

THE PRESENT STATE OF NATIONAL ACCOUNTS IN LATIN AMERICA

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This document attempts to give an overall review of the present situation of national accounts in Latin America, and deals essentially with the statistical basis and procedures used in their preparation.

The purpose of these comments is to place the main problems common to all countries in order of priority and, in view of the need to advance and in the face of the task of establishing the present SNA, to discuss briefly the main lines which future work might follow.

The stage of development so far reached by national accounts in Latin America is unsatisfactory if compared with the former system recommended by the United Nations two decades ago, and their recent evolution indicates that the rate of progress has fallen behind the advances made in the theoretical field in this connexion, and in relation to the increasing requirements of macroeconomic information for economic planning and policy. This whole picture becomes more meaningful if the objectives, structure and content of the present SNA, that has already been in force for five years, are compared with the present state of national accounts estimates in the region, which reveals the long road that lies ahead and the magnitude of the effort required if the present situation is to show a change for the better. Clearly, little progress can be made unless the basic statistics are expanded in scope and improved. This is the crux of the problem, towards which the greatest efforts and resources should primarily be channeled.

It is necessary to adopt a critical approach and concerted action with respect to four aspects which characterize the national statistical systems in Latin America:

- (a) organizational problems and the shortage of human and financial resources;
- (b) the lack of co-ordinated programmes of basic statistics;
- (c) the limited use of efficient methods of collecting data; and
- (d) the insufficient recourse to administrative records.

A. INTRODUCTION

This document attempts to give an overall review of the present situation of national accounts in Latin America, and deals essentially with the statistical basis and procedures used in their preparation.

It is not the intention here to present a list of shortcomings as an objective in itself, nor to weigh up how good or bad the estimates of each country may be. The purpose of these comments is to place the main problems common to all countries in order of priority and, in view of the need to advance and in the face of the task of establishing the present SNA, to discuss briefly the main lines which future work might follow.

Systematic work on national accounts in Latin America began towards the end of the 1940's and started to acquire importance in the first years of the 1950's. Three major stages may be distinguished in its historical evolution to date.

The first stage covers the entire 1950's and is characterized by accelerated growth, in that towards the end of the decade a large group of countries had published official estimates, including fifteen which already had series covering several years and had begun to prepare them periodically. The work consisted, in general, of estimates of the gross domestic product by industrial origin and the structure of the gross national product by type of expenditure.

The second stage covers most of the 1960's and constitutes a consolidation phase, taking the form of the extension of the scope of the estimates and the improvement of the quality of those that already existed. In this stage, all the countries of the region completed estimates of their GDP, and some of them had managed to draw up—although with certain restrictions—a simplified system of accounts following the recommendations of the United Nations, together with the inclusion of a larger number of supplementary tables and a more extensive detailing of the items composing them.

The third stage, which covers the last few years, is characterized by slow progress; the only significant advance has been in the rapidity with which annual indicators of the development of the economy (sectoral GDP and expenditure) become available, and in the inclusion of some new topics in a very small number of countries. The scope of the estimates has remained almost unchanged and there has been very slight improvement in reliability.

B. FEATURES OF PRESENT ESTIMATES

1. *Scope*

The present SNA is used only by Venezuela after four years' constant effort.¹ A simplified system of accounts, based on the recommendations of the former SNA, has been prepared and is published periodically by five countries (Chile, Colombia, Panama, Paraguay and Uruguay), while four others (Argentina, Barbados, Bolivia, and Trinidad and Tobago) introduced the system in the past but subsequently had to give it up. The rest, slightly more than half the countries of the region, prepare estimates for the most important macroeconomic aggregates and for some partial aspects of the former SNA but are not in a position to prepare all the data required even for a simplified system of accounts.

By and large, plenty of information is available on the gross domestic product by kind of economic activity and on the composition of the GNP by type of expenditure, at both current and constant prices. Data can also frequently be obtained on functional income distribution, capital formation and financing, external transactions, and income and outlay of households and general government, although in many cases this is only theoretically true, since such tables in fact fall short of the content and volume of detail proposed in the former SNA. The estimates are based on such limited statistics that items appear with a high level of aggregation and they sometimes contain only balancing items obtained residually, the outstanding example of this being consumption of households.

The concepts, definitions and classifications used in the preparation and presentation of the estimates generally correspond to those contained in the former SNA, although how far they correspond varies according to the country and the item, depending on the extent to which the basic statistics are adjusted for national accounts purposes.

¹In 1969 Mexico published the consolidated accounts for the nation and supporting and supplementary tables for the period 1950–1967 in accordance with the present SNA, but this work is now continued only for production accounts. Cuba published estimates of the social product, but the data available are not sufficiently detailed to determine how far they correspond to the System of Material Product Balances (MPS).

