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*The Economic Bulletin for Latin America* has been published by the secretariat of the Economic Commission for Latin America twice yearly since 1956. The essential purpose of this periodical is to provide a résumé of the economic situation of the region designed to supplement and bring up to date the information published in the Commission's annual economic surveys. Apart from this summary, which is to appear in every issue, special articles on different subjects related to the economy of Latin America are included, as well as informative and methodological notes.

The ECLA secretariat assumes entire responsibility for the *Bulletin*. Its content—intended for the information both of public officials and of the general reader—was not submitted to the Commission's member Governments before publication.

Since October 1958 the *Bulletin* has regularly included a Statistical Supplement. This subsequently became large enough to warrant separate publication, one issue being published in 1960, another in 1961 and two in 1962, each being bilingual with the corresponding table of contents. Since 1964, a new publication, the *Statistical Bulletin for Latin America*, has been issued twice a year, to provide the public with a regular flow of statistical data on economic matters.

#### EXPLANATION OF SYMBOLS

Three dots (...) indicate that data are not available or are not separately reported.

A dash (—) indicates that the amount is nil or negligible.

A minus sign (—300) indicates a deficit or a decrease.

A stroke (/) indicates a crop year or a fiscal year, e.g., 1954/55.

An asterisk (\*) is used to indicate partially or totally estimated figures.

“Tons” and “dollars” are metric tons and United States dollars, respectively, unless otherwise stated.

Minor discrepancies in totals and percentages are due to rounding.

# THE TRAINING OF HUMAN RESOURCES IN THE ECONOMIC AND SOCIAL DEVELOPMENT OF LATIN AMERICA<sup>1</sup>

## I. INTRODUCTION

A distinctive feature of Latin American development policy in the last few years has been the inclusion, among its foremost objectives, of the rapid expansion of the social services, with particularly high priority for education. The importance attached to education has found visible expression in the increase in the school attendance rate and the evident tendency of most of the Latin American countries to give education a larger share of resources in relation to total public expenditure or the domestic product.

This trend in development policy has its basis in an evaluation of past experience, which has led to the inclusion of new elements in the very concept of development. The Latin American economies have been expanding at very irregular rates and have failed to achieve a reasonably high and sustained tempo of growth over the long term, thereby underlining the inadequacy of a policy that is confined to investment or even to the modernization of certain key institutions. What has emerged instead is the idea of development as a process of social change, with a consequent emphasis on the economic, social and political reforms, essential for this type of development. It is clear from past experience that the benefits of economic progress are not being enjoyed by all sectors of the population alike. The redistribution of income and improvement in the living conditions of the less privileged are not likely to follow automatically upon economic growth, or at least not as swiftly as would be required in view of the social pressures predominating in Latin America.

The promotion of education is thus at one and the same time a goal in line with this broader concept of development, and an instru-

ment for correcting a deficiency that economic growth alone has been unable to overcome. This approach attributes to education, both in its capacity as a social institution and as a key factor in the training and development of human resources, functions broader than those traditionally ascribed to it. Consequently, educational activities are regarded as an integral part of development policy, which must necessarily be closely co-ordinated with the other components of that policy.

Otherwise, problems of the same kind as those being met by general development policies might recur in the field of education. For instance, if stress is laid on the need for greater financial resources there may be an appreciable expansion in the volume of educational services, but this offers no assurance that the situation in education will in fact be improved. Even if the population were to benefit more directly from the expansion of educational services than from a rise in the production of goods, the extreme inequality in the distribution of educational facilities might well continue to accompany and aggravate the inequity in the distribution of income and wealth; the possibility of making full use of the wider educational services might continue to be restricted to certain groups, while for large sectors of the population the mere fact that more facilities are available might not be enough or might add to their frustration. It should be remembered at this point that the high drop-out rates over the whole educational cycle from primary school to the university are not due simply to the lack of educational services or to the inefficient use of the public resources allocated to education; they also reflect the inability of large sectors of the population to take advantage of the services provided. To look at the question from another angle, the growing number of professionals and technical experts emigrating to other parts of the world and the constant clamour for more public employment opportunities are indicative of a lack of balance between the present struc-

<sup>1</sup> Document UNESCO/MINEDECAL/9, prepared by the secretariat of the Economic Commission for Latin America, with the co-operation of the Latin American Institute for Economic and Social Planning, and presented at the Conference of Ministers of Education and Ministers Responsible for Economic Planning in Latin America and the Caribbean (Buenos Aires, 20-30 June 1966).

ture of the educational system and the absorptive capacity of the economy.

Factors such as these illustrate the enormity of the task facing educational planners. As in purely economic matters, it is not merely a question of extending existing services and making them more rational and efficient, but of paving the way for changes and creating a sufficient and clear image of the society that education will be called upon to serve in the future.

The orders of magnitude of aspects that will be of great significance in Latin America, together with certain structural changes, are not difficult to foresee. Between 1965 and 1980 the population of the region will rise from 236 million to nearly 364 million; the school population, consisting of children between the ages of 5 and 14, will go up from 61 to 93 million, while the population of active age will climb from 136 to 212 million and the labour force employed in the different sectors of economic activity from 77 to 120 million. If the economy maintains a moderate but steady rate of growth, the regional gross domestic product will expand from 89,000 million dollars in 1965 to around 200,000 million dollars in 1980. During that period, provided that there is better income distribution, current agricultural production will have to expand nearly twofold and manufacturing—providing there is greater economic integration in the region—nearly threefold.

This involves meeting a number of different conditions, and would have various repercussions, even though the per capita rate of growth would not average more than 3 per cent annually. The framework within which Latin American society develops would necessarily have to be different and far-reaching institutional changes would have to be made. The supply of goods and services to meet the material and cultural needs of the people would be greater but so would their requirements. In a narrower sense, these projections also posit a widespread process of technological assimilation, extensive changes in the structure of employment, a considerable improvement in the qualifications needed to ensure job efficiency and a sizable increase in average productivity per person employed.

However, as far as educational planning is concerned, the period in question is not so remote that immediate problems need not be faced.

In 1965, probably less than 1 per cent of the working population in the twenty Latin American countries as a whole came into the category of high-level "professionals", although the definition of this group is both broad and ambiguous,

while less than 3 per cent could be described as "technical" personnel, of which over two thirds were primary-school teachers or accountants. Of slightly under 54 million operatives and artisans, less than 10 per cent could be described as "skilled", and 35 million had no training whatsoever. In the agricultural labour force, professionals and technical personnel barely made up 0.1 per cent, nearly 80 per cent being unskilled workers.

An estimate of the educational levels of the employed population in that same year indicates that slightly over 1 million persons had full or partial university training, 30 million had three or more years of primary schooling, while 37 million had less than three years or none at all. Of the 8.7 million people with a secondary education, 6.2 million had a general secondary education, incomplete in the case of 4.7 million, while 1.8 million had partial or complete technical training at the intermediate level and 720,000 persons had attended teacher training schools. Only 5 per cent of the operatives and artisans had intermediate training of some kind, and even in the category of administrators and managers, including those in the agricultural sector, less than 10 per cent had some level of university training, while 45 per cent had only some degree of primary schooling.

These estimates have been given for purely illustrative purposes and should, of course, be accepted with certain reservations. Nevertheless, this type of information, collected on a more orderly and systematic basis, will undoubtedly have to be used as a basis for educational planning.

A similar occupational structure and educational distribution would clearly be inadequate for the 120 million people who will constitute the total labour force by 1980. The movement of labour from one sector of the economy to another alone involves changes in the level of skills of the labour force as a whole, even though the requirements within any given sector may remain the same. It is likely, however, that these requirements will increase considerably as Latin America's economy develops in the next few years. The land reform programmes must go hand in hand with a serious effort to modernize agriculture, which will heighten the need for professional and technical workers and skilled labour, and will lead to a general expansion or addition of new supplementary functions in relation to social questions, administration and management of co-operatives, etc. In manufacturing, it is likely that the average rate of increase in labour productivity in the sector as



a whole will rise to almost 4 per cent a year, because of the strengthening of more productive and more technically complex industries, the modernization of traditional manufacturing industries, and the increase in the proportion of factory as against artisan industries.

Hypotheses of this type, which can also be applied to other sectors of the economy, provide the basis for figures that help to illustrate the size of the effort that will have to be made in the next few years. For example, it can be estimated that by 1980 about 1.2 million high-level professionals will be needed, practically double the number available at present. An even bigger increase will be needed in the number of technicians (over 5 million, as against an estimated figure of slightly over 2 million in 1965), and such an increase would do much to correct the present marked imbalance between senior and intermediate staff. In the operative and artisan category, the proportion of skilled workers would have to increase to at least 15 per cent, which would mean adding 8 million more skilled workers, thus nearly tripling the present number.

These changes in the occupational structure of the active population would, in their turn, involve equally substantial changes in the educational pattern, more especially in view of the need to improve levels of skill in terms of quality. There are many anomalies in the present situation, since functions at given levels of skills are performed without the necessary grounding of the type and duration required. Hence it would seem that by 1980 there should be over 2.4 million university graduates and over 25.4 million with secondary education. Within the latter group the proportion of those with intermediate technical education will probably need to be over 30 per cent, which in absolute terms means an increase of 6.4 million over present levels and which would in fact impose a major modification on the pattern of the educational systems. Similarly, the number of skilled and semi-skilled workers needed in the operative and artisan category implies that the number of people of working age who have not received a full primary education should be reduced to the minimum.

It would be a mistake to translate estimates of this kind mechanically into terms of the additional funds needed for education. Only a detailed evaluation of the efficiency of the educational system can enable the need for expansion in terms of quantity, as well as for improvement in terms of quality, to be reconciled with an allocation of funds which is already fairly sub-

stantial and which will in any event have to compete with other equally important objectives of future development.

The amount of growth needed can be illustrated by comparing these projections with the present supply of the educational system, in terms of the number of graduates and school-leavers. Even assuming a moderate retirement rate, during the next fifteen years an annual average of 120,000 university-trained professionals will be needed, while at present the annual number of graduates from Latin American universities is about 70,000. Similarly, in intermediate technical training—at the secondary level, or by means of shorter university courses—the present annual supply is 140,000, whereas at least 480,000 are needed. Foreseeable needs in terms of the levels of skills of operatives and other professional workers underline the importance of professional and vocational training outside the school system proper, and the consequent need for educational planning to go beyond the formal system and include in an integrated programme, other vocational and professional training at all levels.

The manner in which educational systems will respond to these needs in the next few years will depend on factors relating to educational planning itself and on the effect of the aspirations of the various social groups as reflected in the type of education they seek. The first are connected mainly with the extent to which educational and general development planning are effectively integrated, the definition of the essential functions and purposes of the educational systems, and the extent to which educational activities are linked with employment policy and with the foreseeable structural changes. All this, in turn, will depend on the capacity of general planning to provide a clear-cut frame of reference for the planning of educational curricula. The question of the “demand” for certain types of education is of special importance from the standpoint of the feasibility and suitability of educational reforms. The more these reforms are inconsistent with what given population groups hope to obtain through the expansion of their educational opportunities, the less feasible and suitable they become. For example, there is a characteristic pressure on the part of the middle classes for the extension of general secondary education as a gateway to the university and subsequently to jobs with a certain social standing, and this might conflict with the need to increase technical training at the intermediate levels, apart from the distortions that would result from increasing university enrolment in proportion to the ex-

pansion in secondary education, assuming it were possible to do so. Similar problems, in a different sphere, arise in relation to the extension of educational services to the marginal groups of the urban population and to the rural population in general. Particularly in the second case, there is still a good deal of disagreement on the kind of education that should be offered.

Broadly speaking, these are the main subjects dealt with in the pages that follow. There is first a study of the content and scope of educational planning in Latin America, in terms of the conceptual basis of the underlying aims

and the practical effect of the work done so far. There then follows an outline of the existing situation in quantitative terms, together with a number of projections up to 1980, which provide a basis for a consideration of the magnitude and pattern of the programme to be undertaken; this section also includes some methodological comments that may help to make planning more systematic in the future. Lastly, there are a few comments on the place of education in a development policy viewed as a process of social change, from the point of view of the demand for education by different sectors of the population of Latin America.

## II. CONTENT AND SCOPE OF EDUCATIONAL PLANNING IN LATIN AMERICA

### 1. THE PURPOSES OF EDUCATION AND THE EXTENT TO WHICH THEY ARE FULFILLED

The expansion of the educational system for the benefit of society as a whole can be justified on the basis of two fundamental criteria: the defence of human rights and the full realization of the human potential. Both these criteria are reflected in the patterns imposed by Governments on the educational systems, which are very similar throughout Latin America. The first, set forth in article 26 of the Universal Declaration of Human Rights, has been elaborated upon in a long series of regional declarations and in national laws. The second figures prominently in national educational plans and was given particular attention at the 1962 Santiago Conference on Education and Economic and Social Development.

Taken at their face value, the criterion of human rights and that of the realization of the human potential might seem to be somewhat contradictory or, at least, to indicate different priorities in the expansion of the educational systems. In point of fact, however, they tend to be compatible and even complementary. Both call for universal and uniform general education, long enough and good enough to prepare all children to be good citizens and to play their part as producers and consumers in a modern society, and make access to higher levels of education conditional on individual ability. Both support the expansion and diversification of secondary and higher education, so as to enable individuals to realize their full potentialities and to occupy increasingly diverse and demanding occupational and social roles. Both seek maximum opportunities for further study, training and intellectual growth for the adult

population. In fact, the short-term conflicts of priorities in the allocation of resources, which could arise from such criteria (e.g., the universalization of primary education *versus* the accelerated training of middle-level technicians), seem to be much less important than the conflicts which arise because other development aims are competing with education in the distribution of available funds.

Two other purposes or functions of the educational systems are sometimes alluded to in official policy statements. Although they have been analysed from various angles, by sociologists, educators and political leaders, they cannot be expressed in terms of quantitative objectives as easily as those relating to human rights and the realization of the human potential. These two functions are, up to a point, compatible with one another, and all educational systems do in fact fulfil them to different extents, whether deliberately or not. In their more extreme formulation, however, the two functions are incompatible; for, on the one hand, education is expected to affirm existing or dominant values, status symbols, occupational preferences, etc. and transmit them to the new generations, and on the other, it is asked to be a breeding ground for economic and social change.

Some idea of the extent to which the educational systems of Latin America are responding to such purposes and functions can be obtained from many national and regional reports.<sup>2</sup> They indicate that the majority of children in Latin America still do not have a real opportunity to attend school long enough to achieve func-

<sup>2</sup> Among the most recent are *Education and Development in Latin America* and *Evolution of the Educational Situation of Latin America 1956-1965* (UNESCO/MINEDECAL/7).

tional literacy and are effectively excluded from secondary and higher education. Progress towards more diversity and more equal opportunities at the middle level is particularly halting; students are channelled into studies that will be virtually worthless unless followed by a university education, which for most of them is out of reach. The different levels of education do not constitute a coherent system inspired by common aims. At all levels, rapid expansion has meant a proliferation of schools with the minimum material resources, and lacking qualified teachers and clearly defined objectives; there has been a general lowering of standards in the interests of training a larger number of people, so that absorption by the economies of the growing number of certificated technicians and professionals is increasingly problematic. The potential functions of education in establishing, preserving or reforming the social and economic structure have not been the subject of deliberate national strategy, except in the case of one or two countries.

In education, as in the other spheres of public social action and in the economies themselves, models and standards from urban, industrialized societies have been superimposed on different realities—on rigidly stratified societies, predominantly rural, with traditions of education centred on the granting of professional titles and on cultural symbols considered appropriate for *élites* already determined by family connexions. In education, the importation of different and incompatible models goes back to the mid-19th century in the form of laws calling for universal education, and for many years educational missions from foreign countries and international organizations have been at work modernizing the educational systems, thus reinforcing this tendency. In this sense, the attempted application of successive imported educational models offers a parallel with what has occurred in the economies, where ideas geared to other realities have long predominated both at the levels of theory and of applied policies. In education, as in the economies and the political systems, the traditional structures have shown a surprising ability to absorb and adapt to imported models, and an ability to institute changes without arriving at the fundamental transformation now considered an essential condition for dynamic development.<sup>3</sup>

<sup>3</sup> The "permeability" of the traditional structures to partial modernization is discussed in depth in the Economic Commission for Latin America's study, *El Desarrollo Social de América Latina en la Postguerra* (Solar/Hachette, Buenos Aires, 1963).

The shortcomings of the educational systems have been criticized with remarkable frankness by the national educational authorities in reports prepared for the many regional meetings on education and related topics.<sup>4</sup> The need to bring education into line with regional realities is now a commonplace. Educational planning bodies have been set up in many Latin American countries, the number of qualified educational planners and administrators is growing, and the statistical information needed for planning is slowly becoming more extensive and reliable. The shortcomings can thus be regarded as transitional and unavoidable in a period of rapid expansion. Before they can be overcome, however, it is essential that there should be a wider understanding of the less overt influences responsible for the great discrepancies between the educational objectives and the actual working of the educational systems.

## 2. RECENT EXPERIENCE IN EDUCATIONAL PLANNING

The above considerations help to place in proper perspective the nature and scope of the educational planning so far undertaken in Latin America.

### (a) *Progress in general and educational planning*

The planning process in Latin America has made great headway in the last few years, particularly in relation to two fundamental aspects: every country has established a national planning office and has drawn up—or is on the point of completing—a development plan.

The many sectoral plans made in the past have been given a new significance by the recent changes in the nature of planning, and, from being piecemeal attempts to rationalize a single sector without reference to other economic and social conditions, they have become an intrinsic part of over-all economic development plans. Although no real co-ordination has yet been achieved either among the individual plans, or between these and government policy, progress is undoubtedly made towards greater integration and greater use of over-all planning.<sup>5</sup>

<sup>4</sup> The reports submitted by most countries of the region for a Latin American Conference on Children and Youth in National Development, held in Santiago in December 1965, in which education is considered along with other social and economic questions, provide many examples of such self-criticism.

<sup>5</sup> Information on the state of planning in Latin America is given in the ECLA *Economic Survey of Latin America, 1964*, United Nations publication, Sales No.: 66.II.G.1, chapter VIII.

The progress made in planning is also reflected in the organization and preparation of plans for the educational sector. Educational planning offices have been set up in all the Latin American countries, save for Haiti. These offices have been adapted to the characteristics and organization peculiar to each country, with planning in some cases centralized in the Ministry of Education, or the Planning Board or Council, for all educational levels; in others, it is the responsibility of administrative subdivisions by educational cycles; and in others, the responsibility of the different states or provinces.

Again, all the Latin American countries, with the exception of the Dominican Republic, which is engaged in the work of preparation, have already completed plans or formulated specific measures and goals for education, either as part of an over-all plan or as a detailed specific plan. There are, however, marked differences in the depth and detail with which the question of education has been considered. In some cases, the only point dealt with is the allocation of public funds in accordance with enrolment targets, with no analysis of educational policy or guidelines for its future evolution. In other cases, some basic principles of educational policy are laid down or proposals made for the reorganization of the system, and, in at least one instance, the educational system is analysed and its objectives and goals defined.

Another factor which has helped to define some of the fundamental elements of educational planning has been the widespread adoption of the system of performance budgeting. The fact that this system entails a reclassification of budget items and the adoption of new principles of budget control makes it possible to gauge more accurately the relative proportions of the sums to be allocated to each sector and activity and to assess their unit cost and yield. For education, it means, at the very least, that the order of priority for expenditure must be determined in detail. This system is now being used in Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Peru and Venezuela; in Panama it is in the process of being established, and in Argentina and Chile it has been applied in some aspects. The five Central American countries have a standard methodology, thus making it possible for their public sector accounts to be consolidated for purposes of information.

Apart from these educational planning elements included in general plans or performance budgeting, special plans for education have been

drawn up in Brazil, Chile, Cuba, Ecuador, El Salvador, Nicaragua and Uruguay. In Mexico, a plan for primary schooling is being applied throughout the country and special schemes have been drawn up for the States of Jalisco and Veracruz.

These and other general data on the achievements of educational planning in Latin America are presented in table 1. It should be pointed out that these advances in planning are indicative of general policy trends but it does not necessarily follow that they have been applied in practice. Thus, some plans so far represent a stage of analysis and suggested solutions rather than anything else. On the other hand, in some countries which have not yet prepared specific educational plans, certain guidelines have been clearly defined and policy measures have been adjusted accordingly.

#### (b) *The general substance of educational plans*

It is now widely recognized in the Latin American countries that education must be taken into account when decisions are made on the volume and composition of public expenditure. Consequently enrolment targets are usually specified for each educational level and the necessary funds to meet those targets estimated. In the primary school cycle a distinction is usually made between urban enrolment, whose requirements it is hoped to meet completely before long, and rural enrolment, which it is planned to cover to a fairly substantial extent. In each case, enrolment is calculated in terms of the school age population and the targets established, and estimates are made of the school premises and teaching staff needed, and of capital and operating costs. The funds that should be allocated to education are also compared and brought into line with the other public sector appropriations.

Over and above this process, which is one of rationalizing public expenditure rather than of defining educational policy, the question of education has been given special attention in certain cases. The plans for Bolivia, Colombia, Ecuador, El Salvador, Mexico, Uruguay and Venezuela, for example, define the measures whereby educational output can be geared to manpower requirements, and stress the need for more specialized technical training at the secondary level, the establishment of technical training centres and mass adult education campaigns. But the only general plans to go beyond the formulation of broad qualitative principles are those of El Salvador and Uruguay; and, as the plans have no projections of

**Table 1**  
LATIN AMERICA: SOME CHARACTERISTICS OF EDUCATIONAL PLANNING

Country	The question of education included in general plan	Separate educational plan	Projection of employment by sectors	Estimated manpower requirements	Projection of public expenditure on education	Enrolment targets			Proposed educational reforms			Programme of professional technical training outside the formal educational system	Literacy plan
						Primary	Secondary	Higher	Primary	Secondary	Higher		
Argentina .....	x		x		x	x	x		x	x		x	x
Bolivia .....	x				x	x	x						x
Brazil .....	x	x			x	x	x					x	
Chile .....	x	x			x	x			x	x		x	
Colombia .....	x		x		x	x						x	
Costa Rica .....	x				x	x						x	
Cuba .....	x	x			x	x				x			x
Ecuador .....	x	x	x		x	x	x		x	x		x	x
El Salvador .....	x	x	x	x	x	x	x						x
Guatemala .....	x				x	x	x						
Haiti .....	x				x								
Honduras .....	x				x	x							
Mexico .....	x	x			x	x						x	x
Nicaragua .....	x	x			x	x							
Panama .....	x				x								
Paraguay .....	x				x	x	x						
Peru .....	x				x	x	x					x	
Uruguay .....	x	x	x	x	x	x	x		x	x		x	
Venezuela .....	x		x		x	x	x			x		x	x

employment by sectors and activities or by technical and professional levels, it is impossible to estimate the labour requirements that educational planning should aim at satisfying. As a result there are no yardsticks to indicate how educational plans can be successfully incorporated in over-all plans.

The three general plans that deal in most detail with the relationship between employment and education are those of El Salvador, Uruguay and Venezuela.

In the Venezuelan plan, the importance explicitly attached to employment even led to an amendment of the plan's preliminary projections, through the adjustment of growth targets for the product and the addition of supplementary programmes to combat unemployment. The latter included a training plan for skilled workers and technicians to cover about 50,000 persons by 1966, and a preliminary list was drawn up of the trades that could be taught in the special programme (building, general and automobile machine work, secretarial work and rural services), without specifying the number of trainees in each category.

The plans for El Salvador and Uruguay also include a fairly comprehensive evaluation of potential manpower resources in relation to the proposed economic development goals. To that end, projections of total population growth, with its demographic and economic characteristics, were made, and employment targets, together with labour requirements by sectors and by vocational levels, were analysed. An attempt is now being made in Uruguay to gear technical and professional training to employment policy, both within and without the formal educational system, and, at the same time, manpower planning is being made an integral part of over-all planning.

In a few instances, special educational plans have been successfully incorporated in general development plans, and, in fact, actually constitute a breakdown and amplification of the relevant portion of the over-all plan, with a more detailed analysis of the state of education and well substantiated policy proposals. In other cases, they are independent of the main body of planning, with the result that their scope is necessarily restricted to internal aspects of the educational system and to justifying a specific allocation of funds, and there is no assurance that they are compatible with other basic elements of development policy or that the objectives pursued are feasible.

### (c) *Some problems and trends in educational plans*

For a closer appraisal of the scope of educational planning activities up to the present, whether expressed in the form of over-all plans or of specific programmes, an examination should be made of the kinds of problems involved and of possible solutions. This can be more easily done by dealing with the different educational levels in the order in which they usually appear in the plans.

*Primary education.* By and large, the plans devote most attention to two of the basic problems of primary schooling in Latin America, namely, absenteeism and dropping out.

The concern aroused by absenteeism is reflected in higher enrolment targets, which generally provide for the absorption of the whole urban population of school age in a relatively short space of time, together with a variable but fairly high proportion of the rural population. In the majority of the plans, current expenditure is estimated on the basis of these targets, by applying a certain teacher-pupil ratio. Capital expenditure is usually calculated with the aid of property records on the state of the buildings involved, and the new requirements are estimated in accordance with the size and distribution of the new enrolment figures (see table 2 for a summary of these targets as specified in the different plans).

A reduction in the school drop-out rate is a goal often allied with that of increasing enrolment, in an attempt to make the system more effective. The plans provide for the allotment of greater funds to expand the capacity of the school system, and, in some cases, to raise the numbers of years of compulsory schooling (in Uruguay three years were added to the secondary cycle and in Chile an eight-year primary cycle was instituted). Other causes of dropping out are seldom explicitly considered, and, as a result, other supplementary measures are not being taken.

Another subject on which the plans lay stress is advanced training for teaching personnel. In some cases (Bolivia, Chile, Colombia, Cuba, Ecuador, El Salvador and Mexico), proposals were made to step up teacher training and to launch a campaign for the training of unqualified teachers. In Mexico, for instance, 33,100 teachers graduated from the Federal Institute for Teacher Training (Instituto Federal de Capacitación del Magisterio) between 1945 and 1954; in Bolivia, the Higher Institute for Rural Education (Instituto Superior de Educa-

ción Rural) was set up to train high-level and specialized teaching staff for service in rural areas; in Chile, a National Programme for the Advanced Training of Teachers (Programa Nacional de Perfeccionamiento del Magisterio) is being implemented; and, in Ecuador, holiday courses are recommended. Other plans provide for intensive courses for specialists in training teachers, with the joint aid of the universities and the advanced teacher training schools.

Planning of primary education was given great impetus by the application of the Major Project for the Extension and Improvement of Primary Education in Latin America, which was launched by UNESCO in 1957 for a ten-year period. The aims of this project were to encourage the systematic planning of education, develop primary school services, revise the curricula with a view to achieving educational equality, improve teacher training systems and train a nucleus of leaders, and specialists in education. Among the measures it took to achieve these aims, UNESCO provided technical assistance, gave courses, organized meetings and seminars, and granted fellowships.

The problem of illiteracy is dealt with in the plans separately from primary education, the solution proposed being campaigns to reach all those who have not been brought into the school system. In Argentina, Bolivia, Cuba, Ecuador, El Salvador, Mexico and Venezuela, five to ten-year plans have been prepared to combat adult illiteracy. A few do not stop at simply teaching how to read and write. Ecuador's plan, for example, consists of three cycles, each nine months long, to eliminate illiteracy, to give further training in reading and writing and to provide an adapted form of primary schooling. In other cases, such as that of Guatemala, reading and writing is to be taught in the indigenous tongues as well.

*Secondary education.* A number of regional plans indicate that among the major problems facing secondary education are the limited capacity and the inefficiency of the system, the dearth of technical training and the concentration of resources in the traditional pre-university branches. Taking as their starting point the lack of proportion between the number of children leaving primary school and the enrolment capacity of secondary school establishments, some plans estimate probable enrolment figures and, on that basis, calculate the additional school premises and teaching staff required. A few go beyond quantitative growth estimates and formulate general guidelines for overhauling the system and adapting it to economic develop-

ment needs, but, on the whole, any such considerations are limited to the division of the system into cycles, and the possibility of establishing connexions at different levels between general education and technical specialized training.

In some cases, however, growing importance is attached to vocational training. In the Uruguayan plan, for example, it is proposed that the part played by technical education within the secondary cycle shall be gradually increased until it absorbs 40 per cent of the complement in 1974.

*University education.* Most of the plans point to the inability of the universities to absorb the growing number of secondary school graduates and to the difficulty of overcoming the problem by short and medium term solutions, since not only are more funds required, but also a larger number of high-level teaching staff. The policies that emerge from the plans range from a rigorous selection process, which limits the number of students accepted for each course (as in Chile), to a greater permissiveness as regards enrolment, which usually leads to overcrowding during the first year or so and a low ratio of graduates to enrolled students (e.g., Argentina, with 4.9 graduates for every 100 students enrolled in the period 1954-62). In order to make the system more efficient, by reducing the drop-out rate and shortening the number of years required for university study, several plans recommended that a system of grants should be set up to free the students from the need to earn their living while studying.

Some plans (among them those of Argentina, Colombia, Ecuador and Mexico) stress the fact that university enrolment is at present mainly directed towards the liberal professions, with the result that there is a shortage of students in courses more in line with economic development requirements. Little has been done, however, to translate this concern into specific co-ordinated proposals for remedying the situation. In some cases, reference is also made to the lack of proper co-ordination among the different universities and between them and the rest of the educational system. Some interesting information in this connexion has been gathered by the Central American Higher University Council (CSUCA), which was set up in September 1948 but whose permanent secretariat did not enter into operation until 1959. This body has prepared and promoted the implementation of a plan for the regional integration of higher education in Central America, which aims at co-ordinating the teaching of the universities

## LATIN AMERICA: SOME EDUCATIONAL TARGETS

<i>Country: (1) Year of establishment of first over-all planning agency<sup>a</sup> (2) of present system and (3) of educational planning services; (4) over-all development plan; (5) educational plan</i>	<i>Primary education targets</i>	<i>Secondary education targets</i>
<i>Argentina: (1) 1961; (2) January 1964; (3) 1960; (4) National Development Plan, 1965-69 .....</i>	To establish complete primary education for 95% of the school-age population in 1969, compared with 87% in 1962. To improve the educational yield	To increase the enrolment rate of the 13-18 age group from the present rate of 30% to 40%, and shift the emphasis towards technical, agricultural and industrial education
<i>Bolivia: (1) 1953; (2) July 1963; (3) 1963; (4) Economic and Social Development Plan, 1962-71. Two-year economic and social development plans, 1963-64 and 1965-66 .....</i>	To incorporate 100% of the urban children and 80% of the rural children, compared with 79% and 40%, respectively, in 1961, raising the average number of pupils per primary teacher from 26 to 35 in rural areas. To reorganize and divide the school system into pre-primary, basic, pre-vocational and specialization cycles, each of 2 years' duration .....	To increase the school attendance rate from 11% to 34% and the average number of pupils per teacher from 18 to 35. Reorganization: 2 years of education and vocational guidance, followed by 2 years of technical training (administration, commerce, agriculture, industry) or a 4-year course in academic subjects
<i>Brazil: (1) 1956; (2) July 1963; (3) 1962; (4) Government Economic Action Programme, 1964-67</i>	To increase enrolment in urban school by 330,000 and in rural schools by 3,300,000 between 1965 and 1970. To build 4,950 classroom in the towns and 49,650 in the country. To raise number of teachers by 54,600	To increase enrolment between 1965 and 1970 by 700,000 pupils in towns with over 100,000 inhabitants, by 380,000 in those with 5,000-100,000 inhabitants, and by 370,000 in those with under 5,000 inhabitants. It is estimated that 1 school is required for every 500 pupils enrolled in the major cities, 1 for every 300 in medium-sized towns and 1 for every 200 in small towns. Number of teachers: 1 for every 20 pupils enrolled
<i>Chile: (1) 1939; (2) November 1964; (3) 1962; (4) National Development Plan, 1961-70; (5) Educational Programme, 1965-70 .....</i>	Intensive programme: to increase enrolment by 174,000 pupils in 1965, train 5,000 additional teachers and build 6,000 classrooms. The initial aim is 4 years' universal schooling, to be extended to 6 years by 1969. Educational reform: an 8-year basic course, which would eventually be extended to 9 years	To increase the enrolment rate of the 15-19 age groups to 35% by 1970 and to 50% by 1976, compared with the present rate of 26%. Reform: a 3-year humanistic-scientific or technical course



## EMBODED IN THE NATIONAL PLANS

<i>University education targets</i>	<i>Targets in technical training outside the formal educational system</i>	<i>Literacy targets</i>	<i>Teachers training targets</i>
To increase the enrolment rate of the 19-24 age group to 11% as compared with the present rate of 10%. To improve the educational yield and encourage enrolment in courses of "strategic importance for development"		Intensive National Adult Literacy and Education Campaign	
		Two 5-year literacy campaigns (1962-66 and 1967-71), the first to cover 60,000 persons annually, and the second 80,000. To incorporate literacy courses in a minimum basic education programme	An Inter-American Co-operative Educational Service (SCIDE) programme for the improvement of teaching. Establishment of the Higher Institute of Rural Education
To raise the enrolment figures from 16,000 to 45,000 between 1965 and 1970, thus towns with over 50,000 inhabitants would have 1 student for every 100 inhabitants or 1 student enrolled for every 11 inhabitants in the 20-24 age group		To reduce the number of illiterates to 19 million or 26% of the total population, by 1970	
To double the number of graduates in the next 10 years	A national system of apprenticeship to cover 2,000 apprentices in 1966, 4,000 in 1967, and 6,000 in 1968	An intensive adult literacy programme to cover 100,000 adults through the establishment of 2,600 basic and community education centres	A national programme of refresher courses for primary school teachers (8,100 took part in 1965-66)

## LATIN AMERICA: SOME EDUCATIONAL TARGETS

<i>Country: (1) Year of establishment of first over-all planning agency* (2) of present system and (3) of educational planning services; (4) over-all development plan; (5) educational plan</i>	<i>Primary education targets</i>	<i>Secondary education targets</i>
<b>Colombia:</b> (1) 1951; (2) December 1963; (3) 1957; (4) Over-all Economic and Social Development Plan, 1962-70. Four-Year Public Investment Plan, 1961-64 .....	To build 22,000 new classrooms for 880,000 pupils and thereby reduce the quantitative deficit by 75%. To raise the enrolment figure to 2,440,000 in 1965	To expand the existing services, by raising investment from 8.54 million pesos in 1961 to 20 million in 1964 at 1960 prices
<b>Costa Rica:</b> (1) 1963; (2) January 1963; (3) 1964; (4) National Economic and Social Development Programme, 1965-69 .....	To incorporate 88% of the school-age population by 1968, this entails the construction of 3,150 classrooms for 82,500 children	To incorporate 22% of the 14-19 age group by 1968; this entails the construction of 611 classrooms for 42,600 students
<b>Cuba:</b> (1) 1960; (2) February 1961; (3) 1960; (4) National Economic Plan (annual); (5) Four-Year Educational Plan, 1962-65..	To increase enrolment to 92% in 1965. To prohibit children of primary school age from working. To subdivide the primary course into a 4-year and a 2-year cycle	To enable 80% of primary school leavers in 1965 to pursue their basic secondary studies. To subdivide the secondary course into two 3-year cycles
<b>Ecuador:</b> (1) 1954; (2) August 1961; (3) 1960; (4) Over-All Economic and Social Development Plan, 1964-73; (5) Ecuadorian Educational Plan, 1964-73 .....	To increase enrolment from 709,000 pupils in 1963-64 to 1,103,000 in 1973-74, which would raise the rate from 87 to 100%; 12,067 teachers and 207 supervisors will be needed for the purpose. To establish 6 years of compulsory schooling throughout the country, and subdivide the primary course into three 2-year cycles	To establish a 3-year basic cycle, followed by a more specialized cycle to prepare students for the professions, research or the arts. To increase enrolment from 94,300 in 1963-64 to 219,000 in 1973-74, and the number of teachers by 7,800. The total cost would amount to 553 million sucres for current expenditure and 146 million for investment
<b>El Salvador:</b> (1) 1962; (2) April 1962; (3) 1951; (4) Over-All Economic and Social Development Plan, 1965-69; (5) General Educational Plan, 1965-69 .....	To increase the enrolment rate to 90% by 1969, which will entail the construction and equipping of 4,400 classrooms and an increase in the number of teachers from 10,200 to 13,500	To increase enrolment in the basic cycle from 30,800 in 1964 to 55,400 in 1969, in the upper (bachillerato) cycle from 4,700 to 10,300, in teacher training from 7,500 to 12,800, and in vocational and technical training to a total of 2,000

## 2 (continued)

### EMBODIED IN THE NATIONAL PLANS

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<i>University education targets</i>	<i>Targets in technical training outside the formal educational system</i>	<i>Literacy targets</i>	<i>Teachers training targets</i>
To invest 18.6 million pesos (at 1960 prices) between 1961 and 1964	To expand the activities of the National Apprenticeship Service by means of investments totalling 18.3 million pesos over the four years, covered by the Plan		To enable 11,160 serving primary school teachers to obtain diplomas. To train school supervisors and headteachers
To invest 14.3 million colones in 1965-68			
To attain an enrolment figure of 80,000 by 1970	To establish extension courses for workers basic technical courses, and schools of agricultural technology	Literacy campaign. The illiteracy rate in 1961 3.9%	Higher Institute of Education
To increase enrolment from 5,100 in 1964-65 to 14,600 in 1973-74 and to train 29,000 professionals during this period. To establish a fellowships programme		Ten-year National Adult Literacy Campaign, consisting of three 9-month cycles: literacy, post-literacy, and adapted primary education	Regular or vacation training courses and seminars
To raise the enrolment capacity from 3,400 students in 1964 to 7,450 in 1969			To increase enrolment in the Higher Teacher Training School from 590 students in 1965 to 1,600 in 1969

