depreciation in enterprises.

3. Institutional sectors

The institutional sectors are transactors because of their action as independent financial units that assign or decide on the application of financial resources, both for the receipt and expenditure of current income and for the attraction and use of capital funds.

SNA recommends the establishment of two accounts for each institutional sector: the income and outlay account, pertaining to current transactions, and the capital finance account, which includes gross accumulation and its financing and the variations in financial assets and liabilities. Although the SNA recommendations do not include the preparation of a production account for each of these sectors, there are operational and analytical advantages to such a practice. From the operational standpoint, such accounts allow for a more thorough development of the system, which would thus include accounts for all the transactions of each institutional sector, and explicitly show the link between production accounts and income and outlay accounts, facilitating assignment of the operating surplus. From the analytical standpoint, such accounts are useful in linking domestic production and the income originating from it with the entrepreneurial structure, forms of ownership and organization, and the technological levels associated with them.

Table 17 proposed by SNA, which shows the income of interior factors by class of economic activity and institutional sector of origin, provides the starting point for recording this linkage, but its analysis undoubtedly requires a significant range of the sector of non-financial enterprises and financial institutions.

In practice, with the exceptions of some countries that have current income and outlay accounts for general government —and, to a lesser extent, for households— the preparation of accounts by institutional sectors is the part of the system of national accounts that has been least dealt with and implemented in Latin America. In this respect, it should be mentioned that, in order to orient and facilitate the application of SNA, the United Nations Statistical Office is preparing a manual of national accounts,[22] part II of which provides an analysis of information sources and calculation methods that can be used in estimating income and outlay accounts and capital finance accounts for each institutional sector.

Following is a summary of the main requirements or conditions that should be met by potential sources of information and the difficulties that they present, without considering problems relating to sectoral coverage or the scope of each individual transaction, as analysed and commented in detail in the aforementioned document.

(a) *Non-financial enterprises, corporate and quasi-corporate*

In principle, in order to prepare the accounts for each institutional sector, it is essential to have accounting data. This is absolutely necessary in the treatment of non-financial enterprises, since the sector covers not only corporations —capital or other types— but also enterprises which although unincorporated, have a large volume of operations and carry complete profit-and-loss records and complete balance accounts on financial assets and liabilities, as well as on physical assets required for their business activities.

The complexity and diversity of private accounting systems in different types of societies, as well as the variety of criteria on the scope, time and method of valuation to be used in recording many different transactions, has been the greatest obstacle encountered in collecting and systematizing the accounting information that is available, at least in respect of corporations. The situation is somewhat similar with respect to the accounting systems of public enterprises. These difficulties clearly point to the advisability of encouraging each country to adopt and apply general accounting plans having a uniform orientation for all non-financial enterprises, which would determine the accounting structure and the recording of operations in such a way as to facilitate financial and administrative management, but which would also be consistent with the national accounting criteria and make it possible to systematize and aggregate transactions.

Despite this general limitation, which exists in almost every country of the region, it should be possible to make preliminary even though partial, estimates of the structure and scope of each subsector and type of transaction. To this end, it would be necessary to take advantage, for the time being, of information existing in administrative records created for the purpose of monitoring compliance with given legal norms, such as tax returns, bookkeeping reports and statements which public enterprises and certain private enterprises must by law submit to the government regulatory authorities and annual accounting statements that certain classes of corporations —especially capital corporations or those having access to the securities market— must normally present and publish.

To the extent that it is not possible to make use of such information, however, the estimates for this institutional sector could be based on annual surveys of different classes of enterprises, which in turn might complement the surveys normally made of the establishments of certain economic sectors for purposes of gathering data on production. In addition to allowing for the collection of data on income and outlay and capital finance, this approach has the advantage of linking or integrating the data provided at the enterprise level with those used in establishments, thus making it possible to prepare production accounts for the enterprises and facilitating classification by class of economic activity. To this end, it would be advisable to introduce, in stages according to increasing complexity, special questionnaires that would provide comparable data suited for national accounting purposes which at the same time could be used by the enterprises surveyed to complement and expand their accounting records.

All this indicates that there are concrete possibilities of making estimates for the non-financial enterprise sector. Moreover, the rational use of the different sources available and the feasibility of collecting complementary data coincide with the analytical need for obtaining accounts —both financial and production accounts— for important institutional subsectors; for the time being, the accounts of public enterprises, based on recording systems currently used by them, which might eventually be adjusted to meet national accounts criteria, possibly introducing special forms designed to expand the data base provided by accounting records.

Accounts of capital corporations might also be obtained, either from the accounting statements they are usually required to publish (or to submit to public monitoring bodies) or from special surveys of the type mentioned above.

Likewise, it would be particulary useful in the Latin American countries to estimate production accounts and income and outlay and capital finance accounts of foreign enterprises. Legal regulations governing this type of corporation could be useful for this purpose.

Finally, consideration should be given estimating accounts for subsectors of corporations such as co-operatives, for which specific accounting data bases can be set up which could prove to be useful for analytical purposes. As regards quasi-corporate enterprises, they should be included in this institutional sector only when they are considered exceptionally important; a decision in this regard would have to be based on accounting information obtained directly in each case. Hence, they should not be considered as a separate institutional sector, but rather should be incorporated to the subsector with which they have the greatest organizational similarity.

These same possibilities point to a potential strategy for producing estimates on accounts of non-financial enterprises based on the availability of information and beginning with public enterprises, capital corporations and foreign enterprises, and leaving for a later stage those corporations that are not capital corporations.

(b) *Financial institutions*

In general, the accounting statements and periodical reports required by regulatory and tax authorities are the basic sources of information for most types

of financial institutions, except for those entities that are generally classified as "other financial institutions". These tools usually provide valuable information on capital transactions and, with some limitations, also meet the requirements on current income and outlay. It may be necessary to adjust some of the data provided in these records to the national accounting definitions, and it would therefore be useful to design special forms for requestioning additional information through the same regulatory mechanisms.

(c) *General government*

Budget and public accounting statements are the sources of basic data for estimating accounts for general government. Although it is possible to work directly with central government records and it is feasible to bring together the budgets of state governments, it will probably be difficult to gather data regarding local government; in this case, it may be necessary to make the first estimates on the basis of annual questionnaires submitted to a sample of goverments at those jurisdictional levels. Likewise, there may be separate records for budgetary and extrabudgetary agencies, which must be combined with the accounting statements of the central government.

It may be necessary to adjust, subdivide and/or reclassify a large part of the government data in order to meet national accounting requirements: in many cases, it may be necessary to resort to analytical budgets in order to obtain the necessary details. Moreover, the government financial accounts are usually kept on a cash rather than a cumulative basis, for which reason it would be necessary to gather information from more detailed records that will make it possible to distinguish payments attributable to commitments of the year of payment for previous debts or advances. For all these purposes, it will be very useful to maintain close links between the national accounting office and the public accounting directorate; in this regard, before the periodical data are collected, it will be important to increase and improve co-ordination and harmonization between the classifications of public income and outlay and the requirements of national accounting.

(d) *Private non-profit institutions serving households*

Private non-profit institutions serving households, and households themselves, constitute different sectors in the current SNA, but not in the previous one. Nevertheless, some countries may consider it necessary, during the first stage in the adoption of the current SNA, to consolidate such institutions with households into a single sector. [23]

If separate accounts were to be established for private non-profit institutions serving households, the sources of basic data would be the accounting statements and records of those entities, the tax reports they are required to submit to government authorities for purposes of obtaining tax exemptions, and other information required by the agencies supervising the activities of all or certain classes of such entities. As in the case of the other sectors mentioned above, these data normally do not directly meet the requirements of national accounting and they must therefore be supplemented with additional data gathered through special surveys.

(e) *Households*

This institutional sector covers not only households, but also unincorporated resident enterprises that are not classified as quasi-corporate enterprises. In practice, as metioned above, it probably also includes private non-profit institutions serving family units.

For the time being, and bearing in mind the real possibility of measuring transactions in this institutional sector, it may be advisable to make the relevant estimates for the sector as a whole, and indirectly, on the basis of estimates for other institutional sectors. In this case, some transactions may be determined as counterparts of the consolidated accounts of the nation or of the accounts of other institutional sectors. Others, mainly those of a monetary and banking type, may be determined by the difference between estimated values for the nation as a whole and the sum of the estimates for the other sectors.

Strictly speaking, in order to measure the sector's transactions on an annual basis, and to classify them by socioeconomic groups of households, it would be necessary to carry out continuous income and expenditure surveys which would have to be complemented with accounting data of unincorporated enterprises.

In practice, a permanent programme of nationwide surveys of households that would integrate surveys conducted for different purposes should be sufficient for the estimation of the income and outlay account. Periodical surveys of employment, which usually make up the nucleus of such a programme, can provide useful annual information in certain classes of income, especially salaries and wages. Consideration might be given to incorporating in these surveys once a year, a special income module that would allow for comparable annual measurements of the different types of income. If the accuracy of these measurements is not satisfactory, as is often the case,[24] special income surveys providing better estimates of different types of income could be implemented periodically as part of the multiple purpose programme. Income and expenditure surveys which, because of their cost and operational requirements, are only carried out once in a while, can provide a direct measurement of final consumption expenditure of households, of direct taxes, and of interest payments, as well as better measurements of different types of income. If integrated into the permanent programme of household surveys, they can be made more useful for the purposes of the national accounts, both because they would be comparable over time, and because their results could be related to those of more frequent surveys and there would be an assurance that they would in fact be carried out. Likewise, the technical requirements of income and expenditure surveys would "spill over", in terms of the permanent capability of the programme and would influence the quality of the employment and income surveys. Moreover, the results of all household surveys can be disaggregated by socioeconomic groups of households, hence meeting a requirement that is of the utmost analytical importance.

Despite the promising possibilities offered by an integrated, multiple purpose household survey programme, it may still leave unsolved some of the problems that arise in connection with the annual estimation of the accounts of households and their enterprises. For the time being, surveys used as a basis for

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such accounts must cover the entire nation and the accuracy of the results pertaining to rural areas must be comparable to that of the results pertaining to urban areas. In addition, even the best surveys carried out in Latin America considerably underestimate entrepreneurial income, as well as income from properties received in cash.[25] In addition, they usually do not show the amount of the gross operating surplus of the different classes of enterprises owned by households; for this, it would be necessary to include batteries of questions aimed at reconstructing the surplus approximately by using information on the value of gross income and operating costs actually paid, based either on the informant's memory or on easily accessible documentation. This technique, although more costly and still in the experimental stage, seems to be recommendable in cases such as those of agricultural establishments, as the way to improve the quality of replies on the amount of actual and imputed entrepreneurial income; in other cases, it may not be very useful and may even be less useful than the alternative of concentrating efforts on measuring more carefully the amount of withdrawals made by the household from its enterprises or businesses. Finally, international experience shows that income and outlay surveys do not usually provide acceptable measurements of savings nor of most capital finance flows,[26] perhaps with the exception of purchases of physical assets.

From this set of possibilities and limitations a profile emerges of a possible strategy for estimating household accounts. For the time being, table 23 proposed by SNA appears to provide a better frame of reference for these estimates than accounts III E, since it considers households as a receiving institutional sector; therefore, it includes under households the entrepreneurial income obtained by households from their unincorporated enterprises, instead of the operating surplus originated in these enterprises. Moreover, it has been designed to provide the link between national accounts and more detailed statistics on the distribution of income; for this reason, the table presents some useful disaggregations (compensation of employees and entrepreneurial income, separating income from owner-occupied dwellings) and proposes the classification of income, current payments and accumulation of assets by socioeconomic groups of households, which in principle allows for better use to be made of the data obtained from household surveys.