Furthermore, several aspects that are incorporated in the present SNA, or are complementary to it, have not been treated systematically by the Latin American countries. A considerable number of countries prepared input-output tables and a smaller number capital finance accounts, although in neither case were they invariably carried out in strict conjunction with the national accounts estimates. As a result, several opportunities for using the data together for a more detailed study of the economic system were wasted.

As to studies on the distribution of income by size or by socio-economic groups and the preparation of regional estimates, the situation is even less satisfactory. In the case of the former, available basic information is fragmentary and has never been fully utilized by being adapted to and incorporated in a system of national accounts, except in Argentina which carried out an exhaustive study on one occasion. A number of experiments have been made in connexion with regional estimates or for selected geographical areas, but these have corresponded to specific objectives and requirements; only three countries systematically calculate the gross product by sector of origin and by region.

As regards public sector accounts and the breakdown of the components of final expenditure, despite the growing interest in more extensive research into the field, no country has yet reached a level that conforms satisfactorily to the requirements of the present SNA and of economic analysis and policy.

2. Sources and methods

The inadequate development of national statistical systems in Latin America is responsible for the lack of statistical programmes for the co-ordinated and integrated preparation of basic data. Accordingly, the basic statistics available fail to meet the requirements of a system of national accounts.

The preparation of national accounts estimates rests on four broad groups of sources:²

- (a) regular censuses and current statistics of establishments
- (b) foreign trade statistics;
- (c) accounting records of the public sector; and
- (d) other administrative records of the public sector, especially tax and social security records.

Most of the countries in the region periodically carry out censuses in the agricultural, mining, industrial and commercial and service sectors, and also have annual series on the basis of which the development of these sectors can be evaluated, but the quality and coverage of the data collected are often impaired by an improper approach to and conduct of the inquiry. Moreover, there are few cases where annual series are integrated with census inquiries in a consistent and co-ordinated programme, and their content relates to only a few topics. Foreign trade statistics present problems as regards time of recording, valuation and classification criteria used in the collection of basic data, generally customs and tax declarations.

²Population censuses are an important source for obtaining estimates of functional income distribution and the GDP in those sectors where the income method is used, particularly community, social and personal services, except public administration and defense (ISIC divisions 92 to 95).

Public accounting records are based on principles, definitions, registration periods and classifications that are consistent with the objectives for which they were established, usually many years ago, and do not fully meet the information requirements for the preparation of a system of national accounts. A similar situation arises in connexion with tax and social security registers, which are suitable for the administration and control of these systems; in addition, the evasion and omissions in declarations must be kept well in mind in utilizing this source in many countries.

The basic statistics available determine the approach adopted in preparing estimates. Since the majority of countries have more abundant and reliable data on output than on income and final expenditure, the value-added approach is nearly always used as the basic procedure for preparing estimates, and is supplemented to a greater or lesser extent—according to the country and branch of economic activity—by the income approach.

The use of the expenditure approach for estimating gross domestic product by type of expenditure is hampered by the lack of adequate information about its biggest component: household consumption. Therefore, all the countries prepare independent estimates, on the basis of public accounting records and foreign trade statistics, for government consumption, exports and imports; they then estimate gross domestic capital formation on the basis of an analysis of commodity flows, and obtain the consumption expenditure of household holds by subtraction.

Considering that the Latin American countries have developed their national accounts estimates, in so far as the basic statistics permit, within the conceptual framework and in line with the accounting structure of the former United Nations SNA, and taking into account the foregoing observations, it is clear that in general the process of preparing a group of estimates is based essentially on data obtained from production accounts, government income and outlay, and external transactions.

There is also a great similarity among the countries of the region as regards the procedures they use in preparing estimates: (a) detailed value added estimates and the flow of domestic commodities calculations are made for benchmark years for which more data are available; these are generally years for which economic and/or population censuses have been carried out and they also constitute the basis for estimates at constant prices; some countries also prepare input-output tables for those years; (b) the estimates for the benchmark years are interpolated and extrapolated by means of continuous series; and (c) a series of aggregates is obtained annually from fiscal accounts and foreign trade statistics.

Although most of the countries possess data on output, only a few have sufficient information on intermediate consumption at the same regular intervals. Hence in many cases it is necessary to have recourse to assumptions that production functions are stable which introduces bias in the estimates of value added.

Another drawback is the lack of proper independent estimates in order to obtain a control of global estimates (product and income) and of estimates of the level and composition of private consumption and investment and of the breakdown of value added. The operating surplus of production units and

household consumption are obtained by subtraction, so that they both depend on the reliability of output estimates.

The procedures commonly used to express series at constant prices are of two kinds: extrapolation of the relevant values in the base year, using appropriate indicators of physical volume, or deflation of current values by means of price indexes which are often constructed especially for the purpose. The first type is used mainly for the sectoral product, and the second type almost exclusively for the components of expenditure, while household consumption is usually obtained residually.