## LATIN AMERICA: SOME EDUCATIONAL TARGETS

<i>Country: (1) Year of establishment of first over-all planning agency* (2) of present system and (3) of educational planning services; (4) over-all development plan; (5) educational plan</i>	Primary education targets	Secondary education targets
<i>Guatemala: (1) 1954; (2) November 1954; (3) 1963; (4) Over-All Economic and Social Development Plan, 1965-69 .....</i>	To incorporate 72% of the school-age population by 1969, compared with 47% in 1964; this means that enrolment will have to be increased by 293,000 pupils and 7,000 classrooms will have to be built	To incorporate 10.9% of the school-age population by 1969 (compared with 7.3% in 1964) through an increase of 22,000 in the enrolment figure and the construction of 430 classrooms
<i>Haiti: (1) 1962; (2) July 1963; (4) Emergency Plan (two-year investment plan) .....</i>	To build 490 new classrooms in the urban sector and 175 rural schools with 4 classrooms each	To build four new general secondary schools and enlarge or reconstruct four rural schools
<i>Honduras: (1) 1955; (2) February 1955; (3) 1965; (4) National Economic and Social Development Programme, 1965-69 .....</i>	To step up enrolment from 292,400 pupils in 1964 to 363,200 in 1969 and 470,300 in 1974 (the proportion not attending school will drop from 48.7% to 42.5% and 34.1%). 2,900 and 3,600 new classrooms, and 2,600 and 5,500 teachers, respectively, will be required	To increase enrolment from 19,600 pupils in 1965 to 25,400 in 1969 and 37,200 in 1974 (the proportion not attending school will drop from 93.3% to 92.8% and 90.9%). The requirements would be 650 and 1,050 classrooms, and 6,500 and 10,500 teachers in the two years concerned
<i>Mexico: (1) 1958; (2) March 1962; (3) 1959; (4) Short-term plan, 1962-64; (5) Plan for the expansion and improvement of primary education in Mexico (1960-70); Jalisco Plan (1964) .....</i>	<i>Eleven-year plan:</i> to ensure free enrolment for all children. The increase envisaged was 3,300,000. The 1964 enrolment figure was 6,600,000 or 300,000 more than the target envisaged for 1967 under this Plan. <i>Jalisco Plan:</i> to meet the actual demand in 1970 (629,000 enrolments out of a school-age population of 830,000)	
<i>Nicaragua: (1) 1952; (2) February 1952; (3) 1959; (4) Over-All Economic and Social Development Plan, 1965-69; (5) Improvement of the educational situation in Nicaragua; General Plan, 1965-75</i>	To increase enrolment by 120,000 between 1965 and 1969 or from 55% to 72%. To build 2,600 classrooms	To increase the enrolment figure by 5,000 between 1965 and 1969; thus covering 10.3% of the school-age population, compared with 8.9% in 1965. To build 125 new classrooms
<i>Panama: (1) 1959; (2) June 1959; (3) 1960; (4) Economic and Social Development Programme, 1963-70 .....</i>	To build 3,400 new classrooms between 1963 and 1970 at a cost of 17 million balboas	To build 350 new classrooms between 1963 and 1970 at a cost of 2.1 million balboas

## 2 (continued)

### EMBODIED IN THE NATIONAL PLANS

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<i>University education targets</i>	<i>Targets in technical training outside the formal educational system</i>	<i>Literacy targets</i>	<i>Teachers training targets</i>
To raise the initial enrolment figure of 7,100 in 1964 to 9,800 in 1968 and 13,400 in 1972			
	National Apprenticeship Programme: industrial and agricultural training centres	Literacy campaign, launched in 1944 to cover 6,000,000 persons; illiteracy was reduced from 53% of the population aged 6 years and over in 1944 to 36% in 1960 and 28% in 1964	Federal Institute for Training Primary School Teachers. 33,000 teachers without diplomas were trained between 1944 and 1964
To increase enrolment by 4,300 between 1965 and 1969 and raise the number of graduates to 5,000 by 1974			
To enlarge the buildings of the University of Panama at a cost of 4 million balboas	To carry out a training programme for workers (5 million balboas). To establish 28 new agri-		

## LATIN AMERICA: SOME EDUCATIONAL TARGETS

<i>Country: (1) Year of establishment of first over-all planning agency* (2) of present system and (3) of educational planning services; (4) over-all development plan; (5) educational plan</i>	<i>Primary education targets</i>	<i>Secondary education targets</i>
<i>Paraguay: (1) 1948; (2) September 1962; (3) 1958; (4) Economic and Social Development Plan, 1965-66</i>	To increase enrolment from 349,000 in 1964 to 381,500 in 1966; this would step up the enrolment rate to 86% in 1965 and to 87.5% in 1966. To raise the school retention rate to 20% in 1966 and 40% in 1970. To supply free meals and textbooks	To increase enrolment from 33,000 pupils in 1964 to 34,000 in 1966. To provide technical training for a total of 450 students in 1965 and 475 in 1966
<i>Peru: (1) 1962; (2) October 1962; (3) 1958; (4) Public Investment Programme, 1964-65 and 1966 ...</i>	To attain a 100% enrolment by 1969, by increasing the number of pupils from 1.8 million in 1964 to 2.3 million in 1969. To increase the number of classrooms from 41,700 in 1964 to 54,000 in 1970	To attain a school enrolment rate of 40% (70% in general secondary schools and 30% in technical schools) thus increasing the number of pupils receiving general secondary education from 235,000 in 1964 to 377,000 in 1969, those receiving technical training from 68,000 to 162,000; and those trained as teachers from 9,800 to 19,000. To increase the number of classrooms used for general secondary education from 3,400 in 1964 to 6,100 in 1970, and those used for technical training from 1,900 to 4,700
<i>Uruguay: (1) 1960; (2) January 1963; (3) 1961; (4) Economic and Social Development Plan, 1965-74; (5) Educational Development Plan, 1965-74 .....</i>	To attain a school enrolment rate of 90.2% by 1974, compared with 87% in 1965; 5,500 teachers will be needed	To incorporate 93.2% of the pupils completing primary school and keep 80% of them up to third grade; 4,070 teachers will be needed
<i>Venezuela: (1) 1958; (2) December 1958; (3) 1959; (4) National Plan, 1965-68 .....</i>	To increase enrolment in pre-primary and primary school from 1.5 million pupils in 1965-66 to 1.8 million in 1968-69. To reduce absenteeism of 7-year-old children in first grade from 25% to 5%, and of all children primary school age from 21% to 10%	To raise the enrolment figure from 292,000 in 1965-66 to 388,000 in 1968-69; to increase the teaching staff from 15,700 to 20,300

\* Relates to the original agency that served as a basis for the present system.

## 2 (concluded)

### EMBODIED IN THE NATIONAL PLANS

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<i>University education targets</i>	<i>Targets in technical training outside the formal educational system</i>	<i>Literacy targets</i>	<i>Teachers training targets</i>
	cultural vocational schools and improve those already in existence (565,000 balboas)		
To attain enrolment figures of 5,560 in 1965 and 5,665 in 1966; to raise the number of graduates from 371 in 1964 to 433 in 1966			
To step up enrolment from 53,400 students in 1964 to 88,000 in 1969. To increase the number of classrooms from 1,000 in 1964 to 1,900 in 1970			
To increase enrolment in the University from 2,000 students in 1965 to 3,200 in 1974	To increase enrolment in the Universidad del Trabajo from 26,500 students in 1965 to 33,500 in 1974		
To increase student enrolment from 46,900 to 69,700, and the number of teachers from 4,900 to 6,700 between 1965-66 and 1968-69	To step up attendance at courses held by the National Institute of Educational Co-operation from 62,200 employed and 16,200 unemployed workers in 1965 to 84,400 and 19,100 respectively, in 1968. To reach a total of 367,000 participants in the four-year period concerned	To reduce illiteracy from 23.6% of the population of over 14 years of age in 1963 to 16% in 1965 and 4% in 1968	

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in the five countries. To this end, regional research institutes have been set up, certain departments or faculties have been designated as regional schools or centres, and faculty and teaching staff associations have been formed.

*Training outside the formal system.* In general, the plans make no reference to this type of training, i.e., to professional and vocational training given in official or private institutions, plants, etc. The Argentine plan makes a brief reference to the fact that the effects of the reform of the formal educational system are meant to be long-term, and that some system of training is

consequently required to bridge the gap between labour supply and demand over the short and medium term. The Venezuelan plan deals more extensively with the question of manpower planning, and refers specifically to the Venezuelan Institute of Educational Co-operation (INCE) which provides training and advanced and specialized courses for workers and apprentices. The enrolment for 1966 was expected to be 40,000, to which another 30,000 should be added from the special crash training programme, and the funds needed were calculated on that basis.

### III. MANPOWER REQUIREMENTS IN LATIN AMERICAN DEVELOPMENT

A study of what has been achieved so far in educational planning in Latin America clearly shows the lack of effective integration with general development planning. In fact, the points of contact between the two do not go much beyond a formal complementation, the common use of certain demographic projections, and the earmarking of funds for educational purposes—all too often estimated on the basis of very general criteria—within the framework of the over-all allocation of resources.

This lack of integration is attributable not only to the educational planning process itself, but also to the shortcomings of the general plans as regards the very aspects that should give greater scope and guidance to the education programme. In particular, the planning of human resources has not been approached from the standpoint of general planning. Although many studies have been carried out in this field, most of them represent isolated efforts that do not add up to a general view of economic and social development. This is apparent from the failure to translate general and sectoral economic growth targets into terms of manpower employment, productivity and skills, and from the lack of clearly defined policies on employment and the introduction of new techniques. As a result, the essential basis for planning educational and training requirements consistent with development aims is missing.

These shortcomings are, in their turn, partly due to the lack of statistical information, of standard criteria for the organization and collation of data in line with the specific aims of educational planning, and of a methodological approach adapted to Latin American conditions. As a result, most of the Latin American countries do not have a reliable picture of the oc-

cupational structure of the active population, far less of the educational pattern of either the active population or the population as a whole.

In these circumstances it is difficult for educational plans to do more than establish specific aims for the quantitative expansion of the existing system, devise programmes to make the system more rational and efficient, and estimate the funds necessary for those purposes. Any qualitative or policy changes that are made are the result of the discovery of weaknesses or problems that show up in practice, rather than an anticipation of those likely to arise in the future. Thus they lack the quality of far-sightedness, which is one of the main attributes of planning, and which is especially important when, as in education, a relatively long period of "maturation" is involved.

Hence certain basic propositions accepted as guiding principles for future educational activities are posed in such general terms that it is difficult to put them into practice. For example, although the need to expand secondary education is recognized, it still has to be made clear what proportion of those who complete the cycle should go on to the university, and for what proportion other openings should be available that would ensure their taking up careers useful to the community. Similarly, although it is accepted that there is an urgent need to provide more technical training, there is no clear definition of the part to be played by secondary education and the intermediate levels of university training, nor is there any precise indication of the numbers involved or of their distribution by type of specialization. Again, although the need to increase the proportion of skilled workers has been established, no estimation has been made of the approximate numbers involved nor



any clear definition of the limits of responsibility and necessary degree of co-ordination between training offered within and without the formal school system.

Orders of magnitude of this kind should, however, constitute the basic frame of reference for educational planning that would be in line not only with the general aims of education itself, but also with development requirements in terms of human resources.

The purpose of the following paragraphs is to present such a frame of reference for Latin America as a whole. In view of the lack of systematic data on most of the subjects referred to, the figures used are, of course, only estimates, and in some cases frankly hypothetical in character. They are included mainly for the purposes of illustration, and to provide a basis for certain additional observations on the present situation and the outlook for the next fifteen years.

## 1. THE PRESENT SITUATION

### (a) *Population, employment and productivity*

The total population of the twenty Latin American countries in 1965 can be estimated as about 236.6 million. Nearly 39 million (16.5 per cent of the total) were less than 4 years old, and 61.1 million (almost 26 per cent) were children of school age, i.e., between 5 and 14 years old. In other words, the under-15 population represented slightly over 42 per cent of the total population.

The economically active population in 1965 amounted to 77.9 million, or 33 per cent of the total. Of the male population over 14 years of age, 90 per cent belonged to the labour force, while for women the corresponding proportion was less than 20 per cent.

It should also be noted that some 5 per cent of the total active population consisted of children aged 10-14 representing no less than 15 per cent of all children of this age group.

At present the annual growth rate of the economically active population is close to 2.9 per cent, which in absolute terms represents an increase of 2.2 million every year. This rate is practically the same as that for the population as a whole, and appreciably higher than it was in recent years, when the 0-14 age group was expanding more rapidly than any other in most of the Latin American countries. A slight decline in the fertility rate can be expected in the future, and hence some reduction in the proportion represented by the under-15 group, which in turn will lead to a somewhat higher growth

rate for the active population than for the population as a whole. The annual growth rate may well be over 2.9 per cent by 1980, which would mean that the population of active age would double every twenty-three or twenty-four years.

In order to assess what needs to be done in the training of human resources, separate consideration should be given to the factors determining the net increase, namely, the number entering the active population, withdrawals through retirement, and deaths. For 1960 the entries can be estimated as 2.7 million, and they will probably amount to about 5.1 million by 1980; annual retirements from the active population, through reaching pensionable age or through other causes, are expected to increase from nearly 410,000 to 715,000 during the same period, and annual deaths in the active population to increase from 630,000 to 810,000, which will represent a sharp decrease in the death rate.

It should be noted that there are appreciable differences in this respect between the male and female population. The age composition of the entries into the active population is such that 56-57 per cent of the males in this group are under 15, about 35 per cent are aged 15-19, and only 10 per cent are 20 or over. The age structure is younger for women, since the corresponding percentages for the three age-groups are 70-72, 26-27, and only 2-4 respectively. In both cases there is a notably high proportion of very young people in the new entries into the labour force, which in itself makes it unlikely that the new entrants can have received much education or training, and will achieve satisfactory productivity levels.

The differences are even sharper in the case of retirements. In the male population, withdrawals begin to be substantial at the age of 50, since only 10-11 per cent of withdrawals are of men under 50, whereas 40 per cent are of men aged 50-65. For the female population, the bulk of withdrawals are of women under 35, amounting to about 66 per cent of total female withdrawals.

Such are the demographic indicators that are particularly relevant, in view of their obvious importance in educational and manpower planning. From another standpoint, these indicators need to be supplemented by others relating to the sectoral structure of employment and the average productivity of the labour force in each sector.

The main data available for 1965 in this respect are given in table 3. They show that the domestic product for Latin America as a whole

Table 3

LATIN AMERICA: ESTIMATES OF THE PRODUCT AND EMPLOYMENT, 1965

<i>Sector of activity</i>	<i>Domestic product (millions of dollars)</i>	<i>Labour force (thousands of persons)</i>	<i>Product per person employed (dollars per person)</i>
Agriculture and fishing .....	19,348	35,499	545
Mining and quarrying .....	4,279	743	5,760
Manufacturing .....	20,031	12,048	1,663
Construction .....	2,869	3,706	777
Basic services .....	6,731	4,185	1,608
Other services .....	35,389	20,705	1,709
TOTAL	88,647	76,886	1,153

for 1965 was about 89,000 million dollars, which in relation to a total labour force of about 77 million means a product per worker of about 1,150 dollars a year.

The differences in sectoral productivity revealed by these estimates are particularly significant, despite the high level of aggregation involved in the classification adopted. Each of these sectoral groups should really be subdivided into more homogeneous units, to reveal the diversity of technological levels involved. This consideration is particularly important in relation to manufacturing, since in existing conditions in Latin America manufacturing includes both artisan activities—which account for almost half the total employment in the sector—and factory industry, with a productivity ratio between the two of 1:8. Moreover, within the factory component there are great differences in the levels of up to dateness, efficiency, and absorption of modern techniques. The “other services” sector likewise represents a group of extremely heterogeneous activities, ranging from domestic service to services involving a high degree of specialization and skill. The agricultural sector in Latin America, too, covers a wide range of situations, and includes a relatively small number (at least in terms of employment) of modern farms, generally specializing in certain export products, and a very large number of subsistence farmers using primitive methods of cultivation.

Hence it is not enough to compare present productivity levels with the occupational structure at the level of sectors defined as broadly as in table 3. Furthermore, any forecast of future changes that will have to be made in the Latin American economy would have to cover both the changes in the relationship between

the main sectors, and the consequent structural changes within each sector, a point that will be dealt with more extensively later in this paper.

(b) *The occupational structure of the labour force*

Although the proviso about the limitations imposed by highly aggregative sectoral classification must always be borne in mind, it is useful, at least for the purposes of illustration, to attempt to establish a link between the sectoral distribution of employment and the occupational structure of the labour force.

In this connexion, table 4 gives estimates for Latin America as a whole for 1965, and the derived coefficients are given in tables 5 and 6.

In general these figures confirm the qualitative evaluation—on which there seems to be general agreement—of the relatively low levels of skill of the labour force in Latin America, and supplement it by providing an illustration of the size of the problem in quantitative terms. They also provide additional useful detail on the relationship between the occupational structure of the labour force and the sectoral distribution of employment. It is striking, for example, that of the 600,000 persons described as “professionals”, who represent less than 1 per cent of the total labour force, three quarters are employed in the “other services” sector. Agriculture employs less than 3 per cent of this professional group, although it absorbs 46 per cent of the total labour force, and this group accounts for only 0.05 per cent of the total number employed in agriculture in Latin America, which in absolute terms is less than 20,000. A similar number of professionals are employed in the mining and quarrying industries, whose share in total employment is much lower; because of

**Table 4**  
**LATIN AMERICA: ESTIMATED OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE, 1965**  
*(Thousands of persons)*

Sector of activity	Total	Professional and technical personnel			Administrative and managerial staff	Employees and salesmen	Operatives and artisan workers				Services personnel
		Total	Professional	Technical			Total	Skilled	Semi-skilled	Unskilled	
Agriculture and fishing .....	35,499	44	18	26	63	133	34,884	1,744	5,232	27,908	375
Mining and quarrying .....	743	30	18	12	12	52	625	62	135	428	24
Manufacturing .....	12,048	194	49	145	309	948	10,464	2,093	5,232	3,139	133
Construction .....	3,706	90	27	63	57	70	3,450	345	1,725	1,380	39
Basic services .....	4,185	126	32	94	105	629	3,157	316	1,578	1,263	168
Other services .....	20,705	2,308	460	1,848	1,773	6,749	1,262	126	252	884	8,613
<b>TOTAL</b>	<b>76,886</b>	<b>2,792</b>	<b>604</b>	<b>2,188</b>	<b>2,319</b>	<b>8,581</b>	<b>53,842</b>	<b>4,686</b>	<b>14,154</b>	<b>35,002</b>	<b>9,352</b>

**Table 5**  
**LATIN AMERICA: ESTIMATED OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE, 1965**  
*(Percentage composition by sector of activity)*

Sector of activity	Total	Professional and technical personnel			Administrative and managerial staff	Employees and salesmen	Operatives and artisan workers				Services personnel
		Total	Professional	Technical			Total	Skilled	Semi-skilled	Unskilled	
Agriculture and fishing .....	46.2	1.6	3.0	1.2	2.7	1.6	64.8	37.2	37.0	79.7	4.0
Mining and quarrying .....	1.0	1.1	3.0	0.5	0.5	0.6	1.2	1.3	1.0	1.2	0.3
Manufacturing .....	15.7	6.9	8.1	6.6	13.3	11.0	19.4	44.7	37.0	9.0	1.4
Construction .....	4.8	3.2	4.5	2.9	2.5	0.8	6.4	7.4	12.1	4.0	0.4
Basic services .....	5.4	4.5	5.3	4.3	4.5	7.3	5.9	6.7	11.1	3.6	1.8
Other services .....	26.9	82.7	76.1	84.5	76.5	78.7	2.3	2.7	1.8	2.5	92.1
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 6**  
**LATIN AMERICA: ESTIMATED OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE, 1965**  
*(Percentage composition by occupational categories)*

Sector of activity	Total	Professional and technical personnel			Admini- strative and mana- gerial staff	Emple- ees and sales- men	Operatives and artisan workers				Ser- vices per- sonnel
		Total	Profes- sional	Tech- nical			Total	Skilled	Semi- skilled	Un- skilled	
Agriculture and fishing .....	100.0	0.1	0.05	0.07	0.2	0.4	98.2	4.9	14.7	78.6	1.1
Mining and quarrying .....	100.0	4.0	2.4	1.6	1.6	7.1	84.1	8.3	18.2	57.6	3.2
Manufacturing .....	100.0	1.6	0.4	1.2	2.6	7.9	86.9	17.4	43.4	26.1	1.2
Construction .....	100.0	2.4	0.7	1.7	1.5	1.9	93.1	9.3	46.5	37.3	1.1
Basic services .....	100.0	3.0	0.8	2.2	2.5	15.0	75.5	7.6	37.7	30.2	4.0
Other services .....	100.0	11.1	2.2	8.9	8.6	32.6	6.1	0.6	1.2	4.3	41.6
TOTAL	100.0	3.6	0.8	2.8	3.0	11.2	70.0	6.1	18.4	45.5	12.2

the high technical level of this sector the proportion of professionals employed is 2.4 per cent of the total, the highest in any of the sectoral groupings used, which means that mining and quarrying employ forty times more professionals per thousand of the total sectoral labour force than agriculture. Manufacturing is in the middle of the scale in this respect, but as a result of the relative preponderance of the artisan component, the figures for manufacturing are much closer to those for agriculture, since it absorbs slightly over 8 per cent of all professionals, who account for only 0.4 per cent of the total labour force in manufacturing. This last figure is slightly higher for construction (0.7 per cent) and basic services (0.8 per cent), and much higher for "other services" (2.2 per cent), which includes independent professionals such as secondary school teachers, public service doctors and other groups.

Of the 2.2 million included under the heading of "technical personnel", at least a third are primary school teachers, and about another third are accountants and bookkeepers. Hence the ratio between professionals and technicians, which is particularly significant for the purpose of evaluating the effectiveness of education and training at the higher and intermediate levels, appears highly distorted on the basis of the over-all figures. However, if the two above-mentioned groups are excluded, and a stricter definition of technicians adopted, it seems likely that the figure for technical personnel would not be much higher than that for the professional group, perhaps even lower in some sectors, notably agriculture.

This type of ratio will be examined in greater detail in later sections of the present paper, as a basis for formulating a number of hypothetical projections on future requirements. It is sufficient here to indicate another relevant feature revealed by these estimates, regarding the levels of skill of those included in the category of "operatives and artisan workers", who altogether represent 70 per cent of the total labour force. Of the 54 million in this group, 35 million are unskilled, while 14 million are regarded as semi-skilled, and 4.7 million (less than 10 per cent) as skilled operatives or artisans. Once again the lowest proportion of skilled workers is found in agriculture (5 per cent), but the proportions are not very much higher in the other sectors (10 per cent in mining and quarrying, construction, basic services and other services, and 20 per cent in manufacturing).

(c) *The educational profile of the labour force*

Despite these marked shortcomings, the above estimates seem to show that about 7 per cent of the labour force consists of persons carrying out administrative or technical and professional functions, indicating a relatively satisfactory occupational structure at least in this respect. However, this conclusion is subject to reservations as to the real level of training of these professional groups, and more information is needed on the educational profile of the labour force for the main occupational categories.

On this point the lack of a systematic flow of data on present conditions in Latin America is even more striking, although they should constitute the essential basis for effective educational planning. Thus, it is once again useful to turn for illustrative purposes to a quantitative picture which furnishes at least some orders of magnitude that appear reasonable in the light of the incomplete and scanty data available. Table 7 presents figures based on a hypothesis of the educational profile of the labour force in 1965, and in tables 8 and 9 these figures are translated into a picture of the percentage composition by occupational categories and levels of training.

An approximate indication of the probable degree of validity of these hypotheses can be obtained by comparison with estimates worked out independently, in relation to the distribution by level of education of the total population aged 15 and over, both active and inactive. The latter calculations are based on the 1950 censuses for sixteen countries of the region and on the 1960 censuses for six countries,<sup>6</sup> and give the number of grades of schooling completed. In brief, these calculations show that persons with over twelve years of schooling represented only 0.9 per cent of the total in 1950, and 1.6 per cent in 1960 (although these figures are not strictly comparable, since they do not refer to the same countries); those with seven to twelve years of schooling constituted 6 per cent of the total in 1950 and 9.3 per cent in 1960 (in this year a further subdivision was made showing that those with seven to nine years' schooling represented 5.9 per cent of the total and those with ten to twelve years represented 3.4 per cent); those with one to

<sup>6</sup> The sixteen countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Nicaragua, Panama and Paraguay, and the six countries are: Chile, Ecuador, Honduras, Mexico, Nicaragua and Panama.

Table 7

## LATIN AMERICA: A HYPOTHESIS OF THE EDUCATIONAL PROFILE OF THE LABOUR FORCE, 1965

(Thousands of persons)

	Total	Professional and technical personnel	Administrative and managerial staff	Employees and salesmen	Operatives and artisan workers	Services personnel
University training (complete and incomplete) .....	1,060	660	230	170	—	—
Secondary education .....	8,730	1,500	1,050	3,010	2,700	470
General secondary .....	6,240	640	930	2,580	1,620	470
Complete .....	1,490	280	350	860	—	—
Incomplete .....	4,750	360	580	1,720	1,620	470
Technical .....	1,700	140	120	430	1,080	—
Teacher training .....	720	720	—	—	—	—
Primary education .....	67,096	632	1,039	5,401	51,142	8,882
Three years and over .....	29,700	370	580	3,000	21,540	4,210
Less than three years or none .....	37,396	262	459	2,401	29,602	4,672
TOTAL	76,886	2,792	2,319	8,581	53,842	9,352

Table 8

## LATIN AMERICA: A HYPOTHESIS OF THE EDUCATIONAL PROFILE OF THE LABOUR FORCE, 1965

(Percentage composition by occupational categories)

	Total	Professional and technical personnel	Administrative and managerial staff	Employees and salesmen	Operatives and artisan workers	Services personnel
University training (complete and incomplete) .....	100.0	62.3	21.7	16.0	—	—
Secondary education .....	100.0	17.2	12.0	34.5	30.9	5.4
General secondary .....	100.0	10.3	14.9	41.3	26.0	7.5
Complete .....	100.0	18.8	23.5	57.7	—	—
Incomplete .....	100.0	7.6	12.2	36.2	34.1	9.9
Technical .....	100.0	7.9	6.8	24.3	61.0	—
Teacher training .....	100.0	100.0	—	—	—	—
Primary education .....	100.0	0.9	1.5	8.1	76.2	13.3
Three years and over .....	100.0	1.2	2.0	10.1	72.5	14.2
Less than three years or none .....	100.0	0.7	1.2	6.4	79.2	12.5
TOTAL	100.0	3.6	3.0	11.2	70.0	12.2

Table 9

## LATIN AMERICA: A HYPOTHESIS OF THE EDUCATIONAL PROFILE OF THE LABOUR FORCE, 1965

*(Percentage composition by level of education)*

	Total	Profes- sional and tech- nical per- sonnel	Adminis- trative and mana- gerial staff	Employees and salesmen	Opera- tives and artisan workers	Services personnel
University training (complete and in- complete) .....	1.4	23.6	9.9	2.0	—	—
Secondary education .....	11.4	53.7	45.3	35.1	5.0	5.0
General secondary .....	8.1	22.9	40.1	30.1	3.0	5.0
Complete .....	1.9	10.0	15.1	10.0	—	—
Incomplete .....	6.2	12.9	25.0	20.1	3.0	5.0
Technical .....	2.4	5.0	5.2	5.0	2.0	—
Teacher training .....	0.9	25.8	—	—	—	—
Primary education .....	87.2	22.7	44.8	62.9	95.0	95.0
Three years and over .....	38.6	13.3	25.0	34.9	40.0	45.0
Less than three years or none .....	48.6	9.4	19.8	28.0	55.0	50.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

six years of schooling represented 43.8 per cent of the total in 1950 and 52.5 per cent in 1960, again subdivided in 1960 into those with one to three years and those with four to six, the two groups being practically equal; lastly, those who had completed less than a year of schooling represented 49.3 per cent of the total in 1950 and 36.6 per cent in 1960.

As these are merely rough estimates relating to varying numbers of countries at different periods, they cannot be expected to coincide with the hypotheses of the educational profile given above. However, this does not rob a general comparison of all its value. For example, the difference in the estimates of the proportion of persons with complete or incomplete university training—1.4 per cent for the 1965 labour force, and 1.6 per cent of the total population aged 15 and over in 1960—may be partly a reflection of the significant number of persons with professional qualifications who do not form part of the labour force; this is probably accounted for by the smaller participation of women and their earlier withdrawal. On the other hand the first hypothesis assumes a rather higher proportion (11.4 per cent) of employed persons with secondary education than is the case with the total population aged 15 and over (9.3 per cent). The greatest difference is in the group with four to six years of schooling, where probably the proportion assumed for

the labour force (48.6 per cent) is rather high, although it must be remembered that the participation rates of this group in actual employment are also likely to be too high in view of the lower educational levels of the female population.

In brief, the hypothesis presented is to some extent confirmed by these other estimates, which, incidentally, once again demonstrate the large part played by estimates in the quantitative data available and the urgent need to provide an organized flow of data of this type.

Even with the reservations alluded to, this hypothesis suggests a series of conclusions that underline the defects in the occupational structure of the labour force from the standpoint of the actual training that has been received by the members of the various categories. A striking example is the paradox of the high proportion of managers and administrators (about 15 per cent of the total) who have had no formal professional training, and the even higher proportion (about 45 per cent) who have not even completed their secondary education. Of the group performing strictly professional functions, it appears that about 23 per cent have had more than a primary education, and nearly 10 per cent less than three years' schooling.

However far-fetched these findings may seem, they unquestionably point to the need for a critical analysis of the occupational structure that

appears to exist in Latin America, according to the piecemeal data available, and also for a standardization of concepts and definitions that would permit more accurate assessment. As to the substance of the problem, an attempt has been made to overcome the inadequacy of the school system with the aid of practical experience and widely varying informal systems of training. In other words, the educational profile of the labour force is not as unsatisfactory as the school attendance figures appear to indicate, although the real situation is no more accurately reflected by the figures for the occupational structure revealed by the employment statistics.

Another important point brought out by the tables is the high proportion of the labour force with less than three years' schooling, not only among operatives and artisans and in the personal services sector, but also among employees and sales personnel.

It is useful to supplement this general impression of the educational profile for the main occupational categories by a more detailed study of the situation as it appears to affect skilled staff with complete or incomplete university training, and skilled staff with intermediate vocational training. In 1965 these two categories together comprised about 2.5 million persons, which is slightly over 3 per cent of the total labour force, or only 2.3 per cent if primary school teachers are excluded.

Additional calculations based on incomplete data for Argentina, Chile, Colombia, Uruguay and the Central American countries indicate that, of the slightly over one million professionals at the university level estimated in 1965, about 700,000 had received some type of degree, whereas the remaining third either failed to graduate, or graduated from short university courses. Of the graduates, it is likely that about a quarter (180,000) were scientists and engineers; a somewhat lower proportion (about 170,000) belonged to the medical and allied professions; about 90,000 were professionals in the economic sciences (including university-level accountants) and social sciences; about 120,000 studied law; 130,000, the humanities and education; and 20,000, fine arts and other subjects. This structure has been modified to some extent by recent trends; while the total number of graduates rose substantially between 1957 and 1964, there has been a much slower increase in the training of professionals in law, and a proportionally greater one in the number studying agriculture and related subjects, architecture, the natural sciences, the social sciences and educa-

tion; the number graduating from the faculties of engineering and medicine have remained about the same.

The analysis of these trends and of the structure of the total professional strength is unquestionably essential for the purpose of educational planning, and at the same time useful in evaluating the direction of the changes needed in the light of certain significant ratios.

For example, the present strength of engineers and scientists represents a ratio of only 750 to one million inhabitants (0.75 per mil), whereas in some countries much the same proportion graduates *every year*, and in the United States and the Soviet Union the annual graduation figure represents twice this ratio.

Furthermore, of the 180,000 included in the category of engineers and scientists, probably only about 90,000 are engineers proper, and perhaps more than half that number is engaged in construction activities. This latter group, added to the total number of architects (slightly over 20,000), determines a much higher ratio of senior professionals to other workers in construction than in industry, mining, basic services and other sectors. In agriculture, for example, the total of about 24,000 agricultural engineers gives a ratio of 0.7 for every 1,000 persons employed in the sector, possibly only 1 agricultural engineer for every 4,000 hectares under cultivation or every 19,000 hectares used for agriculture, without taking into account the high proportion of agricultural engineers who do not in fact work on the land. Lastly, the estimated 40,000-50,000 professionals with training in the natural sciences represent a ratio of 0.19 per thousand inhabitants and, moreover, an appreciable proportion of these are employed as science teachers in secondary schools and universities.

In addition to the category comprising engineers and scientists, there is another group of high-level professionals with training in various fields: about 170,000 in the medical sciences; (140,000 doctors and 30,000 dentists); some 210,000 in the economic and social sciences and in law (90,000 economists and sociologists and 120,000 lawyers); 130,000 in the humanities and education; and 20,000 in fine arts and other fields.

The structure of the intermediate-level group is harder to estimate than that of the university-trained group. Probably about 20 per cent (about 600,000) are technicians in agricultural and other specific production processes; not more than 1 to 2 per cent (some 30,000) are para-



medical technicians and graduate nurses; over 40 per cent (about 900,000) are commercial technicians and office workers; 35 per cent (700,000) graduated from teacher training schools; and 20,000 are technicians in various other specialties. Needless to say, this classification depends on how strictly the level of training is defined; thus, the above figures would be considerably higher if they included persons with a lower standard of training, or practitioners who might be attending courses at specific vocational schools but, in actual fact, are below the intermediate level.

Without losing sight of these reservations, it is interesting to examine the ratios between those trained at the university and intermediate levels, as deduced from the above estimates. These ratios are particularly significant in the technological and scientific fields, although from information currently available the figures appear to fluctuate widely in line with the criteria adopted in defining the intermediate level and in estimating the number of persons in that category. For example, on the basis of two alternative definitions—a very broad one that would include incomplete training and a narrow one restricted to technicians with advanced secondary training—the ratios of engineers and scientists to technicians with intermediate training would be 1:2 in the first case and 3.5:1 in the second. In sciences alone, where the number of laboratory personnel graduating from technical schools is small, the ratios range from 5:1 to 10:1.

However wide those margins may be, it seems reasonable to conclude from the above ratios that intermediate technical personnel are in even shorter supply than university-trained professionals, and, besides its direct effects, this situation inevitably results in a certain degree of under-utilization of the latter's capacity since they are required to perform functions that could be taken care of by more junior technicians.

The same observation is applicable to the medical professions. In addition to a ratio of only one medical practitioner for an average of 1,700 inhabitants, there is an even greater shortage of well-trained intermediate personnel. The ratio of doctors to graduate nurses and paramedical technicians is probably no more than 1:0.25, excluding nurses with practical training only—which is sometimes supplemented by training programmes outside the formal education system—who in fact constitute a semi-technical category or rather belong to the services category in the public health sector.

There are, of course, a great many more technicians—both in absolute terms and in proportion to the number of professionals with university training—in the economic and social sciences sector, which at these intermediate levels covers various types of economic techniques applicable to commerce, office work, accounting and financial services. This is partly attributable to the extensive complex of commercial schools and specialized courses. It is estimated that up to 1965 commercial schools and vocational training courses at the appropriate level in Latin America have helped to train about 1.5 million accountants, secretaries and typists, librarians and registry clerks. Probably not more than 60 per cent of this number continues to form part of the economically active population, in view of the early retirement of a high proportion of female workers. Thus, the ratio between university-trained professionals and intermediate-level technicians probably ranges between 1:5 and 1:10, according to the stringency of the criteria for classifying the latter.

As regards professionals in the field of law, there is no question of an intermediate level, at any rate for the present. But in the humanities and education the two concepts have tended to merge. In addition to the estimated 130,000 graduates, at least a further 90,000 who failed to graduate but work in educational or other services would have to be considered. The 700,000 primary teachers who attended teacher training schools should also be taken into account in this sector, even though their classification as intermediate personnel is not quite in keeping with the sense in which it is applied to other professions.

#### (d) *Present supply of the educational system*

The hypothetical characteristics of the educational profile of the economically active population as outlined above derive from the lines along which the educational system has evolved through the years. Since one of the purposes in formulating these hypotheses is to anticipate the skilled manpower needs that are likely to emerge in the next fifteen years, it would be useful to supplement them by the systematization of data on the present capacity of the system, in order to gain some idea of the scale on which the various sectors and levels would have to be expanded. To that end, the formal school system and the training facilities provided outside the formal school system will be considered separately. Some illustrative data will be added regarding the migration of skilled personnel, even though the numbers involved are not very large.

(i) *The formal school system*

*Primary education.* In 1965 an estimated total of 2 million pupils completed their primary education in Latin America. The last few years have marked a cumulative annual rate of increase of about 8 per cent in the number of school-leavers as the result of a relatively rapid increase in enrolments (about 5 per cent annually) and an appreciable rise in the primary system retention rate, although it is still very low for the region as a whole. Compared with a little over 2 million school-leavers, total enrolment in all primary education courses numbers some 33 million persons.

*Secondary education.* This level includes general secondary education, professional and vocational training (technical), and teacher training. The lack of reliable information on the number of persons completing their studies in each sector is evidence of the delay in systematizing the provision of statistics on these questions.

It is roughly estimated that in 1965 nearly 370,000 pupils completed the general secondary course in the whole of Latin America, and that a total of some 3.3 million were enrolled in the various secondary grades. About half of these school-leavers entered university, while the other half were immediately incorporated in the labour force or joined the ranks of the economically inactive population not covered by the school system. It should also be noted that the number of persons finishing the general secondary course doubled between 1957 and 1965, and this represents a considerable annual rate of growth.