The possibilities for expanding household statistics along these lines and as an extension of national accounts are set forth in the guidelines on statistics on distribution of income, consumption and accumulation being prepared for this purpose by the United Nations Statistical Office.[27] These guidelines suggest classifications and tabulations of data relating to households that are much more detailed than those that can be included in SNA, as well as ways of facilitating and improving the adjustment of definitions and classifications to the practical possibilities of obtaining information from the households themselves. The purpose of this broader approach to household accounts is to facilitate the measurement and evaluation of the economic wellbeing of the population, the drawing up of policies oriented towards that welfare, the formulation of fiscal income and expenditure policies, and the planning and appraisal of economic development.

Any estimate of household accounts must be based on the indirect procedure mentioned above, which consists of obtaining individual items from

the difference between the acccounts of the nation and the estimated accounts for other institutional sectors. In some cases, such as the case of gross savings of the sector, fixed capital consumption of personal enterprises and gross investment in those enterprises, this is probably the only way to prepare the estimates. But even when results of household surveys for other items are available, they should be checked with the independent national accounts estimates;[28] the aforementioned bias in the measurement of entrepreneurial income is a good example of why the findings of surveys must be corrected. At the same time, household surveys may be the only means of obtaining complete information on certain types of household income and, above all, on the distribution of different types of income by socioeconomic groups.

There is no question that, because of the fact that in most countries solutions based on continuous income and expenditure surveys seem to be unrealistic, annual estimates of income, expenditures and capital transactions of households must necessarily be based on the indirect procedure complemented with annual data obtained through a permanent household survey programme. It would only be feasible to set out these accounts by socioeconomic groups —as proposed in table 23 of SNA— if the results of an income and expenditure survey of acceptable quality were available and, even so, there would be limitations as regards the measurement of capital transactions. If it were feasible to investigate income on a yearly basis through special surveys included in the permanent programme, this would open up the possibility of breaking down the annual estimates of household income by socioeconomic groups.

Obviously, if the countries of the region are to make significant progress in the area of national accounts they must set up a permanent system for conducting household surveys. In this regard, qualitative changes can be expected in many countries once the United Nations programme for the development of the national capacity to conduct household surveys begins to bear fruit.[29]

It is also clear that one requirement for obtaining household accounts is that the accounts of other institutional sectors be estimated regularly. Even if the accounts of non-financial enterprises were limited, during the first stage of their development, to public enterprises and capital corporations, it would at least be possible to obtain an alternative approximation of the accounts of households as a receiving sector —with the help of household surveys— and these could be modified to include all entrepreneurial income from non-capital corporations and quasi-corporations. The coverage of items that cannot be clearly attributed to households or to their enterprises could then be expanded as well.

4. Public sector

Statistics on the public sector have always been particulary important. On the one hand, they are important from the analytical viewpoint of a public sector that is broader than the institutional sector of the general government of SNA, which also includes public enterprises. This broader concept of the public sector is very important for purposes of planning and appraising the economic situation, as it allows for an analysis of the behaviour and insertion of public agencies as a whole in the supply of goods and services and the demand for

resources of production, as well as the means of financing used by public authorities.

They are also important from the more specific viewpoint of the financial aspects of government transactions, which allows for a more specific concept of public finance and which, at the international level, is oriented by the International Monetary Fund's *Manual of public finance statistics*.[30] Essentially, this manual covers the same aspects of the transactions as SNA, although with certain differences, mainly, the basis on which transactions are recorded, sectoral coverage, the structure of accounts and the sources of data.[31] In the IMF manual, attention is centred on the use of statistics in financial and monetary analyses, and there is usually a close relationship between the data required and the type of transaction recorded in the treasury accounts or similar summaries of the public administration. SNA, on the other hand, pays attention to the many users that the information on the public sector must satisfy, as it must include not only the financial flows shown in the treasury records, but also information on the relation and integration of the accounts of the sector with those of the other institutional sectors and the production accounts of public enterprises. For this purpose, it is necessary to resort to the detailed records of government agencies and public enterprises, making further changes in them in order to adapt them to national accounting concepts, such as the addition of imputed flows or adjustments so as to use for a basis the amounts obtained and the economic period for civil years.

SNA makes general recommendations for the preparation of complete accounts for the public sector. In addition, the United Nations Statistical Office, in response to the growing interest on this subject, is preparing a special paper on the statistics of the public sector as part of the forthcoming practical handbook on national accounting; to this end, it has in recent years been working together with the IMF in a joint effort to bring the two manuals together and reconcile them as far as possible. Moreover, the handbook being prepared by the Statistical Office will give a detailed, overall explanation of the treatment of the public sector in SNA, providing more orientation on sources and methods of estimation.[32]

In almost every country of the region, estimates have been made in order to consolidate totally or partially the transactions of the public sector, but since these are not always prepared bearing in mind the requirements of national accounts, problems arise when an effort is made to harmonize them. In the national accounts offices, the estimates that have been prepared most frequently are those referring to the measurement of fixed gross capital formation of the public sector by type of goods.

In those countries where they are already being applied, the IMF recommendations on public finance statistics already provide an orderly data base which, although requiring modifications and expansions for use in the accounts system, represent a point of departure that is vitally important to the estimation of the accounts of the public sector; moreover, IMF has already made significant progress in dividing the items given in its draft manual so as to provide for a better adjustment for national accounts purposes.

The accounts for the public sector proposed in SNA fit into this overall framework of national accounts without representing a closed system, since they

are equivalent to the sectoral accounts. Actually, the entire economy is divided into two major sectors: public and private. Therefore, the preparation of accounts for the public sector is related to the sources and estimating methods which, in general terms, are set forth for SNA as a whole. In SNA, the production accounts of the producers of government services and the income and outlay and capital finance accounts of general government are, in fact, separate. On the other hand, accounts for public enterprises and institutions are included in the group of industries and of financial and non-financial corporations and quasi-corporations, as a result of which it is usually necessary to resort to the accounting books and budgets of these entities when they must be measured individually.

IV. POSSIBILITIES FOR IMPROVING THE QUALITY OF ESTIMATES OF PRODUCTION AND OF THE USE OF GOODS AND SERVICES

The expansion of the current coverage of national accounts in the countries of the region is an analytical necessity and a technical challenge. The quality of the estimates currently prepared must be improved —in some cases, considerably— if they are to provide an efficient tool for the analysis of increasingly complex economic situations. This may turn out to be a more exacting task than is the inclusion of new subjects, since the nucleus of the problem lies in the quality and relevance of the basic statistics available. Although there is still a wide margin for the national accounts teams to use their imagination in order to utilize, adapt, complement and monitor existing statistics and to improve their estimating procedures, they must concentrate their efforts on the basic statistics which provide the foundation of national accounts, in order to allow for the necessary expansion of existing estimates and to improve their quality. Moreover, as was pointed out in a previous paper, there are some serious deficiencies in that the zeal with which efforts have been made to expand the scope of the estimates has led to a deterioration in their quality, inasmuch as incomplete or unreliable basic data have been processed, or theories that are difficult to accept have been adopted on the nature and behaviour of aspects not included in basic statistics. At the other extreme are those cases in which the desire to minimize error has led to a narrowing of the coverage of estimates, which have been limited to those aspects on which the most reliable basic data are available. Since this information usually relates to the more dynamic sectors, in which modern forms of organization are predominant, this criterion underestimate the absolute value of production or income while at the same time it tends to overestimate the growth rate. [33]

The position held here is that in order for the quality and coverage of basic statistics to be significantly improved in the Latin American countries, a profound transformation of statistical systems must be carried out rather than a thorough auditing and detailed expansion of traditional statistics. This transformation should be oriented towards achieving a dynamic and stable balance between: (i) those analytical requirements that are essential —and, therefore, have priority— in order to take the pulse of the development processes occurring in our countries and detect new problems to which they give rise, as well as the obstacles encountered; (ii) the conceptual relevance and the minimun quality levels of measurements in order to avoid equivocal or inconclusive analyses, and (iii) the actual availability of technical, organizational and financial resources for statistical development, which is part of each country's institutional apparatus and is a facet of its development. Although it is legitimate to want the official analyses of the socioeconomic situation and the

production of the statistics required for such analyses to be ranked high in the institutional development of the countries, such a desire does not justify proposing idealistic but unrealistic schemes.

The special features of national accounts make them well suited as a framework for the transformation and development of national statistical systems; hence, increasing attention is being given to the possibility of using them for this purpose.[34] However, from the standpoint just outlined, the development of basic statistics set within the framework of national accounts and adapted to the resources and needs of our countries should be accomplished through the introduction of new and efficient measurement tools that can serve a variety of analytical purposes and which will lead to the development of permanent nuclei of technically and operationally sophisticated skills that will allow for considerable flexibility.

Therefore, in this chapter, in considering the possibilities of improving at least the quality of the estimates of production and use of goods and services, which have the longest tradition in Latin America, we have tried to avoid a patchwork approach consisting of a mere listing of the innumerable specific limitations that arise in national accounts with each information gap, each working assumption or each estimating procedure. Instead, we have concentrated on the possible changes that could be made in the statistical system or in the approach to the preparation of national accounts in order to achieve qualitative improvements in the reliability and usefulness of basic statistics, bearing in mind the requirements of national accounts as well as entire areas of analysis of production, generation of income and demand.

1. Sources of basic statistics

The collection and processing of the primary information required for estimates of production and use of the supply of goods and services represents a significant portion of the work done by the national accounts units. Moreover, it is the field in which they have the greatest experience, both with respect to recognition of primary resources and to capacity for subsequently adapting and processing the data provided by those sources.

The data on goods and services are linked with the first stages of the countries' statistical development. The following are fundamental parts of this work: (i) periodic censuses and surveys among manufacturing and mining establishments and, less frequently, construction industries and commercial and service establishments; (ii) statistics on the production of agricultural goods, and (iii) statistics on trade, which are administrative subproducts of the regulations relating to customs and exchange.

There is in the region an increasing flow of data from economic censuses and ongoing research on production, intermediate use, occupation, etc., relating to the different economic activities. Many of these surveys are part of the concerted plans of action at the worldwide or regional level that have been put underway in response to initiatives of international agencies concerned with expanding the scope of activities covered, and working for the adoption of definitions, classifications and valuation criteria that would be more useful for analysis and would be common to all countries, in order to improve comparability.

The countries have been increasing their efforts to improve these basic pieces of information. The national accounts units have tried to provide orientation on orders of priority in this area, which is mainly the responsibility of national statistical offices, in view of the importance of improving basic statistics so as to expand and improve the quality of SNA accounts and tables. In this respect, there is consensus that the national accounts units' use of improved procedures and techniques for adapting or complementing basic information will achieve only limited results unless there is an improvement in the scope, coverage and reliability of basic information. Evidently, a great deal of progress can be made in the interim until the programmes or plans of action for improving basic statistics produce results, since the national accounts units are constantly concerned with adopting better procedures for processing primary data or making more integral and rational use of existing resources.

In contrast with this development of statistics, whose unit of observation and classification is the establishment, good or service, there is less experience, availability and reliability in the countries of the region as regards the utilization of surveys which use statistical units of an institutional type (enterprises or households), or in the use of data from administrative records (balances or tax returns) prepared by enterprises, persons or non-profit associations. This is to a large extent reflected in the fact that little progress has been made in respect of the accounts and tables on current income and outlay and financing of accumulation prepared on the basis of institutional units of observation and classification.

With respect to production accounts, the use of information based on households has been limited to estimating the income of the employed population in certain groups of services, such as the providing of services to enterprises and, in a more general way, of activities of the so-called informal sector of the economy, both in the services sector and in the crafts sector.