3. *Reliability of estimates*

Although problems vary from country to country and from one aggregate to another and, in addition, both aspects change over the years, it is possible to identify and analyse certain characteristics that apply to every country.

It is essential to a system of national accounts that they should cover every economic activity that has previously been defined within the limits of production; an estimate must therefore be included for each item and for every heading. Given the present state of basic statistics, there is not a single country in the region that could set up a simplified system or even produce many of the supplementary tables if it wished to restrict their preparation solely to components based on events recorded with great accuracy. Inevitably, they have to resort to less accurate basic data, use various procedures for adapting and combining information from different sources, and frequently employ assumptions.

There are accordingly two main groups of factors that determine the reliability of the estimates: (a) the shortcomings of basic statistics; and (b) the use of assumptions in preparing estimates. There is a close causal relationship between the two, and they naturally occur simultaneously.

The relevance of these factors varies according to whether they concern estimates for benchmark years or annual calculations; because of the interdependency of the accounts and of the procedures used for preparing estimates, they have direct and indirect influence on: (a) the absolute level achieved; and (b) the annual variations recorded.

Although the region is scrupulously careful in its use of appropriate methodologies for ensuring that the basic information is employed as effectively as possible, many Latin American countries are way down the scale as regards the degree of reliability which is admissible in the preparation of national accounts estimates, since it is impossible to make up for the shortcomings of the basic statistics. There are important instances of errors in the work of adapting basic data to the concepts and definitions of a national accounts system.

Two abnormal practices must be mentioned which, although not of very frequent occurrence, are to be found in certain countries. In some cases the prevailing idea has been to produce a broad series of macroeconomic aggregates or to complete all the accounts in the system despite the fact that the basic data used are incomplete or unreliable; this led to making up the shortcomings with very partial or unsuitable information or by means of heroic assumptions. The result is a volume of data that confuse the user who assumes that a particular item

relates to the concepts that are indicated in the title when, in point of fact, it is merely a record of a subjective appreciation of a given phenomenon or reflects no more than the original assumption.

In other cases, the desire to obtain accurate and unbiased estimates has led to many items, of key importance in analysing the structure and evolution of the economy, being calculated exclusively on the basis of information which is known to be accurate, without introducing imputation or estimates regarding the remaining components not covered by those data.³ In so far as the basic statistics for the modern segments of the economies and for the larger establishments are more abundant and of better quality, the practice will be to record only fast-expanding activities, underestimating the GDP level while considerably overestimating annual rates of growth, especially when the same criterion was adopted in the base year (overestimated weighting). These practices, in fact ignore dualism—although this is a characteristic of most of the Latin America countries—with the result that the estimates distort the true facts about these economies.

The analysis of the internal consistency of the sources used to estimate different items in national accounts does not always receive proper attention whereas it should in fact play an important role in the choice and use of data and in any attempt to assess the quality of the estimates.

As is known, to date there exists no statistical method to quantify margins of error in the estimates of national accounts. Despite this, it is possible to form some idea of the degree of reliability of the estimates on the basis of what is known about their statistical basis and a critical appraisal of it and the assumptions and methods used to make the estimates.

The minimum aim is to provide users with information so that they will know how to use the data, and direct and stimulate the collection of better or new basic data.

To date, only a few countries of the region have published their methodologies for making estimates in a detailed form with opinions or appreciations on the quality of the basic data and the repercussions of the assumptions. It would mean great progress if the offices in charge of national accounts estimates were to prepare and publish detailed explanations of the scope of each aggregate and the sources and procedures used. The fact of keeping quiet about the limitations of the estimates does not help anyone, limits the possibilities of analysis and rules out criticism as a stimulus to progress.

C. MAIN GAPS IN ESTIMATES

The Latin American countries have a number of basic features which characterize their economies and make for a certain similarity among them. Moreover, in view of the stage of development their national statistical systems and the content of their programmes have reached, the situation with regard to basic statistics is much the same in all countries.

³The problem becomes even more serious when, as often happens, there are no detailed methodological notes or supplementary information on the basis of which to determine the order of magnitude of the different components.

These two factors—economic structure and basic statistics—represent the main gaps in national accounts estimates which are common to all the countries in the region.

In a brief analysis of the most important gaps, an attempt has been made to relate the comments made here to the system of accounts proposed in the present SNA. Thus a first group deals with accounts II on activities in the agricultural and manufacturing sectors.⁴ Attention is then given to problems connected with gross capital formation, and, lastly, some points related to accounts III, i.e., income and outlay and capital finance accounts, are discussed.

The coverage given to the various matters depends primarily upon evaluation of their importance in the region and the possibilities of the improvement and expansion of basic statistics in the near future and, therefore, also the prospects of introducing the present SNA.