The total number of students enrolled in vocational training schools is probably in the neighbourhood of 1.3 million, and the number completing their studies, about 140,000 annually. Approximately 100,000 of these have attended commercial courses, some 36,000 have received technical training for industrial occupations and barely 4,000 have studied agriculture.

As regards teacher training schools, it is estimated that a total of 560,000 students were enrolled and about 50,000 graduated in 1965. As in other sectors of secondary education, teacher training schools nearly doubled their enrolment figures from 1957 to 1965; but even so, about 40 per cent of the primary teachers have no diplomas.

To sum up, at the present time approximately 560,000 persons a year complete their secondary education, two thirds in general secondary schools, one fourth in vocational or technical training establishments and slightly less than 10 per cent in teacher training schools.

*University training.* An estimated 71,000 students graduated from Latin American universities in 1965, the rate of increase in the last few years being 8 to 9 per cent annually.

About 15,000 studied education and the humanities; nearly 3,000, fine arts and architecture; some 9,500, law; almost as many, the economic and social sciences; slightly under 4,000, natural sciences; about 8,000, engineering; over 20,000, medicine and related fields; and slightly more than 2,000 agricultural subjects.

These and other data on the formal school system are well known. Suffice it, therefore, to record these general figures as a basis for the comments on future expansion needs set forth in other sections of the present study. Meanwhile, it would be useful to examine some information on education outside the formal school system, whose contribution to the training of skilled manpower is not always sufficiently stressed.

(ii) *Training facilities outside the formal education system*

The training of university professionals, intermediate-level technicians (industrial technicians, accountants, agricultural experts, etc.) and primary and secondary teachers is obviously the prime responsibility of the formal education system. On the other hand, many institutions outside that system have a part to play in the vocational or professional training of urban and rural workers, business employees, government officials, and managerial and executive personnel.

In the industrialized countries, workers and intermediate-level personnel are mainly trained, in accordance with various procedures, in the enterprise itself. In Latin America, many institutions are also playing an increasingly important part in manpower training at various levels and in different economic sectors; these include industrial, business and agricultural enterprises, banks, public services, the armed forces, trade unions, entrepreneurs' associations, cultural associations, productivity centres, certain private schools which by the very nature of the instruction they impart are outside the formal education system, and specialized professional or vocational training institutions.

The latter have developed in Latin America, at least on up-to-date lines, only since the Second World War, and have spread quickly in countries forced by their relatively rapid industrial development to utilize new facilities for training skilled manpower. Their original radius of action was fairly limited, extending later both vertically

(to include supervisory personnel, foremen and production specialists as well as skilled and semi-skilled workers) and horizontally (to cover a wider range of technical skills in industry and other fields).

These specialized institutions, some of which are well known by their abbreviations, include the following: SENAI and SENAC (Brazil), SENA (Colombia), SENATI (Peru) and INCE (Venezuela). Other organizations with similar functions are CONET (Argentina), the Universidad del Trabajo (Uruguay) and the Professional Training Department of the Technical Co-operation Service (Chile), which is shortly to be reorganized as the National Professional Training Institute (Instituto Nacional de Capacitación Profesional—INACAP). Some of the more recently established institutions are Rapid Manpower Training (Adiestramiento Rápido de la Mano de Obra—ARMO) in Mexico, the National Apprenticeship Institute (Instituto Nacional de Aprendizaje—INA) in Costa Rica and the Ecuadorian Professional Training Service (Servicio Ecuatoriano de Capacitación Profesional—SECAP). The institutionalization of professional training outside the education system at a level higher than for operatives is at a less advanced stage. In some degree, this function is performed by productivity centres, through the organization of seminars and courses for the managerial staff of enterprises and other administrative levels.

Varying contributions to these activities are made by the State, entrepreneurs and trade unions. For example, the specialized institutions are controlled mainly by the State in Argentina, Chile, Mexico and Uruguay, and by entrepreneurs' associations in Brazil and Peru, while a balance is struck between the two in Colombia and Venezuela. The trade unions form part of the governing council of SENA (Colombia) and are represented on the council of SENATI (Peru). The productivity centres are mainly under the jurisdiction of the State in Argentina and Chile, and of entrepreneurs' associations in most of the other Latin American countries. In any case, they generally enjoy considerable administrative autonomy and operate very flexibly in regard to programmes and types of training.

In short, training outside the formal education system is taken care of by a wide range of institutions differing in origin and aims, and particularly in the types of training they have to offer. Table 10 presents a more systematic picture of professional and vocational training services, showing the kind of institution con-

cerned, the main training methods used and the types of programmes undertaken. Table 11 contains specific information—date of establishment, economic sectors covered, organization, financing and principal programmes—on the main specialized training services existing outside the formal education system in Latin America.

Unfortunately, there are no comparable data available to measure the scale of this type of training. At a conservative estimate, about 250,000 workers could be trained under present conditions through either intensive courses or relatively long courses at the specialized institutions alone. In all probability, several times that number receives some type of training in the enterprises and services in which they are employed, though the procedures and methods may vary widely.

At any rate, these are large enough figures in absolute terms to make it quite clear that services of this kind are helping significantly to meet Latin America's development needs in terms of human resources training. It seems unwise, therefore, that so slight a link should persist between these training services and the formal education system, or that the former should continue to be disregarded in the formulation of educational policy and plans.

### (iii) *Migration of skilled personnel*

In order to evaluate the relationship between the total number of people trained both within and without the educational system and the number needed for the purposes of economic development, the extent to which that number is increased or reduced by the migration of skilled personnel should be taken into account. Although such shifts are generally on a minor scale, they may have a significant effect not so much on the total strength of the labour force as on particular specialties or sectors.

Latin America records a simultaneous inflow and outflow of skilled personnel, in addition to migratory movements between one country of the region and another, about whose scale there are few data available.

Particularly in recent years, international technical co-operation programmes have provided a medium for reinforcing the region's human resources by highly skilled foreign technicians and experts. But, as their contribution is both temporary and suitable for only the very highest levels of training, it is inevitably in the nature of guidance rather than of specific economic and social action. Moreover, under existing conditions, the influx of foreign personnel in con-

**Table 10**  
**LATIN AMERICA: MAIN PROFESSIONAL AND VOCATIONAL TRAINING SERVICES**

<i>Organizations</i>	<i>Form of training</i>	<i>Programmes</i>
Production and services enterprises ..	Unorganized training Tendency of big concerns in certain branches (metallurgy, metal-transforming, banking, etc.) to organize staff training	Short courses of instruction for new workers, agricultural workers, employees and supervisors Promotion of these groups Instruction in new techniques Change of occupation
Public services (including the armed forces) .....	Unorganized training Small-scale training services and occasional courses	Briefing courses for new officials Promotion of officials Training in new fields of knowledge
Professional and vocational training services (SENAI, SENAC, SENA, INCE, SGT, CONET, SENATI, Universidad del Trabajo) .....	Apprenticeship Training and advanced courses for adult workers and employees Advanced training for supervisors (TWI and other programmes) Training and advanced studies for technical and administrative staff In-service training in enterprises	Apprenticeship (4-36 months) Evening, night and week-end basic and advanced training (10-700 hours) Seminars for supervisors (2-200 hours) Technical and administrative courses (1-3 years) Aid to enterprises for organizing training Training and advanced courses for teaching personnel Correspondence courses (12-36 months)

State professional and vocational training schools (Ministry of Education, universities and others) .....	Training of urban and rural workers and of employees Technical training Training and advanced courses for workers and employees	Training courses for urban and rural workers and for employees (2-5 years) Technical courses (2-4 years) Evening courses for training and upgrading of workers and employees (over 12 months) Courses for teachers (2-4 years)
Private professional and vocational training schools (Salesiana and other religious and lay organizations and universities) .....	Training of urban and rural workers and of employees Training and advanced courses for workers and employees	Training courses for urban and rural workers and for employees (2-5 years) Evening, night and week-end courses for workers and employees (12-36 months)
Public and private institutes for administration and management .....	Advanced training for supervisors (TWI) Advanced training for managerial and administrative staff	Courses for supervisors (TWI and others) (20-150 hours) Courses and seminars for managerial and administrative staff (4-50 hours)
Correspondence courses at home and abroad .....	Technical training (mainly in electronics, repair work and industrial design)	Technical courses (1-3 years)

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SOURCE: Latin American Institute for Economic and Social Planning, mimeographed papers.

Table 11

## LATIN AMERICA: SOME SPECIALIZED TRAINING SERVICES

<i>Services</i>	<i>Country</i>	<i>Year of establishment</i>	<i>Sector using services</i>	<i>Organization</i>	<i>Financing</i>	<i>Main programmes</i>
SENA (Servicio Nacional de Aprendizaje) .....	Colombia	1957	Industry, commerce, agriculture, mining, transport, services, construction	National Council (bipartite) National Department (appointed by the Government) Planning Commission Sectional Councils Sectional Departments (appointed by the National Department)	Decentralized public enterprises and services 20 workers 100,000 pesos 1 per cent of wages paid	Apprenticeship for minors Training for adult workers In-service training in enterprises
SENAC (Serviço Nacional de Aprendizagem Comercial) .....	Brazil	1945	Commerce, banking, services	National Council (bipartite) National Department (appointed by the National Council) Regional Councils Regional Departments (appointed by the National Council)	Commercial concerns 1 per cent of wages paid, on the basis of social security contributions	Secondary commercial training. Training of employees
SENAI (Serviço Nacional de Aprendizagem Industrial) .....	Brazil	1942	Industry, mining, transport, construction	National Council (bipartite) National Department (appointed by the National Council) Regional Councils Regional Departments (appointed by the National Council)	Industrial concerns 1 per cent of wages paid, on the basis of social security contributions	Apprenticeship of minors Training of workers In-service training in enterprises

SENATI (Servicio Nacional de Aprendizaje y Trabajo Industrial) .....	Peru	1961	Manufacturing	National Council (bipartite) National Department (appointed by the National Council) Regional Councils Regional Departments (appointed by the National Council)	Manufacturing industries with 15 workers, 1 per cent of wage paid, up to 6,000 soles	Not yet in regular operation
SCT (Servicio de Cooperación Técnica) .....	Chile	1960	Industry, mining, agriculture, transport, services, commerce, banking, construction	National Department (bipartite) National Director (appointed by the Department)	Contributions from CORFO and payments for services rendered by enterprises	Training of workers and supervisors In-service training in enterprises Training of workers
INCE (Instituto de Cooperación Educativa) .....	Venezuela	1959	Industry, mining, agriculture, transport, services, commerce, banking, construction	National Administrative Council (tripartite) Executive Committee (appointed by the Government)	Enterprises in all economic sectors, 1 per cent of wages paid, 0.50 per cent of annual profits paid to workers, 20 per cent of above totals from the Government	In-service training in enterprises Training of Workers Apprenticeship of minors
CONET (Consejo Nacional de Educación Técnica)..	Argentina		Industry, agriculture, commerce, banking, transport, services, mining, construction	National Council (bipartite) (appointed by the Government)	Public funds, 1 per cent of wages paid by enterprises (apprenticeship tax)	Secondary, industrial, commercial and agricultural training Training of workers Apprenticeship of minors
UT (Universidad del Trabajo) .....	Uruguay		Industry, commerce, banking, agriculture, transport	Governing Council (appointed by the University)	University funds	Secondary, industrial, commercial and agricultural training Training of workers

nexion with private foreign investment,<sup>7</sup> particularly in the extractive industries and certain manufacturing activities, tends to be small. In addition, such personnel is usually sent on a temporary basis and the rate of turnover is high. Another kind of transfer consists in the selective immigration of skilled labour and specialized technical personnel on a permanent basis.

A typical example of the latter is the programme of the Inter-Governmental Committee for European Migration (ICEM), the latest results of which are shown in table 12. In accordance with this programme, approximately 1,000 skilled workers were placed in Latin American private industry between January 1964 and April 1966. Most of the requests received came from the textile industry (28 per cent), the metal-transforming and metallurgical sector (25 per cent) and the chemical industry (20 per cent).

Surprisingly enough, what is even more important than the inflow of skilled personnel is the outflow of highly specialized technicians and professionals to the more developed countries, particularly the United States. That country's statistics show that in 1941-50 there were some 43,000 immigrants from Latin America—excluding Mexico because of the peculiar characteristics of population shifts in border areas—and nearly 95,000 in 1951-58. The flow has increased substantially in recent years: 19,000 persons in 1959, 23,000 in 1960, 26,000 in 1961, 32,000 in 1962 and 35,000 in 1963.<sup>8</sup> Although these are over-all figures, professionals and skilled personnel presumably account for a fairly high proportion (especially if Mexico is excluded), and the figures for emigration to other countries—probably on a lesser scale—would have to be added.

A more detailed examination of the characteristics of that emigration in the particular case of Argentina leads to the conclusion that over 5,000 professionals and technicians emigrated from that country to the United States between 1950 and 1964.<sup>9</sup> Nearly 60 per cent of this over-

<sup>7</sup> Two United States surveys show that in 1956 there were about 22,000 nationals of that country employed in developing areas as the result of private United States investment, two thirds of whom were in the professional or business executive categories. The number rose about 35,000 in 1965, of whom probably one third were United States citizens employed in Latin America.

<sup>8</sup> Data compiled by ICEM.

<sup>9</sup> See Enrique Oteiza, *La emigración de ingenieros dentro del contexto de las migraciones internacionales en la Argentina, un caso de "brain drain" latinoamericano*, Instituto Torcuato Di Tella, Buenos Aires.

**Table 12**  
ICEM LATIN AMERICAN PROGRAMME  
(Workers with known occupations moved during 1965)

Occupational groups	Total number of workers <sup>a</sup>	Professional and other highly skilled workers departed under selective migration programmes	Workers departed under other programmes
<b>TOTAL</b>	<b>1,491</b>	<b>519</b>	<b>972</b>
Architects, engineers, surveyors .....	45	35	10
Nurses .....	42	23	19
University teaching staff .....	31	28	3
Teachers—secondary school and other teachers .....	209	160	49
Draughtsmen .....	13	12	1
Engineering technicians .....	21	16	5
Other professional staff .....	283	51	232
Agricultural and rural workers .....	313	65	248
Fishermen .....	10	4	6
Tool makers, machinists, plumbers, welders .....	193	68	125
Electric and electronic workers ..	24	10	14
Carpenters, joiners, cabinet makers ..	37	8	29
Other production workers .....	202	32	170
Service workers ....	68	7	61

SOURCE: Inter-Governmental Committee for European Migration (ICEM).

<sup>a</sup> This report does not include workers' dependants who may have moved under the auspices of a workers' programme. Also excluded are persons of working age whose profession has not been specified.

all figure consisted of engineers, doctors and teachers.

A total of 1,153 persons emigrated from Chile to the United States in 1963, slightly over a quarter being university graduates.<sup>10</sup> It is interesting to note that an inquiry into their motives for leaving the country brought to light the fact that 24 per cent—a proportion which is probably on the low side because of a reluctance to admit the true reason—were drawn by ex-

<sup>10</sup> See Pan American Union, *La emigración de recursos humanos de alto nivel y el caso de Chile, 1965*.



pectations of better pay, 29 per cent by the desire to improve their professional standing, 16 per cent by the hope of greater recognition for technical or scientific work, and 13 per cent by better opportunities for research.

Even without fuller information to define the scope of the problem, the partial data given will suffice to show that the emigration of skilled manpower from Latin America is reaching sizable proportions in relation to existing levels of vocational training in the region. Hence, there is a pressing need for a more searching study of the underlying causes of such emigration and the measures that might be taken to reduce it, since if it continues unabated, it will represent not only a loss in terms of investment in training but also a waste of talent and technical skill that is needed for the development of the region.

(e) *The concept of "shortage" of skilled manpower*

The figures contained in the previous sections are clearly indicative of a relative shortage of skilled manpower, even at the present stage of development. However, it is not easy to express that shortage in terms of indexes and the problem tends to be obscured by the replacement of certain professional categories by others requiring less skills, incomplete or partial training, or crash courses mainly given outside the formal educational system.

Naturally, some shortage in specific categories of skilled manpower is quite normal in any country, inasmuch as the reverse would imply the existence of reserves which, in turn, would mean the under-utilization of trained human resources. In the industrialized countries themselves, the structural adjustments deriving from the continuous technological and institutional changes produce occupational frictions and the need for equally constant adjustment at all levels of professional and vocational training. However, such adjustments are facilitated in those countries by the existence of appropriate machinery for anticipating skilled manpower needs, by the scope and efficiency of the educational facilities provided outside the formal school system and, above all, by the population's educational background. The situation is very different in the developing countries, where the shortage of skilled manpower is more widespread and there are not same means for overcoming it promptly, apart from the fact that the problem is not always clearly defined.

In the developing countries, the shortage tends to be masked by the considerable extent to which highly skilled persons are replaced by

others with far lower or frankly inferior qualifications for the functions they are to perform; hence the difficulty of the shortage in quantitative terms, as the main deficiencies are of a qualitative nature. The very professional degrees and employment categories are usually ambiguously defined and far from standardized, a fact which leads to misinterpretation and limits the possibility of determining the real extent of the shortage to certain categories of irreplaceable personnel, clearly defined by their functions and the precise qualifications required. In brief, there are marked disparities between the optimum qualifications required and those of the manpower available.

It is no less difficult to gauge the effects of the shortage of skilled manpower on existing activities. The low productivity levels in the production of goods and the supply of basic services can be measured in quantitative terms unlike the inefficiency or poor quality of other services. Although undoubtedly these are in part the effects of that shortage, it would be difficult to separate them from those of other causes without a very close analysis of the pertinent "production functions". Even so, it would not be going too far to claim that the shortage of skills, in both quantitative and qualitative terms, is the cause of huge losses in labour and capital productivity which probably amount to several times the cost of training the corresponding number of persons at the appropriate level.

To look at the problem from a different angle, the superimposition of widely differing technical strata which is typical of Latin America's economic development—more especially in industry but in other sectors as well—is doubtless another result of the shortage of skilled labour. Although the shortage can be combated by concentrating the most highly qualified personnel in a few activities or enterprises, the whole matter assumes a different aspect if the aim is to obtain more widespread increases in productivity and efficiency.

The problem is likely to become even greater in future. In the past the difficulty has in some measure been obviated by the surprising adaptability and capacity for improvisation of operatives, executives and technicians. This is possible at the stage when the predominant activities are the production of current consumer goods, raw and intermediate construction materials and, in general, types of manufacture not requiring a large proportion of highly skilled manpower. But it will be very difficult to make further headway without a large-scale training campaign

if the activities to be initiated or expanded are specialized and technically more complex. Suffice it to cite an example, which is of particular importance for planning purposes, namely, the problems involved in the study and preparation of new projects for the development of various economic sectors that require the intensive use of large numbers of highly skilled personnel in a wide range of professions and specialties. Their replacement by less well-qualified personnel is very difficult and entails the risk of incurring the huge social costs that follow upon wrong decisions in this connexion, while the services of foreign consultants and other forms of external technical assistance cannot be contracted on the scale required.

Considerations of this kind will be borne in the section dealing with certain hypothetical projections of skilled manpower needs in 1980 and the improvements that can reasonably be expected in the educational profile of the economically active population in Latin America.

## 2. HYPOTHETICAL PROJECTIONS TO 1980

The estimates and hypotheses made in the previous section can be taken as the basis for some useful conclusions as to the particular lines that should be emphasized in Latin America's educational planning. They are, however, subject to two types of reservations which should be kept in mind.

The first derives from the very nature of those hypotheses, whose purely illustrative purposes justify their somewhat too general application to Latin America as a whole, but which nevertheless prove extremely tenuous if related to particular situations in the various countries. It is common knowledge that the differences between the Latin American countries in basic aspects of their economic and social development and in the progress made by education itself are too great for a regional "diagnosis" or for the definition of an educational policy and certain educational goals at the Latin American level to have sufficient practical value. In a word, whether it is the broad aims of education or the more specific objectives of training in particular technical skills that are in question, the fact remains that the differences in per capita income levels, the distribution of the population among urban and rural areas, economic structure, the stage of industrial development reached and other equally important factors impose educational requirements that vary from one country to another and call for different human and financial potentialities to satisfy those requirements in full measure.

The second reservation derives from the fact that the estimates and hypotheses thus far presented relate to the present situation, whereas educational planning should not only eliminate existing disequilibria but anticipate future needs. This condition is at once more important and relatively easier for the developing than for the industrialized countries. It is more important because, as developing economies, their growth involves a speedier structural transformation and therefore faster absorption of technical progress and more rapid changes in terms of the human resources needed to assimilate that progress. It is relatively easier because it is largely a question of absorbing technical progress already available in other economies, and because the very experience gained from their past evolution makes it possible to foresee the direction and scope of the structural changes that are to be expected in the growth of economies at a less advanced stage of development.

However, this line of reasoning should not be pursued too far, since many features of Latin America's development are very different from those shown in another historical context by the now industrialized economies. These differences are particularly noticeable in regard to education, which plays a vital role in the whole question of the training of human resources.

An analysis of the long-term development of the Latin American economies suggests that the combination of a high rate of population growth with a low over-all rate of development, in addition to various institutional factors, has gradually distorted the structure of employment. Although unemployment has not reached a very high level, widespread under-employment has become a serious matter, to the point where it is estimated that in many of the Latin American countries overt or disguised under-employment affects about 20 or even 30 per cent of the whole labour force. Different factors have combined to influence the proportions of agricultural and non-agricultural employment and the scale of migration from rural to urban areas, making them incompatible with the increases in agricultural productivity and in the absorption capacity of urban activities, thereby introducing new elements of distortion into the structure of employment. Thus, the long-standing under-employment in rural areas is being supplemented by a considerable amount of under-employment in the urban sector, particularly in certain services.

This is not the place to define the terms of that problem. It is simply mentioned in passing,

so as to reaffirm the need for development plans to include a clearly-defined employment policy, which will provide an essential frame of reference for planning the training and development of human resources and, consequently, for educational planning. On the other hand, it seems useful to supplement the estimates and assumptions made concerning the present situation by similar illustrative examples which will help to clarify the effects of certain foreseeable changes by means of hypothetical projections of the main variables to 1980.

(a) *Growth and structural changes in respect of the population, the product and employment*

From the probable evolution of the principal population ratios, it may be estimated that the population of the twenty Latin American countries will be about 364 million in 1980. No major changes are envisaged in the population structure by age, although there will probably be a somewhat smaller increase in the under-15 age group and a slightly larger one in the group of 65 years and over; thus, the total figure would be split up as follows: 152 million in the youngest age group, a little over 197 million aged 15-64 and slightly more than 14 million over 64 years of age. Of the youngest age group, the population of school age (7-14 years) may number about 72 million compared with 40 million in 1960.

In view of the changes in the age structure and other factors with conflicting effects, the rate of participation in the labour force may be expected to increase slightly; thus, there would be about 120 million economically active persons in 1980, which is 45 million more than the estimated figure for 1965, i.e., an average absorption of 3 million persons annually during the next fifteen years. To look at the question from another angle, the rural population would approach 150 million, while the urban population would exceed 215 million, or a little over 59 per cent of the total.

It is far more difficult to forecast the evolution of other factors which complete the demographic picture in order to evaluate the magnitude of the efforts that must be made to educate and train people. Some estimates are given, however, which might serve at least for purposes of illustration.

In 1965, the average annual productivity per employed person in Latin America as a whole was about 1,150 dollars. On the assumption that productivity will increase at an annual average rate of 2.5 per cent over the next fifteen years—a higher rate than before, but modest enough

as a future development target—by 1980 it would be about 1,700 dollars per employed person. This figure, in turn, taken together with the projected total employment figure of 120 million persons, would result in an aggregate domestic product of approximately 200,000 million dollars for Latin America, or more than double the absolute figure recorded in 1965 (a little over 88,000 million dollars).

Even with an annual per capita increase of less than 3 per cent in the product, the over-all increment in the fifteen years considered would be fairly substantial, and in any case large enough to expect that there would also be significant changes in its sectoral composition. These changes are not, of course, dependent on its quantitative growth alone, but also on certain essential factors of development policy. Without going into the question in too much detail, it should at least be taken for granted that widespread agrarian reform, more progressive income distribution and closer economic links among the countries of the region will play a greater or lesser part in future development. In those circumstances, it would be difficult to envisage an agricultural growth rate averaging less than 1.5 per cent per capita annually, an increase in manufacturing industry equal to at least an elasticity of 1.3 with respect to the growth of the total product, and a comparable rate for basic services, probably rather slower for transport and faster for power supplies and other ancillary services.

These and other similar criteria lead to the projection of the level and structure of the product presented in table 13. This projection is extended to an estimate of the employment structure that would be consistent with the foreseeable growth of the economically active population and certain assumptions regarding productivity changes in each economic sector. These changes would exhibit clearly distinctive features. For example, in all probability, the rapid growth of manufacturing industry, whose product would almost treble in the next fifteen years, at an average annual rate of nearly 7.5 per cent, would at the same time involve the incorporation of new highly productive and technically complex activities, the modernization of traditional branches of industry and the transfer of resources on an increasing scale from artisan and small-scale industry to manufacturing industry proper. As a result, the average productivity of the population employed in the manufacturing sector as a whole could hardly be assumed to increase at a rate of less than 4 per cent annually, a rate which, in its turn, would

Table 13

## LATIN AMERICA: A HYPOTHETICAL PROJECTION OF THE PRODUCT AND EMPLOYMENT AS OF 1980

	Gross product (millions of dollars)		Employment (thousands of persons)		Sectoral composition of the product (percentage)		Employment structure (percentage)	
	1965	1980	1965	1980	1965	1980	1965	1980
Agriculture and fishing .....	19,348	36,000	35,499	49,300	21.8	18.0	46.2	41.1
Mining and quarrying .....	4,279	9,000	743	1,000	4.8	4.5	1.0	0.8
Manufacturing .....	20,031	58,000	12,048	20,000	22.6	29.0	15.7	16.7
Construction .....	2,869	7,000	3,706	7,200	3.3	3.5	4.8	6.0
Basic services .....	6,731	21,000	4,185	8,500	7.6	10.5	5.4	7.1
Other services .....	35,389	69,000	20,705	34,000	39.9	34.5	26.9	28.3
TOTAL	88,647	200,000	76,886	120,000	100.0	100.0	100.0	100.0

represent a small increment in this sector's share of total employment.

The projections for the agricultural sector are based on the assumption that agrarian reform policy would intensify efforts to step up yield per unit of area, while the increase in productivity per employed person (about 2 per cent annually) would be more moderate; even so, there would be a significant reduction in the proportion of total employment accounted for by the agricultural sector, which, in its turn, would presuppose a continuation of the relatively high rate of migration from the country to the town. As regards the extractive industries, the fact that they are concerned mainly with exports will probably continue to promote a steady and comparatively rapid increase in productivity, and therefore limit their capacity for absorbing additional manpower. On the basis of these considerations it is assumed that if the projections of the product are to be consistent with the overall growth of the labour force, the productivity increases in the remaining activities would have to be very modest, e.g., about 1.5 per cent annually in construction and basic services, and still less in all other services taken as a whole.

In brief, those general assumptions would come to constitute the other facets of an employment policy defined in its broadest sense, and could naturally be based on different criteria. The only object of this illustration is to point up need for the explicit formulation of a frame of reference that would bring into focus the relationships between over-all growth aims and labour absorption needs, on the one hand, and, on the other, the resulting increase in productivity and assimilation of techniques; and to

throw light on foreseeable structural changes, their effects on the sectoral distribution of new employment opportunities and the relevant productivity levels.

#### (b) *Human resources and professional structure*

It is concluded from the foregoing considerations that the changes to be expected in the professional structure of the employed population undoubtedly stem from two types of factors: first, the variation brought about by the development process itself in the relative share of the different economic sectors, in each of which employment has a different professional structure; and, secondly, modernization and increased productivity give rise in each sector to greater needs in terms of professional skill.

The first factor is illustrated by the hypothetical situations presented as representative of Latin America as a whole, the professional structures that were estimated for each sector in 1965 being applied to the sectoral employment figures projected to 1980. It will be noted that, even if the level of professional skill for each sector remained the same, there would be a change in the professional structure of the labour force as a whole, because of the differences in the extent to which the various sectors would necessarily expand, those with the fastest growth rates generally requiring the highest levels of professional skill. Added to this are the results of the absorption of technical progress in each sector on a larger scale and at varying speeds, according to the expected or proposed rate of increase in productivity.

The combination of those two factors may lead to sharp variations over a relatively long

period, as shown in table 14, which presents the results of a hypothetical projection of the professional structure of the employed population up to 1980 for Latin America as a whole. These figures take into account the projections of the product and employment referred to in the preceding section and some additional hypotheses regarding the repercussions of the assumed productivity increment for each sector in terms of the professional skills needed by each sector.

If these projections are compared with the estimates set forth above in regard to the situation prevailing in 1965, the extent and nature of the anticipated changes can be appreciated in detail. The most significant changes relate in general to the considerable increase that would take place in the total number of professionals, the even greater increase in the number of technicians and the higher level of skill in the category of operatives and artisan workers.

To take only one aspect, that of professionals who have graduated from a university, the projections indicate that their number will have to increase by over 130 per cent between 1965 and 1980. Since the population will have expanded by only 55 per cent in that lapse of time, this would raise the ratio of university graduates in the professional category to the total population from the present coefficient of 3 per mil to 4.5 per mil in 1980.

Besides this over-all increase, the category concerned will no doubt also undergo a change in its internal structure, i.e., among the principal groups of professions. It might be postulated, for example, that it will be necessary to increase the proportion of graduates in natural sciences and engineering and, on a lesser scale, in economics and the social sciences; to maintain the proportion of graduates in the humanities, education, the fine arts and the medical sciences at approximately the same level; and to make a corresponding reduction in the proportion of law graduates.

As these considerations are purely illustrative, they do not justify making the projections detailed enough to refer to more specific professions, even though this would help to clarify the basis of the general postulates by showing that they are closely related to the structural changes and improvements in sectoral productivity mentioned above. At the same time, a more detailed analysis of this kind would provide criteria for estimating the changes that should be made in the respective proportions of professionals at the higher level and at the intermediate level (the latter are included in

the general category of technicians, although this designation is not entirely suitable).

(c) *Improvement and changes in the educational profile of the economically active population*

Necessarily supplemented by the more detailed type of analysis, which will not be described here in order to avoid too lengthy a presentation of the hypotheses, this kind of projection of professional structure can be used as a basis for sounder projections of the educational profile of the economically active population which would be compatible with future development requirements. The problem thus touches upon the more direct concerns of educational planning, inasmuch as it can be translated into a quantitative framework which would help to determine the scope and tenor of the training policy that should be adopted.

This additional step is illustrated by the projection of the educational profile of the active population to 1980, as set out in table 15. This represents far more than the mere arithmetical computation of the figures obtained from relating the projections of the future professional structure to present coefficients of "educational inputs" for each professional category.

For the purposes of this projection, it would seem desirable to take into account at least two considerations. In the first place, the educational profile that will be needed in future is not dependent only upon the changes that are expected in the professional structure as a result of the quantitative expansion of the various categories. The opportunity was seized in earlier sections of emphasizing some glaring anomalies in the existing situation in that professional functions are being performed without proper training. In other words, the "internal" educational profile of certain professional categories taken separately displays marked shortcomings in the scope and nature of the corresponding schooling and training. It is therefore to be hoped that such anomalies will be corrected in the future, a task that will involve the improvement of the general educational profile of the active population, quite apart from the greater quantitative need for professionals in the different categories.

The second consideration relates mainly to the inevitably rigid nature of certain factors that will be encountered in attempting to improve the educational profile of the employed population. In practice, a considerable proportion—probably about 30 per cent—of the active population in 1980 will consist of persons already integrated in the labour force in 1965,

**Table 14**  
**LATIN AMERICA: A HYPOTHETICAL PROJECTION OF THE OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE UP TO 1980**  
*(Thousands of persons)*

	<i>Total</i>	<i>Professional and technical personnel</i>			<i>Administrative and managerial personnel</i>	<i>Employees and salesmen</i>	<i>Operative and artisan workers</i>			<i>Services personnel</i>	
		<i>Total</i>	<i>Professional</i>	<i>Technical</i>			<i>Total</i>	<i>Skilled</i>	<i>Semi-skilled</i>		<i>Unskilled</i>
Agriculture and fishing .....	49,300	200	50	150	150	200	48,250	4,900	14,800	28,550	500
Mining and quarrying .....	1,000	60	30	30	15	70	825	120	350	355	30
Manufacturing .....	20,000	600	140	460	500	2,000	16,600	5,900	9,000	1,700	300
Construction .....	7,200	200	50	150	110	140	6,670	860	3,600	2,210	80
Basic services .....	8,500	320	70	250	210	1,530	6,100	680	3,400	2,020	340
Other services .....	34,000	4,930	850	4,080	2,720	10,880	2,040	340	510	1,190	13,430
<b>TOTAL</b>	<b>120,000</b>	<b>6,310</b>	<b>1,190</b>	<b>5,120</b>	<b>3,705</b>	<b>14,820</b>	<b>80,485</b>	<b>12,800</b>	<b>31,660</b>	<b>36,025</b>	<b>14,680</b>

Table 15

## LATIN AMERICA: A HYPOTHETICAL PROJECTION OF THE EDUCATIONAL PROFILE OF THE LABOUR FORCE UP TO 1980

	Total	Profes- sional and technical personnel	Adminis- trative and managerial personnel	Employees and salesmen	Operatives and artisan workers	Services personnel
University education (complete or in- complete) .....	2,432	1,554	485	393	—	—
Intermediate education .....	25,476	4,144	2,250	6,643	11,251	1,188
Secondary general .....	15,419	1,311	1,715	5,418	5,787	1,188
Complete .....	4,486	632	1,135	3,416	1,445	272
Incomplete .....	10,933	679	580	2,002	4,342	916
Technical .....	8,235	1,011	535	1,225	5,464	—
Teacher training .....	1,822	1,822	—	—	—	—
Primary education .....	92,092	612	970	7,784	69,234	13,492
More than three years .....	57,517	454	695	5,665	41,830	8,873
Less than three years or none at all	34,585	158	275	2,119	27,414	4,619
TOTAL	120,000	6,310	3,705	14,820	80,485	14,680

i.e., by survivors of the present employed population whose educational profile is already determined and could be modified in some measure only through training services outside the formal educational system. Even the educational profile of the new influx into the labour force in the near future is also largely pre-determined by existing educational conditions. Therefore, the new training activities undertaken from now on will influence the educational profile of no more than part of the economically active population that will be available in fifteen years time. This shows how important it is for educational planning to be based on forecasts of future requirements considered over a fairly long space of time.

These considerations, in their turn, give rise to certain conclusions which deserve to be emphasized. In the first place, they explain why the projection in table 15 should continue to show a significant proportion of persons with little schooling in the categories of professionals, technicians, and administrative and managerial staff, a fact which is seemingly inconsistent with the aim of bringing professional skills into line with the functions to be carried out in the economic system. Moreover, a comparison between the projections of the desirable or necessary educational profile in 1980 and the present situation fails to reflect the true magnitude of the efforts that should be made in regard to the

educational system, since they must be measured in relation to the new contingents joining the active population, whose level of education will have to be much higher to offset the inadequacy of the survivors of the existing labour force. In table 16 separate figures have been given for the educational profile of the new contingent that will be joining the ranks of the active population in the course of the next fifteen years.

(d) *Expansion requirements in respect of educational and vocational training services*

In actual fact it is the last considerations discussed that shed most light on the magnitude of the expansion requirements in respect of educational and vocational training services by comparing the training needs for new employment with the assumed levels of "supply" of the educational system. It would be useful, therefore, to dwell briefly on the meaning of these hypothetical figures, deduced from the series of assumptions and criteria assembled in earlier sections.

The need to provide university training for nearly 1.8 million persons in the next fifteen years means that the Latin American universities will have to train during that period nearly twice the number of university graduates now included in the economically active population. From a different standpoint, an average of about 120,000 persons would have to graduate from

Table 16

## LATIN AMERICA: THE ESTIMATED EDUCATIONAL PROFILE OF THE LABOUR FORCE IN 1965 AND PROJECTED TO 1980

	Total, 1965	Total, 1980	Survivors from 1965 in 1980	New occupations
University education (complete and incomplete)	1,060	2,432	636	1,796
Intermediate education .....	8,730	25,476	5,232	20,244
Secondary general .....	6,240	15,419	3,742	11,677
Complete .....	1,490	4,486	893	3,593
Incomplete .....	4,750	10,933	2,849	8,084
Technical .....	1,770	8,235	1,059	7,176
Teacher training .....	720	1,822	431	1,391
Primary education .....	67,096	92,092	40,263	51,829
More than three years .....	29,700	57,517	17,815	39,702
Less than three years or none at all .....	37,396	34,575	22,448	12,127
TOTAL	76,886	120,000	46,131	73,869

the Latin American universities annually in comparison with the present figure of approximately 70,000; this represents an increment of 70 per cent.

There would have to be a relatively larger increase in secondary education as a whole, besides important changes in orientation. In fifteen years time, the number of persons leaving general secondary schools after a complete course of studies who do not go on to the university afterwards would total nearly 3.6 million which, together with a like number entering university, would bring the average number of persons graduating annually from general secondary schools up to about 500,000. This figure is in sharp contrast to the present total of 370,000 persons and represents an expansion of 35 per cent at the secondary level. Although this does not seem to be very large, it should be borne in mind that it involves a drastic re-orientation of secondary education in favour of technical training, and a substantial increase in the number of pupils that can be accepted for the first cycle of basic secondary education. At the same time, the fact that the increase in the number of graduates from general secondary schools is slower than the increase in the number of university graduates augurs a considerable improvement in university retention rates.

The disequilibrium is most acute in relation to technical training. On the basis of the projections set forth above, it is estimated that in the

next fifteen years nearly 7.2 million persons would be given a technical education at the secondary level, i.e., an annual average of about 480,000 as against the present figure of only 140,000. The effort required in this field entails multiplying the existing capacity of the system more than three times over. This conclusion might appear utterly impracticable if interpreted literally, but it is actually subject to a number of reservations that ought to be made clear.