The countries do not have much experience in preparing production accounts for enterprises. In general, the data on balances and the profit and loss tables or those based on tax returns or other types have been used in estimating certain subgroups of activities where large-sized enterprises are predominant or —in certain activities— in estimating the relationship between components of the cost and value of production to be applied to estimates of total production based on information on establishments (censuses, etc.). This procedure has been applied to obtain approximations of the value of intermediate consumption of goods and services not reflected by industrial statistics, or of commercial activities and services in general. This source has also been used to calculate items relating to fixed capital consumption and increase in stocks, although in these two cases there are well-known and formidable problems because of the existence of different valuation criteria and the adjustments for inflation.

2. Generalized application of the commodity flow method

In chapter III, the possibilities of expanding the national accounts estimates prepared by the countries of the region by making annual estimates of supply and utilization of goods and services by the commodity flow method were discussed, and the basic characteristics of such estimates were indicated. It is now

time to draw attention once again to the other dimension of this method: the possibilities it offers of improving the quality of the estimates of sectoral production itself and of the components of final expenditure.

When all the uses of each class of commodity are systematically accounted for, with all the available relevant information being incorporated into the statistical and accounting system, it is possible to control the specificity of the production estimates made and to achieve a general improvement of the quality standards required for such estimates.

This also means that independent estimates of different components of final expenditure must be subject to the consistency requirements that must be met in estimating all intermediate and final uses of the supply, by class of commodity. In this regard, the cases mentioned in chapter II, in which fixed gross capital formation, construction or increase in stocks are estimated by the commodity flow method do not meet these requirements unless, as in the case of Chile, Ecuador and Mexico, they are part of the general application of the commodity flow method.

This proof of consistency is particulary necessary to improve estimates of private consumption and is very useful for conjunctural analysis. As it is obtained as a remainder and is not amenable to control, the value of this aggregate reflects the cumulative errors in estimating the other components of expenditure and those which might result from inconsistencies between these estimates and the estimate of the domestic product obtained as the sum of sectoral aggregate values, in addition to including the increase in stocks not implicitly calculated in the corresponding aggregate. Thus, the general application of the commodity flow method to estimate all the uses of the supply allows for an alternative estimation of private consumption, which will at least make it possible to control and make a consistency analysis of the value obtained as a remainder and, as mentioned above, broken down by purpose of expenditure. Nevertheless, if the quality and level of specificity of the basic series justify it, independent estimation of private consumption by this method could become a part, and would be quite useful for purposes of analysis, of the estimates of components of expenditure obtained by the commodity flow method, and in this case there would be a justification for the statistical discrepancy between the sum of the latter and the value of the product calculated by the production method or the income method.

It is almost unnecessary to stress the extent to which the preparation of an input-output table facilitates the general introduction of the commodity-flow method for the annual estimation of the supply and use of goods and services. But even without conducting a complete input-output estimation exercise, the method can be applied using a reference year for which a special effort has been made to concentrate information on the origin and use of commodities and on the intermediate stages. The experiences of Chile, Ecuador and Mexico are pertinent in this regard.

3. Sources of support for the year of reference

Annual estimates on the supply and use of goods and services should ideally be made by preparing input-output tables for each year. However, since sufficiently extensive and complete annual information is rarely available, this

goal is practically impossible to achieve. It is even questionable whether such efforts, and the costs they would involve, are justifiable when, according to the operative capacity of each country, the first step may be taken by the other parts of the system.

Bearing in mind this situation, the practical solution for this problem is to make detailed calculations, at least for a given year, to serve as a support for the interpolations or extrapolations which may be made for the remaining years — at both current and constant prices— on the basis of ongoing series. For this purpose, it is advisable to prepare an input-output table for one year, or if not, to apply more appropriately and consistently the commodity-flow method based on the balance between the supply and utilization of goods and services, which is one of the fundamental relationships of national accounting. It is important to carry out the extensive detailing of production by class of economic activity and the components of final demand in all cases for the same year, and if possible for a recent year, since in this way the structure of the year may in turn be used to specify the weightings of the base period of the estimates uniformly at constant prices, which requires that the same year be used for all the aggregates.

However, adequate information for the same year is not always available for all the economic sectors or for all the components of final demand. Thus, the year for which the greatest amount of detailed information is available for each case does not necessarily correspond with the year adopted as uniform period and base year for the estimates at constant prices. For this reason, the usual practice is to designate as the year of reference the period in which each particular calculation is used to make the corresponding estimates.

The calculation methods used to estimate the year of reference in each case depend on the type of complete or partial information which may be obtained directly or indirectly from the available censuses, surveys, production statistics, accounting statements and administrative records.

The basic estimate is the gross domestic product by economic sectors, made by calculating separately the gross value of production and that of intermediate consumption for each activity. To this effect, information is required which covers all or almost all the establishments included in each sector, making it possible to classify the productive units in detail by kind of economic activity and specifying the products obtained and the intermediate inputs used in accordance with a suitable breakdown by type of commodity.

The main source of information usually used for these estimates is that provided by census data. In most countries censuses are periodically completed which adhere to the recommendations of world programmes with respect to concepts, classifications and general criteria for recording information. The principal limitations come from the field work or from the design of the census operation, which is often unsuited to the operative capacity of the statistical system or the possibilities and types of private registries. For these reasons, according to the kind of economic activity, a minimum size is set for the establishments included in the census tabulations, generally measured in terms of the number of employed persons, the installed production capacity, or the amount of sales; in the case of manufacturing, there has been a general tendency to include all the establishments.

As may be seen in table 11, most of the availability of census data in the countries of the region is in the agricultural and manufacturing sectors, to a lesser extent in the mining, trade and services sectors and in much smaller proportions in electricity and construction. In the case of economic censuses, especially that of manufacturing, surveys are usually made every 10 years; although some countries have completed economic censuses later than 1973, other countries must base their figures on censuses taken early in the 1960s.

The other sources of information used are annual surveys. For some activities, such as mining and manufacturing, these surveys are carried out periodically, and for others special studies would have to be made. In general, these surveys are more limited than the censuses with respect to the number of establishments, the geographical area included and the detail of the information collected.

One of the problems with this information, as pointed out, has to do with the scope or coverage of the establishments included in each activity. The economies of the developing countries are generally characterized by duality, since traditional establishments and unorganized activities co-exist with modern enterprises. The latter are practically all covered by economic censuses and surveys of establishments, but, on the other hand, small establishments, own-account workers, craftsmen and generally all production carried out in the home are normally not reflected by these sources. As a result, estimates of this informal sector are difficult to make, and the figures included in the national accounts are usually very approximate.

However, as indicated below, in the countries where these domestic activities (principally crafts and manual labour carried out in the home) represent a significant portion of the total, they should be recorded within the framework of the population censuses and be studied by means of household surveys.

Another problem with census information, and much more so with annual surveys, is the measurement of intermediate consumption. The enterprises which have establishments dedicated to different activities have to distribute among themselves a suitable portion of the intermediate consumption expenditure of the central administrative offices and other central auxiliary organizational units (supervision and control, repair and maintenance, storage, supply of electricity, accounting, purchasing and sales and other office work, etc.). Moreover, some expenditures such as those for publicity, telephone services, accounting and legal consultation, etc., generally are not covered by the censuses and surveys and thus need to be calculated especially for the purposes of national accounts.

4. Balance sheets on availability and their use as an instrument for estimating agricultural production

In some instances, the commodity flow approach may be of considerable use for improving production estimates. In particular, the variant consists of preparing balance sheets in physical terms for principal products, taking account of the different uses and reconciling these results with the existing information on the availability of the product.

Table 11

ECONOMIC CENSUSES

Country	Manufacturing				Other activities	
	Period of reference	Size of establishment according to staff employed	ISIC classification Revision	ISIC classification Range (number of digits)	Period of reference	Sectors
Argentina	1973	Total	2	4	1973	Commerce and services
Brazil	1975	Total	a	4	1975	Agriculture: mining; commerce and services
Colombia	1970	Total	2	4	1970	Electricity; commerce and services
					1970/1971	Agriculture
					1968	Mining
Costa Rica	1974/1975	Total[b]	2	4	1974/1975	Commerce
					1973	Agriculture
Chile	1978	5 and over	2	4	1974/1975	Agriculture
Ecuador	1965	Total	1	3	1965	Mining: commerce and services
					1974	Agriculture
El Salvador	1971	Total	2	4	1971	Agriculture; forestry, lumbering and fishing; mining; electricity; construction; commerce and services
Guatemala	1964	Total	1	4	1964	Commerce and services
					1971/1972	Agriculture
Honduras	1975	5 and over	2	4	1974	Agriculture
Mexico	1975	Total	a	3	1975	Mining; electricity; commerce and services
					1970	Agriculture: mining; electricity; construction; commerce; transport and services
Nicaragua					1970/1971	Agriculture
Panama	1971	Total	a	4	1971	Electricity; construction; commerce and services
					1970/1971	Agriculture
Paraguay	1963	Total	1	3	1963	Electricity; commerce and services
Peru	1973	Total	2	4		
Dominican Republic					1971	Agriculture
Trinidad and Tobago	1969 and 1970	10 and over	c			
Uruguay	1978	5 and over	2	4	1978	Mining
					1980	Agriculture
Venezuela	1963	Total	1	4	1971	Agriculture

[a] National classification, similar to ISIC, rev. 2.   [b] Not including small establishments with no compensated employees.   [c] National (equivalent to none of the ISIC revisions).

In the Latin American countries, the sources of basic data on production, crop acreages and yields and on livestock and products of animal origin are the censuses and agricultural surveys and the ongoing series, prepared by using different techniques, by the ministries of agriculture or production control or development bodies. The data provided by these sources refer to agricultural years, which in many cases do not coincide with civil years.

For many products it is common to have ongoing statistics also on exported volumes, either industrial or commercial, which make it possible to update, check, supplement or fill gaps in the sources which provide direct information. The censuses and industrial surveys, statistics on foreign trade, data on official inspection, marketing or tax administration bodies and information on market entry are the most important examples of this type of source. In many cases, however, the use of this information poses problems arising from the discrepancies among the sources providing direct data on production, or between the latter and those providing information on use or marketing. In such a situation, careful evaluation of the basic material is even more necessary.

In many countries of the region, an inventory of this type of information would demonstrate the feasibility of preparing some tables annually on availability and use, and others on supplementary data (areas, yields, stocks, etc.), for each of the principal agricultural products which form a suitable and necessary framework for making estimates of physical production.

A critical examination of the data presented and the definitions, calculation bases and procedures used by the respective sources should aid in evaluating the reliability of the various pieces of information and the origin of discrepancies, ultimately supporting the operations of correction, reconciliation and selection of the series.

Depending on the class of product, sufficient data is not always available to make independent estimates of the various components of both availability and use, and thus to verify consistency. The solution to the problems presented by these circumstances varies in accordance with the type of product considered. Generally speaking, use must be made of supplementary information on marketing and data on technological relationships such as crop yields, stock reproduction rates and production coefficients.

The Subcommittee on Agricultural Statistics of COINS on one occasion held a detailed discussion of the various methodological aspects involved in the preparation of balance sheets on the availability and use of agricultural products. [35]

5. Agricultural statistics

"No development in recent years in the field of data collection has had more striking results than sampling, and nowhere have the results been more pronounced than in agriculture. The time and labor required for collecting statistics by a complete census are so great that few countries can afford to use the census as an annual method of data collection. On the other hand, statistics based upon judgment and estimates of administrators, while inexpensive, are too unreliable to serve the purposes of the policy makers. Agricultural statistics reported by several countries come under the latter category. Consequently, any method which is economical and yet promises sufficiently reliable statistics

merits careful consideration. Random sampling is such a method." [36] This paragraph, written almost 30 years ago, is still true in Latin America.