1. *Production accounts*

(a) *Agriculture*

Practically all the countries carry out regular censuses, gathering data (usually only in terms of volume) on output, yields, stocks, employed persons and working equipment. Most of them also have annual information on yields and volume of production for the main crops, and the number of animals slaughtered for the most important types of livestock. Owing to the limited number of topics included in the censuses and current statistics in the agricultural sector, information is only available on a small number of items, data on prices and cost structure nearly always being excluded. Moreover, the basic data are not too reliable, particularly for the annual series, owing to the outmoded procedures used to collect and compile the information.

There are some additional common problems such as the adjustment of the crop cycle to the calendar year and consideration of the fairly sizeable losses in the case of some products; but on the whole all the countries have adopted adequate ways of dealing consistently with these problems year after year.

The value-added method of preparing estimates is in use in all countries. Estimates of gross output are worked out for each of the goods produced or for homogeneous groups of products, the volume produced being valued on the basis of a set of prices generally registered at the wholesale level in the main urban areas, after being adjusted in accordance with transport and marketing costs.

As regards intermediate consumption and the various components of value added, the majority of the countries have practically no information resulting from direct inquiries in establishments, which means that indirect estimates must be used.

⁴Agriculture and manufacturing (ISIC major divisions 1 and 3) represent about 50 per cent of the GDP. These two kinds of activity considerably influence the estimates for wholesale and retail commerce and freight transport by road (because of the method of calculation used), the final proportion being around 70 per cent of the GDP. There is no room here to deal with general problems related to these sectors, nor with more specific and critical problems such as street and commerce services, domestic services, and services rendered by professionals on own account, which are very important issues in the region, especially the first two because of their relationship with studies on under-employment and productivity.

Inputs are calculated by using global estimates based on the analysis of (a) production and imports of goods used mainly in the sector (fertilisers, pesticides, products for animal health and nutrition); and (b) normal inputs or standard costs for crops (seeds and expenditure on maintenance of machinery, etc.). Indirect taxes are calculated by means of a detailed analysis of the tax base of each of the taxes levied by the State, whose registers also provide the amount of the subsidies received.

Factor income is calculated by a few countries, the estimates being even less reliable than the other items of the production account. Compensation of employees is obtained from data on employed population and average compensation, and the operating surplus is obtained residually.

The quality of the estimates and their degree of reliability depend on the accuracy of the data on output and prices. The degree of detail in which the estimates are prepared varies according to whether they are based on benchmark years or annual estimates.

In order to analyse and evaluate the reliability of the output estimates it is useful to group the products in four main categories: (a) products which require some form of industrial processing before being launched on the market; (b) products which are basically destined for export; (c) products the marketing of which is subject to some instrument of State intervention; and (d) products for direct human or animal domestic consumption.

In the first three cases output estimates can be controlled and improved, since data on their use or purpose are generally obtainable from independent sources. In these cases, too, it is easier to obtain more accurate data on prices paid to producers.⁵ In the fourth case, it is practically impossible to obtain data which would enable the results of the production statistics to be controlled or at least judged on a quantitative basis, especially in those cases where the goods in question form part of subsistence production.

The quality of the global estimate of gross output depends on the relative importance of each of these groups of products within the total for the agricultural sector.

Although in most Latin American countries subsistence production is quantitatively important, only one country provides separate estimates that indicate its volume and change over time. In other countries, this concept is not presented separately, and remains implicitly incorporated in the output estimates, since the basic data come from informants scattered throughout the country who provide data on the area cultivated, yields and output. Understandably enough, these data have substantial limitations, and it is therefore not unreasonable to suppose that the inclusion of own-account production for consumption entails a considerable degree of uncertainty, particularly in the countries where it is of most importance, since the development of the statistical system (and even the geographical area it covers) is inadequate.

Several countries do not provide estimates for own-account fixed capital formation while those that include them only do so for a small group of goods on

⁵Or data from which they can be deduced on a more reliable basis.

the basis of very limited information, especially as regards their valuation, despite the fact that the cost of such investment in some countries can be high.

Change in the stock of cattle is a datum which, except in a few countries, can only be reliably measured when censuses are taken; consequently annual estimates are based on a linear interpolation between censuses or extrapolations on the basis of a series of assumptions.

Estimates of inputs and factor income are such that little use can be made of the calculations for studies of technological change, variations in productivity, changes in the price system, and the relationship between such changes and the generation and distribution of income.

It is obvious that no real progress can be made as regards the estimates of the agricultural sector until the shortcomings of basic statistics are overcome. This inevitably means using more efficient methods of statistical research. It is important to persevere in and extend the work already begun on sample surveys in some countries. At the same time a start should be made on planning and experimenting in methods and procedures for collecting data on the many aspects for which information is not at present available, so as to be able to put them into systematic use in the future. Top priority should be given to research on: (a) use of land and prices; (b) structure of costs and investment; and (c) rural living conditions (including the problem of subsistence production).