The first relates to the fact that the 1965 figures for the employed population with technical training—which have served as a point of departure—include not only persons who have completed a technical course, but also a considerable proportion with incomplete training. Although it would be desirable for the 1980 forecasts to relate to graduates as such, since that would mean a real improvement in the educational profile of the population at large, the scale of growth required will determine that, in practice, large numbers of people with incomplete technical training will still be joining the labour force.

The second reservation relates to other sources of technical training for human resources. This function will be fulfilled on a modest scale by shorter university courses, but better opportunities will be afforded by the extramural training system. This means that professional training outside the scope of the educational system will have functions and responsibilities that go far



beyond those traditionally conceded to it, and will be recognized as a vitally important instrument for supplementing—at least during a period of transition and adjustment such as that lying ahead—the efforts made through the formal system. Naturally, a course of this kind can be followed only if the systems are properly integrated and co-ordinated under a single educational planning policy in the broadest sense of the term.

With respect to secondary education, the projections envisage the need to train within the next fifteen years nearly 1.4 million primary teachers, i.e., over 90,000 annually, as compared with the 70,000 now graduating every year.

As regards primary education, the magnitude of the task to be undertaken is reflected not so much in the projections of the educational profile of the active population as in the estimates of the age structure of the total population and the objectives established for meeting the requirements arising therefrom.

Lastly, the form given to the projections of the educational profile of the active population fails to bring out another future development need, namely, the level of skill of operatives and artisan workers. Some of the tables in this study (particularly table 14) make it clear that of the 80 million persons who will come into that

category in 1980 some 12.8 million should be skilled operatives and artisan workers, and nearly 32 million semi-skilled workers. If the former group is reduced by the 5 million or so who would receive technical training at the secondary level (table 15), there would still be 7 million persons whose skills would have to be developed by professional training outside the radius of the formal educational system.

It would be out of place in a document of this kind to go further into the various repercussions that are likely to be produced by this set of projections. Besides providing certain general orders of magnitude that throw more light on the extent of the task to be undertaken, this paper has been concerned with emphasizing the need to place the problem in the over-all context of development; to tackle it as a whole, reconciling the broad aims of education with the need to train human resources; and to relate it to educational activities in general, whether these are pursued through the formal system or through professional training services provided outside it. It has also tried to illustrate, through hypotheses relating to Latin America as a whole, certain general lines of approach that would appear to be suitable for dealing with the subject and that will, in the last analysis, have to be used to give the as yet scattered educational planning efforts a more practical form.

#### IV. THE REMODELLING OF THE EDUCATIONAL SYSTEM AND THE DEMAND FOR EDUCATION

##### 1. *General considerations*

From the considerations set forth in the previous section, it is plain that the aims of educational activities must be radically changed so as to bring the broad objectives of education into line with other more direct development needs. It would be wrong to assume, however, that only the traditional activities of the educational system would be affected by this reform and that the sole requisites for its achievement are a sound grasp of the problem and the allocation of sufficient funds.

The reactions of the different social groups also have to be taken into account, since the purposes of education, as formulated by the State and by educationists are compared by them with their own aspirations. Education is sought by parents for their children either to confirm the status the family has already attained, or as an avenue toward higher status and better-paying occupations. Moreover, any

educational system has complex internal forces of momentum and inertia deriving from the interests of teachers and administrators at the various levels and in the many specialized areas of instruction; and at the higher levels student pressures also have to be reckoned with. When the educational aims fixed by the State encounter the heterogeneous pressures exerted from inside and outside the educational system, the actual lines of evolution and the "output" of the system depend on what has been called an "aggregate intention" or "resultant".<sup>11</sup> The system cannot fully respond to any of the demands made on it but is shaped by the relative strength of the pressures.

In a dynamic society, the aggregate demands upon education may tally sufficiently with the objectives that derive from the concepts of hu-

<sup>11</sup> Andrew Pearse, *The Instrumentality of Education Systems*, paper prepared for the Sixth World Congress of Sociology, Evian, France, 4-11 September, 1966.

man rights and of the optimum development of human resources for the system to function with reasonable efficiency. In a society deliberately "mobilized" for development, the Government may be able to impose its objectives with sufficient vigour and enough public support to subordinate other claims to them. In a nearly static traditional society, the educational system is able to confirm "ascribed" statuses without serious strain. The situation is quite different in transitional or "conflict" societies, in which the traditional order is no longer considered to be viable but in which a generalized aspiration for development has not yet produced a national consensus regarding the prerequisites of development. These prerequisites may pose even more awkward problems, with the result that the different objectives of, and demands upon, the educational system are likely to frustrate one another. The expansion of the systems depreciates the traditional rewards they could offer in terms of status and occupational guarantees, but their ability to stimulate social mobility and productivity hardly increases in proportion.

In relation to demands on the educational systems from the "consumers" of education, four strata in the national populations deserve particular attention: the traditional upper classes and the newer *élite* groups; the urban middle stratum; the rural-agricultural lower stratum; and the rapidly growing, geographically mobile, semi-urban stratum that is commonly labelled "marginal". The urban middle stratum exerts the strongest pressure for the allocation of more resources to education and influences the content of education not only directly through its demands but also indirectly through the predominance of its members among teachers, administrators and planners. The two last groups—rural-agricultural and semi-urban—have been recently caught up in the widening hunger for education, but the pressures they can exert are relatively weak and they are only beginning to formulate realistic demands for educational content adapted to the opportunities likely to be within the reach of their children. The following pages will dwell on the relationships between the different strata and the educational systems in their entirety rather than on the problems of the different branches or levels of education.

The traditional upper classes provided the educational models on which newer objectives and forms have been superimposed. In more recent times, the influence of this sector seems to have been mainly negative, in its partial

withdrawal or passivity in the face of the educational pressures of the middle strata. To these groups education did not present a "problem", as long as their children could be sent to private schools or abroad to study, and as long as professional titles were more important as confirmation of their status than as a means of securing an income. More recently the lower relative growth of income from the land and the increase in numbers have combined to force a rising proportion of the youth from these classes into the competition for professional and white-collar employment. The creation of private universities in several countries seems to have responded to the preference of the *élite* to withdraw from the overcrowded and agitated atmosphere of the national universities, and the restrictive admission policies clung to by some of the traditional professional faculties of the national universities may have a similar motivation. Generally, however, the traditional *élites* do not seem to have attempted to use the expanding systems of public education for their own purposes.

The newer industrial *élite* in some countries have begun to meet their own needs for well-trained technicians outside the public educational systems by supporting private universities, technical schools, and other training centres that offer relatively short specialized courses adapted to immediate industrial demands.

Part of the answer to the oft-repeated question as to why the middle strata, after attaining considerable vigour and quantitative importance, have not been able to provide more coherent leadership may be found in the initial dominance and later passivity of the *élite* groups in relation to public education.

Educational policy has been affected by the "crisis of the traditional decision-making machinery" or "power vacuum" noted in several recent studies of Latin America, but at the same time it has contributed to the crisis.

## 2. EDUCATION OF THE URBAN MIDDLE STRATUM

More recent studies have begun to point out that the stereotyped picture of a region dominated by the traditional upper classes is no longer valid. The groups emerging in the middle lack sufficient homogeneity and cohesiveness to justify the term "class", but representatives of middle "strata" or "sectors" evidently hold the leading positions in several countries and are pressing toward political and economic dominance in others. Various statistical indicators show that the middle strata have grown almost

in proportion to the degree of urbanization in the different countries.<sup>12</sup>

Between 1955 and 1956, according to UNESCO calculations, enrolment in schools at the middle level grew by 120 per cent and in institutions at the higher level by 114 per cent, compared with only 72 per cent in primary schools. While expansion of intermediate and higher education, possibly at an even faster rate, is undoubtedly needed, the *kind* of expansion that took place did not respond to any clear public objectives. In a much more limited way, parts of the urban lower stratum began to struggle for the same objectives.

Educational planners are now insisting that the channelling of more than two thirds of the vastly expanded secondary enrolment into university cannot be permitted to continue. The general lines of the needed reforms were widely agreed upon, even at the beginning of the past decade,<sup>13</sup> but the most difficult problem is to find effective means of "educating" the more eager consumers of education into accepting such reforms.

The difficulties faced by educational policy and planning are more complex than would appear at first sight. The nature of the demand for intermediate level education not only tends to direct it along traditional university-preparatory lines but also reinforces the downward pressure on quality inevitable in a period of rapid expansion; the consumers lack interest in the future practical application of what is being taught and do not exert a strong corrective pressure if the school system sacrifices quality to quantity. To the extent that public secondary schools do not meet the demand, the consumers turn to private fee-charging schools, the standards of which are even harder to control, to which the lower-income population groups have even less effective access, and which, at the same time, obtain in the form of subsidies a major share of the public resources allocated to inter-

mediate level education. It is significant that secondary education at present is mainly in the private sector in nearly every country, while both primary and higher education are mainly public and free (although incidental costs to the pupil can be heavy). Around 1962, 70 per cent of secondary school pupils in the region as a whole went to private establishments, while only 10 per cent of the university students were in private universities.<sup>14</sup> This anomaly indicates in itself the extent to which the expansion of secondary education has derived from consumer pressures rather than public policy; it also indicates the main mechanism through which "free" university education is reserved for a limited population group. Historically, the situation derived from the dual origin of the school systems; university education for the *élite* (with the stages leading up to the university often handled by schools attached to the universities themselves), public primary education for the masses, with the middle level almost disregarded.

If the consumers find admission to traditional lines of secondary education difficult and expensive and admission to technical-vocational schools cheap and easy, some of them (the families barely able to keep their children in school) can be expected to send their children to the latter but to try to use such schools for their own original purposes. This tendency seems to be partly responsible for the limited extent to which such schools provide training that really corresponds to the need for up-to-date skills. The study of agriculture is a particularly obvious example; not only is enrolment very low in relation to national needs,<sup>15</sup> but the overwhelming majority of the students come from the urban middle strata and seek urban jobs after graduation. The output of teacher-training institutions is also affected; they are used to obtain a low-cost secondary education (frequently with the aid of scholarships) by many young people who do not go into teaching or,

<sup>12</sup> See *Materiales para el estudio de la clase media en América Latina* (Office of Social Sciences, Pan American Union, 1951); John J. Johnson, *Political change in Latin America: Emergence of the Middle Sectors* (Stanford University Press, 1958); *El desarrollo social de América Latina en la postguerra* (op. cit.); and a study submitted to the Central American Economic Co-operation Committee in 1960 on *Las clases medias en Centroamérica; características que presentan en la actualidad y requisitos para su desarrollo* (E/CN.12/CCE/176/Rev.2).

<sup>13</sup> See, for example, the conclusions of the Inter-American Seminar on Secondary Education (Santiago, December 1954-January 1955).

<sup>14</sup> Sylvain Lourié, "Education for today or yesterday" in *Problems and strategies of educational planning: Lessons from Latin America* (UNESCO, International Institute for Educational Planning, Paris, 1965).

<sup>15</sup> Agricultural education also brings out with particular clarity the discrepancies between educational needs as calculated by planners and actual educational demand within the existing structures. Many reports have emphasized the need for far greater numbers of agricultural specialists; but in agricultural schools enrolment continues to be far below capacity, and many graduates take jobs that bear no relation to their agricultural training or go abroad to work (*Evolution of the educational situation of Latin America, 1956-1965*, UNESCO/MINEDECAL, paras. 29-31).

when trained in "rural normal schools", find teaching jobs in the towns.<sup>16</sup>

Few children from the lowest "marginal" urban stratum reach the intermediate level schools at all, but increasingly large numbers of children from families of regularly employed workers do so. The few investigations that bear on their situation suggest that they are seriously handicapped in taking advantage of this education by their background, even when family income is sufficient for their maintenance while studying.<sup>17</sup> To the extent that they succeed, they are able to move individually into the middle stratum, and assume the occupational preferences already described. The middle stratum, using the schools as a means of social ascent, was unable to break away from an uncreative imitation of the education previously monopolized by the upper classes. The urban wage-earners now risk falling into the same pattern, pushing their children into the already overcrowded ranks of the salaried employees. Even if they were to prefer an education directed toward skilled industrial employment, the weaknesses of most vocational schools at present make this alternative unattractive.

The influence of the urban middle stratum on the school systems is not limited to external pressure for specific kinds of education; members of this stratum—themselves products of the educational patterns that have been described—staff the school systems and inevitably impart to them their own values and anxieties. The school systems are as subject as other sources of livelihood to organized pressures for protection of status, job security and expansion of employment, particularly in administrative posts. Reforms that seem to threaten the interests of any specialized group of teachers or administrators are resisted, usually through political channels. At the same time, efforts to rationalize the expansion of the educational systems are countered by continual pressure for special pro-

<sup>16</sup> See *Education and development in Latin America: bases for an educational policy* (UNESCO/MINEDECAL/7), para. 135; and *The Instrumentality of Education Systems*, op. cit.

<sup>17</sup> A study in 1961 of secondary students in Montevideo, a city in which young people from the working classes have relatively equitable opportunities to enter secondary school, indicates wide differences in rates of wastage and also in final examination standings according to the occupation of the father. Among first-year students in the *liceos*, 19.2 per cent came from families of skilled workers and 3.3 per cent from labourers' families. In the fourth year the corresponding percentages had dwindled to 5.3 and 0.4 (Aldo E. Solari, *Estratificación social y rendimiento liceal*, paper presented to the VII Latin American Congress of Sociology, Bogotá, July 1964).

grammes and new local institutions, often well-meant and desirable in themselves, but unrelated to priorities and in practice contributing mainly to the creation of new jobs and the complication of the administrative apparatus. The present proliferation of new universities and specialized schools in response to local or sectoral initiatives, without regard for the objectives of training or the availability of qualified staff, material resources and students, is one important facet of this problem. The planning agencies themselves are far from exempt from the pressures toward bureaucratization that derive from the educational experience and occupational aspirations of their staff.

The above considerations do not mean that the middle strata should be accused of deliberately monopolizing and distorting educational opportunities. Their position is difficult, particularly in the countries in which they are already numerous while economic growth is lagging. The burden of educating their children above the primary level can be very heavy, and the resulting opportunities for upward movement in status and income are likely to be increasingly disappointing within the occupational areas on which they have concentrated up to the present. Now that they have a greater chance of completing their secondary education, they are finding it particularly difficult to move on to universities, as the latter either have not expanded rapidly enough to take in the increasing numbers formally qualified to enter, or have thrown up their own barriers to screen out the products of depreciated secondary schooling.

There is also the influence exerted by the students themselves. These, whatever their social origin, constitute groups not yet committed to the existing status and occupational order, which are stimulated by their own adolescent drives to take up a critical or rebellious attitude, and are highly important both for their numbers and their concentration in urban institutions. Their potential as a force for social change is limited, however, by the fact that the obvious unrest among them at present seems to correspond to an unresolved mixture of several ways of coping with the future. One method is the exertion of organized pressure to make the secondary and higher institutions conform to their own limitations of resources and earlier schooling in the hope that education will nevertheless produce its traditional material rewards.

Other problems derive from the rapidity with which intermediate and higher enrolment rates have been increasing in the past decade, i.e.,

over 10 per cent annually. This not only far exceeds the rate of population growth but also the rate of economic growth. When divorced from effective manpower planning and quality control of education, this rate of increase is liable to lead to unemployment or to the underutilization of the educated. Up to now, this phenomenon has been less conspicuous in Latin America than in parts of Asia and the Middle East, but there are signs that unemployment among the educated is on the increase in Latin America as well. The character of the "explosion" that is bound to result from the contradiction between the uses to which education is put and the absorptive capacity of the economies will largely depend on the ability of the urban middle strata, including the students themselves, to understand what is happening and formulate different objectives for their own education.

### 3. RURAL EDUCATION

The education that is being offered to the rural population appears to be remote from the pattern described above but in reality is dominated by it. For the most part, the rural school has been an exotic and sickly import from the cities, deriving from national policy rather than local demand. The small farmer or rural worker might want education for his children, but until quite recently he could exert virtually no influence on the supply of schooling or its content. The geographical coverage of rural schools has gradually expanded, but with the really forceful demands for education coming from the towns, these schools have continued to be copies of the first two or three grades of urban primary schools. Central Government attempts at planning and the fixing of standards have done little to overcome these weaknesses, in part because of the lack of material resources and qualified teachers to back up the plans, in part because of the remoteness, both geographical and cultural, of the authorities from the rural population and in part because of the incompatibility between rural economic, social and political relationships and mass education.

In some of the more traditional rural areas in which effective agrarian reform has not begun, and most people are either resident workers on large estates or *minifundio* cultivators, three alternative trends can be envisaged for the schools:

(a) Their growth can be stunted and sterilized by existing conditions, so that the privileged position of the local upper strata is consolidated and the rural-agricultural population is discour-

aged from trying to make use of schooling that is irrelevant to its needs;

(b) Their growth can bring about a change in the existing structures, by creating aspirations that cannot be satisfied within them, by giving the rural people tools in their efforts to organize and relate themselves to national political life, and by stimulating them to move out of the rural-agricultural environment altogether;

(c) Their growth can be linked with wider movements for rural advancement, giving support to measures of land reform, community development and provision of public services, and receiving support from them in their turn.

Up to the present, the first two roles, frequently in contradictory combinations, have been the general rule. The oft-described poverty and truncated courses of the rural schools correspond to the exclusion of the rural population from participation in the national society, but even schools of this kind have done something to promote discontent with the traditional lot. As unions of farm workers and political movements begin to penetrate the countryside, and land reform looms larger, more insistent and specific demands for rural education are heard.<sup>18</sup> Meanwhile, experimental rural school programmes in many countries have at least provided experience in techniques for the kind of education capable of assuming the third role.

Since low labour productivity in agriculture and unmanageable flows of migrants to the towns are two of the most notorious regional problems, it is natural that proposals should be made for a rural education focused in agriculture, with a higher school entry age than the standard for urban education. For many reasons, however, the task of equalizing rural and urban education can hardly be evaded in this way.<sup>19</sup>

1. Whether or not more satisfactory rates of growth are attained in agricultural production, the demand for agricultural labour cannot be expected to increase in step with the growth of the rural population. In most countries between one third and one half of the children living in rural areas can be

<sup>18</sup> Several observers have commented on the pressure for better local schools exerted by the farm workers' unions of Bolivia and their vigilance over the performance of teachers. In various other countries, rural groups have built their own schools and even hired their own teachers if unable to obtain teachers from the national authorities.

<sup>19</sup> Thomas Balogh, "Land tenure, education and development in Latin America", and Alvaro Chaparro, "Education and training for agricultural development", in *Problems and strategies of educational planning: Lessons from Latin America*, op. cit., set forth alternative approaches to rural educational policy.

expected to move into non-agricultural occupations. What they really demand of the rural schools is that they should prepare them for life in the national society, and give them a basis for further formal education or for training on the job, but the rural primary school cannot distinguish between the children who will leave the land and those who will stay.

2. For the group remaining on the land, the central long-term need is not for the kind of simple agricultural instruction that can be given in the primary schools. Within the traditional rural structures, such teaching would be almost irrelevant, and it must be assumed that future agricultural development will mean, on the one hand, an increase in the number of economically viable family farms and, on the other, modernization of large holdings, whether under individual ownership, co-operatives or other forms of tenure. Both trends will require rural workers able to operate machinery and ready to absorb new techniques from the printed page, radio or practical demonstration. For these purposes, what can reasonably be asked of the primary school is that it should give functional literacy, some acquaintance with mechanical principles, a consciousness of the possibility of technical change and progress, and an awareness of the sources of new information. Rural teachers are in general poorly qualified to carry out these minimum tasks of primary education, but it is more feasible to qualify them for such tasks than to convert them into effective instructors in agricultural techniques.
3. Primary education concentrated on agriculture would meet with strong resistance from the rural inhabitants themselves, largely because of their awareness of the factors already mentioned. They would have good reason to assume that such education would not be of much practical use under the conditions in which it would filter down to their children, and they would expect it to perpetuate their inferior position in the national societies. The rural population now demands education, first, in order to know how to defend itself and take the initiative in rural society, and, secondly, as a means by which their children can escape from agricultural labour.

Effective rural school attendance for the standard primary period of six years—let alone the longer periods of universal general education now being proposed—will place a heavy

burden on the parents, in view of the continuing importance of child labour in agriculture, even if the incidental costs of school attendance are kept to a minimum. The parents will naturally expect their sacrifices to be rewarded in terms of higher status and earning power for the children. If the rural economies become more dynamic a considerable expansion of local employment requiring education and mechanical skills can be expected—truck, bus and tractor drivers; repairmen for machinery; better-paid rural school teachers. Positions of local leadership needing education will also become more numerous and attractive—municipal officials, co-operative and farm workers' union chiefs, political party spokesmen and organizers. If real opportunities do not expand, however, the educated rural youth can hardly avoid being drawn into the pattern of competition for urban white-collar employment.

Very few rural children are at present within geographical range of any kind of post-primary school. Any increase in the number of such children able to obtain a complete primary education is bound to be followed by an upsurge in the numbers seeking further schooling. If their needs cannot be met locally the result will be a higher out-migration rate for the young people who are best qualified and whose parents can help them to pursue their studies in the towns. Few of them will return, even if unable to realize their educational aspirations.

The case for schooling directed toward agriculture and related occupations is stronger at the post-primary than at the primary level, since it should be practicable to select the young people more likely to remain on the land. If agrarian reform is effective, there will be a demand for full-time intermediate level courses teaching not only agricultural techniques but also the allied skills needed by the modern farmer or farm manager (accounting, operation and maintenance of machinery, assessment of marketing alternatives, etc.). Even under such circumstances, however, full-time schooling may not be the most important or effective way of training future farmers.

The greater part of the rural population of Latin America lives in tiny hamlets that are too small to support more than a one-teacher primary school, or else are scattered by single families. Although present national policies commonly envisage the concentration of rural families in larger settlements, the actual trends seem to be more commonly in the direction of greater dispersal and impermanence of dwelling places. Improvement of roads and bus transport

will gradually enable the children from a sizable proportion of these families to be brought together in larger schools, but they will have to depend for their post-primary education on the small towns that are administrative centres of *municipios*, marketing centres or the seat of local branches of technical services provided by the national Governments. In the past, most towns of this kind have filled the role of community centre lethargically or oppressively, monopolized whatever public services were available and prided themselves on their superiority to and detachment from anything rural. But now, they are tending to lose the few functions they have carried out, as communications improve, local markets dwindle in importance, and the youth of the small-town upper and middle strata migrate to the towns.

The selective revitalization of these small towns is desirable for two reasons: (a) vigorous local centres are needed to provide the rural-agricultural population with services that will bring their levels of living closer to those of the towns; (b) the creation of employment opportunities in such centres can hold back part of the wave of migrants now flooding into the great cities of the region. Policies for the revitalization of small towns would certainly include the establishment of intermediate level schools of a calibre similar to those of the larger towns, which would be open to rural youth and whose curriculum would be aimed at meeting local needs for specialized skills. If the schools are set up without the simultaneous implementation of programmes that will ensure the expansion of local demand for such skills, they will naturally stimulate rather than counteract the process of out-migration. In this area of educational policy, consumer demands on education from the local upper and middle strata are liable to be particularly obstructive. Over large parts of Latin America, however, the desertion of the small towns by these groups and their replacement by mobile elements from the rural lower strata are creating new possibilities as well as new problems.<sup>20</sup>

#### 4. EDUCATION AND THE "MARGINAL" POPULATION

None of the countries attaining *effective* universal education in the past have faced, on a scale comparable with that indicated by present Latin American population trends, the problem of adapting education to the needs of "marginal" masses, although some of these countries are still struggling with such problems

<sup>20</sup> See "Rural settlement patterns and social change in Latin America", *Economic Bulletin for Latin America*, vol. X, No. 1, 1965.

in relation to minorities. *Marginal status* is compatible with strongly felt needs for education; indeed, some marginal families seem to invest exaggerated hopes in education as an avenue toward higher status for their children, and appreciable proportions of low-income families that have been questioned about reasons for migration to a city mention the attraction of better urban educational opportunities. Such aspirations are probably far from universal, however; investigations indicate that a good many marginal families are too resigned, disorganized, or preoccupied by problems of food and shelter to give much thought to education. Most of the urban marginal families, unlike rural families, are within range of complete primary schools and even secondary schools, though rarely within easy distance of the latter. At the same time, marginal families are handicapped in taking advantage of the education offered, to such a degree that most of their children do not finish primary school. The main difficulties can be summarized as follows:

(a) The most obvious handicap is the incompatibility between family levels of living and extended schooling. The nutritional and health situation of the children from marginal families is usually poor. The very high levels of fertility that prevail in these strata—urban as well as rural—limit the parents' capacity to provide adequate support for their children; even clothing required for school attendance may be lacking. The clash between school attendance and activities contributing to the family livelihood is not so generalized as in the rural areas, but is undoubtedly important, in spite of laws in almost every country in the region prohibiting employment of children below the age of 12 or 14.

(b) The geographical mobility of the rural marginal population—and to a lesser extent of the urban—interferes with continuity in education and conflicts with efficient use of permanent educational installations. The construction of schools almost always lags behind the growth of the low-income urban peripheral settlements. Their primary schools are naturally overcrowded and of poorer quality than those of other urban zones. Home conditions practically prevent study outside the schools (in which double or triple shifts with abbreviated hours of instruction are typical).<sup>21</sup> Young people completing primary

<sup>21</sup> In interviews conducted recently in a low-income urban settlement, teachers emphasized the influence of paternal unemployment, undernourishment, and overcrowding on performance in school. (*Los servicios públicos en una población de erradicación*, E/LACCY/BP/L.2/Add.2.)

school under such disadvantages have to go long distances from their homes to secondary or vocational schools, where they must compete for places with better-prepared and better-off urban youth.

(c) As the child from a marginal family—or even from a relatively well-off working-class family—progresses beyond the first few primary grades, he is faced with various difficulties because the school system is dominated by the values of other social strata. Teachers and students from the middle strata are likely to be prejudiced by his social origin. His parents' educational level is too low for them to help him in his studies, as is usual in other strata, or to help him make sound choices concerning post-primary studies. The absence in his family of reading matter or the habit of reading, and the usual dependence on the radio for entertainment and information, further handicaps him in settings in which reading ability is of primary importance. The content of schooling, directed even from the primary level toward the academic secondary school and the university, is unrelated to his background or to his probable occupational opportunities.

The school systems have begun to apply a number of measures designed to make education more accessible and useful to children from low-income or marginal families. These include school meals, school health services, employment of trained social workers to maintain contact between the school and the child's family and find remedies for domestic obstacles to school

attendance, employment of education and vocational guidance specialists, etc. Such measures have been introduced piecemeal, frequently deriving from external offers of aid (particularly in the case of school meals); it does not appear that in any country as yet they respond to a comprehensive plan fixing priorities for complementary services and based on a study of the problems of low-income families in specific settings.

A realistic calculation of the costs of bringing *effective* education to the low-income strata cannot be limited to the direct costs of school buildings, supplies, and teachers; the costs of complementary services on a much larger scale than at present would have to be included. At the same time, the extent to which the educational system can advance ahead of progress in other sectors has its limits. The shortcomings of education for the low-income strata are not only problems with their own unique characteristics and sectoral remedies; they are also symptoms of wider deficiencies in the economic and social structures, and can hardly be resolved without simultaneous attacks on the problems of marginality, poverty, employment and levels of remuneration on several fronts, comprising—in addition to the expansion of production and the enlargement of markets, which are basic economic objectives—the expansion and diversification of employment opportunities and the strengthening of popular organizations able to participate effectively and rationally in the national debate over development policies, including those relating to education.

## V. CONCLUSIONS

Two kinds of conclusions can be drawn from the ideas expounded in this paper. First, there has been a reaffirmation of some of the general opinions that have been expressed recently as to the quantitative scale of the effort to be made, the need for radical changes in the structure of the educational system as well as an extension of its coverage, the roles to be played by the various means and instruments of education and training, the best ways to fit education to meet the social aspirations of different population strata, the efficiency of the present system and the degree to which its efficiency must be increased. The tentative nature of this type of conclusion is due, in some cases, to the lack of data that are full and accurate enough to act as a basis for more specific proposals on the kind of action that ought to be taken in

the near future. Secondly, some pre-eminently methodological issues have come to loom even larger than before, such as the way in which the question of human resources is to be dealt with in over-all planning, the substance and methods of educational planning, the need for information and the best way of systematizing the collection of data.

### 1. GENERAL CONCLUSIONS

#### (a) *The economic and social context*

In Latin America today, educational activities must do more than simply bring about a quantitative expansion in the existing system. There are obvious signs of incompatibility between the system as it stands and the economic and social requirements of the region, and its



objectives and method of operating often have their frustrating aspects even for those who are able to reach the higher educational levels. Unless the system is radically overhauled, its conflicting elements and general inadequacy will become even more marked in the near future.

In the course of the next fifteen years, the regional domestic product will more than double even if the growth rate remains fairly low. This expansion will inevitably be succeeded by far reaching changes in the economic structure and social environment in which it takes place. Latin America will have to come closer to being an industrial society; the shift in the proportions of its urban and rural population will probably lead to a redefinition of the functions of urban centres and of their relations both to one another and to the areas on the periphery; the different sectors and levels of economic activity will have to assimilate new technologies far more thoroughly if the sharp discrepancies in current productivity are to be lessened; the more obviously backward areas of the economy, such as agriculture and certain services, must be modernized; the clamour for a more equal distribution of the benefits of development will increase; a fairly advanced stage of regional economic integration will probably be achieved and the long-standing pattern of Latin America's trade with other areas of the world is likely to alter considerably.

These and other foreseeable changes depend to some extent on educational activities, but will at the same time exercise a powerful influence over their future course. The planning of education should therefore be closely associated with general development policy to a much wider extent than the mere harmonization of the education appropriation with other budget provisions.

#### (b) *The extension of primary education*

The characteristics of a more industrialized society, in which income distribution is more equitable and all sectors of the population take an active part in national life, necessitate the extension of primary education on a much wider scale, through measures to make it really universal and to provide for the proper number of years of schooling. Moreover, this very extension is essential for the different levels and types of training needed to facilitate the widespread absorption of techniques in the different economic sectors and to ensure higher levels of productivity and efficiency.

In the face of those requirements, there should, however, be due recognition of the wide variety of situations that exist and will exist in the Latin American countries as regards their relative stages of development, the structure of their population and their ability to mobilize the necessary resources. The present relatively low rate of school attendance and the foreseeable increase in the population of 5-14 years of age from 60 million in 1965 to over 90 million in 1980 will call for a proportionately greater effort from the less developed countries of the region, which are naturally less well equipped to make it.

#### (c) *The introduction of more technical subjects into secondary and higher education*

The expansion of primary education will have to be accompanied by a substantial and proportionately larger increase in secondary education, in view of the lesser scale on which the latter has developed. Such action, however, would have little result and would run considerable risk of being frustrated unless the system was basically re-oriented at the same time. Certain Latin American countries are already facing a serious problem in that a large proportion of secondary school graduates have no access to the university after following a course of studies whose main purpose is to prepare them for university training. It will not be long before the problem spreads to other countries and is seriously aggravated by the expansion of secondary education along its present lines.

The consequent need for re-orientation is fully consistent with future development requirements in terms of different levels of professional and vocational training, the educational profile of the labour force being adapted to the progress and structural changes taking place in the Latin American economies. The resulting introduction of technical subjects from a certain level of secondary education onwards would gradually correct one of the most serious shortcomings in the existing structure of training, which causes certain technical functions to be carried out by inadequately trained personnel or by highly qualified professionals whose skill is largely wasted.

The same considerations apply to university training. At the higher levels, more relative importance will have to be given to particular groups of professions that are most directly linked with advances in modern technology and scientific research. It will also doubtless be necessary to train more intermediate-level professionals by means of shorter courses at the

university level, in order to increase the supply of properly trained human resources more rapidly and efficiently, and to improve the very unfavourable relations existing today between high-level and intermediate-level professionals.

As future development policy becomes more clear-cut, the steps taken can be directed not only towards a satisfactory grading of the professions and specialties that already form part of educational programmes, but also to the inclusion of others in response to new and foreseeable requirements. To mention only one of the many relevant factors, land reform, for instance, will generate a greater demand for special qualifications in technical, social, administrative and organizational aspects.

(d) *The integration of training within and without the school system*

The scale of the effort required in education and training as manifested by Latin America's development prospects and needs for the next few years entails careful consideration of the contributions that can be made through the various systems. It is clearly impossible to satisfy all the direct and indirect educational and professional or vocational training requirements without highly effective co-ordination between the school system offering a general education, professional training within the educational system and training and specialization outside it.

The latter, although operating on a piecemeal basis, has in recent years come to play a highly important role in several countries of the region, especially in the training of industrial workers. However, it is still far short of covering the whole range of possibilities, both in quantitative terms, and in its scope, which should be expanded to include suitable training programmes for a wide variety of levels and professions from semi-skilled workers to highly specialized professionals.

It is inconceivable, however, for this informal system to be able to play such a role without forging much closer links with professional and vocational schools and even university centres. Hitherto, the former's contribution to such training has tended to be marginal, being confined to the use of their premises and the collaboration of their teaching staff on a very unsystematic and temporary basis, without the formulation of larger-scale programmes that would represent the contribution of a formal education specially designed to supplement other forms of training on a regular basis. The same observation is applicable to the universities, mainly in relation

to higher formal education that would supplement other professional training programmes.

All this would entail far-reaching changes in the present situation, which is notable for the tenuous connexion between education and training within and without the formal system. This is partly due to the institutional dispersion of informal services and to their approach, which consists in meeting the most urgent needs of particular economic sectors, as well as to the fragmentary conception of the functions pertaining to the formal and informal educational systems, which is not always free from a certain underestimation of the latter's importance or from a tendency to assign full responsibility to it in fields where the formal system should also play a more active part.

The same piecemeal approach to the problem has been discerned in educational planning. In general, this has been confined to the school system proper, without expressly defining the contribution or functions of training provided outside the system, the links between the two or adequate forms of co-ordination and technical control. Accordingly, the first urgent step would seem to be a broader definition of the actual concept of educational planning to extend its scope beyond the general school system to embrace the whole question of human resources training, including the professional training given as part of that system and the training and specialization offered outside it.

(e) *The grading of technical functions*

The re-orientation of education with a view to intensifying technical training, particularly at the secondary level, is not merely a question of adapting the educational services to provide a growing proportion of the population with that type of training. Although this would meet obvious economic development needs, it would conflict with traditional values and social aspirations, which are still identified with more "academic" types of training. Such attitudes are unlikely to change very rapidly, at any rate until it becomes obvious that the university centres are unable to find room for a fairly large proportion of the persons graduating from general secondary schools, and the faster the quantitative expansion of secondary education the sooner this will happen.

In the meantime, these social value judgements seem to be reflected in the levels of remuneration as well. There are usually marked differences in income between high-level and intermediate-level professionals, a fact which discourages any increases in demand for the

latter type of training and, in some cases, leads to the emigration of that level of professional on an extensive scale.

Hence, the need to grade technical functions involves changes in wage policy itself, which is yet another example of the degree to which effective educational planning is dependent upon proper integration with the different aspects of over-all development policy.

(f) *Mobility within the educational system*

The previous question is also linked to the degree of mobility that is contemplated for the educational system itself. So long as each stage of general education is the indispensable and sole requisite for the ensuing stages up to university training, and intermediate technical or professional training are considered to be "closed" careers, it will be difficult to interest a larger proportion of the population in them.

It is therefore very important that, in defining the structural changes that are required in the educational system to bring it into closer line with development needs, a study should be made of the ways and means of ensuring the greatest possible degree of mobility within the system, and thereby avoiding dead ends for capable persons whose abilities would justify their access to higher levels of professional training.

(g) *Cost and efficiency of the system*

If the quantitative expansion of education and training on the scale indicated in previous sections is measured against the indicators of the present costs of the system, it will no doubt be concluded that very heavy additional expenditure is involved. The estimate of the extra funds required will be even higher if allowance is made for the fact that structural changes of the kind described entail a relatively greater expansion of the more costly types of training, such as technical courses.

Moreover there is the fact that over-all expenditure on education already represents relatively high proportions of the national product and public expenditure. These proportions would be even higher if the expenditure on training outside the educational system were properly estimated, including the almost incalculable outlay on professional and vocational training and specialization "on the job" and the equivalent of personal contributions for educational purposes in the shape of the time spent in studying by adults and adolescents of working age. Even for the first type of expenditure only, it can easily be seen that an increase on that scale will be difficult to re-

concile with other legitimate development needs giving rise to similar demands for the allocation of larger resources.

This may well be one of those problems which educational planning will have to do most to solve, less by working out a better "case" for education in the competition for more resources than by promoting the maximum productivity of the resources already assigned to education. There seems to be a fairly widespread consensus that the school system can be made much more efficient and its per capita costs reduced. An increase in the retention rates alone would mean a considerable drop in unit expenditure in relation to the number of persons completing each stage of education. There also appear to be certain possibilities of introducing "economies of scale" in the use of educational facilities—laboratories and other teaching media, including certain technical courses—which could function separately or be combined according to the needs of educational centres. At other levels, a proper co-ordination along broad and clearly defined lines would avert the danger of duplication and enable the resources earmarked for research to be used to much better purpose. No less promising seem to be the possibilities held out by the effective integration of school and outside training, which would make it possible to choose the most suitable training methods for certain specialties, and avoid excessive fragmentation in university studies and intermediate technical schools.

What have been indicated here are just a few of the many lines of action that can be visualized. The important point is that one of the most arduous and pressing tasks to be faced by future educational planning activities will be to reconcile the overwhelming demand for the expansion and reform of the educational system with disbursements of funds that are highly unlikely to increase on a comparable scale.

## 2. METHODOLOGICAL CONCLUSIONS

### (a) *Over-all planning and human resources*

Some of the general conclusions that have just been outlined can also be expressed in methodological terms, particularly in so far as general planning, human resources and educational planning are concerned.