In view of this diagnosis, some countries of the region have made outstanding efforts to set up systems of agricultural data on the basis of measurements or surveys by sampling —random or, even better, stratified— but we do not know enough about the results of these experiments to extract generalizable hypotheses.

Most of the countries mainly base their estimates on acreage, yield and quantities produced, according to the informed opinion of the local administrators of agricultural ministries. The degree of reliability of the data varies according to the product; in general, there is broader and more reliable information on products obtained in modern regions or establishments, and scarce and unreliable information on the products characteristic of subsistence agriculture. Moreover, with respect to products which go through a process of industrial transformation before being consumed, or those which are basically meant for export, there are generally data on their principal uses, and so it is possible to control and obtain estimates on production through balance sheets on availability and use, as already pointed out. The situation is also favourable in the case of products whose marketing is subordinate to State intervention mechanisms.

For products destined for direct human consumption without prior processing, on the other hand, there is generally no way of establishing a balance sheet of sources and uses, due to the limited scope of both supply statistics and consumer surveys in urban areas, since they do not include estimates on own-account production.

It is possible to estimate the quantities of livestock produced only on the basis of some of its uses: slaughter, net export of live animals and increase in stocks. Statistics on livestock slaughter usually have sizeable omissions and moreover are usually classified and measured by heterogeneous units. Inventories of livestock are data which, with the exception of a few countries, can only be figured on an adequate basis when censuses are taken; accordingly, annual estimates are based on intercensal interpolations or extrapolations based on a series of assumptions with respect to the rate of births, deaths and composition of the stock.

Censuses generally do not include information on prices. Moreover, almost without exception, ongoing surveys are not made on prices and other aspects related to the production and marketing of agricultural products. Given this situation, the national accounting offices must make use of a broad and heterogeneous variety of sources and go through a long and patient process of adaptation of the data from these sources in order to be able to use them to valuate the quantities produced. Depending on the products or countries, prices originally correspond to different stages in the marketing process, and it is necessary to correct them according to trade and freight loading and unloading margins in order to calculate producer values. Along with adapting the available price information in order to express it at producer prices, in the case of many products it is necessary to select the varieties, qualities and periods suited to calculating the figures representing the average price received by the producers.

Taking into account the problems posed by the estimation of production and prices, it is to some extent understandable that lower priority is given by the countries to estimates on the intermediate consumption of the agricultural sector, particulary since almost no country estimates the real product of the sector by using the double deflation method.

There is little doubt as to the advantages offered by the application of more rigorous statistical methods based on sampling. In principle, the possibilities are very promising. Direct measures of area samples and establishment surveys may be used for estimating physical production. Moreover, these surveys, made on a stratified sample of establishments, may constitute the basis for estimating the production accounts of the sector. Advantage could also be taken of the development of capacities to make household surveys in rural areas, not only to investigate the living conditions in these areas but also to measure the production carried out in family establishments. Finally, there is the possibility of making ongoing surveys among local producers or tradesmen, in order to make a periodic inquiry into the prices paid for representative varieties of the various types of inputs and to find out the composition of the costs of production.

The principal obstacles to implanting a modern and flexible agricultural organization information system seem to lie mainly in the institutional and organizational structure. On the one hand, precise and up-to-date maps and cadastres are needed. Also required is a more complex and technified field organization in the rural areas and, above all, one that is very different from the traditional agricultural organizations. This perhaps helps to explain the obvious urban bias of the advances made in Latin American statistical systems.

6. Non-marketable and domestic agricultural production

Certain components of agricultural production do not enter the market, since they are used by the producers or establishments themselves.

In many rural areas of the region, a significant portion of agricultural production is meant to be consumed by the households of the producers themselves. This subsistence production is usually carried out as a part of family farm production and represents the major part of the production of sub-family plots (which cannot provide productive employment to all the active members of the household). Subsistence production also occurs in the "grey area" made up of the dependent workers who receive as part —sometimes the main part— of their remuneration a small plot to cultivate on their own. Although own-account production may or may not represent a significant proportion of a country's total agricultural production, its adequate measurements and apportioning, as well as its detailed specification, are important for national accounts and indispensable for the analysis of the general welfare.

Another type of non-marketable production which takes place in agricultural establishments consists of the inputs (seeds, fodder, etc.) used in the establisment itself. Also included in agricultural production, but used for capital formation by the establishments, is the development of permanent plantations and the raising of reproductive livestock. In addition, in order to expand their fixed capital, agricultural establishments usually carry out secondary activities, erecting buildings of various types.

With the procedures which most of the countries of the region use currently to estimate agricultural production by product on the basis of the acreages harvested, estimates of own-account production and those of production of inputs for the producer's own use should in principle be included. This is probably true in the case of the principal agricultural products which are industrialized or exported, or even in the case of foods (tubers and fruits, for example) which are produced as specialities in some regions for the national market; however, it is doubtful that these estimates adequately reflect the production of food (dispersed and fragmented) which constitutes the basis of subsistence, as well as that of certain species of vegetables and fruits. Annual estimates of livestock production do not adequately cover the large amount of production by domestic farms, or secondary production by agricultural establishments. The own-account slaughter of animals, on the other hand, is included in livestock production when it is estimated on the basis of a model of stocks and flows.

The calculation of the innumerable plots dedicated to this type of production would require an exhaustive enumeration of the acreages used for agricultural purposes. This reinforces the need to base production estimates on rigorous instruments, such as measurements by sampling, on an adequate sample obtained from the agricultural census, but it also indicates the advantage of making full use of the possibilities offered by the household surveys of rural areas. Moving from the establishment —arbitrarily defined, from the point of view of production— to the home as a unit of analysis opens up the possibility of measuring all the activities which the latter carries out (marketable production, own-account production and capital formation) independently of its formal or legal organization as an establishment. In addition, since both types of survey require meticulous map making, it is possible to prepare a complex sampling framework based on the agricultural and population censuses, and thus compare both types of results.

7. Estimates of the industrial product

The degree of reliability of the estimates relating to the manufacturing sector differ according to whether it is a question of years with or without census information or intercensus years of the industrial stratum measured by means of sample surveys.

Most of the countries of the region have economic censuses for manufacturing which cover the total number of establishments (see table 11); the exceptions are Bolivia, Haiti, Nicaragua, the Dominican Republic and the English-speaking countries of the Caribbean. Nonetheless, the quality of the estimates based on the census data is limited in many cases by the lack of current figures and, in general, because in spite of the possible importance of craft activities in most countries, the available economic information on them is scarce or almost non-existent.

As for the annual establishment surveys, the coverage of the establishments included is even lower (see table 12) and is strongly influenced by the aspect indicated above, since the problem of the craft sector is further complicated in the annual intercensus calculations by the lack of information on small and sometimes medium-sized establishments. Even in countries with a

Table 12

MANUFACTURING SURVEYS[a]

Country	Executive body	Initial period	Frequency	Coverage		ISIC classification		Availability of information on principal products (quantity and value)
				Size of establishment according to number of employees	Other characteristics	Revision	Range (number of digits)	
Argentina	INEC	1970	Quarterly		Principle products			X
Bolivia	INE	1960	Annually		Establishments with capital of US$ 50 000 and over	2	4	X
Brazil	IBGE	1968	Monthly		Principle products	b	2	X
Colombia	DANE	1975	Monthly	10 and over		2	3	
Chile	INE	1968	Annually	50 and over		2	4	
Ecuador	INE	1955	Annually	7 and over	Establishments with production greater or equal to 180 000 sucres annually	2	4	X
El Salvador	DGE and C	1960	Annually	Total		2	4	X
Guatemala	DGE	1971	Annually	5 and over		2	4	
Honduras	DGE and C	1962	Triennially	5 and over		2	4	
Mexico	DGE	1963	Annually	The most important of the activities selected	Currently groups classes of activities	c	4	X
Panama	DE and C	1955	Annually	5 and over		2	3	X
Peru	O.G.E.	1944	Annually	5 and over		1	3	X
Dominican Republic	ONE	1950	Annually	5 and over	Sales value greater or equal to R.D.$ 31 630			X
Uruguay	DGE and C	1973	Annually	10 and over	Only Dept. of Montevideo	2	3	
Venezuela	DGE and C	1974	Annually	5 and over		2	4	

[a] Refers to surveys in progress and published.
[b] National classification similar to ISIC, rev. 1.
[c] National classification similar to ISIC, rev. 2, with four-digit range.

sizeable industrial investment such as Argentina and Brazil, the surveys are not carried out by establishment but for principal products.

In addition, as shown in table 13, eighteen countries of the region prepare indexes of the physical volume of industrial production on the basis of annual surveys or special requests to present data for shorter periods. Two other countries (Bolivia and Venezuela) publish indexes only on the current value of production. Of a total of 20 countries, fourteen apply the ISIC Rev.2, four countries the ISIC Rev.1[37] and two countries use national classifications similar to those of the ISIC Rev.2.

Analysed as a whole, the information provided by the annual surveys and the data on the changes in production indicated by the indices of physical volume has the following main limitations:

(a) In general, large-sized establishments, and to a lesser extent medium-sized ones, are referred to; small establishments are excluded;

(b) The selection of establishments is not usually stratified by sizes within the same branch;

(c) The list of establishments and products selected is usually rigid, since it usually does not incorporate new activities, establishments or products;

(d) In some cases the annual sample of establishments is variable depending on the lack of response to the survey;

(e) Information is collected separately on amounts and quantities for the major finished products and to a lesser extent on raw materials or used materials;

(f) For some branches of activity the information is completed with data from regulatory associations or bodies;

(g) The results obtained from the annual surveys are not always compatible with the results from shorter periods;

(h) Quality control of information, instead of referring to technical or economic relations, refers to aspects of accountable balances;

(i) The offices which carry out establishment surveys are not always the same ones which prepare the production indexes;

(j) The procedures and indicators used to prepare the physical production indices in each class of activity are usually uniform and do not respond to the peculiar characteristics of each branch;

(k) The base year of the industrial production indexes in most of the countries does not coincide with the base period of the national accounts estimates at constant prices.

Because of these limitations, and since these indicators are generally not prepared with the participation of the national accounts offices, the result in practice is that the latter try to improve and supplement the information for the sector estimates with heuristic procedures, which are in turn not very rigorous.

To correct these deficiencies, the solution is to keep permanent records of the industrial establishments, effectively integrating the censuses with the ongoing sample surveys. For the moment, adjustments are usually made when a new census is taken or when the establishment of new and very important activities is noted.