(b) *Manufacturing*

Most countries periodically conduct industrial censuses which comply to a large extent with the requirements of world programmes of industrial statistics, at least as regards the content of the surveys if not the date on which they are carried out. The concepts, definitions and classifications employed mostly conform to those that have been internationally recommended. Although census information is theoretically geared to the requirements of national accounts, there are certain factors that affect or limit its use.

Several countries—usually the least industrially developed—adopt a definition of the statistical unit or fix a minimum size for establishments, for census purposes, which does not suit the structure of its industrial activity, with the result that a large proportion of that activity is left out of the census.

In some censuses, the coverage and quality of information collected has suffered from the method used or because there has been no proper planning or supervision of the field work.

Given the limitations mentioned in the foregoing paragraphs, experience shows that information for the benchmark census years is fairly abundant and reasonably sound in the case of medium-sized and large establishments. The same cannot be said of small industry and artisan-type work, data on which are often not collected by censuses, or if they are they suffer from a great many omissions and from the poor quality of the replies received.

The situation presents even greater shortcomings as regards the data produced annually. A group of the countries of the region have for several years conducted sample surveys on industrial establishments selected from among those covered by the previous census; these data have a number of limitations:

—the results emerging from the surveys become progressively less representative with the passage of time, particularly in the dynamic industries, because they do not give sufficient attention to the inclusion of new types of activity or new products in the establishments selected, or the activity of new establishments; the lack of permanent registers of industrial activities or directories in the majority of the countries is one of the aspects which determines this situation;⁶

—almost all the countries fix a minimum size for the establishments covered by the survey; this, generally speaking, means that all the small, and in some cases certain medium-sized, establishments are excluded;

—the surveys generally cover the volume and value of output, employment and wages paid, and, to a lesser extent, the main inputs, but there are very few surveys which attempt to accumulate data on the remaining aspects of production accounts.

Almost all the countries use the value-added method to work out the estimates; they prepare detailed calculations for the benchmark years and extrapolate or interpolate these results annually, using indicators. Thanks to the scope and quality of the basic data used, the estimates for the benchmark year are more reliable than those for the annual series, especially when the latter are the result of extrapolations.

The quality of the indicators used annually for extrapolations or interpolations of the different times is inadequate in the majority of the countries; in this case again, the most reliable data are those for output and are based on the hypothesis of the stability of production functions; the compensation of employees does not have a solid statistical basis either, and both these aspects affect the values of the operating surplus.

The assumptions of the stability of production functions, especially when applied at a very high level of aggregation of between 5 and 10 major branches of industry, implies a very considerable limitation on the annual estimates of value added, particularly in view of the early stage of industrial development in many of the countries, where the installation of a few new industries may modify to an appreciable extent the structure of production in the sector.

The estimates for small-scale and artisan-type industry, despite their importance in many countries of the region, are notoriously unsatisfactory. Only a few countries have basic data (of poor quality) for benchmark years, and in all of them annual data are practically non-existent. There are various procedures adapted to the sources available, but strictly speaking most of the estimates are barely a conjectural evaluation of the phenomenon.

Future possibilities of improving estimates in this area are closely linked to the development and perfecting of coordinated programmes of industrial statistics. In this context attention should be given to;

- (a) the establishment of permanent registers of industrial activity directories;
- (b) the creation and testing of methods for the compiling of data not at present envisaged;

⁶Another highly important aspect is related to conceptual and practical problems in the preparation of index numbers.

- (c) the effective integration of the censuses and continuous sampling so as to ensure a minimum of periodic information adequately linked with the frames of reference; and
- (d) the development of procedures for compiling data on small establishments and artisan-type industries (probably more closely connected with household than establishment surveys).

2. *Capital formation accounts*

Estimates of gross capital formation in the great majority of Latin American countries distinguish between three broad categories of components: machinery and equipment (usually classified by domestic or foreign origin), construction, and changes in stocks. This breakdown is the natural result of the procedure used to prepare the estimates and of the availability of information.

The method basically used in the first group is the commodity flow, based on import and industrial production statistics. Although these basic sources of data are of acceptable quality in many countries of the region, the need to effect a number of adjustments and adaptations in order to arrive at national accounts estimates undermines their reliability. The following are the main problems encountered in this respect:

—the assignment of goods according to their use (investment, consumption or intermediate inputs) is based on an analysis of the kind of good, which raises two types of difficulties that are inherent in the method itself but are more serious in Latin America because of the problem of basic statistics; on the one hand the absence or inadequacy of information for determining the uses of certain goods with possible alternative uses (cars, air-conditioning units, sewing-machines, etc.), and on the other hand, the aggregation criterion and the level of detail in the classifications of certain imported and locally-produced goods, which means that they include different types of goods that are impossible to distinguish, the use of which may vary widely;⁷

—the adjustments which must be made in respect of trade and transport margins, customs, and installation costs represent a high percentage of the total cost of the investment, and they are usually calculated very roughly since there is no proper statistical base.