#### (i) *Planning of human resources*

The fact that the planning of human resources is a fairly recent innovation explains the exist-

ence of different schools of thought, each based on a different body of experience, with respect to the concept of human resources and the scale of the programming required for them, the right place for the planning agency for human resources in a national economic and social planning system and the functions and activities of the specialists in this subject.

The variety of views held becomes even more evident when an attempt is made to define the planning of human resources: (1) it is regarded as synonymous with the concept of social development, or, in a narrower sense, with the programming of certain social sectors such as education, health, nutrition and housing; (2) it is regarded as equivalent to the planning of education and professional training at all levels, with the shortage of trained manpower and the targets and methods of remedying this as its main points; (3) it is also considered to be tantamount to employment programming, with the provision of jobs for surplus unskilled labour as its central point; (4) finally, it is viewed as a body of studies on manpower and the consequent establishment of targets and means for absorbing unemployed and under-employed manpower required for development programmes and projects, that is, the optimum utilization of human resources within the framework of general planning and sustained and rapid economic and social growth.

(ii) *Relations between the planning of human resources and educational planning*

In this connexion, the planning of human resources is one of the facets of over-all planning and, apart from its intrinsic importance, provides a link between the goals of educational planning and general development policy. The work of educational planning thus ceases to be independent of over-all planning and becomes yet another case of planning for one sector which, however individual its characteristics, must be dovetailed with the body of targets established and the means whereby they are to be attained.

In other words, educational planning must be fitted into the framework of planning as a whole, as regards both the allocation of resources and the definition of targets. In relation to the former, it will have to compete with the funds claimed by other activities and be ultimately given its place in a list of national priorities covering the requirements of every sector. With respect to the co-ordination of its targets with the rest of the system, those deriving from the social and cultural objectives of education as a social institution should be coupled

with those originating in the more direct requirements for the training of human resources for development purposes.

It is precisely in the latter connexion that the need to plan human resources is most obvious. If the labour requirements that spring from general plans are clearly specified in keeping with employment policy, it becomes easier for educational policy to state its targets and decide on its priorities for funds in accordance with the goals and means established for the other economic and social sectors.

(iii) *Experiences in the planning of human resources*

An examination of development plans shows that not only has little use been made of techniques for estimating the manpower supply and requirements, but that scant attention has been paid to the mechanisms and instruments of action that can be mobilized to ensure that the manpower available is being used efficiently and that supply and demand, particularly for skilled labour, are in proportion to one another, both qualitatively and quantitatively.

An analysis of these mechanisms and instruments will necessarily be piecemeal and incomplete, since they are studied separately without regard for their interrelationships or for the compatibility of a measure proposed in one field with another that is convenient in a different area. It frequently happens that policies for training human resources are not in line with those for improving the use of such resources.

Much the same occurs in connexion with training institutes. The studies and plans for the formal educational system are unrelated to those for training outside it, such as intensive professional or vocational training and the apprenticeship system. So much so that the first are dependent on the Ministry of Education while the second are directed by a variety of autonomous bodies that have little connexion with the Ministries.

The problem becomes even more acute in the case of technical and professional training. Institutes providing facilities of this kind that are part of the formal system and answerable to the Ministries of Education have little or no connexion with the same types of training offered outside the system.

As indicated in point (d) of the general conclusions, both systems should be co-ordinated and integrated in an over-all plan, since educational systems have no reason to be competitive but should, on the contrary, complement one

another as part of the national educational effort. This is all the more important in view of the need to rationalize training systems in order to avoid wastage of resources, the importance of outside training for the people who have been unable to enter the formal educational system, and the added flexibility of such training services which enables them to overcome certain obstacles in a shorter space of time without thereby eliminating the need for raising retention rates and increasing the number of years that the students remain within the formal school system.

(iv) *The organization of human resource planning*

The comments made above lay stress on the role of human resource planning and its importance as a more appropriate framework for educational planning. In spite of the importance of this subject, however, the approach to it in Latin America has been *ad hoc* and unsystematic.

To sum up, it is advisable that greater continuity and priority should be given to the task of planning for human resources, and that key groups of specialists should be set up to deal with it on a permanent basis. These nuclei might be established in the central planning offices or at the sectoral or regional level in the national planning systems.<sup>22</sup>

(b) *The basic data required*

With the growing awareness of the urgent need for the systematic planning of education and human resources in the light of over-all development policy, the difficulties caused by the dearth of sound basic statistics on the subject in Latin America are becoming increasingly evident. The number of estimates or even simply hypotheses that have had to be made on essential aspects of the present situation in the course of this very document demonstrate the nature and magnitude of the gaps that have to be filled. The deficiencies are equally marked in general data on employment, the educational profile of the population and the education offered by the existing systems.

Census findings, which are one of the main sources of information on these questions, may

take several years to publish. In fact, the complete results of some of the censuses made in 1960 are not yet available. Then, too, the tabulation of the crude data collected is usually organized on the basis of routine criteria rather than with the aim of carefully following the needs of interpretation and analysis. The result is that significant material is lost or relegated to second place behind other less important items. During the inter-censal periods, that are often quite long, no attempt is made to remedy the consequent gaps in the flow of data by providing regular information through other channels.

Not even reasonably approximate orders of magnitude have been estimated for concepts such as that of under-employment, that are particularly important in Latin America at its present stage of development.

So far there is no adequate information available on the educational profile of the Latin American population, in terms of the total, the active population or specific professional categories. The number of professionals in the labour force is not known in most of the Latin American countries, and, where it is, the figures are far from reliable. No basic data are available for measuring the professional structure against remuneration levels and wage policy, and no regular information is issued on the labour market which could be used to pinpoint the imbalances between the different kinds of professional and vocational training and the immediate requirements of the economic system. What is more, the very "supply" of the existing educational system cannot be assessed with any degree of precision. Although enrolment figures can be obtained by broad educational levels, it is not always known exactly how many students leave every year at each level. The information available on professional and vocational training services outside the formal system is very general, and fails to make a clear enough distinction between the different kinds of training for each one to be properly evaluated.

In the circumstances, it is not surprising that no comprehensive and systematic analysis should have been made of human resources and the present state of education.

It is therefore vital that steps should be taken to establish a steady flow of information that will eventually become a fundamental tool in educational planning. Over the long term, statistics on human resources will be needed to replace the piecemeal and scattered information used today by a basic set of estimates that will enable a start to be made on the planning of

<sup>22</sup> There might be, for instance, a system of human resource planning that would gradually incorporate: (a) a specialized section on human resources as part of general programming within the Central Planning Office; (b) persons responsible for questions of human resources in sectoral planning agencies, belonging to the Central Planning Office, Ministries or other bodies; (c) university institutions and other bodies for study and research on economic and social matters.

human resources and education in its true sense. This does not imply that a complete body of information must be available before planning is initiated, but that the two activities should be pursued simultaneously to ensure their progressive development.

(c) *Criteria for systematizing data*

An important requisite for facilitating statistical work is the clear definition and standardization of a set of criteria for the systematization of basic statistics.

In the first place, this relates to the actual classification of occupations. The main problem in determining the different categories of manpower concerns personnel whose training requires a comprehensive basis of appropriate knowledge and skill to carry out complex functions. It is this type of training that should be classified as *professional*, and differentiated from a simple occupational specialization for which the only requirement is a general education.

The industrial development process calls for increasingly systematic professional training for the labour force, including operatives. The work done by operatives, although fairly simple, entails more and more responsibility owing to the high cost of equipment and the increasingly complicated working methods. Accordingly, the training of these workers should be based on an acceptable educational level to enable them to understand up-to-date techniques. Practice alone is not enough; what is required is systematic instruction in the relevant subjects.

It is therefore concluded that the general system for classifying manpower should be in line with a combination of criteria that would include at once professional levels, types of functions and specific occupations.

As the criterion for professional levels corresponds to educational levels, it should constitute the point of departure for the classifications system. The criterion governing type of functions is useful, especially in those cases where the workers' functions do not correspond exactly to clear-cut professional levels, or where they actually form a compound profession and specialization is obtained through additional training.<sup>23</sup>

<sup>23</sup> This would apply to high-level managerial and administrative personnel who combine technical and administrative professions. At another level, there are the functions of a universal character which require either fairly simple professional training or some basic training to be followed by occupational specialization on

Both are important criteria for human resources planning, and should, in practice, be combined in a system of functional-professional classification.<sup>24</sup>

This or any other classification would also have to be combined with a classification by sectors of economic activity. Thus the occupational classification would result from crossing the functional-professional classification with the classification by sectors of economic activity.

For the purposes in mind, this type of systematization would, however, still not suffice. It would also be necessary to obtain the educational profile of the occupational categories concerned. This would not be required if the professional criterion was sound enough for each professional level to correspond to an educational level. Since this is difficult to achieve, and there is a lack of compatibility, in practice, between the professional level and the relevant training requirements, the educational profile is essential in order for analysing the educational level of the employed population, thus becoming an indispensable instrument in educational planning and its integration with the planning of human resources and over-all planning.

Practically speaking, the above considerations demonstrate the need for well-defined professional degrees at all levels of the labour force, so that professional levels and functional descriptions are clearly established.

In any case, all these criteria for standardization should be carefully studied and formulated in conjunction by those responsible for the planning of human resources and educational planning proper.

The foregoing comments are merely a few examples which reaffirm the need—also present in the methodological field—to intensify the planning of education and of human resources through co-ordinated action within the context of over-all development planning.

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the job. Thus, there is in fact some degree of horizontal employment mobility, or interchangeability of work (routine office workers, services personnel or a certain category of technicians engaged in practical work).

<sup>24</sup> A functional-professional system might consist, for instance, of the following categories:

1. Administrators, directors and owner-managers;
2. High-level professionals;
3. Intermediate-level professionals;
4. Independent operatives;
5. Routine operatives, office workers and salesmen;
6. Technicians and highly skilled operatives;
7. Skilled technical operatives;
8. Semi-skilled technical operatives;
9. Services personnel;
10. Non-skilled workers, apprentices, etc.

As part of these efforts, special attention should be paid to methodological research and to the training of professional cadres to work in these fields, in order to equip the instruments of human resource planning and educational planning for dealing with the conditions of the

region as a whole and of each one of the Latin American countries. Viewed from this angle, it is clear that an interdisciplinary approach is the only way to tackle the whole complex of problems posed by the economic and social development of Latin America.

# ECONOMIC PLANNING IN BRAZIL AT THE LEVEL OF THE STATES\*

## INTRODUCTION

The most remarkable feature of Brazil's experience in the field of planning consists in the proliferation of sectoral, regional and state projects and agencies. In the mosaic resulting from the spontaneous emergence of innumerable planning efforts, the pieces are all detached from one another. The extent to which this many-sided process is peculiar to Brazil can be seen yet more clearly in the light of parallel developments in the other Latin American countries, where the planning of production resources and the corresponding institutional machinery are confined almost entirely to the sphere of the central government. At all events, in line with varying institutional patterns agencies have been set up to direct the technical preparation of a plan or to serve as the main instrument for the channelling and supervision of the investment programmed. Although various criticisms have been levelled at the way this procedure works in practice—including, for instance, the objection that it is a typical form of organization "from the top", which does not establish direct contact or means of communication with the ramifications and the periphery of the economic and social system—the technical problems involved are obviously of a relatively simple kind.

Planning in Brazil has assumed quite a different aspect, and has evolved on different lines. Until a very few years ago it was not primarily characterized—except in the case of sectoral programming for a few basic infra-structural activities—by a centralist approach.

Two major movements are observable in its evolution, one from the periphery to the centre,

and the other—more marked of late—starting from the centre and aiming at fusion and integration with the first.

This situation, unique of its kind in Latin America, has its origins both in the continental dimensions of Brazil and in the relatively polycentric character of the country's previous development, stemming in its turn from the various primary-economy sources of production, which gave rise to more or less vigorous and permanent focuses of expansion throughout the Brazilian territory.

Admittedly, this factual and historical basis, with its inevitable implications for the establishment of an integrated planning system, confronts Brazil with problems and difficulties much greater than those deriving from the approach prevalent in the other Latin American countries. The advances attempted at the centre and on the periphery must keep pace with one another, so that distortions may be averted and the requisite fusion may be achieved within a reasonable length of time.

Nevertheless, however formidable the challenge, if a satisfactory response to it springs from the diversified experience described, the outcome may be a planning system that is more alive, more deeply rooted in the national economy. This avenue of approach will certainly make it possible to by-pass or minimize problems deriving from the over-centralization which is now inducing some countries to delegate decision-making to subsidiary bodies, in an endeavour to relieve the congestion in the central planning nuclei.

Progress on both fronts at once, and the preservation of a proper balance between the two movements, have become more essential than ever in the new circumstances attending Brazil's development, closely linked as they are to those characterizing other Latin American economies at the present time. In effect, after decades of active industrial development and diversification of the structures of production, the relative polycentricity characteristics of the primary-exporter growth model have been modi-

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\* Under the sponsorship of the Banco Nacional do Desenvolvimento Econômico and the ECLA/BNDE Centre, a first seminar on state planning in Brazil was held last year. It was attended by representative of the planning authorities and of the financing and development agencies of almost all the Brazilian states, as well as by delegations from federal and regional agencies. The many background documents presented at the meetings were subsequently handed over, in accordance with a decision adopted by the organizing institutions, to a group of their own economists; and it fell to Mrs. Maria Conceição Tavares and Mr. Antonio Castro, economists from the ECLA/BNDE Centre, to prepare a summary of the main ideas, problems and experiences discussed, which has taken the shape of the article published here.



fied. In Brazil, as in other countries and in the world economy, the advance of the industrialization process has gone hand in hand with an unmistakable trend towards the concentration of technical progress and of the resulting social benefits. There is reason to believe, in the light of what has happened in Latin America and elsewhere, that this tendency will become more marked in the course of time, if it is merely left subject to the spontaneous action of economic forces and organized pressures, and is not systematically and rationally controlled and rectified by economic policy. In other words, there can be little doubt of the necessity for efficacious decisions and action in the fields of policy and administration, both at the centre and on the periphery, to check the development of disequilibria and promote a growth model that will strike a better balance between the needs and aspirations of all regions and states. Such a strategy, far from implying a sacrifice on the part of the more highly developed areas of the national system, may represent the surest guarantee that they will be able to maintain their rates of expansion.

Specific procedures for integrating planning efforts and systems at their major levels—national, regional and state—can hardly be envisaged on the basis of the information available at the present stage; but there is widespread awareness that this objective must be attained.

### A. CONCEPTUAL APPROACH

Under the Brazilian Constitution, the states enjoy considerable political power and plenty of financial resources in the shape of tax revenue. Within this institutional framework—unique in Latin America—attempts have been made in recent years to try out programming as a means of influencing economies whose only mark of unity is their political definition as sovereign members of a Federation. The proliferation of such planning nuclei has turned the Brazilian scene into a pageant of experimental programming activities, in which the various decision-making centres take part side by side. The obvious complexity of a multicellular planning system based on the state governments is greatly intensified if, as is the case in Brazil, the decentralized policy-making and administrative units are subordinated in most instances to what are called “regional” planning agencies, and, in turn, the decisions and regulations established by the Federal Union are binding on all alike.

The First Seminar on Planning at the State Level constituted an important step in the right direction, since it reviewed Brazil's heterogeneous planning experience, which up to that time had been the object of little study and had not been systematized. The final outcome of its work, which fell into two phases, was a more fully integrated survey of state planning efforts and an outline sketch of their characteristics and distinguishing features. The Seminar was organized with a view to promoting discussion of factual reports presented by the various state planning organs and of allied topics of a theoretical and conceptual nature. This first stage of the proceedings brought to light the features and problems common to the different undertakings described as well as their specific dissimilarities, thus enabling the technical experts from the various states to exchange notes on those aspects of their experience which were to some extent transferable. The next stage was to study the special nature of planning at the level of the states, make a systematic classification of its characteristics, and, as far as possible, subject it to typological treatment, with due regard to the diversity of the experiments recorded, on the basis of the material which the delegations had been asked to furnish, and which had been compiled in the course of the Seminar itself. The aim of the present paper is to offer a brief preliminary contribution to this work of analysis.

Accordingly, in the study of state planning problems due allowance must be made for the close dependency of the state economies and authorities on the decision-making centres at the federal and regional levels. Furthermore, given the radical differences between the state economies and the diversity of their institutional machinery, any analysis of their planning experiments must take into account the distinguishing characteristics of certain groups of states. Thus, when the stumbling-blocks encountered by the nascent planning systems are the object of attention, they must be viewed in the light of such considerations as, for example, the obvious disparities between the states that constitute focal points of industrial development and those in which old-fashioned agricultural activities—typical of the periphery of Brazil's continental economy—are predominant. This approach is all the more justifiable, inasmuch as disregard of the specificity of the problems peculiar to groups

of states would be conducive to the idea that the ills besetting the economic life of the individual members of the Federal Union are merely local symptoms of "national" ailments.

The sole purpose of the observations that follow is to analyse and elucidate the nature of the problems attendant upon economic planning at the level of the individual states, patently contrasting as they do with those encountered by other planning experiments, most of which are conducted at the national level. In the last part of the present section, attention will be devoted to some aspects of the formulation and viability of state programmes. Questions bearing on the establishment and operation of planning systems, however, will not be discussed here, for two reasons: first, data would be required that are difficult to obtain, and secondly, such problems relate to the peculiar features of individual states (and even to the vicissitudes of their political life).

### 1. MOTIVATION OF STATE PLANNING

Among the innumerable factors that operate in favour of state planning, a distinction must be drawn between those stemming from "social consciousness" or from a "demonstration-effect" transferred to the sphere of politics, and those linked to the economic problems with which the various state economies have to contend. The first group comprises both generic and specifically present-day motivations such as the following:

(a) The increasing complexity of the functions taken on by the authorities, including the state governments, in response to the social tensions deriving from the structural reforms under way;

(b) The political interests of the state governments (especially at the beginning of their term of office), who see planning as a means of reconciling the scantiness of their financial resources with their commitments vis-à-vis the electorate in respect of what are usually ambitious public works programmes;<sup>1</sup>

(c) The effects of the consolidation of project and programming techniques at the national and international levels, which at the level of the individual states leads to what may be termed "induced planning". The sole object of some

<sup>1</sup> Another reason for the interest in planning displayed by the state government is its potential usefulness as a means of staving off the pressures exerted by their political clientèle. The element of rationality implicit in plans and programmes provides state executives with valid arguments for withstanding pressure in the direction of dissipation of resources, *inter alia*.

state programming efforts is to fit in with the regulations of Federal and/or international financing agencies, with a view to the tapping of additional resources.

The search for more rational patterns of government action entails the adoption of criteria increasingly based on technical expertise, and therefore means that the state administrative machinery has to be overhauled. Its implications are far-reaching, and extend from the recruitment and training of personnel to institutional reforms. These reforms give rise to a technocracy which seeks to take part in the formulation of economic development policy, and, in its implementation, comes into conflict with traditional bureaucracy. Failure to adapt the institutional structure to the public sector's new criteria for action would deprive planning of all practical significance.

Planning must next be considered as an instrument of action, whose ultimate object and *raison d'être* is the solution of economic problems. These, in all their magnitude and complexity, constitute the "concrete" motivation of the plans formulated; consequently, in so far as the individual states identify and endeavour to grapple with their own specific economic difficulties, they will have to establish programmes with different targets and characteristics, each reflecting the structure and *modus operandi* of the particular economy concerned.

Recognition of the idiosyncracies of the state economies, besides throwing into relief their common features or problems, makes for a typological approach calculated to prevent the application of general principles to particular cases in a field in which universal characteristics are virtually non-existent. The following classification by groups may be adopted:

(a) States with diversified and dynamic economies, in which the authorities are called upon to take action on several fronts, and therefore resort to programming in an effort to co-ordinate their many sectoral functions and control their financial machinery;

(b) States with under-diversified or expanding economies, where the object of programming is to consolidate the benefits of progress and diversify the base of the economy concerned;

(c) States with stationary economies, characterized by extensive primary activities and a few industrial undertakings, which look to programming for a means of making their previous activities more dynamic, and at the same time launching new projects that will revivify their economies;

(d) States with extensive territories in which the density of population and economic activities is low, and where programming is essentially a device for selecting the areas or sectors whose potential is greatest, in order to concentrate resources therein;

(e) Extremely poor states, where what is needed is to break the vicious circle of poverty by laying down strategic lines of action and establishing strict priority criteria. Here the purpose served by planning is to ensure that the state's own scanty resources are turned to the best possible account, and that, at the same time, the indispensable supplementary external financing will be properly applied.

In the case of states with diversified and dynamic economies, there is no need for programmed action to alter their basic economic characteristics. Since in these economies no attempt will be made to introduce qualitative changes, the ends pursued by planning may be attained through the rational administration of the resources allocated to traditional sectoral programmes. The problems of the other groups of states, in contrast, call for more drastic treatment, entailing the use of instruments whose content and rate of operation are different.

## 2. DETERMINING FACTORS IN STATE PLANNING

In order to study the nature of planning at the level of the states, the first step is to define its field of application, the factors that limit it, and the radius of action of state economic policy.

The state "economies" represent a mere politico-administrative demarcation of areas which do not constitute "systems", whether they are viewed from the standpoint of their economic content or from that of the political and institutional régime to which all alike are subject, and which has been imposed from above by the representative organs of the Federal Union. The economic activities that are carried on in the geographical territory of a state are, in fact, by no means confined within its frontiers. In the first place, its structure of production is not necessarily highly integrated; on the contrary, specific areas in some states are linked up with productive activities at the regional and/or national level. Secondly, the decisions which most powerfully affect the evolution of the state economies stem only in part from their own private or public sectors. The main features of the institutional framework, determined as they are by the Constitution, cannot be altered by the state governments. Thus, parameters are established which range from the general regu-

lations governing the economic activity of the country as a whole (labour legislation, agrarian laws, etc.) to the definition of the different sources of income on which the federal, state and municipal authorities can draw.

The domain of state government action having thus been defined, the next point to consider is how the state economies are affected by decisions emanating from other levels of government and conditioning the possibilities open to state economic policy.

First and foremost among the variables which are determined from the national viewpoint are over-all foreign trade, credit and wage policies. The measures adopted in these spheres have been dictated by problems that have grown up during recent stages of Brazil's development, and relate not only to the requirements of the industrialization process, but also to the monetary instability accompanying it. Clearly, states which are focal points of industrial development, or have close links with it, can find directives for their economic expansion in these over-all measures. The rest have little or no direct connexion with the industrialization process; in their case, whether the effects of economic policy are beneficial to them or the reverse, its motivation has not much to do with the difficulties against which they are battling. What is more, the guise assumed by central government policy is no longer the same in the peripheral states as in those that are centres of industrial development, since the role and the relative influence of the several economic variables are different at the hub and on the circumference. Measures intended to restrict, encourage or rechannel activities that are of secondary importance at the focal points of the industrialization process may affect economic forces that rule the life of the more backward areas. In other instances, policies conceived with an eye to basic aspects of the industrial economy, on which they also produce specific secondary effects, make themselves felt on the periphery through these latter alone. Obviously, no attempt has ever been made to elucidate or assess the implications for the remoter states of the distorting effects of distance on the so-called over-all policies.

The impact of these over-all policies on the state economies tends to divert their course along lines that do not necessarily coincide with those pursued by the plans of action concerned. It is incumbent on the states to readjust their instruments of action, with the aim of exploiting or counterbalancing the modifications brought about. Thus it is a tortuous road that government action at the level of the states must

follow; the decisions involved have to be taken on ground that may have been undermined by measures adopted at other levels of government. In order to determine the radius of action that is left to the state authorities, wedged as they are between the decisions emanating from the central government and the inadequacy of their own instruments of action (to be discussed later), the next step is to list spheres of decision which are controlled by the Federal Government but in which the states (or regions) exert increasing influence. An attempt will thus be made to define the power of economic policy at the state level, working from the outside inwards, and finally showing it to be based on a combination of forces which, in varying measure, are dissociated from its own interests.

First, in the sectoral programmes for which the Federal Union is responsible, the opportunity for the states to advance their interests occurs in the context of a geographical decision, namely, the selection of locations for the development of the programmes in question. Here a distinction may be drawn between the following categories:

(a) Major infra-structural projects, designed to strengthen the base of the economy in centres of industrial development;

(b) National integration projects which revolutionize the economic prospects of certain states without being actually dictated by their interests;

(c) Projects of national scope and significance, for which some of the states members of the Federation may compete on the basis of locational advantages.<sup>2</sup>

Of the programmes which may be generically termed "sectoral", only those falling into the last of the foregoing categories can be influenced by the interests and political power of the states. Consequently, measures adopted in this field, although emanating from higher decision-making centres, are largely attributable to the pressure of state claims which in this case operate as heterodox and erratic instruments of economic policy.

Another sphere of action of more immediate interest, and of great importance for most of the Brazilian states, relates to the primary activities on which their economic life is traditionally based. The critical situations resulting from the uncontrolled expansion of the internal supply and/or the stagnation or decline of world demand are of twofold significance for the na-

tion; they imply foreign trade, balance-of-payments, and other problems, and at the same time drastically affect the producer areas. In face of these serious difficulties, the Federal Union, which in the last analysis is responsible for dealing with national problems and is endowed with greater institutional and financial flexibility, is gradually being induced to establish agencies for the purposes of protecting, channelling, and supervising the crop-farming activities that are in jeopardy. The capacity of these agencies to influence the level of economic activities and the development prospects of the states in which such primary activities are carried on is unquestionably very great. It is therefore natural that within the agencies themselves powerful pressure mechanisms should have been set up to further the interests of the leading producer states.

The transfer of attention from what are, *de facto*, central government decisions to the intermediate sphere of authority constituted by regional agencies brings under study an area that is highly receptive to state problems. This observation holds good, despite the fact that the most influential regional institutions are projections of the central government, largely because these bodies, once established, acquire a good deal of vitality of their own, and the manipulation of their instruments of action is guided by local criteria.

The strength of the regional agencies is based essentially on budget allocations from the Federal Union which enable them to establish and attain important sectoral objectives; there is a danger, however, that their action may degenerate into clientèle politics, with the resultant dissipation of the federal resources in question. Besides providing these resources, the Federal Union delegates faculties to the regional agencies whereby they are empowered to make discriminatory use of tax, tariff and (formerly) exchange concessions, with a view to the channelling of private-sector activities at the regional level. In these cases, the instruments in question are applied with the essential aim of attracting capital from outside the area, or at least stemming the outflow of local resources. In the last analysis, the regional agencies, as well as constituting parts of the central government machinery geared to local problems, afford a means of putting forward state claims, which are strengthened by being placed on a regional footing.

The foregoing remarks on the degree of receptiveness of the higher authorities to the claims of state interests may be supplemented

<sup>2</sup> Especially when the projects concerned relate to raw materials, whose possible sources are so numerous in an economy of continental dimensions.

by some reference to the possibilities of requesting resources directly from the Union that are open to the states. Results in this field have varied, chiefly in relation to the degree of harmony existing between the state and central governments. As a rule, extra allocations obtained through direct application to the central government are assigned on a sectoral basis, and are earmarked for the financing of specific projects.

Lastly, there remains the area of decision-making pertaining strictly to the states. As regards the conventional instruments of economic policy, the states confine themselves to directing the flow of public income and expenditure and to the use of certain marginal instruments capable of influencing the behaviour of the private sector.

The states have a sovereign right to determine the rates of certain taxes established in the Constitution, and the purposes for which the revenue accruing from these is to be used. They are not, however, authorized to make qualitative changes in the tax instruments; their fiscal policy cannot do much more than modify the distribution of the tax burden and introduce the so-called "supplementary taxes" (*taxas adicionais*). Confined within these limits, and consequently lacking in flexibility, the fiscal policy of the state governments has to contend with a serious problem: the possibilities of expanding internal revenue easily reach saturation point. The tax exemptions of which the states can avail themselves to provide incentives for the private sector carry little relative weight in investment decisions, and moreover, are fruitless as a means of attracting capital, for they spread so quickly to the other states that they cease to constitute differential benefits.<sup>3</sup>

With respect to credit policy, two levels must be distinguished. The financing of circulating capital by public banks in the states represents, as a rule, only a tiny fraction of the total volume of credit, whose major sources are private banks and local agencies of the central bank. In the case of medium- and long-term credit, the state banks have an opportunity of offering certain incentives and thus pursuing selective ends; but the volume of resources at their disposal is frequently too small for their action to play a significant part in the encouragement and channelling of capital formation. At neither of

these levels, therefore, can the influence of state credit policy on the behaviour of the private sector be fundamental.

Given the applicability and the relative importance of the Federal Government's economic measures at the level of the state economies, and since the states' own instruments of economic policy are few and ineffectual, the radius of action open to state decision-making is obviously narrow. This situation is the inevitable outcome of the development and proliferation of the instruments at the disposal of Federal economic policy, with which the evolution of state powers could not possibly keep pace. Hence one of the characteristics of the states is the disequilibrium between the weight they carry politically and their limited capacity for economic decision-making. Attempts to right the balance tend to follow the pattern suggested by the foregoing considerations: the power of the states, cramped by their relative lack of institutional flexibility, makes itself felt in the higher decision-making centres through wire-pulling and pressure mechanisms.

### 3. THE NATURE OF PLANNING AT THE LEVEL OF THE STATES

The next step is to examine, from several points of view, the set of problems which form the framework for state planning and radically affect its nature.

In view of the miscellaneous limitations noted above, planning in the case of the individual states assumes, at first glance, the guise of a technique for the administration of public funds. Since it stems from the operation of the public sector itself, it does not need formalization; nor would there be any point in establishing lines of demarcation between the stages of a planning procedure set up on these bases. Thus there are fewer reasons for the existence of that gulf between formulating plans and acting on the basis of planning which is so frequent (and so difficult to bridge) in central planning efforts. Planning starts at the very heart of the state Executive, and is kept alive by direct government backing and contacts. The "system" operates through a small team in charge of new institutions whose activities and functions are not usually superimposed on those of the agencies previously existing. Even when the execution of the plan gives rise to friction between the traditional administrative institutions and the planning nucleus, it can be more easily smoothed out by the personal authority of the State Governor, since the institutional structure is under-diversified and lacking in autonomy. Thus,

<sup>3</sup> In so far as this tax exemption machinery is extended to the majority of the states, it defeats its own original ends. The poorer states find themselves obliged to adopt it, although it deprives the public treasury of resources, simply in order to prevent the migration of existing enterprises to competing areas.

there is no problem here comparable to that faced by central planning, which has to co-ordinate the movements of the various parts of a gigantic administrative organism with the decisions stemming from an adventitious "foreign body" (the planning nucleus).

As an administrative technique, planning is better suited to the smaller field of state action, within which greater flexibility is possible. But where co-ordination with economic policy is entailed, central planning has a number of powerful instruments at its disposal, whereas the states are restricted to the use of incentives which have only a marginal effect on the directions taken by private activity. Since the limitations and characteristics of state planning are such that it can, up to a point, be set afoot and promoted by government decisions, it may legitimately be described as having a high political content. Federal planning, however, entails a vast amount of work of an eminently institutional nature, whose purpose is to co-ordinate the various bodies and facilitate the propagation of centrally adopted decisions; this latter task, which is of primary importance, is virtually apolitical, and can be carried out irrespectively of the major decisions relating to economic policy and the selection of priority targets.

To these indications of the political tenor of state planning, a few further comments may usefully be added.

The adoption of planning by a state government implies that individual decisions, even when prompted by legitimate political pressures, must be forgone if they are incompatible or directly at variance with the plan. Nevertheless, the technical experts who co-operate with the authorities in the formulation of the plan must not lose sight of the political and social situation. If, owing to unforeseen factors, the execution of the plan involves the disruption of the forces that support the government, the time has come for it to be overhauled. It would be idle to cherish the illusion that a plan whose propagation and dynamism are so closely dependent upon the authority of the State Governor could be impervious to pressures that affect its political foundations themselves.

The behaviour patterns followed by the political and social variables and parameters during the execution of the plan are of great importance, since they may, *inter alia*, jeopardize its continuity or deflect its course. Clearly, however, social and political questions are only part of a general picture that includes basic economic magnitudes which programming must identify and to some extent take into account.

For example, current expenditure, of which the major component is remuneration of personnel, constitutes a variable of decisive significance for government planning. It is quite likely that during the period of execution of the plan pressures for an unforeseen increase in this item may grow up. To bow to them immediately, without analysing the possible effects of such an adjustment on the level of investment and therefore on economic and social development itself, would be to waive the notion of the interdependence of the economic aggregates. To ignore them would be tantamount to supposing that this interdependence is self-sustained, and can dispense with the political and social forces which impart dynamism to the aggregates concerned.

The economic content of state planning must next be considered. Apart from the fact that the development plan covers innumerable sectors of the economy, it consists essentially of measures adopted in relation to basic problems that vary from one part of the country to another. Thus, its keynote may be any of the following:

(a) The elimination of certain bottlenecks that hamper the further expansion of an economy which is already diversified to some extent;

(b) The rehabilitation of sectors in process of decline;

(c) The creation of new dynamic opportunities through industrialization.

This last point is deserving of comment.

In the first place, the more backward states, whose practical possibilities are limited, cannot as a rule advance far beyond the processing of primary products. The states that have reached a higher stage of development, and are aiming at the efficient installation of a relatively diversified manufacturing sector, should not attempt a small-scale reproduction of the industrial structure existing in the major centres, but should seek to establish a dynamic complex, in which the component branches of industry are selected with an eye to locational advantages at the regional and even the national level, in accordance with their dimensions and the size of the market to be served.

The radical reforms required for the attainment of major objectives can be only partly brought about in the space of time covered by development plans, which approximately corresponds to a government's term in office. Furthermore, such objectives are reflected in projects that are not always viable at the level of the states, whose financial capacity they may ex-

ceed, while their implications may be of regional scope. Hence state strategy is not bounded by the temporary horizons of individual plans, nor do its repercussions stop short at the politico-administrative frontiers of the states.

The extension of planned action beyond the period covered by government plans and beyond the state frontiers involves a number of complex questions. In the first case, a thorny political problem arises in connexion with the maintenance of the necessary continuity in certain public works by successive governments of different political colourings. In principle, there is no guarantee that this continuity will be preserved; in practice, however, the chances that the governments elected will be able to remodel public-sector programmes already under way. Specific projects may even have their continuity ensured by the operation of the most varied factors, ranging from public awareness of their priority to the actual commitment of material and human resources so substantial as to make the undertakings in question irrevocable.

The problems raised by participation in programmes of pluri-state significance relate to the need for dovetailing state plans with regional and/or national plans. The co-ordination of the activities programmed at the various levels of power has already been the subject of comment in the present study.

At the regional level, the geographical location of projects has to be more specifically defined, and the states can play an active part in determining it. The distribution of Federal Union programmes by geographical areas is a field to which the states have only limited access. In any event, however, they can avail themselves of a number of pressure and influence mechanisms, etc., to push their claims in the regional and national agencies. This is an entirely heterodox aspect of state economic policy. It is difficult to co-ordinate action on this front, the importance of which is highly contingent upon circumstances, and which is imbued with political significance. Nevertheless, the articulation of state aspirations in extra-state agencies should give a broader view of the situation and should crystallize in a genuine "external policy at the state level", to be applied intensively as a supplementary line of action. Such a policy would have several dimensions, reflecting the basic problems of the individual states.

Without dwelling on considerations peculiar to specific types of desiderata (financing for individual projects, support prices, credit and tax concessions, etc.), it should be emphasized that

the disparities between the relative importance of the various states, and the consequent differences in their capacity to sway the decisions of the Federal Union, have repercussions on the significance and role of external policy in the over-all strategies concerned.

In the first place, the states in which the industrial complex is being consolidated find it easy to identify their interests with those labelled as "national" and inherent in the evolution of an import-substitution development model. The provision of the infra-structural base that consolidates the industrial nucleus already developed is largely undertaken by the Federal Union, while the states which, because they are more highly developed, have substantial resources at their disposal, are responsible for preparing the detailed projects, expediting their execution and promoting their extension throughout the state territory. There are even cases in which these states embark upon projects so far-reaching as to place them in a privileged position as regards inducing the Union to associate itself with their undertakings and offering guarantees to international bodies.

The peripheral states are compelled to push their claims more aggressively and with less certainty that they will be met, because their capacity to enlist the interest of the central government is not so great. Until recently, the problems of these states, serious as they were from the social and economic standpoints, were seldom regarded as deserving of priority. The fact that it is harder to foresee the results of a policy based on ambitious claims makes the work of programming extremely difficult, and even suggests the advisability of considering the possibilities opened up by different degrees of compliance with the aspirations concerned. In these circumstances, the importance and unpredictability of the benefits that external policy will be able to secure seem to advocate the establishment of alternative programmes, and, moreover, as far as possible, the setting up of targets that are not closely interdependent.

It is upon these lines of action that programming pivots, and along with them go efforts to introduce improvements in many other economic activities. In a new country, undergoing a rapid process of demographic and economic expansion, problems relating to education, public health, marketing, storage, etc., are found everywhere, although in differing degrees of seriousness. Projects directed towards the fulfilment of basic objectives, in combination with the programmes of secondary importance that

are developed in all fields, constitute the "specific" content of state planning.

#### 4. PLANNING PROPER<sup>4</sup>

Although the planning process is divided into separate stages, in practice they are simultaneous and interrelated. Only in the initial phase can a reasonably clear distinction be made between them, diagnosis, projections, programming, and supervision of the implementation of the plan and constant review of results. However, in order to bring to light some of the problems arising in the process of establishing an effective planning machinery, it is useful to identify several of the "theoretical" stages of the process, even if only on the basis of successive rough estimates.

##### (a) Considerations regarding the diagnosis

Before starting to prepare the plan, a diagnosis should be made of the state economy, which could be brief to start with and subsequently more detailed.

The diagnosis would be designed to provide criteria for an evaluation of the state's position in the light of the existing and past dynamic forces affecting it. The projections would determine future trends in the case of proven hypotheses regarding the persistence of such forces.