The establishment census, although infrequent, is a key factor in a programme of economic statistics. This census should be supplemented with

Table 13

INDEXES OF PHYSICAL VOLUME OF INDUSTRIAL PRODUCTION

Country	Source	Base period	Frequency	Activities	ISIC Classification Revision	ISIC Classification Range (number of digits)	Coverage Size of establishments	Coverage Other characteristics	Number of series	Indicators Quantity produced	Indicators Deflated production values	Indicators Consumption of materials	Hours worked
Argentina	Banco Central	1970	Annually and quarterly	Manufactures	2	4	With 5 or more workers or with installed engines of 1/2 HP or more	Excluding generation of electricity for own use	657	X			
Barbados	O. E.	1971		Mining, manufactures electricity	2	3							
Brazil	IBGE	1975	Annually and monthly	Mining, manufactures	a	3		Mining covers 82.8% of V.A. and manufactures 57.8% of V.A.	613	X			X
Colombia	Banco de la República	1970	Annually and monthly	Manufactures	1	2	10 or more persons employed			X		X	X
Chile	INE	1968	Annually and monthly	Manufactures	1	3	5 or more persons employed	Excluding the refining of large-scale copper mining		X		X	
	INE	1957		Mining			Principal enterprises	Excluding natural gas and including copper refining					
Ecuador	Banco Central	1970		Manufactures	2	3	7 or more persons employed or with gross value of production/180 000 sucres annually	Covers 90% of gross production value		X			
El Salvador	Banco Central	1961	Annually and monthly	Manufactures	2	3	With sales of more than 1 000 colones in 1961 and more than 500 colones in refining in 1961/1962		109				

(Table 13 concluded)

Country	Source	Base period	Frequency	Activities	ISIC Classification Revision	ISIC Classification Range (number of digits)	Coverage Size of establishments	Coverage Other characteristics	Number of series	Indicators Quantity produced	Indicators Deflated production values	Indicators Consumption of materials	Hours worked
Guatemala	D.G.E.	1946	Annually and monthly	Manufactures and electricity	1	2	5 or more persons employed	Cover 59% of gross value of production	18	X		X	
Haiti	I.H.E.	1954/1955	Annually	Manufactures	2	3							
Honduras	Banco Central	1966	Annually	Manufactures	2	3	5 or more persons employed						
Mexico	Banco México	1970	Annually and monthly	Mining, manufactures, construction and electricity	2	3	All	Annually covers 100% of gross value of production and monthly covers 60% of gross value of production	316	X			
Nicaragua	Banco Central	1960		Manufactures	2	3	With production greater than 1 200 córdobas in 1953		24	X			
Panama	D.E. and C	1971	Annually and quarterly	Manufactures	2	3	5 or more persons employed		207	X		X	X
Paraguay	Banco Central	1977	Annually	Mining, manufactures, construction and electricity	2	3	1 or more persons employed						
Peru	INE	1973	Annually and monthly	Manufactures	2	3	5 or more persons employed	Covers 73% of gross value of production	215	X	X	X	
Dominican Republic	ONE	1968	Annually	Manufactures	2	4	All	Covers 100% of sugar refining and 98% of gross value of production of rest of manufacturing	182	X			
Trinidad and Tobago	C.E.O.	1977	Annually and quarterly	Manufactures and electricity	a	2							
Uruguay	Banco Central	1961	Quarterly	Mining and manufactures	1	2	10 or more persons employed	Covers only Department of Montevideo	79	X	X	X	X

aNational classification, similar to ISIC, revision 2.

annual studies of a sample of establishments, in order to obtain the most important data, and with more frequent surveys to determine the critical measurements which are subject to seasonal variations or other short-term changes. [38]

8. Estimates of the value of construction work

In the countries which include the construction industries in economic censuses, the census data, as well as that from annual surveys, are incomplete and unreliable. This is because of the form of organization of these industries, in which there are numerous small producers who are very mobile and keep insufficient records, making it difficult to design and carry out censuses and surveys except for the large-scale units and governmental bodies which deal with construction work.

In addition, of particular importance in the developing countries is own-account building done by units which are included in classes of activities other than construction, especially works for agriculture, electricity, transport, communications and housing. As far as possible, these works should be measured separately and classified in the construction industry; however, in practice it is frequently impossible to define all these works as having been completed by independent units, and thus they must be recorded as secondary production of the enterprises or bodies which produce them. In general, it is possible to identify own-account housing construction separately, since in order for it to be carried out it requires a building permit. [39]

Among the other very special characteristics of this sector which make its measurement difficult are the following: the principal activity of the construction industry is developed on changing sites, for which reason the project, that is; the concrete work and the construction permit, are frequently used as a statistical unit rather than establishment or enterprises doing the building; another peculiarity is the general use of subcontractors who work for the main contractor and are responsible for the project as a whole. Finally, this activity is characterized by the fact that production largely consists of unique products and the projects generally last for a relatively long period of time, with the work extending over one or more accounting periods.

For the above reasons, it is difficult to obtain indexes of the volume of the sector's physical production, as well as to establish comparable prices for its valuation. National accounting offices, taking these limitations into account, resort to a large variety of information sources and use various methods to estimate the value of construction. In general, the estimates corresponding to public construction are prepared on the basis of data from government accounts, while those corresponding to private construction are prepared on the basis of building permits, supplemented —in some countries— by statistics on production and importation of the principal construction materials. Government accounts usually present difficulties because they include equipment or expenditures which do not by definition correspond to goods produced by this industry, or which are calculated in the fiscal accounts at different times from those used for the national accounts.

Statistics on building permits granted are the main source of information in Latin America for the estimates of the value of construction of buildings in

urban centres. The main problem of preparing national accounts statistics is that of adapting these theories to make them representative of the volume of construction completed in each period. For this it is generally necessary to make corrections which take into account the importance of evasion and waivers, and the development of the execution of the work through time. With this objective, use is made of the data available in city records on permits granted, certificates of authorization of works and waivers, and information provided by construction firms on the average total duration and duration by stages of the various types of work and on the importance of each stage in the formation of the total value of the construction.

Moreover, since the declared value in the permits frequently underestimates the real value of the construction, it is necessary to make periodic studies of the average value of various categories of works in order to obtain the prices to be applied to the constructed surface in each period, or the appraisal correction factors used to calculate the declared values on the permits.

Statistics on prices and costs of construction in the region are clearly insufficient. Generally, the only figures available are the cost indexes of the principal materials and labour, based on systems of weighting corresponding to given types of housing, and excluding other expenditures or margins of utility. Cases of adjustment to incorporate technological changes are not reflected and the weighting bases are not revised with sufficient regularity. Indexes of cost of material and labour corresponding to other types of buildings and works are prepared very infrequently, and for this reason the above-mentioned indexes are applied to all types of public ad private construction, although their definitions and scope are specific and thus unsuitable for general application.

For national accounts, indirect calculations are also often made of the production of construction based on inputs and using data on employment or on important items of intermediate consumption, such as cement, bricks, lumber, etc. The average of the ratio between the value of inputs and the value of gross production is usually determined on the basis of surveys or analysis of representative projects of various works.

9. Problems of the method of extrapolating from the added value in the base year

In most sectors, the contribution to the total gross domestic product is calculated by extrapolating the gross value added in the base year of the various component activities, by the respective indexes of gross production volume.

As is well known, the results obtained by applying this method will differ from those obtained by calculating the gross domestic product as the difference between gross production and intermediate consumption, at constant prices, insofar as the change in intermediate consumption at constant prices differs from the trend in the physical volume of gross production. The possibility of this occurring varies according to sector and period. In general, in those sectors whose production is subject to fluctuations because of natural contingencies, such as the agricultural sector, changes in the input/physical output ratio will be more frequent, and the same will occur in the leading sectors of advanced technology. However, it is to be hoped that in general, in the majority of activities, technical changes are occurring at a sufficiently slow rate so that the

assumptions of the calculation are not too strong, with the weighting bases revised fairly frequently for those cases in which the opposite occurs.

Changes in the degree of vertical integration also affect the results obtained by this procedure. Supposing that, in an establishment in which the various stages in the process of producing a good were being carried out, a decision is made to eliminate one or more of them (using other establishments to replace them); if the final product resulting from the process is maintained as a unit of measurement of production for the establishment, it will not be considered that its contribution to the final product of the economy has become less, whereas the processes which were transferred to other establishments have increased the production of the latter, with duplications occurring in the measurement of the growth of the total activity.

Admittedly this type of change, with respect to the integration of activities, is slow, and if there is a frequent change in basis it will not affect the measurement. But this type of change may occur rapidly, due to the application of policies which promote the opening of the economy. In these cases, it usually occurs that some of the parts making up a final product are imported and stop being produced in the establishment which makes the final product, thus diminishing its contribution to net production. Again, if the final product is kept as a unit of measurement, the decrease in the value added in the establishment will not be reflected.

10. Biases in the declaration of the value of production

We have mentioned that in order to prepare their production and intermediate consumption estimates, the national accounts investigators use information from censuses or surveys. Frequently, doubts arise with respect to the definitions of the various concepts included in these information sources. Also common are reflections on whether the data provided by the surveys respond exactly to the concepts being explored by the censuses or surveys.

With respect to the first type of doubt, one problem clearly stands out which is of growing importance in periods of inflation and which is related to the time at which the production is valuated.

International recommendations indicate the use of sales prices in the period of reference of the survey. But when inflation is high and the period of reference is long, the average sales price for the period may differ significantly from the price which should be applied if the criterion is adopted of valuating production at the prices at the time when the product is finished. This is particulary important in cases of activities which are definitely seasonal.

In addition, the SNA recommendations with respect to the valuation of intermediate consumption point out that the latter corresponds to the period in which the raw material is used in the productive process. Thus, to obtain a valid input-output ratio it would appear suitable to valuate production according to the prices at the time when a given good is produced.

It should be pointed out that in periods of high inflation the problem of the time of valuation is much more important than questions relating to the place to which the price should refer or the conditions of delivery and sale.

11. The use of household surveys in estimating the craft sector product and that of informal activities

An especially weak area of current national accounts estimates is the calculation of the product originating in small establishments or independent workers, generally not recorded in the industrial or service censuses and surveys. These conglomerates of producers, which include craft activities in industry, street or vendor trade and the group of services usually rendered on an unorganized basis, constitute the nucleus of the so-called informal sector of the economy, which is characterized by the lack of formal organization of the productive units, in many cases also by the seasonal or temporary character of the work, and almost always by the underemployment of those who do this work.

Household surveys are an appropriate tool for obtaining useful information for estimating the number of persons working in small establishments and their respective incomes, as well as the number and income of own-account workers, occupations which make up the bulk of the informal sector.

Generally speaking, the central core of the ongoing household survey programmes consists of the measurement of the demographic characteristics and job situation of the population, identifying the economically active and inactive populations. In turn, the employed population is distinguished from the unemployed, obtaining data for each person on his occupation, sector of economic activity and category of the occupation in which he is working or of his last job. These surveys generally also ask the size of the establishment, in terms of number of employees, the type of work of each individual and also in many cases the remuneration obtained from the main job.

With respect to income, questions are not always asked about income other than that from paid labour. However, some surveys incorporate a special module of questions on income which also provides information on the income of employers and independent workers. In other cases, special income surveys have been made which also contain the necessary questions for obtaining a minimum description of the person's occupational situation and for determining the origin of the various incomes.

Moreover, in some cases special surveys have been made or special questionnaires have been included in the multipurpose surveys to study in greater detail the characteristics of craft activities and, in general, of own-account work in the informal sector. In this respect, PREALC's research might be mentioned, as well as the surveys done in Mexico and Argentina.

There has also been a detailed analysis[40] of the problems and possible alternatives for measuring employment and income by means of household surveys, as well as their potential for various analytical purposes. On these bases we may conclude that the household survey programmes, among other purposes, might be used in national accounts to support the estimates on the production and income of the informal sector.

12. Preparation of statistics on foreign trade
at constant prices

(a) *Goods*

In most of the countries of the region, the national statistics offices prepare, on the basis of commercial trade statistics, indexes of unit values and quantities of foreign trade. These indexes are calculated in foreign currency — and in some cases also national currency— and refer to FOB values for exports and CIF values for imports.

To adapt the originally calculated data to foreign currency for national accounting purposes, an estimate is usually made of the indexes of physical volume, taking the indicators of detailed categories and weighting them again by the value of the transactions in national currency corresponding to the base year of the national accounts estimates at constant prices. In this way the price indexes for total exports and imports is obtained implicitly.