On the whole, the Latin American countries endeavour to give proper and careful consideration to these problems, making full use of the possibilities offered by the basic statistics available. There are, however, discrepancies between countries in the region and between them and the developed countries as regards the inclusion of—or the share assigned to—some products in gross capital formation; but these differences usually depend on each country's economic structure and are not the result of conflicting or mistaken concepts or procedures. Those goods whose inclusion or percentage share are in doubt are not very important; the adjustments made in order to bring import or domestic production figures into line with buyers' prices have a much greater relevance to capital formation estimates.

⁷There are also problems as regards the treatment given to spare parts and, in general, repair or maintenance costs in respect of capital goods.

The series covering capital formation in buildings and other construction have a less reliable statistical base. Few Latin American countries conduct periodical censuses and inquiries in the construction sector. Estimates are generally based on construction permits or licences, supplemented by data obtained from government accounts, or, to a lesser extent, on statistics for production and imports of building materials. In some cases two procedures are combined, and housing censuses are also used as a partial framework for the estimates. Nevertheless, most of the countries are unable to distinguish between housing and other types of construction.

The main difficulties arising from basic statistics in the second category are as follows:

—building permits refer only to the principal urban areas and the omission of records is often considerable owing to poor supervision; moreover, the data pose problems as regards both their assignment to an accounting period and their valuation, although in some countries they are partially overcome by incorporating information concerning the final work certificates;

—data obtained from fiscal accounts are to some extent unsuitable because of the definitions, classifications and time of recording employed;

—estimates of land improvement and development of plantations and own-account capital formation in the agricultural sector have very little statistical basis as regards both volume and valuation; a few countries do not even prepare estimates for these items.

Data on changes in stocks are very limited in scope in that they generally cover a small group of primary products, which are usually for the export market or subject to State intermediation or control, and the cattle stock. There are also serious valuation problems, especially in countries with high inflation.

The situation is considerably worse in the case of estimates at constant prices. Since the method most often employed is to deflate values at current prices, the reliability of the estimates depends on the accuracy of the calculations at current prices and the quality and suitability of price indexes; the latter, in addition to showing the same statistical shortcomings as referred to above, have a number of limitations deriving from the preparation of the indexes themselves.

Judging from available basic data and from the procedure employed for obtaining estimates, it is unusual for gross capital formation to be classified by kind of activity using the assets and by institutional sector owning them.⁸

The improvement of estimates of gross capital formation requires a considerable effort in several respects. None of the basic sources of data and none of the procedures currently used for obtaining estimates can be rejected; they must, on the contrary, be improved. New procedures must be devised for obtaining data, and, therefore, new methods found for preparing the estimates. Because it would take too long to describe all the steps in this direction and because such is not the purpose of this paper, only the most important measures are mentioned here:

- (a) the study and application of improvements in the aggregation criteria and the level of detail currently used in the classifications of imports and industrial production;

⁸Given the investment made for the public sector, it is possible to obtain that of the private sector residually; it will be appreciated, however, that the result is subject to a wide margin of error.

- (b) the carrying out of surveys of importing and wholesale enterprises in order to obtain data that will permit a more accurate calculation of trade margins and, to a lesser degree, the determination of the destination of the goods;
- (c) the development of surveys of establishments (including the agricultural sector) to include questions regarding the purchase of fixed assets and own-account capital formation in order to permit direct measurements for checking the estimates obtained by the commodity flow method and to facilitate classification by kind of activity and by institutional sector, as well as to provide a better basis for the valuation of goods at buyers' prices;
- (d) the improvement of statistics on building permits and final work certificates (coverage, valuation, average duration of works, abandonment, etc.);
- (e) the organization of surveys of the construction industry;
- (f) the adaptation of data extracted from fiscal accounts.

3. *Income and outlay and capital finance accounts*

The coverage and reliability of the basic statistics used in preparing estimates for this group of accounts vary according to the institutional sector or subsector concerned.