The distribution and priority of the aspects of states economies considered in the diagnosis should reflect the specific situation of each state. For example, certain states on the periphery have unexplored possibilities as regards the production and even the industrial processing of primary products. Therefore, it is vitally important to assess the actual potential of their natural resources, and this is closely bound up with the study of technological possibilities for their utilization.

An essential part of the diagnosis in the majority of states is the examination of the characteristics of past crops, deriving largely from primary-exporting cycles now on the decline, in conjunction with the identification of institutional and technological obstacles to their revival.

In the more advanced states first priority is given to studies on sectoral interdependence,

location, and tactics for removing bottlenecks. Industrial development has given rise to a great many problems, especially of an institutional nature, since there comes a point where it is imperative to reform the financial system, establish regulations governing capital markets, etc. Moreover, national and state problems and interests sometimes overlap in the area representing the focal point of industry.

In theory, no expense should be spared in analysing the technical aspects of production during the diagnosis stage. In addition to studying the existing production situation, the specialists concerned should indicate possible new fields of activity and recommend appropriate technological measures.

##### (b) Preparation of the state government plan

It is impossible to quantify a state plan in the variables with any reasonable degree of accuracy. The unstable rate of population growth reflects the internal migration that tends to take place; hence those states with an inflow of surpluses from other states find it extremely difficult to project their population figures.

The rate of investment, while influenced in some degree by the state public sector through the provision of fiscal incentives, loans, technical assistance, and location advantages, fluctuates violently according to economic conditions in the rest of Brazil, especially the demand for products from the state concerned and the federal government price policy. State capital fluctuates even more widely in the face of opportunities for using it outside the state.

Economic relations with the rest of the country, in terms of both real and financial flows, are difficult to measure and it is virtually impossible to establish a balance of transactions. Under present circumstances, the lack of statistics for internal trade and financial movements precludes even the keeping of an *ex-post* register of the main flows as a basis for evaluating the volume of such trade.

In spite of the above difficulties, it is essential to try to quantify at least those variables that are directly influenced by the state public sector, albeit with some reservations as to the accuracy of the forecasts.

The state government plan might cover a period of five to six years, depending on the governments' term of office, plus one year of the next term. It would embody specific measures and targets in line with a suitable long-term approach. The public sector programme, which will be dealt with later, would respond

<sup>4</sup> The aim of the present sections is to establish a frame of reference for the structural layout of a development plan at the state level. Many of the considerations presented here are taken from the study *Planejamento econômico ao nível estadual*, prepared by the economist Mr. Eduardo Daros and submitted to the First Seminar on Planning at the State Level.



to the needs or functions that this sector is expected to fulfil under the government plan.

The analysis of the state economy as a whole would determine the strategic sectors in which the government should take steps to initiate or accelerate development.

In the preliminary stage of establishing targets, two groups of public and private investments projects would be considered, independently of the sources of financing. The first, or high-priority group, would comprise an integrated set of projects. The second group would consist of projects that were more or less independent of the priority group, and their implementation would depend on the resources remaining after the needs of the first group had been met.

After estimating the resources that could safely be relied upon, the composition of the high-priority group would be finally determined. Some of them would be public sector projects designed to improve or establish the infrastructure of basic services, in response to the needs of industrial complexes already in existence and/or the core of industries it might be intended to set up in selected centres. In this respect, state and municipal planning should be co-ordinated with a view to settling such urban issues as transport terminals, access to industrial districts, telephone service, energy distribution, water supply, sewerage, etc.

The group of private projects, supported directly or indirectly by the government, would be studied from the standpoint of the comparative advantages of the area in relation to the rest of Brazil and other countries, in the light of the existing infra-structure and the various improvements contemplated in the plan. Therefore, the aim is not to analyse the comparative advantages of each project on its own since that would preclude any possibility of industrial development in most states, but to assess in dynamic terms the over-all macro-economic benefits deriving from the execution of all the projects concerned.

Thus, the continuity of the group of high-priority projects should not suffer because of their close interdependence.

The second group would include projects intended to supplement the high-priority projects, as well as independent projects and a large proportion of social projects (water supply and sewerage for marginal population centres, housing, etc.). The essential feature of the lower-priority group would be its virtual independence from the central axis of economic development

policy. The problems arising from failure to execute or complete them would have limited repercussions that would not affect the priority group.

In addition to adequate geographical distribution of the high-priority projects, their timing must be carefully considered, particularly if the basic social services in the chosen centres present serious deficiencies.

In view of the difficulty of forecasting the financial resources obtainable from the rest of the country and abroad, the government plan should include several hypotheses for the financing of what are regarded as strategic investment projects.

Alternative internal and external financing possibilities should be duly explored. The group of high-priority projects would constitute the rigid basis of the plan and would roughly absorb the fairly safe supply of internal and external investment resources. The second group would make up the flexible basis in that it would be tailored to the resources available after the needs of the first group had been met. The state government would take full advantage of the possibilities of obtaining external financing (from the rest of the country or abroad) for any of its projects. Therefore of the two groups of projects, more importance would be attached to those with the best chance of being financed with funds from other countries or other parts of Brazil; the execution of the basic projects, however, would be independent of those negotiations. As and when additional external resources were obtained, they would be allocated to some of the lower-priority projects. The degree of flexibility of the scheme would depend on the funds which the state public sector had available to cover its direct and indirect investments.

It is difficult to quantify these external resources; estimates would take into account not only whether the projects satisfied the technical and economic requirements of the financing agency but also the nature of Brazil's relations with other countries. Although the state government cannot influence the Federal Government's relations with other countries and international financing agencies, it is important to know the nature of these relations in order to avoid serious errors in estimating the resources available.

### (c) *State public sector programme*

This programme is the key-stone of the government plan, inasmuch as it co-ordinates the variables on which the state government exerts

direct influence and can therefore handle with a reasonable degree of security.

It would have the same duration as the government plan and would include all estimates of public income and expenditure, as well as the administrative measures to be adopted by the state government. Income would be estimated on the basis of several hypotheses, including the probable result of the changes in tax structure and the incidence of certain taxes. For the sake of administrative expediency and for political reasons, the tendency has been simply to forecast the greater incidence of certain long-standing taxes without analysing its economic and social implications.

The state government should not adopt a passive attitude with respect to the availability of resources resulting from the mere projection of past trends. In most instances, such an attitude would make it impossible to initiate the implementation of large-scale projects without danger of their being discontinued. Only a diagnosis will show how far the possibilities of increasing the tax burden and public utility rates were examined; where appropriate on the expenditure side, available investments resources would be analysed with due regard for the increase in the cost of implementing the proposed projects.

The annual budget would represent a breakdown of the public sector programme as consistent with the structure of the state administration. The resources would be distributed among the various units responsible for the execution of projects in accordance with the financial scheme envisaged in the general public sector programme.<sup>5</sup>

#### (d) *Aspects of economic policy*

Throughout the planning process, state economic policy operates at two different levels. Recognition of the most serious problems confronting the individual states and the determination of general lines of action to solve them set the tone of each individual programme. Thus, while "policy aims" are determined and translated into a set of targets, "policy measures" are adopted to accomplish the major objectives. They are designed to mobilize economic resources and instruments, thus specifically helping to attain the proposed targets. The constant mobilization of instruments under changing circumstances naturally calls for day-to-day decisions; hence a plan cannot be formulated in

<sup>5</sup> See the considerations on programme and performance budgeting in section B.

detail in view of the insecure factors on which it is based.

When plans are conscientiously drawn up and executed they become the backbone of economic policy, which, by virtue of its principal role, can be applied on new fronts to reinforce the efficiency and scope of the general guidelines established.

In view of the limitations in the use of conventional economic policy instruments, the possibility of compensating the deficiencies of market forces lies in the creation of new mechanisms capable of strengthening state action and making it more flexible.

Experience in this respect has been varied and in some cases successful, particularly as regards the establishment of new decentralized agencies and the promotion of opportunities in the industrial sector.

Two types of organizations have been established: semi-public enterprises directly responsible for the basic sectors, and financing corporations which grant supervised credit with considerable operational flexibility and some technical stringency. Technical assistance has played a vital part in opening up industrial opportunities through the preparation of basic studies and preliminary projects and, more recently, the establishment of industrial districts.

The renovation of mechanisms for stimulating the private sector could quite well continue to follow the two lines indicated above, i.e., new forms of organization, and industrial promotion. The main difficulties relate to incentives for the agricultural sector.

The agricultural development measures thus far adopted at all levels of public administration have proved inadequate, less for want of innovations than because of the difficulty of applying them extensively. Indeed, there are a great many instruments known to be potentially useful incentives to agriculture, ranging from new forms of organization to the adoption of a number of technical and financial assistance measures. However, the large-scale application of successful experience in the agricultural sector is seriously impeded not so much by the shortage of human and financial resources as by the heterogeneous nature of the problems confronted. Apart from being of such different types—ecological, economic, institutional, etc.—they also differ considerably from one place to another. In some areas, for example, the preponderant weight of institutional rigidity alone might nullify the attempts to solve quite a different

type of problem. Therefore, it is easy to understand the difficulties facing the state governments in their attempts to guide the agricultural sector by means of incentives whose efficacy is already jeopardized by factors that are beyond their control, or can hardly be removed over the short term.

The efficiency of state economic policy is dependent not only upon the creation of new instruments but also upon the prior rationalization of its traditional machinery. This involves widely differing action which ranges from the adoption of new techniques in the formulation, execution and control of public expenditure policy to consideration of such complex and delicate questions as the co-ordination of supra-state action. It should be remembered, in this respect, that in view of the consistently heavy dependence of most states on federal government allocations and assistance, such action is being carried out in an improvised and discon-

nected fashion. External state policy, owing to its heterogeneous nature, its dependence on uncontrollable factors and its eminently political bias, is evidently the most difficult policy to formulate with a minimum degree of security.

A legitimate target in the evolution of the public sector would be the harmonization of its organs to enable it to fulfil a varying but organically co-ordinated range of functions. However, it is not intended to introduce a whole predetermined system of planning; in the first place because in order to overcome the inertia of some institutions and practices it is nearly always necessary to start by changing some crucial aspects of the spheres controlling the state public sector; and secondly because the evolution of the functions and possibilities opening up to the state government should be accompanied by constant adjustments in the institutional machinery which serves as the operational basis for state economic policy.

## B. PRESENT STAGE OF STATE PLANNING

Planning at the level of the individual states was first attempted in the north-eastern area—in the States of Pernambuco and Bahia—even before the establishment of SUDENE, the local development agency, which encouraged action along the same lines in the rest of the north-eastern states.

Since 1960, embryo planning units have come into being in the twenty-two states of the Union, and at the present time they all possess agencies at varying stages of formal organization which are endeavouring to put into practice some form of programmed action.

The general factors conditioning state planning, together with its inherent limitations, have been analysed sufficiently, and it is clear that the local administrations have some common problems to face in their efforts to launch a new type of government action along more rational and continuing lines. Naturally, the succinct examination of recent developments in Brazil makes it impossible to generalize as in the conceptual approach, since it is now necessary to evaluate the results obtained and identify the specific problems encountered. Admittedly, in the above-mentioned analysis consideration was given to the marked differences in the problems between one area and another, and it was even attempted to establish a typology for the economic problems affecting the various states, indicating the widely varying scale and importance of planning experiences. However, the hetero-

geneous nature of the situation is such that it cannot be ascribed only to differences in the economic and social structure of the Brazilian states.

Because of a variety of past and sometimes fortuitous factors, the stage of economic and social development reached by a state bears no real relation to its institutional policy-making machinery. Thus, some states which are at much the same stage of development present quite different types of administrative and policy-making organization. Until comparatively recently, certain under-developed states had a more powerful and better co-ordinated planning organization than some of the more highly industrialized states, as a result of the provisional and improvised lines along which most action was programmed.

The lack of permanent planning institutions (at all government levels) is easily explained by the fact that this is a relatively new side of administration and calls for novel techniques and approaches. The obstacles to modernizing and revitalizing the conventional administrative machinery are only too well known, as are the dangers of establishing detached planning nuclei, which fail to become integrated with the other sectors and either lose their initial force or cease to exist altogether. It is not surprising, therefore, that both the success and the very nature of state planning should be so closely

dependent on effective guidance by the State Governor.

Most of the successful planning experiences heretofore have been strictly supervised by the State Governor, and their continuity is dependent on the maintenance of a small group of specialists in strategic positions. A change of government, usually combined with the breaking-up of the advisory team, inevitably interrupts the process and hinders the establishment of planning on a permanent footing, especially in the case of embryo organizations.

More recent planning experiments on better organized and more decentralized lines (in Paraná and Ceará, for example) have not yet faced the test of a change of government; therefore, it is not known how changes in policy and in the supervisory team might affect them.

An examination of such experiences immediately shows their diverse nature, which seems to depend, *inter alia*, on the state governments' aims, line of action, and decisiveness in confronting the problems concerned.

Independently of the major objectives—economic and social development—which are included in virtually all declarations of aims, certain governments have confined their action to infra-structure, educational and health projects in the traditional style of public works programmes, without co-ordinating their targets or properly supervising their execution. There is no question of planning here, even in its broadest sense, i.e., the progressive rationalization of public action.

Yet there have been some really significant developments in programming. A number of state governments, on the basis of rough diagnoses deriving in part from an extensive analysis of local economic problems, endeavoured to integrate their decisions in the broader framework of economic development policy, translated into a set of interrelated objectives. Having defined this bare outline of a plan, they began to put it into practice through a wide range of instruments.

Some states focused particular attention on breaking down the budget among the programme targets and tried to achieve better co-ordination among the sectors directly or indirectly engaged in accomplishing them. Others got round the difficulty of carrying out extensive administrative reforms by establishing decentralized agencies for the attainment of certain strategic targets or the implementation of a group of high-priority projects. Lastly, most states set up or reorganized planning agencies which, at least in theory, were

expected to prepare, perfect, supervise and review government plans.

In nearly all states, steps were taken to offer the private sector a number of new incentives through special bodies, sometimes simply the development departments of state banks and often semi-public corporations specially set up to promote, channel and finance private investment.

The emphasis on one type of action or another was largely dependent upon the kind of problems faced, the manpower and financial resources available, and the strategy adopted. This was usually guided along the line of least resistance on both the technical and the policy-making plane, or else, from a different standpoint, towards measures which seemed to offer the best chance of success in one or both of these fields of action.

The complex and unprecedented nature or many of the problems arising in this preliminary stage of planning at the level of the individual states has, in general, slowed up progress and caused many—sometimes quite serious—set-backs.

Roughly speaking, there are two stages in the establishment of planning at the state level. First come the surface reforms in the course of which new techniques are formally adopted but the manifold implications of the more rational government methods have not really been translated into practical terms. All the states have already entered upon this stage and some have left it behind. A greater refinement of government practices had become imperative as a result of competition among the various states and in consequence of the general atmosphere of expectation associated with the emergence of new generations with a different cultural background and training. Yet any attempt to advance beyond the stage where planning techniques and practices are little more than embellishments of the *status quo* encounters increasing resistance, and the political dividends reaped in the earlier stage are lost or may even turn into deficits.

## 1. PLANNING ORGANIZATION

The attached table shows the main types of institutions composing the embryo state planning systems.

The central planning nucleus consists of three types of organizations:

Those within the actual structure of the executive, such as line organizations (planning offices) and top-level units (ministries or advisory boards);

PLANNING ORGANIZATION: INSTITUTIONS IN THE VARIOUS STATES

	Northern region			North-eastern region									Central-western region		Central-southern region				Southern region			
	AM	PA	AC	MA	PI	CE	RN	PB	PE	AL	SE	BA	MT	GO	MG	ES	RJ	CB	SP	PR	SC	RS
<i>Planning bodies</i>																						
Ministry or advisory board .....			1964				1964					1963								1965	1961	1961
Offices .....	1965					1963	1964						1961	1964	1963	1964		1963	1964			
Council or committee .....	1964	1961		1958	1959	1962		1958	1952		1959	1955	1963	1956	1951	1961	1963			1955		1963
Superintendency or corporation ..				1959		1962				x			1961	1961				1961		1962		
<i>Sectoral units</i>																						
Electric energy .....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Transport infra-structure .....	x	x		x	x	x	x	x	x	x			x	x	x			x	x	x	x	x
Agriculture .....		x		x	x	x	x	x	x		x		x	x	x	x	x			x	x	x
Storage .....					x	x	x	x	x	x	x		x	x	x	x	x			x	x	
Sanitation .....		x			x	x	x		x	x			x	x				x	x	x		
Housing .....					x	x	x	x		x		x						x		x		
Education and health .....	x	x		x	x	x	x	x	x	x		x	x	x	x	x	x			x	x	x
Others .....						x	x		x	x		x	x	x	x			x	x	x		
<i>Financing agencies</i>																						
State bank with development department .....	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Development corporation .....				x		x		x		x					x			x		x		
Credit and financing corporation..						x									x			x		x		x
Development plans published .....	65/66			61/65	63/66	63/66	61/65					63/65	60/63	60/65	61/65	61/63			64/66	63/65	61/65	64/66

Source: BNDE-DE-DER.

AM: Amazonas; PA: Pará; AC: Acre; MA: Maranhão; PI: Piauí; CE: Ceará; RN: Rio Grande do Norte; PB: Paraíba; PE: Pernambuco; AL: Alagoas; SE: Sergipe; BA: Bahia; MT: Mato Grosso; GO: Goiás; MG: Minas Gerais; ES: Espírito Santo; RJ: Rio de Janeiro; GB: Guanabara; SP: São Paulo; PR: Paraná; SC: Santa Catarina; RS: Rio Grande do Sul.

Councils or committees, in juxtaposition with the administrative structure of the state, which maintain remote, indirect relations with the various government departments; Autonomous or decentralized units—super-intendencies and development corporations—to which powers have been delegated and resources allocated (generally on a permanent basis) to carry out studies and provide advisory services.

The top-level unit in the first category possesses both the virtues and the shortcomings indicated previously: although they are invigorated by the power and personal prestige of the State Governor, they usually cease to exist when this support is removed and the team breaks up. In brief, they have both the advantages and disadvantages of an indeterminate form of organization. Although planning offices are more likely to be organized on a stable basis, they possess the rigid characteristics of the normal line organization, and the difficulty of obtaining co-operation from other offices does much to hamper the necessary co-ordination.

The role of state planning councils or committees, by their very nature, is to carry out studies and provide general guidance. In some cases, the government directs them to formulate guiding principles for economic policy and possibly to provide advisory assistance to the various state departments. Although they occasionally draw up development plans, they lack the necessary powers to operate effectively in the stages of implementation and supervision. Most of these units are rapidly becoming atrophied and ceasing to carry out the usually ambitious functions legally assigned to them.

The decentralized organizations are comparatively new and present widely varying forms and modes of operation. They are not generally found on their own, but operate in association with at least one of the other types of planning units described. Nevertheless, planning functions are normally so distributed that the agency with the highest degree of autonomy is responsible for the substantive part of planning from the preparation and supervision of major investment programmes to the relatively flexible handling of financial resources. The continuity of operation of these institutions is safeguarded, in principle, by an instrument linking them to tax revenue, usually through an additional sales and consignment tax the proceeds of which were permanently allocated to them on their establishment. Hence, their greater freedom to operate, allied to a reasonable measure of financial security, normally enables them to

attain a higher level of efficiency than the conventional administration.

Future prospects for these institutions, hitherto the most interesting developments in the organization of the planning structure, are somewhat brighter than for the other units mentioned. However, the narrow political framework of the various states makes them vulnerable to changes in the administration, at any rate until they attain some measure of maturity and tradition. In most states, the very shortage of technical personnel makes it difficult for the local factions taking over the administration, even if ready to continue with the projects under way, to count on having equally skilled and reliable teams at their disposal.<sup>6</sup>

All state administrations possess, in addition to general planning agencies, a number of sectoral units which have their own programmes or whose functions correspond to a sectoral breakdown of government plans. These units may be ministries (public works, education, health, etc.), or decentralized agencies set up for specific purposes.

One of the major problems facing nearly all state governments in organizing an effective planning system is precisely the fact that these agencies are not properly integrated with the organ serving as the central nucleus. Indeed there are few states in which the degree of co-ordination is such that sectoral targets are established jointly, thereby making it possible to test their compatibility and feasibility in physical and financial terms. Still less frequently have information and control channels been successfully established for the implementation and periodical review of plans.<sup>7</sup>

The absence of systematic relations between government agencies is particularly serious when it occurs in the more restricted but highly important field of budget preparation and execution. Until comparatively recently, few planning nuclei were able to use the budget as an annual breakdown of government plans, both because of the evident shortcomings of the traditional public sector budget and for want

<sup>6</sup> A fresh element of insecurity was introduced recently as a result of the tax reform adopted by the National Congress in 1966. The replacement of the sales and consignment tax by a tax on the distribution of goods, besides ultimately affecting public financing, empowers the state parliaments, in reviewing the laws authorizing the distribution of the proceeds of the additional taxes on sales and consignments (which automatically expire), to alter the amounts earmarked for the bodies in question.

<sup>7</sup> Practically the only comprehensive, though temporary, experience heard of to date is the São Paulo Action Plan, 1959-63.

of access to the organ responsible for its preparation and control.

Although substantive changes are at present in process as a result of the law providing for the adoption of the programme and performance budgeting system, the budget is still a long way from being a really effective short-term planning instrument.

Chief among the decentralized agencies which are closely or remotely connected with the establishment of a comprehensive economic planning organization are the specialized financing agencies, which, besides promoting and financing development programmes, generally play an important part in stimulating the private sector, especially industry.

The financing agencies can be divided into three basic categories:

(a) State banks, which over and above the functions of a commercial bank exercise those of a government bank and development institution. Most of them came into being as a result of the reorganization of commercial banks already in existence, through the establishment of specialized departments. Others were set up recently under the protection of special legislation giving them the functions of development banks; in this case they are normally responsible for administering state funds allocated to specific programmes in the public or private sector, as well as the resources deriving from transfers by federal agencies.

(b) Semi-public multipurpose institutions, usually with some operational flexibility, such as development corporations. Their main functions are the financing of fixed capital formation in small and medium-scale industrial enterprises; technical and financial co-operation with public enterprises, primarily in the provision of basic services which are outside the strictly centralized sphere of the administration; sectoral studies and research; the preparation of preliminary projects; and, in general, all the activities necessary for promoting industry. The administration of state funds created through the specific allocation of tax revenue ensures a reasonable degree of stability for the programmes undertaken by these bodies. Moreover, their ability to present more carefully prepared projects from the technical standpoint enables them to request additional funds from external sources (federal and international), which the formal administrative organs, lacking the necessary skilled personnel and subject to more stringent legal and accounting regulations, find it difficult to do.

(c) Lastly, credit and financing associations have recently been established under licence

issued by the Central Bank (formerly the Superintendency of Money and Credit—SUMOC), which authorizes them to operate on the basis of adjustable medium-term securities. They were set up in order to tap and channel private saving, thus preventing it from seeping out of the area concerned, and to take care of certain financial operations which are outside the province of state banks and development corporations. Their basic function is to provide working capital, and they use bills of exchange as the main instrument for tapping resources in an attempt to form an incipient capital market.

Due emphasis having been placed on the lack of clear-cut relations between the various institutions which roughly make up the state planning systems, it would now be useful to consider their links with other spheres of programmed action, particularly at the federal and regional level.

The various states' heavy financial dependence on the Federal Government, and the creation of informal instruments to press for credit resources and facilities from the central government agencies have already been noted. Although many important state projects are largely financed by means of budget appropriations or federal credit, it is only recently that the slightest attempt has been made to establish the means of analysing the Federal Government's contribution to state investment programmes.<sup>8</sup>

Moreover, although the relations between state planning bodies and regional or interstate development agencies are now closer, they are still very irregular and far from approaching interdependence between programmes. Only in the north-eastern region are these links more effective, basically as a result of the institutionalization of that area's programming activities since the establishment of SUDENE.<sup>9</sup>

In conclusion, it would be useful to consider the hypotheses and problems related to progress towards an integrated nation-wide planning system, as expressly desired by the Federal Government.<sup>10</sup>

The first question concerns a fundamental decision whether the system is to represent merely the sum of the previously existing nuclei or whether the indispensable co-ordination of efforts would be utilized to centralize the state

<sup>8</sup> See the 1965 consolidated public budget.

<sup>9</sup> The Advisory Council of SUDENE includes the governors of the north-eastern states among its members and is headed by the Superintendent of SUDENE.

<sup>10</sup> See the Ministry of Planning report presented at the First Seminar on Planning at the State Level by Dr. H. J. Cole.

and regional spheres of action, i.e., to subordinate them to the central government, or again whether both these aims would be attempted. Within the context of the decision adopted, the role of the regional units remains to be considered, since under the integration scheme they might either lose many of their present functions or serve as regional bases for consolidating the movement towards centralizing planning activities. To sum up, in the latter case the regional bodies would come to represent the side wings of a building whose higher central body was represented by the Federal Government.

The degree of co-ordination and interdependence aimed at would be determined by the greater or lesser measure of centralization desired. Accordingly, a few questions might be raised in connexion with the process and rate of integration. At the present time, although there are no clearly defined relations between the planning nuclei of the two spheres of action, there is a certain degree of interdependence and even of virtual subordination between the federal and state sectoral organs. Thus, such autonomous bodies as the National Highway Department and some of the ministries establish programmes of work which cover the whole of the national territory and the various projects are assigned to state departments or other state bodies. This represents co-ordination in sectoral compartments, which is quite apart from the guiding principles issued by the central and state programming nuclei, respectively. While on the one hand it constitutes a joint undertaking by bodies with similar functions operating at different levels, on the other hand it tends to make the over-all decision-making bodies more rigid in their rulings. In short, it adds up to co-ordination between parts of the two wholes to be reconciled.

Independently of the degree of centralization aimed at within the national framework, there will inevitably be a converging movement which will reduce the autonomy of sectoral units and give more powers of decision to the respective top-level organs in any sphere, and in view of the actual situation, particularly in the state and federal spheres. Nevertheless, the previously existing operational advantages should not be lost, and still less should a system based on the distribution of functions be split up geographically. An over-all picture shows two conflicting movements here: first, a *rapprochement* between top-level organs with similar functions and, secondly, an overhauling of the direct relations between the same sectors in different spheres, with a view to replacing them by vertical con-

nexions with the corresponding programming nuclei.

## 2. THE PRACTICAL APPLICATION OF PLANNING: STAGES AND PROBLEMS

An over-all view of the progress of planning in the different states indicates that very different stages have been reached. The typical stages through which certain groups of states are passing can be outlined as follows:

Those states without previous experience in planning are the most backward in the field and are at present in the process of establishing institutions that will play a major role in co-ordinating state economic policy;

Those states in which past attempts at planning were in the main unsuccessful or abandoned are at present attempting to establish more dynamic units or rehabilitate agencies that have become over-bureaucratic;

A number of states appear to consider that, when a new planning phase is initiated, the administrative machinery must first be subjected to a reappraisal and restructuring, in order to ensure that it is capable of carrying out its new functions;

Finally, a few states have, in addition to establishing or reorganizing their planning institutions, succeeded in formulating a development plan that is more than a mere statement of qualitative goals more or less unconnected with the various governmental programmes.

Regardless of the stage reached by the different states, it is intended to examine below the main problems confronting almost all of them in the establishment of an organic planning process covering every stage of development planning from the formulation to the execution of plans.

The first difficulties encountered in the formulation of plans arise in the pre-planning stage of diagnosis, in connexion with the compilation and collation of statistical information on the different sectors of the state economy. With very few exceptions, the state statistical offices are incapable of compiling, editing and elaborating these data. Generally speaking, the planning units use the macro-economic data supplied by the federal bodies responsible for economic statistics and, when they have qualified staff, carry out a number of sectoral inquiries and surveys. It follows, therefore, that their



analysis of local problems cannot be other than superficial.

Where there has been no detailed study of the state's principal economic sectors, the main lines of economic policy must be drawn in the light of the knowledge and experience of the members of the executive team, who must choose targets on the basis of empirically established criteria of priority.

Generally speaking, only the public works, educational and health programmes, which form the nucleus of the programme of action, are given specific quantitative and phased objectives; for the remaining sectors, particularly those covered by private action, only the nature of the measures it is hoped to adopt is specified.

Some states, whose organizations are of longer standing, then proceed to formulate in detail their public investment programmes, establishing the amount of funds needed to carry out the programme and distinguishing between internal and external sources of supply. In some cases, the over-all programme, together with the corresponding budgetary distribution, is then submitted to the local legislative authority for its approval.

The formulation and approval of the state government plan give rise to two types of problems which, in most cases, can only be overcome by a great deal of work, and which consequently absorb a great deal of the state executives' time.

The problems encountered in the formulation of the plans are technical in character and are connected with the training of personnel and the need to adapt techniques devised under different conditions to the particular requirements of state planning. Macro-economic techniques, both of the conventional and more modern type (deriving from what is known as the Regional Approach) are by their nature difficult to transplant and of doubtful practical utility; they merely serve as a conceptual frame of reference or basis for comparative inter-regional studies.

Some state executives, finding it impossible, with the staff at their disposal, to prepare with sufficient dispatch anything that could be dignified with the name of "plan", hire specialist firms to do so in their stead. The formal presentation of the plans submitted by these firms is not without merit, particularly as regards diagnosis, but—except for political promotional purposes—they are of little value as a methodological guide for future development, and even less so for operational purposes.

The problems encountered in the approval of the plan are mainly political in character. Blanket approval of the public investment programme and assurance that it will not be modified when the annual budget estimates are drawn up and voted upon depend primarily on the support that the State Governor can muster in the State Assembly.

Very few governments rely mainly on this conventional approach. In the first place, even though they might have a majority that will ensure passage of the estimates submitted, the unusual nature of the work involved and the difficulty of grasping its technical aspects slow down the legislative process and unfortunately delay the plan's approval. To overcome the time difficulty, the executives are forced to seek unorthodox expedients, which can be divided roughly into two groups: (a) the establishment of decentralized institutions whose allocations, once approved, are not affected by the programmes adopted; and (b) the establishment of institutions and/or *ad hoc* programmes directly under their control. Thus, in order to escape from the inertia of the conventional machinery for approving and controlling resources—which is essential if a satisfactory rate of progress is to be achieved—there is a tendency to deal with the problem in a piecemeal fashion. Although this gives a certain amount of flexibility to the public machinery, it also accentuates the fragmentary nature of its approach. The introduction of new elements into the state scene is an expedient resorted to by executives with little political support in their respective assemblies, and is a *sine qua non* if governments with minority forces are to make any headway in planning.

The transition to the next stages of the planning process—the execution and supervision of the programmes—gives rise to new problems not easily circumvented, problems which can be traced to the stage of organization reached by the present planning agencies and to the dependence on external sources of financing for completing many of the programmes already under way.

As regards the first point, which is of great importance from the operational point of view, it was demonstrated in the previous chapter that, although the execution of plans has been somewhat decentralized, it has not yet proved possible to establish proper channels of information and means of control so far as the real goals and the funds used are concerned. This affects the revision and up-dating of the plans, which should be a gradual process in which possible

shortcomings in the formulation are corrected and problems presented by changes in the economic and financial situation of the state are overcome.

The second point—the dependence on external financing—introduces an extremely disturbing element into the ordered development of the programmes, since the release of the federal or international funds allocated is completely outside the control of the local planning agencies. Delays or cuts in the appropriations are often in themselves a decisive element in the suspension of programmes. Although the traditional methods, such as bringing indirect pressure or the personal prestige of leaders to bear, are still being used to secure additional funds or the release of those already allocated, recently the teams responsible for formulating plans have attempted to protect themselves against the haphazard nature of foreign aid, either by channelling it to less urgent projects, or by reducing its relative share in the total funds allocated to the programmes.

Given the unsatisfactory nature of the system of supervision, in practice the programmes retain a large measure of independence. It is thus possible that the distance between what is planned at the central level and what is actually being done by the numerous decentralized bodies is increasing. The planners are therefore faced by a series of difficulties on two planes: technically, their relative isolation means that they only become aware of planning deficiencies when these are already irremediable; politically, they are extremely vulnerable in the face of dominant local interests. The combination of these forces and hostile pressures tends to impel the planners to emasculate the plans themselves (or tailor them to what is actually being done), rather than to correct the programmes already under way.

The cumulative effect of these phenomena—the lack of contact with what is going on and the adjustment of plans by means of cuts and/or additions—can deprive the plans of all practical value. In such a case, the tendency is to revise the plans that have become obsolete rather than to replace them in their entirety by new plans. A possible consequence is that the failure of the plans may for a time discredit planning and reaffirm traditional government methods. This leads to discontinuity in the planning process and irregularity in the periods covered by the plans.

The above considerations show that the majority of Brazilian states have not succeeded

in establishing an organic planning process. The progress achieved takes the form of advances on several fronts, which deprives state planning of any kind of uniformity.

The search for solutions that are both practical and politically viable has followed two paths: the attempt to find more rational forms of organization that will lead to the establishment of agencies of different kinds; and the accumulation of a body of experience on the basis of which planning practices making for a more technical approach can be developed.

A quick survey of the planning practices in the major states reveals that there are a number of practices connected with the activity of the public sector or its relationship to the private sector, that have greater practical applicability and have been increasingly adopted.

In the field of public sector programming, there have been some relatively successful experiments in programme and performance budgeting, leading to greater co-ordination within the administrative machinery.

Of the measures employed by the state authority to influence private sector activity, a distinction should be made between those designed to impose selective criteria on capital formation and those providing incentives in respect of particular sites in order to promote existing industrial opportunities.

In public sector administration, both centralized and decentralized, the techniques of analysis and project formulation have long been in use. The adaptation of such micro-economic techniques to the particular conditions of regional planning has been much more successful than the application of over-all planning techniques. In this connexion, reference should be made to the part played by certain regional financial bodies, particularly the Banco do Nordeste do Brasil, in disseminating the techniques for preparing projects and adapting them to small-scale and medium-scale enterprises.

It seems clear that a number of more specialized techniques are emerging alongside these fluctuations, advances and setbacks in the institutions and practices on which an attempt is being made to base the planning systems. Although these techniques are not of the essence of planning, they represent a step forward in the rational and technical use of economic resources and pave the way for more ambitious and less empiric attempts at planning.

## C. FINAL CONSIDERATIONS

1. The growth of public power in the states—as in other spheres—was, until a few years ago, the result of adding new units to administrative bodies whose activities were difficult to co-ordinate, in an attempt to provide an institutional framework for the growing number of government commitments in new social and economic fields. The birth of planning agencies, which for a brief period occurred in all the states, was evidence of the universal search for more organic government participation. The new agencies being established everywhere were not intended to fulfil new functions, i.e., they were not intended to meet an expansion of public sector activities. Their establishment reflected a critical attitude towards the past, whose irrational elements were easy to detect when the situation at that time was viewed in an over-all light. It is clear that, together with the new institutions, a more ambitious attitude towards the future was emerging.

One of the most striking features of the process of reform now being undertaken is the search for a common language to describe the aspirations being translated into development goals. More specifically, this implies adopting new criteria and techniques to provide guidelines for the decisions taken by public agencies, which in turn confirms the need for a growing technocracy.

The planning teams thus created give life to the institutions carrying out the programmes and provide a framework within which recently-established agencies, whose relationship to the context in which they must operate is yet undefined, can coexist with others that are a legacy from past stages. To begin with, the planning agencies are foreign bodies imposed from above on the complex of institutions that makes up the state authority, but they seek eventually to become the guiding centre controlling the activity of the other bodies. Progress in this direction is strictly dependent on the continued support of the state executive.

2. The context in which state planning takes place can be described as follows:

Effective control of only a small number of the variables most affecting the local economy;

An ill-defined capacity to influence the decisions taken at other levels which are likely to have a marked effect on the economy of the states;

An institutional framework much less substantial and diversified at the state than at the federal level, even in relative terms.

The first of these characteristics reduces the radius of state action and leaves the state economy vulnerable to decisions outside its control. The second characteristic follows from the first; although much could be done to make higher decision-making authorities aware of the needs of the states and ready to adopt measures to satisfy those needs, there is as yet no institutional framework for doing so. For programming purposes, the imponderables inherent in this line of approach make it impracticable.

The above is in itself sufficient to illustrate the difficulties facing the state authorities in defining and sustaining pre-established patterns of development through economic policy decisions. The problem is accentuated by the fact that the sphere of action of the state economic institutions is very loosely defined and a large number of *ad hoc* decisions have to be made by the State Governor.

At first sight, the negative aspects that are inevitable when planning agencies are directly supported by the local high-level executive would seem to rule out this extremely unstable solution. The immediate conclusion is that the institutions should be given greater autonomy and their respective spheres of action should be more clearly defined. However, such a step might well not represent a real advance in planning. The ability to improvise, made possible by a close relationship with the State Governor, helps to bridge the gap between the planning teams and the institutions applying state economic policy. To overcome these problems properly, it would be necessary to undertake a complete reform of the state administrative machinery.

The influence of external factors, the uncertainty concerning decisions taken at higher levels and the improvisation of measures form a very unstable framework and are main limitations of state programming.

The awareness that the state is an unsatisfactory context in which to establish conventional-type planning systems has led local planners to seek new formulas and practices which represent an advance in relation to traditional state practices and, at the same time, take account of the limits of the situation within which they are applied. Techniques are being developed to rationalize the use of public re-

sources and to influence the activity of the private sector, and economic development plans are being prepared not on the basis of an analytical model but on the basis of summary diagnoses derived from a detailed study of local problems.

3. The formulation and establishment of plans at the state level is a better and more specific form of economic policy, used by the respective public authorities in an attempt to make their programmes more efficient through:

A definition of objectives which is more in line with reality and which takes into account possible repercussions. Seen in this light, the plan as an over-all view provides a clearer definition of optional goals. Moreover, planning over the long term makes it possible to take considerations of sequence into account, which widens the range of long-term options;

A clearer and more sustained progress towards the established objectives, which is particularly useful in a context characterized by dependence on external factors and on the personal element in decision-taking.