The series of values of goods trade at constant prices in foreign currency is commonly calculated by deflation of current values. The deflator used in each category is generally obtained as an implicit index of unit value by means of prior calculation of the index of physical volume for a sample of the main products in each category. The formula used to calculate the quantity indexes is the Laspeyres type —fixed base weighting— and thus the resulting price indexes are of the Paasche type —current weightings.

The methodology used by the countries of the region for these estimates is only published occasionally; it is thus appropriate to mention some principles which could be taken into account in the procedure for calculating the unit value indexes.

In practice, the representativeness of the sample of each category is determined largely to fulfil a pre-established coverage percentage, for which reason the most important products under each relevant trade heading are selected.

Nevertheless, it is more important that the changing prices reflected in this sample should closely reflect reality than to represent these changes by a high coverage. It is thus recommendable that the selection of the sample should place more emphasis on the homogeneity of the products included than on their representativeness in terms of coverage.

In practice, the calculations of the unit values of the products selected for the sample are usually made on the basis of the total flows of each item, without analysing their dispersion by country of origin or destination. In this respect, it would be helpful to study the variations in the unit values by different origins and destinations, and to discard those transactions which, because they have higher variations than those pre-established as normal, could be considered too heterogeneous. In the case of imports especially, it is anticipated that the unit values of a product coming from various countries will differ among themselves, and that those corresponding to imports from the same country will on the other hand be more homogeneous.

There are no general recommendations or fixed rules on the limits of variation acceptable, and in making a decision the variations which occur would have to be carefully analysed. To this effect, the suggested procedure in general

terms, is to analyse first of all the variations in the unit value levels of the various countries in the same year. However, since the limits which can be set in practice for this dispersion coefficient cannot be very rigid, nor are the results obtained by this single analysis completely satisfactory, it is advisable to supplement the procedure by applying a second step for the clarification of the data, based on the comparison of the annual changes in the unit values by country.

Special mention should be made of imports of machinery and equipment as a heading for which the calculation of a unit value is deficient, in view of the heterogeneous character of this type of product, which means that its unit value index generally reflects a bias because of changes in composition. The United Nations Statistical Office has begun regular publication [41] of price indices of the principal machinery and equipment exporting countries. It seems more reasonable to use these indexes for deflating the imports of this type of goods than the biased unit values of the same importing country.

Although the unit value bias for exports of manufactured products is generally less severe than for imports of these products because of the greater similarity of origin, for some important products it would be worth making special price surveys.

The recommendation to explore in greater detail the available information according to origin and destination of products traded would be only the first step in improving the quality of the unit values which are used in the process of deflation in national accounts. It would obviously be better still to make the calculations on the basis of the individual bills of lading or shipping, which would make it possible to increase the degree of homogeneity of the products considered in this sample, although it would decrease the flexibility of the calculation and increase its cost considerably.

In accordance with United Nations recommendations and established traditions, the change in the basis of the indexes is made approximately every 10 years. The change in basis means a great amount of work at a high cost, so that this change has usually been postponed. Nevertheless, because of the acceleration in world inflation with drastic changes in price structure, it would be more suitable to adopt a maximum period of about 5 years for this change. In this respect, it should be pointed out that most national statistics offices now have greater access to the use of computers, which facilitates the work necessary to change the base.

Moreover, the drastic structural changes in recent years have more frequently promoted the use of chain indexes. However, this process —which is useful for conjunctural analyses— is not systematically applicable for expressing flows of goods and services in national accounts at constant prices, since these indexes are not additively consistent. [42]

(b) *Services*

For the estimate of these flows at constant prices, various procedures are used, but there is very little information in the publications of the national offices on the criteria used. In this respect, a recent study by the Central Bank of Argentina should be noted [43] which provides a list of deflators used in the various transactions involved in exporting and importing services.

For the deflation of the services in the balance of payments, CEPAL[44] distinguishes five categories of services: shipping, passenger services, port services, travel and other services. The income under port services, travel and other services is deflated by a consumer price index adjusted by an index of the import exchange rate; obviously, for port services it would be more suitable to use an index of port tariff expenditures, but this is difficult to obtain for all the countries of the region. Outlay for the same categories mentioned is deflated by a consumer price index of the industrialized countries. With more detail on the destination of tourists, a weighted index of the consumer prices of the principal countries involved could be constructed. The income and outlay of passenger services are deflated by an index constructed on the basis of the gross income per passenger-kilometer of the affiliate airlines of IATA. Finally, for shipping, a maritime freight index is used, which was developed for the regular service lines by the Transport Ministry of the Federal Republic of Germany. This index could be improved by explicitly distinguishing among bulk cargo freight, liquid bulk cargo freight and general cargo freight, weighted by their respective relative size.

NOTES

[1] CEPAL, *Características generales y disponibilidades de información en materia de cuentas nacionales en América Latina*, ST/ECLA/Conf.28/L.3, October 1967; *Experiences of the Latin American Countries in Using the Revised SNA*, E/CEPAL/L.119, August 1975; Carlos Noriega, *Estado actual de las cuentas nacionales en América Latina*, International Association for Research in Income and Wealth, Second Latin American Conference, Rio de Janeiro, Brazil, 9-12 January 1974; Horacio Santamaría, *Las cuentas nacionales en América Latina: Desarrollo reciente, situación actual y perspectivas*, Ninth Meeting of Central Bank Experts of the American Continent, Quito, Ecuador, 18-23 November 1974 and Alberto Fracchia, "Contabilidad nacional a precios constantes en América Latina", in *Cuadernos de la CEPAL*. No. 24, Santiago, 1978.

[2] United Nations, *A System of National Accounts*, Studies in Methods, Series F, No. 2, Rev. 3, New York, 1970.

[3] United Nations, *A System of National Accounts and Supporting Tables*, Studies in Methods, Series F, No. 2, Rev. 2, New York, 1964.

[4] United Nations, *Basic Principles of the System of Balances of the National Economy*, Studies in Methods, Series F, No. 17, New York, 1971.

[5] United Nations, *International Standard Industrial Classification of All Economic Activities*, Statistical Papers, Series M, No. 4, Rev. 2, New York, 1969.

[6] United Nations, *A System of National Accounts*, Series F, No. 2, Rev. 3, table 5.3, New York, 1970.

[7] United Nations, *Classification of the Functions of Government*, Series M, No. 70, New York, 1980.

[8] United Nations, *National Accounting Practices in Seventy Countries*, Studies in Methods, Series F, No. 26, New York, 1979.

[9] CEPAL, *Use of Price and Quantity Indexes in National Accounts Calculations in Latin America*, ST/ECLA/Conf.36/L.4, Santiago, November 1969.

[10] Alberto Fracchia, "Contabilidad nacional a precios constantes en América Latina", in *Cuadernos de la CEPAL*, No. 24, 1978.

[11]United Nations, *Guidelines on Principles of a System of Price and Quantity Statistics*, Statistical Papers, Series M, No. 59, New York, 1977 and United Nations, *Manual on National Accounts at Constant Prices*, Statistical Papers, Series M, No. 64, New York, 1979.

[12]United Nations, *Manual on National Accounts...*, *op. cit.*, New York, 1979.

[13]Alberto Fracchia, "Contabilidad nacional a precios...", *op. cit.*, 1978.

[14]United Nations, Statistical Office, *A System of National Accounts* (SNA), Studies in Methods, Series F, No. 2, Rev. 3, 1970 and *Informe del Seminario interregional sobre el sistema revisado de cuentas nacionales*, Caracas, Venezuela, 8-19 December 1975 (PP/UN/INT-72-104), paragraphs 217 and 218.

[15]United Nations, Statistical Office, *Report of the Expert Group on Future Directions for Work on the United Nations System of National Accounts*, E/CN.3/AC.9/5, New York, May 1980.

[16]United Nations, Statistical Commission, *Report on the Twenty-first Session (12-21 January 1981)*, Supplement No. 2, E/1981/12-E/CN.3/564, New York, 1981, p. 15.

[17]United Nations, Statistical Office, *Handbook of National Accounts* (provisional, ST/ESA/STAT.77), New York, May 1975. This manual recommends that at least 100 classes of commodities should be distinguished (paragraph 2.7) and indicates that 150 classes may be required to achieve a reasonable degree of precision (paragraph 2.16).

[18]United Nations, Statistical Office, *A system of National Accounts*, Studies in Methods, Series F, No. 2, Rev. 3, table 6.1.

[19]CEPAL is preparing a study on this subject entitled "Las encuestas de hogares en América Latina: un panorama de sus principales problemas".

[20]United Nations, *Classification of the Functions of Government*, Statistical Papers, Series M, No. 70, New York, 1980.

[21]The document by the United Nations Statistical Office and OECD, 1980, entitled *Instructions and Definitions for the National Accounts Questionnaire*, proposes the applications of the procedure adopted by the European Economic Community.

[22]United Nations, *Handbook of National Accounts* (provisional), *op. cit.*

[23]United Nations, *A System of National Accounts*, Studies in Methods, Series F, No. 2, Rev. 3, New York, 1970, paragraphs 8.96 and 8.103.

[24]See O. Altimir, "Income Distribution Estimates from Household Surveys and Population Censuses in Latin America: An Assessment of Reliability", Joint CEPAL/World Bank Project on Measurement and Analysis of Income Distribution in Latin America, 1975.

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[26]United Nations, *Handbook of National Accounts* (provisional), *op. cit.*, outline of Part II.

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ANNEX

Table 1

GROSS DOMESTIC PRODUCT BY TYPE OF EXPENDITURE, AT CURRENT PRICES

Country	Final General government consumption	Final private consumption	Increase in stocks	Gross fixed capital formation	Exports of goods and services	Imports of goods and services
Argentina	(X)	(X)	(X)	(X)	(X)	(X)
Bahamas	X	X	——— X ———		X	X
Barbados	X	X	——— X ———		X	X
Bolivia	X	X	X	X	X	X
Brazil	X	——— X ———		X	X	X
Colombia	X	X	X	X	X	X
Costa Rica	X	X	X	X	X	X
Chile	X	X	X	X	X	X
Dominica	X	X	X	X	X	X
Ecuador	X	X	X	X	X	X
El Salvador	X	X	X	X	X	X
Guatemala	X	X	X	X	X	X
Guyana	X	X	X	X	X	X
Haiti	——— X ———		X	X	X	X
Honduras	X	X	X	X	X	X
Jamaica	X	X	X	X	X	X
Mexico	X	X	X	X	X	X
Nicaragua	X	X	X	X	X	X
Panama	X	X	X	X	X	X
Paraguay	X	X	X	X	X	X
Peru	X	X	X	X	X	X
Dominican Republic	X	X	X	X	X	X
St. Lucia	X	X	X	X	X	X
St. Vincent and the Grenadines	X	X	X	X	——— X ———	
Suriname	X	X	——— X ———		X	X
Trinidad and Tobago	X	X	——— X ———		X	X
Uruguay	X	X	X	X	X	X
Venezuela	X	X	X	X	X	X