The accounts of non-financial corporate and quasi-corporate enterprises—except those which are State-owned or State-controlled—have a weak statistical basis and a good many countries are even unable to prepare any estimate because of the almost complete lack of information. Strictly speaking none of the countries in the region have the necessary machinery for the continuing collection and compilation of data for purely statistical purposes on this institutional sector. A few countries obtain information for the whole sector from income tax registers, since according to the tax law all enterprises must declare and pay their taxes, whatever their size or legal form of organization.⁹ Another small group of countries obtains information on a large segment of the sector through the system of control of incorporated enterprises, particularly limited stock companies.¹⁰

In addition to their own particular advantages and disadvantages, the two sources mentioned above have limitations in common. Both are a by-product of administrative records that were kept for specific purposes, and in their present form are not entirely suited to the requirements of the SNA, particularly in the case of income tax. Income tax helps to identify quasi-corporate enterprises but offers very little information about the type of transaction and suffers from the well-known problem of tax evasion, which further reduces the possibility of making a proper comparison between one period and another. The data obtained through the system of controlling corporations has the advantage that a standard form and uniform accounting method is used in the preparation and presentation

⁹ According to the tax legislation in force in most countries, incorporated enterprises must declare and pay their taxes, while the rest are absorbed in the individual declarations of their owners.

¹⁰ In these countries, income tax also provides information on such enterprises.

of the statements of accounts, so that data can be obtained that are fairly well suited to the requirements of the SNA and offer a reasonable amount of detail regarding the type of transaction; however, they only cover corporations and experience has shown that they are subject to as much evasion as income tax returns.

The accounts of financial institutions are based on a good set of basic data in nearly all the Latin American countries, provided either directly by the public institutions concerned (central banks and State-owned banks) or through government agencies which control the activities of private institutions (banks and insurance companies, savings institutions, joint investment funds, etc.). There are usually standard accounting systems for the registration and presentation of data and legal provisions requiring that the statements of accounts be submitted periodically to the competent government authority. For the most part, the data are adequate for the needs of the SNA, as regards both definitions and classifications, although occasionally more detailed information is needed. Companies extending personal credit and financing sales and activities engaged in by individuals are less reliable (because there is no system for collecting data on them and because they are often excluded from State control) but these are of relatively minor importance.

General government accounts are derived from their own accounting systems which are characterized by a complete methodical registration of all operations. However, given the purposes of administrative control and determination of responsibilities for which these systems were established, the data obtained in this way do not fully meet the SNA requirements (especially the time of recording) and a certain amount of adaptation, combination and consolidation of the various items is necessary. The problems are more serious with regard to data on state and local administration, possibly as a natural result of the lower technical standard and level of efficiency of the administrative organization and action of those types of government. Moreover, there are some instances where information is lacking because the item concerned is not included in the public accounting systems, the most important case being the consumption of fixed capital.

The accounts of private non-profit institutions serving households contain little and fragmentary basic information but the sector does not seem to carry very much weight in the region as a whole, although it may do so in the more developed countries; however, more information is available in the latter since this type of organization is generally subjected to certain kinds of State control.

Important though they are, household accounts have a poor statistical basis. Only a small number of countries are able to present data on current transactions, taking advantage of the items derived from production accounts¹¹ and accounts of non-financial enterprises and from estimates for other headings based on income tax and social security records. The lack of sources for preparing independent estimates of the most important components is linked to the fact that household surveys—the main source for estimates of these accounts—have not yet been properly developed in the region.

¹¹It should be noted that some of these are obtained residually, the most important being household consumption expenditure and operating surplus.

The possibilities of introducing accounts III depends on the adoption of three important measures concerning basic data:

- (a) the implementation of statistical programmes whose unit of observation is the enterprise and which include the link with statistics on establishments.
- (b) the extension and adaptation of data obtained from administrative records, from State control over enterprises and from the accounting records of the government and State-owned or State-controlled enterprises;
- (c) the development of a firm and permanent basis of the programming, execution and proper utilization of multiple-purpose household surveys and income and expenditure surveys.

D. THE PROGRESS REQUIRED BY THE PRESENT SNA

The present SNA incorporates the progress in the national accounting field in recent years and provides a suitable conceptual framework for the systematic and integrated recording of economic activity; it also envisages appropriate links with other accounting systems covering different aspects of the structure and behaviour of a community. As a system which regulates and guides the development of co-ordinated and coherent programmes of basic economic statistics it will very probably retain its importance and relevance in the next 10 to 15 years. Moreover, the attention given to adapting the system to the developing countries—although there is still room for improvement¹²—enhances its usefulness to the countries in the region.

The stage of development so far reached by national accounts in Latin America is unsatisfactory if compared with the former system recommended by the United Nations two decades ago, and their recent evolution indicates that the rate of progress has fallen behind the advances made in the theoretical field in this connexion, and in relation to the increasing requirements of macroeconomic information for economic planning and policy. This whole picture becomes more meaningful if the objectives, structure and content of the present SNA, that has already been in force for five years, are compared with the present state of national accounts estimates in the region, which reveals the long road that lies ahead and the magnitude of the effort required if the present situation is to show a change for the better. Clearly, little progress can be made unless the basic statistics are expanded in scope and improved. This is the crux of the problem, towards which the greatest efforts and resources should primarily be channeled.