However, as regards the main lines of economic policy, such as the choice of a particular method of industrialization, no guidelines have been laid down by the central authority and the states are apparently given great freedom of choice. Naturally, this lack of definition by the central authority accentuates regional disequilibria by an accumulative process of concentration, and benefits those states undergoing rapid industrialization.

In principle, it is the Federal Government's responsibility to formulate an industrial policy that will take account of the initial disadvantages of the different states and will attempt to avoid a repetition at the domestic level of the problems now confronting the under-developed nations in their attempts to abolish the traditional international division of labour. For lack of a coherent industrialization policy, the power of decision is delegated to the states and, since the latter have no over-all view of the situation, they try indiscriminately to industrialize as much as possible.

This lack of co-ordination between the states with regard to industrial activity tends to lead to a disorganized division of labour within the country as a whole, which is possibly very different from that which would be established in the light of dynamic over-all criteria. On this ill-defined basis, local authorities establish goals

under the pressure of local aspirations, without relating their real potential to the national scene.<sup>11</sup> Even when industrial opportunities are seized, it may well be that the results will be disappointing once submitted to the test of market forces.

4. Having considered the common features and problems of state planning, it is now appropriate to summarize the ways in which they differ.

There are striking differences in the mechanisms adopted and, above all, in the size and significance of the different planning experiences. The differences in stages of development and in the characteristics of the planning processes under way are governed by one basic factor: the degree of financial autonomy in the different states.

In most of the Brazilian states, the considerable dependence on external resources severely limits the radius of action open to the local administration, with the result that their aspirations and programmes often only have a chance of materializing at the regional level. Thus, the very possibility of initiating a planning process in the more backward states has been closely linked with the existence of regional bodies able to incorporate state planning activities in a wider context. The states of the north-eastern region can be cited as an example. The presence of institutions such as SUDENE and the Banco do Nordeste, which in addition to channelling financial and technical resources into the region are able to lay down guidelines for overcoming a number of common problems, encourages state governments to adopt more efficient methods and, above all, to seek the co-ordination indispensable in undertakings affecting more than one state.

If the situation of the states in the north-eastern region (disregarding planning failures in a number of isolated cases) is compared with that of the states in the northern (Amazonas, Pará), eastern (Espírito Santo, Rio de Janeiro) and western (Matto Grosso, Goiás) regions, it is clear that the results achieved vary a great deal. In the last three regions there has been no integration of state and regional activities capable of making planning initiatives more dynamic, despite the fact that, geograph-

<sup>11</sup> It should be pointed out that the states need the consent of the Federal Government in order to initiate their programmes, since the latter controls the basic instruments of economic policy and the states need to secure federal resources for their more ambitious projects.

ically speaking, these regions come within the radius of action of supra-state bodies. Thus, thrown back on their own scanty resources, they are trying to establish a basis for planning with the aid of an uncertain and inadequate institutional framework. It is thus understandable that planning by these states has been little more than a formality, and for the most part, the plans formulated have been mere statements of intention. In the north-eastern region, however, the results achieved in many states undoubtedly point to a more highly developed planning process, in spite of the instability of certain institutional mechanisms. The development of the region, which began at the state level with the Pernambuco Planning Council and the Bahía Economic Planning Commission and at the regional level with the Banco do Nordeste, was given a great impetus by the establishment of SUDENE and led, at the individual state level, to the relatively complex and integrated planning experience of Ceará.

In more developed states, planning mechanisms were not established in the void either: they grew out of a cumbersome, complex and inefficient public machinery and, above all, a fairly developed local financial system. On this basis, planning has not been oriented towards the great objectives of industrialization or economic development; the new techniques employed have been mainly directed towards achieving a greater degree of coherence and integration in the activity of the public sector. The chief instrument used in this technical and administrative reform was performance and programme budgeting, which makes it possible for the programmes and projects financed by public funds to be considered separately and, therefore, helps to further the consideration of possible alternatives and the supervision of projects already under way.

Although in highly industrialized states with a high per capita income planning techniques are introspective and rationalizing in character in a new state experiencing vigorous growth, like Paraná, the purpose of these techniques is to provide the public sector with vigorous instruments which through their dynamism will arouse and channel latent and growing economic forces. Since the public sector is not yet excessively rigid and divided into watertight compartments, it is possible to make it more dynamic through additional agencies whose institutional organization is summarily defined and which are directly linked with the top-level executive.

5. Brazilian experience in the field of planning,<sup>12</sup> which is both polycentric and multiform, has its basis in various institutions belonging to the central, regional and state administrations, and is characterized by a lack of any clear relationship between the different decision-making centres. There are two senses in which the disconnected nature of the various planning efforts is apparent:

The decisions taken by the central government affect the behaviour of the regional economies and alter the conditions of the universe which the respective planning entities are supposed to influence. As a general rule, the Federal Government does not take into account the distortions imposed by distance on the measures that it takes, and the lower decision-making centres have to improvise ways of adjusting their policies in the light of the transformations that have occurred;

State and regional interests and goals not incorporated organically into the Central Plan may conflict with one another or run counter to the higher interests of the country as a whole, since their viability and appropriateness are not determined in an over-all context.

The recent intensification of planning activities has accentuated the contradictions inherent in a system of this kind and has emphasized the need to establish an integrated system. In principle, there are two ways of achieving this integration:

By recognizing the importance of the states' economic and social common denominators, in terms of the forms they took in the past and/or their dynamic potentiality. It would thus be possible for the two tendencies to begin converging, since the Federal Government could expressly "regionalize" its programmes, while the states could adjust theirs to a certain extent in order to bring them into line with regional goals;

Or, more formally, by eliminating the intermediate decision-making centres and incorporating state programmes directly in the national programme.

With regard to these possible lines of action, it should be pointed out that the three types of centres drawing up programmes of action have fundamentally different politico-institutional ori-

<sup>12</sup> The term "planning" is now widely used throughout Brazil to refer to all types of reform of public sector activity, whether or not plans containing a minimum of conventional technical requirements have been formulated.

gins. National plans stem from the urgent need to deal with certain national economic problems from an over-all point of view, and the full powers of the Federal Government are brought into play; state plans, which have fewer instruments at their disposal, rely on the vitality of decentralized power; whereas regional programmes have their origin in a delegation of power by the Federal Government, and their institutions, having no political strength of their own, have a somewhat uncertain future as a possible middle way in the national planning system and are dependent on the solution given to the problem described above.

Whatever real possibilities of integration there may be, the decisions should be made while the planning process is actually in operation and in the light of their political viability, given the present institutional arrangements, rather than accordance with criteria of a technical, operational nature or with the availability of "adaptable" formal models.

6. The planning experiences in the different states, despite their regional and local variations, have one common feature that brings them together in the same historical stage. This feature is the critical reappraisal of a situation

too inflexible to assimilate the changes taking place and to satisfy the growing aspirations. Independent planning experiences may make progress or suffer setbacks, but taken as a whole they move forward in search of new solutions. There is no assurance that they can establish and set in motion mechanisms that will be really effective in overcoming the economic problems standing in the way of progress in most of the states. Once the process of reform is under way, it may come to nothing, since the spirit of renewal is not immune from the danger of becoming a renewal in word only. To become a new conventionalism would then be the unhappy destiny of the great experiment that we are witnessing.

It is protected to a certain extent from this possible failure by the fact that this movement of renewal is being conducted by a generation endowed with a critical vision and a pragmatic attitude. It is that generation which, regardless of the tentative and transitory nature of the institutions and of the isolated attempts made, seems to point to the irreversibility of the overall process as one of the dimensions of the progress towards higher stages of economic and social development.

# THE HOUSING PROBLEM IN LATIN AMERICA IN RELATION TO STRUCTURAL DEVELOPMENT FACTORS

By RUBÉN D. UTRIA\*

## A. DEFINITION OF THE HOUSING PROBLEM

In the broad context of national development, housing conditions and their associated problems<sup>1</sup> do not exist in a watertight compartment but stem from a complex body of structural and institutional factors that are mainly to be found outside the housing sector. Although such conditions and problems display certain facets that are peculiar to housing when considered separately or on a sectoral basis, they are essentially a by-product of the characteristics and trends of the country's over-all development. In fact, they are usually closely connected with such factors as levels of production and real income, the economic, financial and technological resources available and the power to mobilize them, the extent to which the political and administrative organization of the country meets the people's desire for better living conditions and, in general, nearly all the structural and institutional aspects of national development.

To put the problem on a practical plane, it can be stated more specifically that housing conditions in a given country or community depend on three basic factors:<sup>2</sup>

(a) The ability of the economy to produce a sufficient supply of the goods and services proper to housing;

(b) Access of every sector of the population to these goods and services, in terms of real

purchasing power, as a result of their satisfactory incorporation into the development process; and

(c) The efficient operational organization of the housing and associated services market so that the capacity to generate supplies can be brought into line with the real purchasing power of the people.

As these and other conditions are met, so will the general situation become more conducive to a progressive improvement in housing conditions. The extent to which this favourable climate can be created and maintained will largely depend, in its turn, on whether the prerequisites are being met in an effective and mutually compatible manner, that is, with the volume of supply based on a sound, progressive and widespread development of the production system (and not merely on an artificial and short-lived boom), with purchasing power founded on a constant increase in job opportunities and a steady rise in productivity (instead of a temporary policy of subsidies), and with the functional organization of the market based on a real process of institutional change and improvement (and not simply on more or less arbitrary and wholly academic legal provisions). In this case, it could be claimed that the problem of housing conditions as such no longer existed, or had been reduced to the need for a few efforts to be made to improve or put the final touches to some or all of the market and housing policy instruments. The crux of the matter, then, is the lack of compatibility between the different parts of the whole, stemming mainly from institutional and operational shortcomings that would not be difficult to remedy by policy decisions.

This is essentially true of the highly developed countries where the conditions or prerequisites listed above are usually met. Where variations do occur, they seem to be the result of incompatibilities between those conditions. For ex-

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<sup>1</sup> The term "housing conditions" should be understood as the actual response of a person, family or community to problems relating to physical accommodation, functional aspects of the housing unit, the necessary links between each household and the community as a whole, the body of services required for housing and the improvement of household conditions and, in general, all aspects with a direct or indirect bearing on housing levels.

<sup>2</sup> These "basic" factors should include the policy decision as to whether or not to promote the improvement of housing conditions.

ample, when people are continually trying to improve their housing conditions and have the purchasing power to do so, existing dwellings become obsolete and the conventional supply of housing is outstripped by demand, as in the Scandinavian countries, the United Kingdom and the United States at the present time.<sup>3</sup> Another variation occurs in the case of minorities in an economic or social marginal position, as for instance, the coloured groups and the Mexican and Puerto Rican immigrants in the United States,<sup>4</sup> the Algerians and other Africans in France, and the African and Asian emigrants to the United Kingdom from its present and former colonies.<sup>5</sup> A third variation appears in the developed countries when they go through periods of depression or wars. The former is illustrated to some extent by the housing problem in the United States during the 1930 depression, while typical examples of the latter were to be found shortly after the Second World War in the Federal Republic of Germany, France, Italy and the Netherlands, among other European countries, as well as in Japan, where some, and in certain places all of the housing stock was destroyed in the course of that war.<sup>6</sup>

<sup>3</sup> In connexion with the same subject, see Frank S. Kristop, "Componentes de cambio en el inventario nacional de viviendas en relación con el censo de 1960", *Estadística*, vol. XX, No. 77 (Washington, December 1962), p. 755; Just Gustavsson, *Housing in Sweden*, National Housing Board (Copenhagen, 1964); Danish Ministry of Housing, *Housing in Denmark* (Copenhagen, 1964) and Norwegian Ministry of Housing, *Housing in Norway* (Copenhagen, 1964). The last three documents were submitted to the Study Tour and Workshop on the Organization and Functions of National Housing Agencies for the Implementation of Housing Programmes, sponsored by the United Nations and held in 1964.

<sup>4</sup> *Report on the world social situation* (United Nations publication, Sales No.: 63.IV.4), chapter V; Charles Abrams, "Housing and urban development in the United States of America", in *Report of the ad hoc group of experts on housing and urban development* (United Nations publication, Sales No.: 63.IV.1), pp. 72-74; Michael Harrington, *The other America: poverty in the United States* (New York, 1962).

<sup>5</sup> United Nations Economic Commission for Europe, *The European housing situation* (E/ECE/221, Geneva, 1959); Paul D. Wendt, "Post World War II Housing Policies in Italy", *Land Economics*, vol. XXXVIII, No. 2 (May 1962).

<sup>6</sup> *The European housing situation*, op. cit.; "Programa relativo a los censos nacionales de habitación", *Estadística*, op. cit.; H. Kano, "Housing and urban development in Japan", *Report of the ad hoc group of experts on housing and urban development*, op. cit., p. 67; *World housing conditions and estimated requirements* (United Nations publication, Sales No.: 65.IV.8); *Major long-term problems of government housing and related policies*, vols. I and II (United Nations publication, Sales No.: 66.II.E/Mim.3).

In these cases, the basic feature of the housing problem which differentiates it from the problem as it presents itself in the developing countries is that the "solution" is both easier to find and can fairly readily be turned to account by the economy as a whole. The developed countries, in fact, can usually deal with a housing deficit by making internal adjustments in their production and financial systems without coming up against formidable structural obstacles—such as those characteristics of Latin America—and without seriously affecting the other development sectors. In addition, a systematic expansion of the supply of goods and services related to housing can more easily be used as a strategic tool to invigorate the whole economy in the developing countries. In a developed economy the capacity of housebuilding to absorb a large and complex volume of inputs and manufactured goods of all kinds is a dynamic factor that is likely to bring many benefits in its train.

This is, first, because large-scale housing projects need a great deal of heavy and light construction equipment that can be manufactured locally, generate considerable demand for electric household appliances that are within the people's power to buy, and use an enormous amount of construction materials produced with domestic equipment, techniques and raw materials,<sup>7</sup> and, secondly, because the production system does not have to undergo structural changes before it is capable of satisfying this volume of demand, access to financial resources is seldom blocked by high priorities for other development sectors or by balance-of-payments policy.

In these conditions, the housing deficit is basically a problem of "over-all shortage" and can therefore be dealt with by mass production, the organization of the market and the large-scale mobilization of funds. In the developing countries, however, and more particularly in Latin America, the problem assumes an entirely different form. The poor housing conditions, which affect the living standards of broad sectors of the population in terms of education, health, diet and other aspects, are not simply the result of a temporary housing shortage. On the contrary, everything seems to indicate that they are the outward sign of structural maladjustments and limitations of various kinds which lie at the very root of the development process and manifest themselves in housing and urbanization problems. The poor housing conditions in

<sup>7</sup> Harold Robinson, "Recursos financieros y política de organizaciones interamericanas para vivienda", *La formación de capitales para la vivienda en América Latina*, Pan American Union (Washington, 1963) p. 30.



which large numbers of people live, together with the resulting high rates of overcrowding, promiscuity, depreciation, insanitariness, marginality and other adverse effects,<sup>8</sup> are part of a much broader picture of social and economic marginality that includes all the basic elements of living conditions.

These conditions are recognized to be the result of inadequate economic and social development, which has made it impossible for large numbers of people to find productive employment or to obtain a high enough rate of pay and the other services needed to achieve a reasonable standard of living. The big, insanitary *barriadas* that spring up on the fringe of urban centres, and the crowded, shabby multi-family housing units in the middle of the big towns are together with the shacks of the rural labourers, a manifestation not only of housing marginality but of the general living conditions of the marginal groups who are forced to bear the burden of the structural distortions in the economic and social growth of the country.<sup>9</sup>

Although in Latin America, as in the highly developed countries, the basic features of this problem display certain variations or shades of difference, under-development is common to them all.<sup>10</sup>

<sup>8</sup> "Overcrowding" is said to exist when a housing unit is occupied by a larger number of people than it can reasonably accommodate. "Promiscuity" occurs when activities that are mutually incompatible have to be carried on simultaneously in the same functional space. "Depreciation" relates to the state of preservation of the materials and equipment in a house. "Insanitariness" refers to the state of the sanitary services, if they exist at all (sewage and rubbish disposal, ventilation, etc.). The term "urban marginality" denotes the lack of any relationship between the different housing units and the body of municipal and community services, their location on the edge of town and the drawbacks of the land on which they are built (steep slopes, erosion, exposure to flooding, etc.). There are also other indicators of urban marginality.

<sup>9</sup> "The formation of marginal and sub-marginal population, often living on the very edge of subsistence levels, was the most obvious price that the major Latin American towns had to pay for reconciling their high rates of population growth with the low levels of productivity of their economic structure." See the *Social development of Latin America in the post-war period* (E/CN.12/660), p. 69.

<sup>10</sup> Argentina and Uruguay provide examples of one such variation, since in those countries the cumulative housing deficit is fairly small, as were also, up to a few years ago, the marginal groups untouched by the redistribution of benefits that development brought in its train. These sectors are now growing as the traditional conditions of development deteriorate. Another variation is exemplified by Venezuela, where the substantial tax revenue from petroleum enables a large number of housing units to be financed and even subsidized, although it does not necessarily follow that the families

Using the original scheme of basic prerequisites related to housing conditions, it can be said that this common denominator manifests itself in the following ways in the region:

(a) The economy is unable to generate an adequate supply of housing and allied services;

(b) The social sectors affected by the housing problem do not have the real purchasing power to buy property of their own and the State is unable to subsidize them;

(c) Serious limitations and structural inelasticities make it difficult to organize and operate the market for housing, urban land and associated services.

Thus, the huge housing deficit that has accumulated up to the present is not the crux of the matter but simply a numerical expression or sign of a far more deep-rooted problem, that of the low rate of economic and social development.

Consequently, the real point at issue is the "shortage of development" rather than the "shortage of housing", and this cannot be remedied by speeding up mass construction of new housing units unless at the same time the bases are laid for development so that the economy can give the groups concerned a stable and adequate level of purchasing power and generate the costly complex of factors needed to maintain the supply of housing and associated services at a satisfactory level.

Quite apart from these considerations, the concept or statement of the problem and the majority of the solutions proposed in the Latin American countries have been traditionally concerned with its narrow sense of "quantitative deficit", i.e., in quantifying the difference between the number of families or "census households" and the number of "adequate" housing units existing at a given moment. This is, at least, the impression that is given by the great majority of studies and statements of the problem made by the Governments and specialized housing agencies in the regions,<sup>11</sup> and by the publica-

actually benefiting have escaped from their general state of economic and social marginality. This kind of solution has already been tested and found wanting in the well-known project "Superbloques de Caracas". See Banco Obrero de Caracas, *Evaluación de los Superbloques de Caracas* (Caracas, 1961).

<sup>11</sup> See, for instance, Development Corporation, *Programa Nacional de Desarrollo Económico, Resumen* (Santiago, 1961); Housing Corporation, *Plan-Habitacional-Chile* (Santiago, 1963); Chilean Building Association, *Plan habitacional 1965-70* (Santiago, 1964); National Housing Commission, *Informe sobre su actuación y plan integral*, Ministry of Labour and Social Security (Buenos Aires, 1957); National Public Utilities Corporation, *Déficit y demanda de viviendas en Colombia* (Bogotá, 1956); *Informe final del Primer Seminario*

tions of the various international and regional organizations.<sup>12</sup> However, the concept of the "quantitative deficit", while suitable for the industrialized countries, has certain basic limitations for the analysis and treatment of the problem in Latin America. The main difficulty is that the standard of reference or yardstick adopted for measuring the "shortage" often lacks objectivity.<sup>13</sup> It may well be that the growing aspirations of the middle classes and, in par-

*Nacional de Vivienda de Interés Social* (Ambato, Ecuador, 1959); Ministry of Economic Affairs, *La vivienda en El Salvador* (San Salvador, 1949); Land Reform and Housing Commission, *Informe sobre la vivienda en el Perú* (Lima, 1958); Ministry of Finance and Public Credit, *Programa financiero de vivienda* (México, 1964); National Housing and Urbanization Institute, *Diagnóstico preliminar del Sector Vivienda* (San José, Costa Rica, 1964); W. Harris et al., *La vivienda en Honduras*, Pan American Union (Washington, 1964). See also *Analysis of the housing programmes of five Latin American countries* (ST/ECLA/Conf.9/L.9), Pan American Union, Report of second session of the VI Special committee to IA-ECOSOC (OAS) serv.H/X.4, São Paulo, 1963).

<sup>12</sup> See, for instance, *Statistical evaluation of housing conditions, existing deficits and future housing requirements in the Latin American countries* (ST/ECLA/Conf.9/L.10); *Report of the Latin American Seminar on Housing Statistics and Programmes* (United Nations publication, Sales No.: 63.II.C.14); Pan American Union, *Problemas de la vivienda de interés social en América Latina* (Washington, 1956); *World housing conditions and estimated requirements*, op. cit.

<sup>13</sup> The nature and internal dynamics of these standards of reference have not been properly clarified. Broadly speaking, the housing units referred to are nearly always those that fail to meet these standards. For example, OAS bases its calculations of the deficit on those buildings that do not live up to the standards of human dignity and should therefore be pulled down. *Problemas de la vivienda de interés social en América Latina*, op. cit.

ticular, of employees in the public sector have played an important part in shaping this definition. In any case, this method of approach and the attitude of mind it implies are, naturally enough, incompatible with the realities and limitations of the situation in Latin America. The shortcomings in the way in which the problem is focused in the context of Latin American development have led in practice to a confusion of the problem and its causes with its outward expressions or effects. Because of this, it often happens that both terms in which it is defined Latin America and the efforts made to deal with it are invariably based on the deficit or "shortage" itself rather than on the underlying structural and institutional causes. The problem is stated thus and dealt with in terms of the housing sector with the result that the influence of the social and economic sectors and particularly the limitations characteristic of the development process in Latin America are consistently underestimated. The greater part of the proposals for the programming of housing in the Latin American countries obviously suffer from this shortcoming.<sup>14</sup>

<sup>14</sup> L. J. Jonge, "Demanda actual de vivienda", *Estadística*, vol. XXI, No. 79 (Washington, June 1963), p. 282; Jacob S. Siegel, "Informaciones demográficas para la formulación de programas de vivienda con especial referencia a América Latina", *ibid.*, p. 301; "El programa de estadísticas de habitación y construcción del Instituto Internacional de Estadísticas", *ibid.*, p. 405. See also *Estadística*, vol. XX, op. cit. For a detailed discussion of the subject, see United Nations, *Proposed methods of estimating housing needs* (E/CN.3/274, New York, 1960); *Statistical indicators of housing conditions* (United Nations publication, Sales No.: 62.XVII.7); and *Report of the Latin American Seminar on Housing Statistics and Programmes*, op. cit.

## B. STRUCTURAL NATURE OF THE HOUSING PROBLEM

When the bases and the causes of the problem are analysed as well as its outward manifestations, certain structural factors are brought to light which transform it into a phenomenon far transcending its own field of action, and place it incontrovertibly at the very root of the development of the Latin American countries severally and as a whole. Those factors include:

1. Incompatibilities between the income levels of the broad masses of the population and the cost of housing services;
2. Incompatibilities between theoretical demand and the real capacity of the countries to produce and finance the housing and allied services required;

3. A lack of balance between rural and urban-industrial structures, their internal distortions and demographic implications; and
4. The whole body of politico-administrative and socio-cultural limitations and obstacles that directly or indirectly reflect the structures prevailing in the region.

In addition to these adverse structural elements, which can be regarded as playing a decisive part in shaping the problem, there are other, no less serious difficulties of an operational nature. Among these are the lack of organization in the production of housing and associated services, and in the corresponding, unjustifiable increases in costs, deficiencies in

existing statistical systems and the want of a satisfactory housing policy and investment programmes. But as an examination of the structural factors involved will show, these operational difficulties play relatively little part in the form of the problem in the less developed countries, and attempts to overcome them therefore contribute little to the over-all and definitive solution of the problem. As a result, the benefits of any such efforts are nearly always confined to the sectors that, for structural reasons, have access to the housing and associated services market. Paradoxically, however, it is to these operational factors that the greatest attention has always been paid in Latin America.<sup>15</sup>

#### 1. INCOMPATIBILITIES BETWEEN HOUSING COSTS AND THE PURCHASING POWER OF THE LOWER-INCOME GROUPS

Owing to a complexity of adverse factors, housing costs in Latin America are high, both from the standpoint of production and from that of the purchasing power of the low and medium-income groups in urban and rural areas.

There are no studies available from which to make an accurate assessment of these costs. To begin with, the region has no system of statistical records from which reliable figures could be taken for the costs of all housebuilding undertaken independently of the private sector. As part of their tax system, some of the major towns require information to be provided on the cost and area of new building in general, but in practice figures are usually adjusted by the owners and builders in order to reduce the corresponding tax liabilities. Secondly, the data on official housing programmes are often incomplete, and seldom include the administrative costs of the institution concerned which are, in many cases, between 15 and 25 per cent of its budget, municipal and national taxes (which vary from 3 to 6 per cent) or the financing costs (which are around 6 to 12 per cent annually). In other cases, they exclude the cost of the land, of providing urban facilities<sup>16</sup> or of both, or they may

<sup>15</sup> See footnote and also *Instituto de Teoría de la Arquitectura y Urbanismo*, Concepto y técnica en el planeamiento de la vivienda de interés social (Montevideo, 1964); *Problemas de la vivienda de interés social en América Latina*, op. cit.; Banco Obrero de Venezuela, *Plan Nacional de la Vivienda, 1951-1955* (Caracas, 1951); Inter-American Development Bank.

<sup>16</sup> This cost component is often excluded from housing programmes that do not cover provision of services. Paradoxical though it may seem, many national housing institutions confine themselves to building and handing over the housing unit itself, and leaves it to other agencies to provide the basic services. Examples of this are to be found.

be underestimated, especially when the land is acquired by the institutions several years in advance, is common land (*ejido*) or public land of some other kind. The costs of the basic infrastructure are normally excluded as well. There have also been programmes in which the official figures for the housing units were deliberately set very low in order not to pass the ceiling fixed by the internal or external credit agencies.<sup>17</sup> Again, mainly because of inflation and market instability, the assignment or sale costs are, in most cases, much higher than the figures appearing in the original programme, which are nearly always the ones quoted in official reports. Apart from the question of official figures and the reductions that could ideally be made by simplifying designs, materials and building methods, the type of housing currently on the market is too expensive for the lower-income groups who, except in Argentina and Uruguay, make up the bulk of the population. The real cost of a modest but adequate urban housing unit on the traditional market ranges from 3,000 to 6,000 dollars for poorer families and from 8,000 to 18,000 dollars for the middle-income groups<sup>18</sup> (see table 1).

That this situation continues to prevail is fully confirmed by the programmes launched by the Governments in implementation of the regional programmes for financial co-operation, particularly as regards low-cost housing (see table 2).<sup>19</sup> At the same time, the supply is extremely limited, and the market is characterized by the predominance of cash purchase or rental arrangements in the case of private owners, or of assignment on the basis of long-term repayment in the case of programmes sponsored by the

<sup>17</sup> Owners of many of the houses built as part of the programme established by Chile's Legislative Decree No. 2 add to the size and incur extra costs after the original figures have been entered on the official register.

<sup>18</sup> The estimates comprise: (a) the cost of the land and basic services; (b) the cost of construction in terms of floor space; and (c) the cost of administration, fees and taxes. Capital costs and basic urban infrastructural costs are not included.

<sup>19</sup> For example, according to the National League of Insured Saving Associations, the average cost of housing units provided by these associations in June 1965 was 4,000 dollars in Chile, 6,249 dollars in the Dominican Republic, 4,700 in Ecuador, 9,110 in El Salvador, 7,000 in Guatemala, 4,899 in Peru and 14,482 in Venezuela. See *Saving and Loan Progress Report No. 25* (Washington, 1965). In Colombia 64,149 housing units built by the Institute of Land Credit between 1961 and 1963 cost 2,900 dollars on an average. See *Informe al señor Ministro de Fomento 1963* (Bogotá, 1963), p. 88. In Chile the standard apartments of 70 square metres financed by the Plan Habitacional cost 8,000 to 12,000 dollars.

**Table 1**  
**LATIN AMERICA: ESTIMATED AVERAGE COST OF LOW-COST HOUSING, 1965**  
*(Dollars)*

Item	Housing for low-income families <sup>a</sup>			Housing for medium-income families <sup>b</sup>		
	Alternative A <sup>c</sup>	Alternative B <sup>d</sup>	Alternative C <sup>e</sup>	Alternative A <sup>c</sup>	Alternative B <sup>d</sup>	Alternative C <sup>e</sup>
(a) Land with services <sup>e</sup> .....	100 m <sup>2</sup> × 5 = 500	80 m <sup>2</sup> × 5 = 400	150 m <sup>2</sup> × 7 = 1,050	200 m <sup>2</sup> × 10 = 2,000	80 m <sup>2</sup> × 10 = 800	250 m <sup>2</sup> × 15 = 3,750
(b) Construction <sup>f</sup> ..	70 m <sup>2</sup> × 30 = 2,100	70 m <sup>2</sup> × 50 = 3,500	90 m <sup>2</sup> × 50 = 4,500	140 m <sup>2</sup> × 50 = 7,000	80 m <sup>2</sup> × 70 = 5,600	160 m <sup>2</sup> × 70 = 11,200
(c) Other costs <sup>g</sup> ..	20%            520	20%            780	20%            1,110	25%            1,800	25%            1,600	25%            2,990
<b>TOTAL COSTS</b>	<b>3,120</b>	<b>4,600</b>	<b>6,600</b>	<b>10,800</b>	<b>8,000</b>	<b>17,940</b>
(d) Monthly rent (average) <sup>h</sup> ...	31.20	46.80	66.60	108.00	80.00	179.40
(e) Monthly loan repayment (average) <sup>i</sup> ....	39.00	58.50	83.25	135.00	100.00	223.41

SOURCE: Estimates based on specific cost data for different towns.

<sup>a</sup> With a monthly income of 0-100 dollars (see tables 6 and 7).

<sup>b</sup> With a monthly income of 10-500 dollars (see tables 6 and 7).

<sup>c</sup> Standard detached one-storey or two-storey house.

<sup>d</sup> Apartments in multi-family four-storey buildings on land with an average density of 700 persons per hectare.

<sup>e</sup> Plot of land with roads, water, sewerage, light and some community services.

<sup>f</sup> Total floor space.

<sup>g</sup> Fees or profits, as appropriate, legal costs, deeds, etc.

<sup>h</sup> The average rent charged in Latin America is 1 per cent of the investment.

<sup>i</sup> On a 20-year loan at 10 per cent annual interest, repayable in 240 monthly quotas.

Table 2

LATIN AMERICA: COST OF HOUSING FINANCED BY THE INTER-AMERICAN DEVELOPMENT BANK,  
1961-63  
(Dollars)

Country	Year for agreement	Annual income of families receiving loans	Housing financed by loans	
			Total average cost per housing unit	Total cost per m <sup>2</sup>
Argentina .....	1963	1,800-2,400	3,950	60.00-70.00
Bolivia .....	—	...	1,400	20.00-30.00
Brazil .....	—	Up to four times the minimum wage	830	11.00
Chile .....	1962	225	2,515	32.00
Chile .....	1962	...	3,346	43.57
Chile .....	1963	1,560-1,980	3,459	43.00
Colombia .....	1962	366-2,200	2,110	18.40-57.20
Costa Rica .....	1961	648-1,440	2,707	38.00
Dominican Republic .....	1963	320-2,160	1,000-1,640	15.00-40.00
Ecuador .....	1962	Up to nine hundred	2,222	...
El Salvador .....	1962	576-1,536	2,260	...
Guatemala .....	1962	480-1,680	1,729-2,500	20.00
Honduras .....	—	660-1,560	1,912	51.00
Nicaragua .....	1962	428-2,200	2,732	40.00
Panama .....	1961	800-2,400	2,950-3,240	43.00-46.00
Peru .....	1961	355-1,120	...	26.50
Peru .....	1962	1,560	3,364	37.50
Uruguay .....	—	660-2,280	...	40.00-63.00
Venezuela .....	1961	550-800	1,300	15.00
Venezuela .....	1962	715-2,700	2,613	65.00

SOURCE: *Housing conditions, policies and programmes in Latin America, 1960-63* (ST/ECLA/Conf.16/L.1), p. 41.

Government or non-profit-making institutions. However, the latter system still counts for very little in the region as a whole because of the fairly small volume of supply that it represents in the total. The Social Progress Trust Fund, which up to now has been the largest and most effective source of housing funds in the region, succeeded in partially financing 230,000 units in eighteen countries during its first four years of operation (1961-64).<sup>20</sup> This is an average of 57,000 new housing units a year, and is close to the annual residential housebuilding target fixed by the Government of Chile for 1965-70.<sup>21</sup> Table 3 gives a general picture of this type of supply in comparison with theoretical housing demand in Latin America.

There are no satisfactory data available from which to determine trends in the cost of housebuilding, allied services and urban land in the

major towns of the region. The information that can be gathered is still too unreliable and fragmentary to be used as a basis for a sound comparative analysis, but may serve for a tentative definition of the problem. One of the factors or elements that carries most weight in the cost structure is the rising price of urban land over the last twenty years throughout the region. In the main towns, it is estimated to account for 20 to 30 per cent of total costs. This seems to have come about, in the first place, because of the lack of sufficient private and State capital to provide all the urban services required,<sup>22</sup> and,

<sup>22</sup> This lack has led to a shortage of urban land in the face of the ever-increasing pressure of demand produced by the continuous arrival of new migrants from small towns, and suburban and rural areas. The subject of planned urbanization at different levels has been dealt with extensively in "Rural settlement patterns and social change in Latin America", *Economic Bulletin for Latin America*, vol. X, (1965), pp. 1-21, and "Geographical distribution of the population of Latin America and regional development priorities", *ibid.*, vol. VIII (1963), pp. 51-63.

<sup>20</sup> See *Social Progress Trust Fund*, op. cit.

<sup>21</sup> See *Informe del Presidente de la República señor Eduardo Frei sobre el primer año de gobierno* (Santiago, 1965). See also *Plan habitacional, 1965-70*, op. cit.

Table 3

LATIN AMERICA: MINIMUM ANNUAL NUMBER OF NEW HOUSING UNITS REQUIRED IN 1960; BUILDING TARGETS ADOPTED IN NATIONAL HOUSING INVESTMENT PROGRAMMES AND PLANS; AND NUMBER OF HOUSING UNITS BUILT ANNUALLY *CIRCA* 1960-63

(Units)

Country	Minimum annual number of new housing units required (estimate for 1960) <sup>a</sup>			Period	Targets for housing investment programmes and plans <sup>b</sup>			Annual housing target in 1960-63 as a percentage of urban requirements	Number of urban housing units built annually circa 1960-63 <sup>c</sup>	
	Total	Urban	Rural		Total	Urban	Rural		Period	Urban
Argentina .....	162,087	128,509	33,578	—	...	...	...	...	1960	55,000 <sup>d</sup>
Bolivia .....	14,547	7,408	7,139	1962-66	25,647	10,194	15,453	137.6	—	...
Brazil .....	289,023	169,352	119,671	—	...	...	...	...	—	...
Chile .....	45,402	39,519	5,883	1961-70	53,870	44,450	9,420	112.5	1959-62	33,500 <sup>e</sup>
Colombia .....	91,451	67,251	24,200	1961-65	...	45,220	...	67.2	1960-62	39,873
Costa Rica .....	11,520	6,661	4,859	1963	...	3,441	...	51.7	1950-61	3,100
Cuba .....	55,486	42,081	13,405	—	...	...	...	...	—	...
Dominican Republic .....	14,396	7,323	7,073	—	...	...	...	...	—	...
Ecuador .....	23,648	12,132	11,516	1964-68	9,370	7,644	1,726	63.0	—	...
El Salvador .....	11,050	9,106	1,944	1962-63	...	2,500	...	27.5	1958-62	984

Guatemala .....	15,982	12,137	3,845	1962-63	1,636	...	...	...	1960-62	902 <sup>f</sup>
Haiti .....	15,336	6,316	9,020	—	...	...	...	...	—	...
Honduras .....	11,970	6,196	5,774	1962-64	...	2,208	...	35.6	—	...
Mexico .....	227,689	158,873	68,816	—	...	...	...	...	1958-60	6,564 <sup>g</sup>
Nicaragua .....	6,639	3,977	2,662	1962-63	1,425	...	...	...	—	...
Panama .....	5,697	3,653	2,044	1962-66	10,000	...	...	...	1962-63	2,390 <sup>h</sup>
Paraguay .....	5,001	3,069	1,932	—	...	...	...	...	—	...
Peru .....	60,711	33,693	27,018	1962-71	78,982	...	...	...	1962	5,429 <sup>i</sup>
Uruguay .....	18,820	17,227	1,593	—	...	...	...	...	1955-62	21,000 <sup>j</sup>
Venezuela .....	54,842	50,863	3,979	1963-66	65,000	...	...	45.9	1950-61	41,048 <sup>k</sup>
LATIN AMERICA	1,141,297	785,346	355,951	—	245,930	115,657	26,599	14.7		

\* SOURCE: ST/ECLA/Conf.9/L.10, 4 July 1962.

<sup>b</sup> SOURCES: ST/ECLA/Conf.9/L.9; *Desarrollo económico y social de Costa Rica*, report presented by the Government of Costa Rica (OEA/Ser.H/X.4 CIES/313, 26 August 1963); Economic Planning and Co-ordination Board, *Plan General de Desarrollo Económico y Social del Ecuador* (1963); IVU, *Memoria a la Asamblea General, 1962-63* (Panama); IDB, *Social Progress Trust Fund, Second Annual Report, 1962*.