Table 2

GROSS DOMESTIC PRODUCT BY TYPE OF EXPENDITURE, AT CONSTANT PRICES

Country	Final General government consumption	Final private consumption	Increase in stocks	Gross fixed capital formation	Exports of goods and services	Imports of goods and services
Argentina	X	X	X	X	X	X
Bolivia	X	X	X	X	X	X
Brazil	X	——— X ———			X	X	X
Colombia	X	X	X	X	X	X
Costa Rica	X	X	X	X	X	X
Chile	X	X	X	X	X	X
Dominica	X	X	——— X ———		X	X
Ecuador	X	X	X	X	X	X
Guatemala	X	X	X	X	X	X
Guyana	X	X	X	X	X	X
Haiti	——— X ———		X	X	X	X
Honduras	X	X	X	X	X	X
Jamaica	(X)	(X)	(X)	(X)	(X)	(X)
Mexico	X	X	X	X	X	X
Nicaragua	X	X	X	X	X	X
Panama	X	X	X	X	X	X
Paraguay	X	X	X	X	X	X
Peru	X	X	X	X	X	X
Dominican Republic	X	X	X	X	X	X
Uruguay	X	X	X	X	X	X
Venezuela	(X)	(X)	(X)	X	(X)	(X)

Table 3

GROSS DOMESTIC PRODUCT BY TYPE OF COMPENSATION

Country	Compensation of employees	Operating surplus	Fixed capital consumption	Indirect taxes	Subsidies
Argentina	(X)	(X)	(X)	(X)	(X)
Barbados	(X)	(X)	(X)	——— X ———	
Bolivia	X	X	X	——— X ———	
Brazil	——— X ———		X	X	X
Colombia	X	X	X	X	X
Costa Rica	X	X	X	X	X
Chile	X	X	X	X	X
Dominica	(X)	(X)	(X)	(X)	(X)
Ecuador	X	——— X ———		X	X
El Salvador	——— X ———		X	X	X
Guatemala	(X)	(X)	(X)	——— (X) ———	
Guyana	X	X	X	X	X
Haiti	——— X ———		X	——— X ———	
Honduras	——— X ———		X	X	X
Jamaica	X	X	X	X	X
Mexico	X	X	X	X	X
Nicaragua	X	X	X	——— X ———	
Panama	X	X	X	X	X
Paraguay	X	X	X	X	X
Peru	X	X	X	X	X
Dominican Republic	——— X ———		X	——— X ———	
St. Vincent and the Grenadines	X	X	X	X	X
Suriname	X	X	X	X	X
Uruguay	X	X	X	——— X ———	
Venezuela	X	X	X	X	X

Table 4

AVAILABLE NATIONAL INCOME

Country	Items figuring in previous tables				Items specific to this table		
	Compensation of employees	Operating surplus	Indirect taxes	Subsidies	Net compensation of employees from rest of world	Net property and entrepreneurial income from rest of world	Other net current transfers from rest of world
Argentina	(X)	(X)	(X)	(X)	——— (X) ———		
Barbados	(X)	(X)	—— X ——		—— (X) ——		(X)
Bolivia	X	X	—— X ——		X	X	X
Brazil	——— X ———		X	X	——— X ———		
Colombia	X	X	X	X	——— X ———		X
Costa Rica	X	X	X	X	X	X	X
Chile	X	X	X	X	X	X	X
Dominica	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Ecuador	X	a	X	X	X	X	X
El Salvador	——— X ———		X	X	——— X ———		X
Guatemala	(X)	(X)	——(X)——		——(X)——		
Guyana	X	X	X	X	——— X ———		X
Haiti	—— X ——		—— X ——		——— X ———		X
Honduras	—— X ——		X	X	——— X ———		(X)
Jamaica	X	X	X	X	——— X ———		X
Mexico	X	X	X	X	X	X	X
Nicaragua	X	X	——— X ———		——— X ———		X
Panama	X	X	X	X	——— X ———		X
Paraguay	X	X	X	X	——— X ———		
Peru	X	X	X	X	X	X	X
Dominican Republic	——— X ———		——— X ———		——— X ———		X
St. Vincent and the Grenadines	X	X	X	X			
Suriname	X	X	X	X	X	X	X
Uruguay	X	X	——— X ———		——— X ———		X
Venezuela	X	X	X	X	X	X	X

a Gross operating surplus.

Table 5

CAPITAL TRANSACTIONS OF THE NATION

Country	Items figuring in previous tables				Items specific to this table				
	Increase in stocks	Gross fixed capital formation	Fixed capital consumption	Saving	Net capital transfers from rest of world	Net purchases of intangible assets from rest of world	Net lending from rest of world	Net acquisition of financial assets	Net incurrence of liabilities
Argentina	(X)	(X)	(X)	(P)					
Barbados	——— X ———		(X)	(X)	(X)		(P)		
Bolivia	X	X	X	X	X	X	X	X	X
Brazil		X	X		X				
Colombia	X	X	X	X					
Costa Rica	X	X	X	X	X	X	X		
Chile	X	X	X	X					
Dominica	X	X	(X)	(X)	(X)		(P)		
Ecuador	X	X	——— X ———		X	X	X		
El Salvador	X	X	X	X					
Guatemala	X	X	(X)	(P)					
Guyana	X	X	X	X					
Haiti	X	X	X	X					
Honduras	X	X	X	P					
Jamaica	X	X	X	X	X	X	X		
Mexico	X	X	X	X					
Nicaragua	X	X	X	X					
Panama	X	X	X	X					
Paraguay	X	X	X	P					
Peru	X	X	X	X	X	X	X	X	X
Dominican Republic	X	X	X	P					
St. Lucia	X	X							
St. Vincent and the Grenadines	X	X	X						
Suriname	——— X ———		X	X	X	X	X		
Trinidad and Tobago	——— X ———								
Uruguay	X	X	X	X					
Venezuela	X	X	X	X	X	X	X	X	X

Table 6

EXTERNAL TRANSACTIONS

Country	Current income	Current outlay	Accumulation	Net acquisition of financial assets	Net incurrence of liabilities
Bolivia	X	X	X	P	P
Colombia	P	P			
Costa Rica	X	X	X		
Chile	P	P			
Ecuador	X	X	X		
Guatemala	P	P			
Honduras	P	P			
Jamaica	X	X	X		
Mexico	X	X		P	P
Nicaragua	P	P			
Panama	X	X			
Peru	X	X	X	P	P
Suriname	P	P	X		
Venezuela	X	X	X	X	X

Table 7

GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY AT CURRENT PRICES

Country	Application of ISIC Rev. 2			Identification of:			Separate presentation of:		Valuation basis:	
	Classification in major divisions	Location of restaurants and hotels in major division 6	Location of business services in major division 8	Producers of government services	Producers of private non-profit services to households	Domestic services	Bank service charge imputed	Import duties	At factor cost	At market prices
Argentina	(X)	(X)		(X)		(X)			(X)	
Bahamas	X	X	X				X			X
Barbados	X	X		X					X	
Bolivia	X	X	X	X	X	X	X			X
Brazil	X			X					a	
Colombia	X			X						X
Costa Rica	X	X	X	X		X				X
Chile	X	X		X			X	X		X
Dominica	X			X					X	
Ecuador	X	X	X	X	X	X	X	X		X
El Salvador	X			X						X
Grenada	X	X	X	X						X
Guatemala	(X)			(P)						(X)
Guyana	P			P					X	
Honduras	X			P					X	
Jamaica	X	X	X	X	X	X	X			X
Mexico	X	X		X		X	X			X
Nicaragua	X			P						X
Panama	X	X		P		X				X
Paraguay	P			P						X
Peru	X	X	X	X		X	X	X		X
Dominican Republic	X			P						X
St. Lucia	X	X		P					X	
St. Vincent and the Grenadines	X	X		X			X		X	
Suriname	X	X		X					X	
Trinidad and Tobago	X	X		X					X	
Uruguay	P			X					X	
Venezuela	X			X	X	X	X	X		X

a At net factor cost.

Table 8

GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY AT CONSTANT PRICES

Country	Application of ISIC Rev.2			Identification of:			Separate presentation of:		Valuation basis:	
	Classification in major divisions	Location of restaurants and hotels in major division 6	Location of business services in major division 8	Producers of government services	Producers of private non-profit services to households	Domestic services	Bank service charge imputed	Import duties	At factor cost	At market prices
Argentina	X	X		X	X				X	
Barbados	P	X		X					X	
Bolivia	X	X	X	X	X	X	X			X
Brazil	P								*a*	
Colombia	X			X						X
Costa Rica	P	X	X	X		X				X
Chile	X	X		X			X	X		X
Dominica	X			X					X	
Ecuador	X	X	X	X	X	X	X	X		X
El Salvador	X			X						X
Guatemala	X			P						X
Guyana	P			P					X	
Haiti	X			P					X	
Honduras	X			P					X	
Jamaica	X	X	X	X	X	X	X			X
Mexico	X	X		X		X	X			X
Nicaragua	X			P						X
Panama	X	X		P		X				X
Paraguay	P			P						X
Peru	X	X	X	X		X	X	X		X
Dominican Republic	X			P						X
St. Vincent and the Grenadines	X	X		X			X		X	
Trinidad and Tobago	X	X		X					X	
Uruguay	X			X					X	
Venezuela	X	X		X	X	X		X		X

a At net factor cost.

Table 9

GROSS DOMESTIC PRODUCT RANGE OF SOME CLASSES OF ECONOMIC ACTIVITY, AT CURRENT PRICES

Country	Agriculture, hunting, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas and water	Trade restaurants and hotels
Barbados	P		(X)		X
Bolivia	X	X	X		X
Brazil	(X)		(X)		
Colombia	X	X		X	
Costa Rica	X		X	X	X
Chile	X	X	X		X
Dominica	P				
Ecuador	X	X	X		X
El Salvador	X		X		
Grenada	X				X
Guatemala		(X)	(X)	(X)	
Guyana	X				
Honduras	(X)		(X)		
Jamaica	X	X	X	X	X
Mexico	X	X	X		X
Nicaragua	X		X		
Panama			X	X	X
Paraguay	X	X	X	X	
Peru	X	X	X	X	X
Dominican Republic	X		X	X	
St. Lucia					X
St. Vincent and the Grenadines					X
Trinidad and Tobago	X				X
Uruguay	(X)		(X)	(X)	
Venezuela	X	X	X	X	X

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Table 10

GROSS DOMESTIC PRODUCT RANGE OF SOME CLASSES
OF ECONOMIC ACTIVITY, AT CONSTANT PRICES

Country	Agriculture, hunting, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas and water	Trade restaurants and hotels
Argentina	X	X	X	X	X
Barbados					X
Bolivia	X	X	X		X
Colombia	X	X		X	
Costa Rica	X				
Chile	X				X
Ecuador	X	X	X		X
El Salvador	X				
Guatemala		(X)	X	X	
Guyana	X				
Haiti	X	X	P		
Honduras	(X)		(X)		
Jamaica	X	X	X	X	X
Mexico	X	X	X		X
Nicaragua	X		X		
Panama	X		X	X	X
Paraguay	X	X	X	X	
Peru	X	X	X	X	X
Dominican Republic	X		X	X	
St. Vincent and the Grenadines					X
Trinidad and Tobago	X				X
Uruguay	(X)		X	(X)	
Venezuela		X	X	X	

Table 11

DOMESTIC FACTOR INCOMES, BY KIND OF ECONOMIC ACTIVITY

Country	Classes of activity/ Major ISIC divisions	Type of income	
		Compensation of employees	Operating surplus
Argentina	(X)	(X)	(^{a})
Barbados	(X)	(X)	(X)
Bolivia	X	X	a
Brazil	(P)	(P)	(P)
Colombia	X	X	X
Costa Rica	X	X	
Chile	X	X	X
Jamaica	X	X	X
Mexico	X	X	X
Peru	X	X	X
Uruguay	(P)	(X)	(X)
Venezuela	X	X	X

^{a}Gross operating surplus.