It is necessary to adopt a critical approach and concerted action with respect to four aspects which characterize national statistical systems in Latin America:

- (a) organizational problems and the shortage of human and financial resources;

¹²This should logically occur since a principle inherent in the spirit of an international recommendation is that it should be studied and revised in the light of the experience gathered in its implementation. This is a vitally important point which calls for as much responsibility or more from the institutions which draw up the rules as from those which employ them or the users of information in general.

- (b) the lack of co-ordinated programmes of basic statistics;
- (c) the limited use of efficient methods of collecting data; and
- (d) the insufficient recourse to administrative records.

As regards the first aspect, there is little possibility of bringing about substantial changes in the short or the medium run, since they depend on a number of institutional factors in each country, linked in particular with the situation of public administration in general and with the legal provisions regulating statistical activities. In spite of the difficulty of finding immediate solutions to these problems, they should not be overlooked; on the contrary, special attention should be paid to all the possibilities which may help to attain the goals of modernizing and strengthening statistical systems.

In this respect, it would be advisable for each country to prepare a strategy for the fulfilment of these goals,¹³ in which an essential point of departure would be a comprehensive knowledge (inventory) of the agencies producing statistics, the data they produce and their main characteristics, and the financial, material and human resources they possess. At the same time, it is essential to intensify the efforts that are made in connexion with personnel training.

As regards the second aspect, it is obvious that the task to be carried out is enormous and thus required to be approached in successive stages. In a first stage, the basic statistics available should be evaluated (using the inventory mentioned in the last paragraph) in the light of the present SNA, so as to be able:

- to make fuller use of the data available which has not been fully utilized;
- to rule out the preparation of data which do not prove to be useful or which are out-dated, thus freeing resources which can be reallocated to other tasks;
- to identify and put in order of priority the main gaps in information.

The second and third stages would include the preparation of statistical programmes aimed at eliminating these major gaps within a short time and constructing frameworks and their respective continuous series on a permanent basis in line with the requirements of SNA. A very useful procedure for ensuring that the decisions on priorities and the allocation of resources are in keeping with the most extensive and most urgent needs would be to hold joint meetings of planners, statisticians and national accounts specialists to discuss these subjects.

In addition to the above,¹⁴ the following points should be mentioned:

- (a) High priority should be given to the compilation of basic data leading to the introduction of the complementary system of statistics of the distribution of income, consumption and accumulation of households and linking it (and the SNA) with the system of demographic and social statistics, especially those which permit an integrated approach to research on problems of poverty and employment; the basic aim here is

¹³The implementation of ambitious strategies which place the reorganization of the whole statistical apparatus and/or the reform of existing legislation before the adoption of any action would very probably meet with slow or uncertain success. More feasible strategies might be those which, albeit not directly, induce the desired changes through the establishment of work plans that co-ordinate the activities of the various agencies (decentralized) concerned with the preparation of statistics, and/or the launching of a programme of censuses and inquiries that would employ efficient methods of gathering information, etc.

¹⁴And to what was said in section C, "The main gaps in the estimates".

to make good the present almost complete lack of statistics on living conditions.

- (b) Special attention should be paid in the preparation of the programmes of basic statistics to the inclusion of the kinds of data and classification criteria needed to put into use the accounts proposed in the adaptation of the SNA to the developing countries (accounts IV, V and VI).
- (c) The linkage between different sources (common definitions and classifications) should be investigated and identified and appropriate ways should be sought of achieving this linkage.
- (d) Administrative records should be incorporated in the programmes of basic statistics.

As regards the third and fourth aspects, it is obvious that it is urgently necessary to have available a larger and more reliable body of data; this means seeking efficient methods of collecting information which will at once reduce the cost of research and improve the coverage and quality of the statistics produced. In this context it would seem appropriate to indicate the importance of the following points:

- (a) the dissemination and exchange of experiences among the countries of the region in the field of basic statistics;¹⁵
- (b) availability of technical manuals and international guidelines;¹⁶
- (c) devising and testing new procedures for collecting data (especially questionnaires, instructions, organization of field work, selection and training of interviewers, etc);
- (d) actual organization of censuses and large-scale inquiries as a framework for more frequent or more intensive studies on specific topics;
- (e) ensuring that the administrative records become an effective and economic means of collecting basic data, bearing in mind the statistical requirements in the design, collection and processing of the reports and registers.

¹⁵The periodic convening of regional or sub-regional seminars, working groups and workshops to discuss specific topics would be one of the most effective forms of action.

¹⁶In this connexion, the Statistical Office of the United Nations is preparing a valuable set of documents of this kind on a number of high-priority topics.