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Table 12

**FINAL GENERAL GOVERNMENT CONSUMPTION EXPENDITURE
BY PURPOSE AT CURRENT PRICES**

Country	General public services	Defence	Education	Health	Social security and welfare services	Housing and community amenities	Other social and community services	Economic services	Other purposes
Bolivia	X	X	X	X	X	X	X	X	
Honduras	(X)	(X)	(X)	(X)	———————————(X)———————				(X)
Panama	————X————		X	X	————————X————————			X	X
Peru	————X————		X	X	X	X	X	X	X
Venezuela	X	X	X	X	X	X	X	X	

Table 13

FINAL PRIVATE CONSUMPTION EXPENDITURE BY OBJECT, AT CURRENT PRICES

Country	Final consumption in the domestic market								Direct purchases abroad by resident households	Direct purchases in domestic market by non-resident households
	Food, beverages and tobacco	Clothing and footwear	Gross rent, fuel and power	Furniture, furnishings and household equipment and operation	Medical care and health expenses	Transport and communication	Recreation, entertainment, education and cultural services	Other goods and services		
El Salvador	X	X	X	X	X	X	X	X	X	X
Honduras	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Jamaica	X	X	X	X	X	X	X	X	X	X
Mexico	X	X	X	X	X	X	X	X	X	X
Panama	X	X	X	X	X	X	X	X	X	X
Venezuela	X	X	X	X	X	X	X	X	X	X

Table 14

FINAL PRIVATE CONSUMPTION EXPENDITURE BY OBJECT, AT CONSTANT PRICES

Country	Final consumption in the domestic market								Direct purchases abroad by resident households	Direct purchases in domestic market by non-resident households
	Food, beverages and tobacco	Clothing and footwear	Gross rent, fuel and power	Furniture, furnishings and household equipment and operation	Medical care and health expenses	Transport and com·munication	Recreation. entertainment, education and cultural services	Other goods and services		
Honduras	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Jamaica	X	X	X	X	X	X	X	X	X	X
Mexico	X	X	X	X	X	X	X	X	X	X
Panama	X	X	X	X	X	X	X	X	X	X
Venezuela	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

Table 15

**FINAL PRIVATE CONSUMPTION EXPENDITURE
BY TYPE OF EXPENDITURE**

Country	Final consumption in domestic market				Other goods and services	Direct purchases abroad by resident households	Direct purchases in the domestic market by non-resident households
	Commodities			Services			
	Durable goods	Semi-durable goods	Non-durable goods				
Mexico	X		X	X		X	X
Panama	X	X	X	X		X	X

Table 16

**GROSS FIXED CAPITAL FORMATION BY TYPE OF GOODS,
AT CURRENT PRICES**

Country	Residential building	Non-residential building	Other construction	Land improvement and plantation and orchard development	Transport equipment	Machinery and equipment	Breeding stock, draught animals, etc.
Argentina	———	(X)	———	(X)	(X)	——— (X)	———
Bolivia	X	X	X	X	X	X	X
Brazil	———	(X)	———	———	———	(X)	———
Colombia	X	X	X	X	X	X	
Costa Rica	———	X	———	X	———	X	———
Chile	X	X	X	X	X	X	X
Dominica	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Ecuador	X	X	———	X ———	———	X ———	X
El Salvador	X	X	———	X ———	X	X	
Guatemala	———	X ———	X	X	X	X	
Honduras	X	X	X	X	X	X	
Jamaica	———	X ———	———	X ———	X	X	
Mexico	X	X	X	X	X	X	X
Nicaragua	X	. X	———	X ———	———	X ———	
Panama	X	X	———	X ———	X	X	
Paraguay	———	———	X	———	X	X	
Peru	——— X	———	X	X	X	X	X
Dominican Republic	———	———	X	———	X	X	
St. Vincent and the Grenadines	X	X	———	X ———	X	X	
Uruguay	———	X ———	X	X	———	X ———	
Venezuela	X	——— X	———	X	X	X	X

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Table 17

GROSS FIXED CAPITAL FORMATION BY TYPE OF GOODS, AT CONSTANT PRICES

Country	Residential building	Non-residential building	Other construction	Land improvement and plantation and orchard development	Transport equipment	Machinery and equipment	Breeding stock, draught animals, etc.
Argentina	———— X ————			X	X	———— X ————	
Bolivia	X	X	X	X	X	X	X
Colombia	X	X	X	X	X	X	
Chile	X	X	X	X	X	X	X
Ecuador	X	X	——— X ———		——— X ———		X
Guatemala	———— X ————		X	X	X	X	
Honduras	X	X	X	X	X	X	
Mexico	X	X	X	X	X	X	X
Nicaragua	X	X	——— X ———		——— X ———		
Panama	X	X	——— X ———		X	X	
Paraguay	———— X ————				X	X	
Peru	——— X ———		X	X	X	X	X
Dominican Republic	———— X ————				X	X	
Uruguay	——— X ———		X	X	——— X ———		
Venezuela	(X)	——— (X) ———		(X)	(X)	(X)	(X)

Table 18

INCREASE IN STOCKS BY TYPE OF GOODS, AT CURRENT PRICES

Country	Goods producing sectors				Wholesale and retail trade	Other industries	Government services
	Materials and supplies	Work-in-progress	Livestock (except breeding stock, dairy cattle, etc.)	Finished goods			
Bolivia	(X)[a]			(X)[a]			
El Salvador	(X)	(X)		(X)	(X)	(X)	(X)
Jamaica	X	X	X	X	X	X	X
Mexico	X	X	X	X	X	X	X
Panama	—————————————— X ——————————————				X	X	X
Uruguay	—————————————— X[b] ——————————————				X	[c]	

[a] For total of activities.
[b] Including other industries.
[c] Included in goods producing sectors.

Table 19

VARIATION IN STOCKS BY TYPE OF GOODS, AT CONSTANT PRICES

Country	Goods producing sectors				Wholesale and retail trade	Other industries	Government services
	Materials and supplies	Work-in-progress	Livestock (except breeding stock, dairy cattle, etc.)	Finished goods			
Bolivia	(X)[a]			(X)[a]			
Panama	—————————————— X ——————————————				X	X	X
Uruguay	—————————————— X[b] ——————————————				X	[c]	

[a] For total of activities.
[b] Including other industries.
[c] Included in goods producing sectors.

Table 20

GROSS FIXED CAPITAL FORMATION BY KIND OF ECONOMIC ACTIVITY, AT CURRENT PRICES

Country	Industries (commodity producing sectors)									Producers of government services	Producers of private non-profit services to households
	Agriculture, hunting, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas and water	Construction	Trade, restaurants and hotels	Transport, storage and communication	Finance insurance, real estate and business services	Community, social and personal services		
Bolivia	(X)	(X)	(X)	(X)	———————(X)———————						
Costa Rica	X	———— X ————		X	X	X	X	X	X	X	
Dominica	(X)	(X)	(X)	(X)	(X)	(P)	(X)	(P)	(X)	(X)	
El Salvador	(X)	———(X)———		(X)	(X)	(P)	(X)	(P)	(X)	(X)	
Guatemala	X	———— X ————		X	———————— X ————————					P	
Honduras	(X)	(X)	(X)	(X)	(X)	(P)	(X)	(P)	(X)	(P)	
Trinidad and Tobago	X	X	X	X	X	X	X	P	X	X	
Venezuela	X	X	X	X	a	X	X	P	b	X	X

^{a}Included in community, social and personal services.

^{b}Includes construction.

Table 21

INCOME AND OUTLAY OF THE GENERAL GOVERNMENT

Country	Receipts						Disbursements					
	Property and entre-preneurial income	Indirect taxes	Direct taxes	Social security contribu-tions	Current transfers n.e.c. From residents	Current transfers n.e.c. From rest of world	Final consump-tion expendi-ture	Property income	Subsidies	Social security benefits	Current transfers n.e.c. To residents	Current transfers n.e.c. To rest of world
Argentina	(X)	(X)	(X)	(X)	(X)		(X)	(X)	(X)		(X)	
Bolivia	(X)	(X)	(X)	(X)	(X)	(X)	(X)		(X)		(X)	(X)
Brazil		X	X		X		X		X		X	
Colombia	X	X	X	X	X	X	X	X	X		X	X
Costa Rica	X	X	X	X	X	X	X	X	X	X	X	X
Chile	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	——— (X) ———		(X)
Ecuador	X	X	X	X	X	X	X	X	X	X	X	X
Honduras	X	X	——— X ———		X	X	X	X	X		X	X
Jamaica	X	X	X	X	X		X	X	X	X	X	
Nicaragua	X	*a*	——— X ———		X	X	X	X	*b*		X	X
Panama	X	X	X	——— X ———		X	X	X	X	——— X ———		X
Paraguay	X	X	X	X	X		X		X		X	
Peru	X	X	X	X	X	X	X	X	X	X	X	X
Suriname	(X)	(X)	(X)	(X)		(X)	(X)	(X)	(X)	——— (X) ———		(X)
Uruguay	(X)	(X)	(X)	(X)			(X)	(X)	(X)		(X)	(X)
Venezuela	(X)	(X)	(X)	(X)	(X)		(X)	(X)	(X)	(X)	(X)	(X)

a Net indirect taxes.

b Deducted from indirect taxes.

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Table 22

INCOME AND OUTLAY OF HOUSEHOLDS, INCLUDING PRIVATE
UNINCORPORATED NON-FINANCIAL ENTERPRISES

Country	Receipts						Disbursements				
	Compensation of employees	Net property and entrepreneurial income	Social security benefits	Social assistance grants	Current transfers n.e.c.		Final consumption expenditure	Direct taxes	Social security contributions	Current transfers n.e.c.	
					From residents	From rest of world				To residents	To rest of world
Argentina	(X)	(X)			(X)		(X)	(X)	(X)	(X)	
Colombia	X	X			X	X	X	————— X —————		X	X
Chile	———(X)———		————————(X)—————————			(X)	(X)	(X)	(X)	(X)	(X)
Ecuador	X	X	X	X	————— X —————		X	X	X	————— X —————	
Honduras	X	X			X	X	X	X	X	X	X
Jamaica	(X)	(X)			(X)	(X)	(X)	(X)	(X)	(X)	(X)
Nicaragua	X	X	————— X —————			X	X	————— X —————		X	X
Panama	X	X	————— X —————			X	X	X	————— X —————		X
Paraguay	X	X	————— X —————				X		X	X	
Suriname	(X)	(X)			————(X)————		(X)	(X)	————(X)———		(X)
Uruguay	(X)	(X)			(X)		(X)	(X)	(X)		

Table 23

CAPITAL TRANSACTIONS OF THE GENERAL GOVERNMENT

Country	Accumulation				Financing			Net acqui-sition of financial assets	Net in-currence of liabilities
	Composition								
	Gross capital formation	Net purchases		Net lending	Saving	Fixed capital consumption	Net capital transfers		
		Land	Intangible assets						
Ecuador	X	X	X	X	——————X——————		X		
Honduras	X			X	X	X	X		
Panama	X			X	X	X	X		
Venezuela	(X)	(X)		(X)	(X)	(X)	(X)	(X)	(X)

Table 24

CAPITAL TRANSACTIONS OF HOUSEHOLDS, INCLUDING NON-FINANCIAL AND UNINCORPORATED ENTERPRISES[a]

Country	Accumulation				Financing			Net acqui-sition of financial assets	Net in-currence of liabilities
	Composition								
	Gross capital formation	Net purchases		Net lending	Saving	Fixed capital consumption	Net capital transfers		
		Land	Intangible assets						
Ecuador	X	X	X	X	——————X——————		X		
Honduras	X			X	X	X	X		
Panama	X			X	X	X	X		

[a] Also including private non-profit institutions serving households.

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