<sup>c</sup> SOURCES: C.G.E. Economic Research Institute, *Programa Conjunto para el Desarrollo Agropecuario e Industrial*, vol. IV (Argentina, 1962); Land Credit Institute, *Informe 1962* (Colombia 1962); *Desarrollo económico y social de Costa Rica*, op. cit.; CORVI, *Plan habitacional de Chile* (1963); Department of Statistics and Censuses, *El Salvador en gráficas* (1962); Bank of Guatemala, *Boletín Estadístico* (July-August 1963); *Informe preliminar sobre los programas y estadísticas de vivienda en México*, presented at the Latin American Seminar on Housing Statistics and Programmes (Copenhagen,

1962); National Housing Board, *Informe de situación sobre vivienda, construcción y desarrollo urbano* (Peru, 1963).

<sup>d</sup> Comprising housing units built by the private sector throughout the country.

<sup>e</sup> Comprising housing units built by the public sector (21,478) and the private sector (12,022) throughout the country.

<sup>f</sup> Private building in the capital.

<sup>g</sup> Housing units built by the public sector throughout the country.

<sup>h</sup> Housing units built by IVU throughout the country. See IVU, *Memoria a la Asamblea Nacional 1962-1963* (Panama).

<sup>i</sup> Housing units built in Lima.

<sup>j</sup> Housing units built throughout the country. Provisional estimate based on a national housing sample.

<sup>k</sup> Republic of Venezuela, *Informe Vivienda*, submitted to IA-ECOSOC (July 1963). Comprising housing units built throughout the country.

secondly, because of the speculation that took place during certain stages of the inflationary process, and the lack of effective State action to regulate urban development. At the same time, the urban land available for building purposes tends to be under-utilized because of the specifications or patterns of urban and architectural designs laid down in municipal regulations for town planning. It is an acknowledged fact that between 30 and 50 per cent of the gross total of land suitable for building purposes in the big towns has to be set aside for "green areas" (parks and public gardens), avenues and streets, while each family lot or site may only have 50 to 60 per cent built over, the remainder being a "free area" or "open space". These liberal provisions are not in keeping with a strategy of reserves for the future. Originally inspired by sound principles of urban aesthetics,<sup>23</sup> these specifications may well be justifiable in the highly developed countries, but in the developing areas represent a sizable addition to the price of low-cost housing that is beyond their present capacity to pay. In fact, apart from leading to the under-utilization of land, they multiply the cost of providing drinking water, light, sewerage, telephones, roads and other services, as well as the social costs produced by the imbalances of all kinds that result from unchecked urban growth. Another adverse factor is the small amount of floor space in the plans for each housing unit. A close examination of the low-cost projects prepared by the private sector and by official housing organizations shows there are no clear ideas on the best way to make use of space with the result that much is wasted. In the projects put forward as part of housing policy, "floor space per person" may be anything from 7 to 25 square metres in the different Latin American countries, and even a similar disparity is found in the context of the same country, institution, climate and, in many cases, socio-economic sector.<sup>24</sup> Differences of 300 per cent or more in floor space per person not unnaturally have a proportional effect on costs and consequently determine the type of housing the low-income groups can afford. From a technical standpoint, there seems to be no reasonable explanation for such wide variations, particularly when a good solution can be found in architectural terms

<sup>23</sup> These high specifications are usually justified on health and functional grounds. But a close analysis will show that they go far beyond all reasonable standards, and seem to be mainly intended to age the ornamental grandeur found in certain sectors of the capitals of the highly developed countries.

<sup>24</sup> This is also true of the functional distribution of floor space in blueprints for each particular housing unit.

through the use of "unit areas" of 8 to 12 square metres.

An important factor, again, is the high cost of construction in general, which is apparently attributable to a variety of causes. One of these is under-utilization of the factors of production (labour, tools and equipment, etc.), whatever the production technique in use. This state of affairs seems to be due to structural characteristics and to administrative inefficiency, resulting in low productivity, waste of materials, deteriorations, and under-utilization of tools and equipment, high accident rates, unduly long construction periods and many other drawbacks. The high price of building materials is widely recognized as still another factor, imputable not only to scales of production, but also to the lack of real competition, to the growing numbers of middlemen who push up cost by about 20 to 30 per cent, and to the lack of organization characteristic of the building materials industry. According to estimates, approximately 10 per cent of the materials produced is wasted for want of standardization and modular co-ordination.<sup>25</sup> Then too there is the high administrative cost of housing programmes. It is common knowledge that the official agencies responsible for such programmes operate at administrative cost levels ranging from 15 to 25 per cent of the volume of real investment. Furthermore, the fees payable to project-makers and constructors vary from 10 to 20 per cent of the cost of constructions when they are based on professional scales of rates, and are even higher when other criteria are applied. These heavy cost items are largely determined by the characteristics of building firms, which usually have insufficient backing, are run on makeshift lines and lack the indispensable minimum of capital and equipment.<sup>26</sup> Yet another contributory factor is to be found in the high rates of interest payable on loans (6 to 12 per cent per annum in the case of the public sector<sup>27</sup> and 10 to 24 per cent in that of the

<sup>25</sup> "Standardization" is a production technique designed to promote efficiency, economy and productivity in respect of materials, through the unification and rationalization of specifications and standards. "Modular co-ordination" is a design and construction technique based on the rational and co-ordinated use of modules or common denominators for the dimensions of materials.

<sup>26</sup> See Tatian Bulat, *Organización de las asociaciones gremiales de empresarios en función de un sistema de planificación económica*, University of Chile, Faculty of Economics (Santiago, Chile, 1964), pp. 66 and 67.

<sup>27</sup> Direct interest rates usually range from 6 to 10 per cent per annum, but to these must be added the life and fire insurance surcharges which are almost always compulsory in transactions of this type as an investment safeguard.



private sector); since most building firms need to finance between 50 and 80 per cent of their operations on the basis of credit, the interest payable does much to raise costs. To all these surcharges of varying origin must be added the hidden costs represented by business interruption, certain indirect damages, and the increases in price of materials which automatically occur during the prolongation of construction time that results from faulty entrepreneurial organization, dealings with municipal agencies and public utility enterprises, delays in obtaining credit, seasonal shortages of materials, strikes and many other causes. For example, in Chile the average time taken to construct a privately built low-cost housing unit with 100 to 400 square metres of floor space (DFL.2 type<sup>28</sup>) is usually from 10 to 20 months, and in that period the rise in the price of building materials may be very significant, since in 1962 it amounted to about 13.1 per cent (in terms of constant prices and in relation to the preceding year), in 1963 to 43.4 per cent and in 1964 to 51 per cent (see table 4). In addition, in the case of programmes carried out by the private sector, account must be taken of total profits, which are estimated at approximately 20 per cent of real investment, even when the activities concerned are financed with official funds, from both internal and external sources.<sup>29</sup>

The evolution of these costs, far from showing signs of the elimination of the above-mentioned factors, is following an upward trend. It is undeniably true that in particular countries some firms are attempting to rationalize and mechanize certain phases of the construction process, but this does not seem to be reflected in a real reduction of housing prices, and counteracts, up to a point, some of the more dynamic effects of house-building in the under-developed countries.

Costs in the rural areas are a little lower than those noted in the case of urban housing, especially for the lower income groups, but their principal characteristics remain the same. Although the price of land is not so high, this advantage is cancelled out by the surcharges deriving from transport of materials, which may represent from 30 to 100 per cent of the cost of the materials themselves, according to the dis-

tance between the housing units and the major production centres. In many countries, and in many areas within each individual country, owing to the deficiencies of the system of distribution of materials and equipment and to the non-existence of a rural transport service, the surcharge greatly exceeds the value of the material transported. In Colombia and Ecuador, for example, a bag of cement, priced at approximately 1 dollar in a large town, costs 2 dollars in a small village 20 kilometres away. In Venezuela the corresponding ratio is sometimes as much as 1 to 3. More or less the same is true of skilled labour.

Some of the factors generating high costs and surcharges in house building in Latin America seem to derive from operational causes and therefore to be susceptible of organizational treatment, but most of them stem directly or indirectly from structural phenomena. The high prices of land, for example, reflect the nature of the land use and tenure system; it is hard to combat speculation in a market economy in which supply is very limited and competition negligible. In the production of building materials and in construction activities, the unduly heavy costs are largely attributable to the low technological levels and the lack of flexibility characterizing the production system. The under-productivity of town-planning and architectural design is in some respects a reflection of certain social and cultural codes of values. Hence the removal of these obstacles implies radical reforms in key institutions (ownership and the market), entailing an abrupt and substantial increase in financial and technological resources, and presupposing significant changes in the outlook and values of society. Accordingly, there is no reasonable likelihood of costs being drastically reduced over the short term. While it is true that some reductions can and must be effected, in particular through the rationalization of design and production, existing costs trends and characteristics will obviously persist unless the appropriate structural reforms are introduced.

In consequence of the situation described, traditional market prices for housing and its allied services have risen too high for most of the Latin American population to be able to pay them, even under official programmes offering long-term loans at low rates of interest. The payment of rent for housing units means monthly disbursement estimated as varying between 32 and 67 dollars for families in the lower income brackets and between 80 and 180 dollars for those in the middle income groups. Monthly repayments on loans range from 40 to 84 dollars

<sup>28</sup> I.e., low-cost housing units benefiting under the provisions of legislative Decree No. 2 (31 July 1959). This regulatory legislation, and Act No. 9135, to which it relates, constitute the basis of the housing plan in Chile.

<sup>29</sup> The reference here is to operations on the part of private building firms which are directly or indirectly financed with public funds deriving from special internal and external credit programmes to encourage the construction industry and house building.

**Table 4**  
**ARGENTINA AND CHILE: INDEXES OF CONSTRUCTION COST**  
**(AVERAGE TYPE), 1960-64**

Country	Annual average	Materials	Manpower	Overheads	Total cost	Percentage variation
Argentina .....	1960	328.0	268.9	337.5	303.5	11.5
	1961	396.4	334.9	398.4	370.1	21.9
	1962	516.2	442.4	489.7	481.7	30.2
	1963	589.0	591.8	675.7	599.2	24.4
	1964	678.6	753.7	801.3	723.7	20.8
Chile .....	1960	100.0	100.0	100.0	100.0	—
	1961	101.2	106.9	125.2	105.9	5.9
	1962	110.2	126.5	146.1	119.8	13.1
	1963	157.3	178.9	221.2	171.8	43.4
	1964	240.3	276.7	304.6	259.5	51.0

**SOURCES:**

For Argentina: National Statistics and Census Department (Dirección Nacional de Estadísticas y Censos, Secretaría de Estado), *Edificación*, "Índice del costo de la construcción en la Capital Federal", p. 9; Buenos Aires, June 1965.

For Chile: *Revista de la Construcción*, "Índice de variación de precios", p. 24; Year III, No. 34, Santiago, Chile, March 1965.

per household in the case of the former income strata and from 100 to 224 dollars for the latter (see again table 1). Despite the national efforts made in the last four years with the support of external co-operation, it is patent that the traditional housing and services market still retains its unfavourable costs characteristics. The explanation lies not only in the stumbling-blocks referred to, but also in the relatively slight impact of such programmes on the region's over-all situation as regards housing requirements, and in the lack of the requisite internal efforts to rationalize design and construction processes.

The purchasing power of the families affected by the housing problem is extremely limited both in absolute terms and in relation to the price of housing services. With all due allowance for the unreliability of average figures and generalizations, the income levels of the broad masses of the Latin American population are very low. On the basis of the situation prevailing in 1961, it is estimated that within a scale extending from 0 to 100 dollars, the monthly family income of 50 per cent of the region's population averages 55 dollars. The income group immediately above this level is constituted by 45 per cent of the population, whose income ranges from 100 to 500 dollars, the average being 190 dollars. The remainder is made up of two small groups whose income falls between

500 and 1,300 dollars in the one case, and in the other amounts to 1,300 dollars or over. These groups account for 2 and 3 per cent of the population, respectively.<sup>30</sup> A breakdown of private consumer expenditure in the Latin American countries reveals that the proportion absorbed by housing may be estimated at 13 to 20 per cent, while 1.5 per cent is earmarked for fuel and light and 4 to 12 per cent for household equipment (see table 5). If it is assumed that this percentage distribution of consumption holds good for the lower and middle income groups, and if 17 per cent of family income is adopted as the base figure for the index of maximum capacity to pay for housing services, it may be estimated that the first of these groups (i.e., 50 per cent of the Latin American population) can only allocate, on an average, 9.35 dollars a month to housing, and that the second (formed by 45 per cent of the population) cannot afford more than 38 dollars (see table 6). A comparison of current monthly costs on the traditional housing market with the real capacity to pay shows that the sectors in question are not in a position to secure and

<sup>30</sup> See *The economic development of Latin America in the post-war period* (United Nations publication, Sales No.: 64.II.G.6), pp. 64-65; and also Raúl Prebisch *Towards a dynamic development policy for Latin America* (United Nations publication, Sales No.: 64.II.G.4).

Table 5

## SELECTED LATIN AMERICAN COUNTRIES: PERCENTAGE BREAKDOWN OF FAMILY CONSUMER EXPENDITURE, 1955-60

Country	Date of inquiry	Annual consumer expenditure (national currency units)	Food	Rent	Fuel and light	Housing furniture, upkeep and equipment	Total	Clothing	Miscellaneous
<i>Argentina</i>		<i>Pesos</i>							
(Buenos Aires) ...	1960	87,522 <sup>a</sup>	59.2	3.1	3.9	2.0	9.0	18.7	13.1
<i>Honduras</i> <sup>b c</sup> .....	1958	1,190 <sup>a</sup>	50.1	6.5	6.4	7.7	20.6	12.8	16.5
<i>Haiti</i> .....		<i>Gourdes</i>							
	1955	6,760	51.2	17.4	8.8	3.2	29.4	10.0	9.4
<i>Ecuador</i> <sup>d</sup> .....	1960	—	44.0	—	—	—	12.0	—	—
<i>El Salvador</i> <sup>d</sup> .....	1960	—	42.0	—	—	—	8.0	—	—
<i>Panama</i>		<i>Balboas</i>							
Puerto Armuelles <sup>a</sup> ..	1955	1,231	37.0	0.6	2.4	9.4	12.4	13.6	37.0 <sup>f</sup>
Bocas del Toro <sup>e</sup> ...	1955	1,369	38.3	0.9	2.5	9.7	13.1	11.8	36.8 <sup>f</sup>
David .....	1956	1,607	38.6	5.3	4.3	9.3	18.9	11.1	31.4 <sup>f</sup>
Panama <sup>c</sup> .....	1958	2,172	33.8 <sup>g</sup>	10.1	3.9	9.0	23.0	11.1	32.1 <sup>f</sup>
<i>Peru</i>		<i>Soles</i>							
Lima and Callao ...	VIII-IX 1957	17,552 <sup>a</sup>	55.6	9.2	3.5	5.8	18.5	10.1	15.8
<i>Venezuela</i> <sup>b</sup> .....		<i>VII-VIII</i> ...	46.8	11.3			11.3	7.6	34.3

SOURCE: International Labour Organisation (ILO), *Year Book of Labour Statistics*, 1963, pp. 493-494.

<sup>a</sup> Annual total estimated by ILO on the basis of data for a shorter period.

<sup>b</sup> Urban population.

<sup>c</sup> Manual and non-manual workers' families.

<sup>d</sup> See United Nations, *Compendium of Social Statistics*, 1963, Statistical Papers, Series K, No. 2, p. 572.

<sup>e</sup> Banana-growing areas.

<sup>f</sup> Including alcoholic beverages.

<sup>g</sup> Excluding alcoholic beverages.

Table 6

## LATIN AMERICA: PRESUMED INCOME DISTRIBUTION AND MONTHLY SUM AVAILABLE FOR HOUSING

Income groups (dollars)	Percentage of population represented by income group	Average annual per capita personal income		Monthly income per family (dollars)			Maximum monthly capacity to pay for housing <sup>a</sup> (20 per cent)
		As a percentage of over-all average	(dollars)	Average	Range		
					Lower limit	Upper limit	
0 to 100 .....	50	30.0	120	55	0	100	11.0
100 to 500 .....	45	110.0	400	190	100	500	38.0
500 to 1,300 .....	3	470.0	1,750	800	500	1,300	160.0
1,300 and over .....	2	950.0	3,500	1,600	1,300	over	320.0
TOTAL	100	100.0	370	170			

SOURCE: *The Economic development of Latin America in the post-war period*, op. cit., p. 65.

<sup>a</sup> Estimate.

Table 7

LATIN AMERICA: COMPARISON BETWEEN LOWER AND MIDDLE INCOME GROUPS' ESTIMATED MONTHLY CAPACITY TO PAY FOR HOUSING, AND COST OF HOUSING SERVICES

(Dollars)

Income group <sup>a</sup>	Monthly family income	Maximum capacity to pay for housing	Cost of housing services <sup>b</sup>		Percentage deficit in capacity to pay <sup>c</sup>	
			Rent	Loan repayment	Rent	Loan repayment
0 to 100 .....	55	9.35 <sup>d</sup>	46.80	58.50	80.1	84.1
100 to 500 .....	190	38.00 <sup>e</sup>	108.00	135.00	64.9	71.8

<sup>a</sup> These are the first two income groups within the presumed income distribution prevailing in the Latin American countries, as shown in table 6.

<sup>b</sup> Monthly rent or monthly loan repayment as shown in table 1, on the basis of the middle alternative (alternative B for lower income groups and alternative A for middle income groups).

<sup>c</sup> Gap between monthly capacity to pay and cost of housing services.

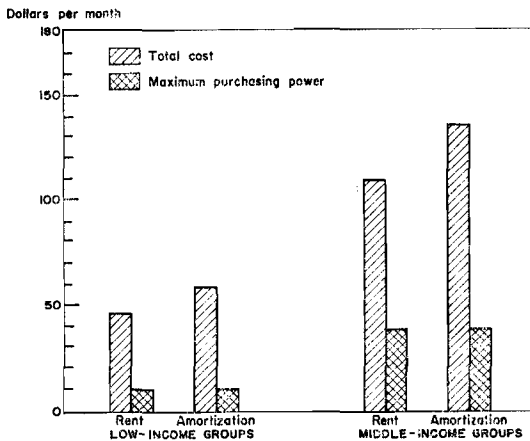
<sup>d</sup> On the basis of the average proportion earmarked for payment of rent (17 per cent) in the consumer expenditure pattern of a representative number of countries (see tables 1 and 2).

<sup>e</sup> On the basis of 20 per cent of family expenditure, in accordance with the estimate for middle income groups.

maintain satisfactory housing levels. Their purchasing-power deficit varies from 80 to 84 per cent in the lower income brackets, and from 64.9 to 71.8 per cent in the middle income strata (see table 7 and figure 1).

Figure 1

LATIN AMERICA: COST OF HOUSING AND PURCHASING POWER IN LOW AND MIDDLE-INCOME GROUPS



The picture evoked by the foregoing comparison is tragic enough, but the real state of affairs is worse still. Although the average figures presented give a general impression of

the situation, they do not clearly show that a whole gamut of family income levels extends between the maximum and minimum, or that there is a majority whose income falls short of the average. The dichotomy characteristic of the development process in Latin America is exemplified in the fact that a small group of workers employed in production processes where rates of productivity are high—the metallurgical, petroleum and chemical industries, industrialized mining activities, air transport, etc.—have attained wage levels which represent the upper limit of the lower income scale and therefore have a marked incidence on the average income figure, although the group in question constitutes only 5 to 10 per cent of the total labour force. For the sake of argument, it might be alleged that 50 per cent of the Latin American population lives in rural areas, and that consequently the average income of 55 dollars corresponds to this sector. Hence the inference would seem to be that urban families have a greater capacity to pay than is reflected in the average income estimates presented above. There is a good deal of evidence, however, that this assumption is not borne out by the facts. In the first place, a sector always exists in urban centres which is affected by unemployment, overt or disguised. In both cases family income is minimal or far below average. Confirmation of this state of affairs is to be found in all the socio-economic studies carried out in the primate

cities of Latin America, and especially in those dealing with shanty towns and slums. For example, in Santiago, Chile, in 1961, 23 per cent of the workers living in shanty towns were unemployed, and 43 per cent earned less than the "minimum legal wage" (*sueldo vital*). Their aggregate income was equivalent to half of the working-class population as a whole, and to one third of that corresponding to Greater Santiago.<sup>31</sup> In Cali, the town registering the most dynamic economic development in Colombia over the last ten years, 49.2 per cent of the population of the five principal shanty towns were out of work in 1963.<sup>32</sup> In Lima, in 1962, 88.9 per cent of the families living in the big marginal settlement known as Pampas de Comas earned incomes of less than 44 dollars, while 38.13 per cent had only casual work to live on.<sup>33</sup> The monthly family income of 26.9 per cent of the population of Mexico's sixteen primate cities in 1960 was below 750 pesos (60 dollars).<sup>34</sup> In 1964, in Venezuela, the incomes of 44.29 per cent of urban households fell short of 500 bolivars,<sup>35</sup> and the recognized unemployment figure stood at 13 per cent.<sup>36</sup> In Belo Horizonte, Brazil, 86 per cent of the families living on smallholdings received less than the equivalent of two minimum legal wages in 1965, and 39 per cent less than one.<sup>37</sup> Estimates of the volume of marginal employment in Latin America<sup>38</sup> likewise corroborate those relating to the limitations of purchasing power in the lower income sectors.

The foregoing considerations warrant the assumption that the real capacity of the lower income strata in urban areas to pay for housing services is less than calculations based on estimates of average income would suggest. Accordingly, some experts proposed the use of State subsidies to bring the purchasing power in question into line with current market prices.

<sup>31</sup> See Guillermo Rosenbluth, *Problemas de la marginalidad y la integración urbana*, pp. 76 and 83.

<sup>32</sup> Municipal Planning Office, *Estudio socio-económico de cinco barrios nororientales* (Cali, 1963).

<sup>33</sup> See Pablo Berckholtz Salinas, *Barrios marginales: aberración social* (Lima, 1963), p. 45.

<sup>34</sup> See Ministry of Finance and Public Credit, *Programa financiero de la vivienda, México, 1964* (Mexico, D.F., 1964).

<sup>35</sup> See Ministry of Public Works, *Informe de la Comisión para el Desarrollo y la Vivienda* (Caracas, 1964) p. 50.

<sup>36</sup> See Central Co-ordination and Planning Office, *Plan de la Nación* (Caracas, 1963).

<sup>37</sup> See State Department of Labour and Popular Culture, *Levantamento do população de Belo Horizonte*, (Belo Horizonte, 1966) p. 59.

<sup>38</sup> See "Structural changes in employment within the context of Latin America's economic development", *Economic Bulletin for Latin America*, vol. X, No. 2, October 1965, pp. 163-187.

But such an expedient is simply not feasible in view of the structural factors that cramp the financing capacity of the Latin American countries, and in the light of basic development priorities. Mainly because of these difficulties no country or international programme has put it into practice, save in certain understandable instances where its adoption has been dictated by a national emergency.

The marked discrepancies between the purchasing power of the lower income groups and the costs of housing services in urban areas go far to account for the expansion of marginal housing conditions which is reflected in the rapid overcrowding of large tenement districts and the proliferation of extensive shanty towns. They would also seem to explain why the sectors most seriously affected by this problem are precisely those that have the least real chance of benefiting under most of the official housing programmes in Latin America, not merely because the supply of housing units is inadequate, but because as a general rule the families concerned, though nominally entitled to avail themselves of the programme facilities are unable to afford the initial down payments or the loan repayment instalments. It is common knowledge that many such households end up by forfeiting the modest dwelling assigned to them, or, in order to meet their amortization commitments, by subletting it, turning it into business premises or using it for production purposes.<sup>39</sup>

## 2. STRUCTURAL LIMITATIONS ON THE FINANCING AND PRODUCTION OF THE NUMBER OF HOUSING UNITS REQUIRED

Even if, at a given moment, the monthly payment capacity of the population groups affected by the housing problem were suddenly increased a great deal, there would be a further structural obstacle to solving that problem: the present inability of the Latin American countries to finance and produce the number of housing units needed to cover the present deficit. There are several factors responsible for this situation.

First, the theoretical demand or accumulated deficit has by now attained such proportions that it is almost impossible to meet; e.g. for 1960, the United Nations estimated that 20.3 million

<sup>39</sup> For example, the Land Credit Institute in Colombia recently announced its intention of instituting legal proceedings against 15 per cent of its assignees for failure to pay the amortization quotas (see *El Tiempo*, Bogotá, 7 January 1966). In Santiago, Chile, about 20 per cent of the families living in the settlement known as Lo Valledor Norte are at present in arrears with their loan repayments to the Housing Corporation (CORVI).

housing units would be needed, 6.6 million for urban and 13.7 million for rural areas.<sup>40</sup> It is estimated that between 1960 and 1965 about 1.2 million units would have to be added to that figure every year to take account of population growth and additional replacement needs. If the present trends continue, during the period 1960-75 an additional 23.5 million units would have to be built, 18.7 million in urban and 4.8 million in rural areas, in order to prevent the 1960 deficit from increasing.<sup>41</sup> This situation which is largely due to the great increase in population throughout the region, means that the problem of overcoming the deficit is almost insoluble, even with a long-term programme. The immediate and complete absorption of the deficit

in 1960 would have entailed the production of some 1,339.8 million square metres, or fifty times the present annual housebuilding capacity, which is estimated to be approximately 26.4 million square metres, or 400,000 housing units (see table 8). A more realistic solution—e.g. absorption of the urban deficit in thirty years and the rural deficit in twenty years from 1965—would entail the production of some 217.8 million metres in each of the first five years. This would mean multiplying the present estimated housebuilding capacity by eight. A still less ambitious solution, such as the recent proposal by a group of housing experts that ten units per 1,000 inhabitants should be built to keep the present deficit stationary,<sup>42</sup> would entail an annual production of some 161.4 million square metres, which is six times the present capacity.

<sup>40</sup> On the basis that 45 per cent of the urban and 50 per cent of the rural population are living in sub-standard conditions. See *World housing conditions and estimated requirements*, op. cit., para. 79.

<sup>41</sup> *Ibid.*, para. 71.

<sup>42</sup> See *Report of the Latin American Seminar on Housing Statistics and Programmes*, op. cit.

**Table 8**  
ESTIMATED COST OF THREE DIFFERENT METHODS OF COVERING THE HOUSING DEFICIT

	<i>Housing needed (millions of units)</i>	<i>Cost<sup>a</sup> (millions of dollars)</i>	<i>Area built over<sup>b</sup> (millions of square metres)</i>
<i>I. Total absorption in one year of the 1960 deficit<sup>c</sup></i>			
Urban units .....	6.6	21,529	435.6
Rural units .....	13.7	22,769	904.2
TOTAL	20.3	44,298	1,339.8
<i>II. Absorption in 20-30 years from 1965<sup>d</sup></i>			
Urban units .....	1.8	5,871.6	118.8
Rural units .....	1.5	2,493.0	99.0
TOTAL	3.3	8,364.6	217.8
<i>III. Freezing of the deficit from 1965<sup>e</sup></i>			
Urban units .....	1.33	4,344.8	88.11
Rural units .....	1.11	1,853.1	73.32
TOTAL	2.45 <sup>f</sup>	6,197.9	161.43

<sup>a</sup> Unit costs: 3,262 dollars for each urban housing unit and the corresponding basic infra-structure.

<sup>b</sup> Reckoning 60 square metres per unit, and as much again for community facilities.

<sup>c</sup> According to the calculation of the deficit for 1960 (see table 3.)

<sup>d</sup> Assuming that the urban deficit would be absorbed in 30 years and the rural in 20.

<sup>e</sup> Taking as the construction target 10 housing units per 1,000 inhabitants, which would not materially affect the present deficit.

<sup>f</sup> Taking as a basis the present population of 245 million and the present urban-rural distribution.

It is clear that, given present housebuilding capacity and trends in the construction sector in Latin America, none of these solutions are feasible. The annual growth rate of the sector during the last five-year period was only 5.9 per cent,<sup>43</sup> at a time when external financing led to a general intensification of housebuilding activity, without, however, significantly affecting future housing prospects.

Any of the above-mentioned solutions would first of all entail profound structural changes in the whole productive apparatus in the region as well as in the construction sector, which would seem to be incompatible with their traditional patterns of development and technological and industrial levels, and with the general levels of development obtaining in the region. On this point it is sufficient to bear in mind that in the last five years the growth rate of the product has been 4.3 per cent and is following a downward trend (see table 9).

The figures in respect of the investment required for absorbing the housing deficit are astronomical in size. If 2,900<sup>44</sup> and 1,400 dollars are taken as the average unit cost of urban and rural dwellings, respectively, plus the cost of the basic infra-structure, the complete absorption of the deficit in 1960 would have required an investment of some 43,668 million dollars, excluding servicing of the capital. This would have meant an investment in housing more than three times as large as the total investment of the region in that year, which was only of the order of 13,545 million dollars (see table 10).

The second solution, i.e., the absorption of the deficit in the space of twenty to thirty years or one generation, would also require heavy investment, of the order of 8,184 million dollars a year in the period 1965-70, or approximately 50 per cent of total investment resources in 1965, which amounted to 15,900 million dollars.<sup>45</sup>

The third solution, i.e., the construction of ten housing units per 1,000 inhabitants, would require an annual investment of 6,065 million dollars, which is approximately 38 per cent of total investment resources and more than six times the probable investment in housing.

In all three cases the amount of investment available in Latin America constitutes a serious structural limitation. The first solution of absorb-

ing the deficit immediately is not even worth considering since it is outside the realm of possibility. The second solution of tackling the problem over the space of one generation would also come up against serious limitations, since no economy—still less economies operating under Latin American conditions—could devote about half of its investment resources to the construction of new housing units. A significant change in the characteristics and pace of development might improve this situation, but to bring about such a change it would perhaps be necessary to concentrate investment on the basic aspects of development, which would obviously lead to a reduction in expenditure on housing. The same applies to the third solution of building ten housing units per 1,000 inhabitants to keep the deficit stationary, since it would be practically impossible to balance an economy in which 38 per cent of investment went on housing.

This structural inability of the economy to overcome the unsatisfactory housing conditions in Latin America can also be analysed in terms of the composition of the national product. It is a well-known fact that in the more developed and balanced economies—in the European countries, for example—expenditure on housing represents only 3 to 6 per cent of the gross national product. On the basis of the estimated cost of investment per unit mentioned above, one housing unit could be said to cost ten times the per capita gross national product in Latin America. This is the ratio in the European countries, particularly the less industrialized.<sup>46</sup> If it holds good for Latin America, it would mean that to carry out the minimum alternative of ten housing units per 1,000 inhabitants would involve allocating about 10 per cent of the gross national product to housing, which is tantamount to doubling the ratio of expenditure on housing to gross national product in the industrialized countries. The situation would be even more extreme in the group of countries whose per capita gross national product is less than 300 dollars.

The amount of resources available for housing as compared with capital requirements has long been a source of concern. More than ten years ago, a United Nations working group attempted to evaluate expenditure on housing and housing prospects and compared the amount of resources required to deal with the housing problem with total investment resources. Then as now—despite the increase in expenditure during the last five

<sup>43</sup> See *The Latin American economy in 1965* (United Nations publication, Sales No.: 66.II.C.8).

<sup>44</sup> The cost of the land has been deducted from the general estimate of 3,000 dollars per housing unit for the purpose of comparison with the available investment figures for the region.

<sup>45</sup> See *The Latin America economy in 1965*, op. cit.

<sup>46</sup> *Report of the ad hoc group of experts on housing and urban development*, op. cit., p. 13. See also *Financing of Housing in Europe* (United Nations publication, Sales No.: 54.II.4), table 37.

**Table 9**  
**LATIN AMERICA: GROSS PRODUCT AND REAL INCOME TRENDS, 1950-63**

Year or period	<i>Latin America (excluding Cuba)</i>					<i>Latin America (excluding Argentina and Cuba)</i>					<i>Latin America (excluding Argentina, Brazil and Cuba)</i>				
	<i>Gross product</i>	<i>Real income</i>	<i>Population (millions)</i>	<i>Gross product</i>	<i>Real income</i>	<i>Gross product</i>	<i>Real income</i>	<i>Population (millions)</i>	<i>Gross product</i>	<i>Real income</i>	<i>Gross product</i>	<i>Real income</i>	<i>Population (millions)</i>	<i>Gross product</i>	<i>Real income</i>
	<i>(millions of 1960 dollars)</i>	<i>(millions of 1960 dollars)</i>	<i>(millions)</i>	<i>(Per capita 1960 dollars)</i>	<i>(Per capita 1960 dollars)</i>	<i>(millions of 1960 dollars)</i>	<i>(millions of 1960 dollars)</i>	<i>(millions)</i>	<i>(Per capita 1960 dollars)</i>	<i>(Per capita 1960 dollars)</i>	<i>(millions of 1960 dollars)</i>	<i>(millions of 1960 dollars)</i>	<i>(millions)</i>	<i>(Per capita 1960 dollars)</i>	<i>(Per capita 1960 dollars)</i>
1950 .....	49,160	50,620	150.6	326	336	36,842	38,100	133.4	276	286	23,893	24,814	81.3	294	305
1955 .....	63,000	64,220	172.8	365	372	48,596	49,877	153.6	316	325	31,516	32,353	93.2	338	347
1956 .....	65,390	66,350	177.7	368	373	50,658	51,765	158.2	320	327	33,276	34,209	95.9	347	356
1957 .....	69,620	70,260	182.9	381	384	54,182	54,972	163.0	332	337	35,607	37,177	98.8	360	376
1958 .....	72,700	72,910	188.2	386	387	56,440	56,818	167.9	336	338	36,636	36,827	101.7	360	362
1959 .....	74,840	74,780	193.6	387	386	59,336	59,350	173.0	343	343	38,073	38,083	104.8	363	364
1960 .....	79,060	79,060	199.1	397	397	62,636	62,636	178.2	352	352	40,016	40,016	107.9	371	371
1961 .....	83,140	82,890	204.9	406	405	65,747	65,518	183.5	358	357	41,397	41,193	111.1	373	371
1962 .....	86,040	85,120	210.7	408	404	69,192	68,516	189.0	366	363	43,572	43,009	114.5	381	376
1963 <sup>a</sup> .....	87,850	86,970	216.8	405	401	71,820	71,055	194.7	369	365	45,660	45,045	117.9	387	382
<i>Accumulative annual rates</i>															
1950-55 .....	5.1	4.9	2.8	2.2	2.2	5.4	5.5	2.9	2.7	2.6	5.7	5.6	2.8	2.8	2.7
1955-60 .....	4.7	4.3	2.9	1.7	1.4	5.2	4.7	3.0	2.2	1.6	4.9	4.0	2.9	1.9	1.3
1960-63 <sup>a</sup> .....	3.6	3.2	2.9	0.7	0.4	4.7	4.4	3.0	1.6	0.7	4.6	4.1	3.0	1.4	1.0
1960-61 .....	5.2	4.8	2.8	2.3	2.0	5.0	4.6	3.0	1.7	1.4	3.4	2.9	3.0	0.5	—
1961-62 .....	3.5	2.7	2.8	0.5	-0.2	5.3	4.6	3.0	2.2	1.7	5.3	4.4	3.0	2.1	1.3
1962-63 <sup>a</sup> .....	2.1	2.2	2.9	-0.7	-0.7	3.8	3.7	3.0	0.8	0.6	4.9	4.9	3.0	1.6	1.6

SOURCE: National statistics prepared by ECLA.

<sup>a</sup> Provisional figures.



**Table 10**  
**LATIN AMERICA: REAL INCOME, INVESTMENT, CONSUMPTION AND EXTERNAL SECTOR, 1960-65**

	1960	1962	1963	1964	1965 <sup>a</sup>	1960- 1962	1962- 1963	1963- 1964	1964- 1965	1960- 1965 <sup>a</sup>
	<i>Millions of 1960 dollars</i>					<i>Annual growth rates</i>				
Real income .....	78,115	84,651	86,614	92,220	97,684	4.1	2.3	6.5	5.9	4.6
Total investment .....	13,545	14,700	13,860	15,594	15,900	4.2	-5.7	12.5	2.3	3.3
Fixed investment .....	13,108	14,194	13,468	14,600	15,080	4.1	-5.1	8.4	3.7	2.9
Public .....	4,070	4,159	3,975	4,786	5,080	1.1	-4.4	20.4	6.1	4.5
Private .....	9,038	10,035	9,493	9,814	10,000	5.4	-5.4	3.4	2.5	2.2
Total consumption .....	64,508	69,753	71,712	75,750	80,409	4.0	2.8	5.6	6.1	4.5
Public .....	8,369	9,270	9,670	9,760	10,000	5.2	4.3	0.9	2.6	3.6
Private .....	56,139	60,483	62,042	65,990	70,409	3.8	2.6	6.4	6.6	4.6
Volume of exports .....	8,665	9,766	10,108	10,352	10,916	6.2	3.5	2.4	5.4	4.7
Effect of terms of trade .....	—	-502	-274	+88	-150					
Net external factor payments .....	1,193	1,423	1,395	1,584	1,663	9.2	-2.0	13.5	5.0	6.9
Net external financing .....	1,132	1,225	353	708	288	4.0	-71.2	100.6	-59.3	-24.0
Imports of goods and services .....	8,603	9,066	8,792	9,564	9,391	2.7	-3.0	8.8	-1.8	1.8

SOURCE: ECLA, on the basis of national statistics. Basic statistics for the external sector from the International Monetary Fund, *Balance of Payments Yearbook*.

<sup>a</sup> Provisional figures.

years—the structural limitations were evident and were clearly stated by the group.<sup>47</sup> Similar concern has been expressed in recent years in a number of studies and articles on the subject.<sup>48</sup>

In the last few years, and particularly since the launching of the Alliance for Progress, the sudden supply of foreign aid for social improvement projects has temporarily increased the limited amount of resources available for housing. It is undoubtedly fortunate that some countries—particularly Colombia and Chile<sup>49</sup> have been able to take substantial advantage of this from the very beginning. However, in view of the capital requirements of the different countries, this assistance—despite its generous proportions—cannot be considered sufficient. Indeed, as was pointed out earlier in the paper, the loans granted by IDB between 1961 and 1964 only amounted to 197.1 million dollars for housing and 141.2 million for environmental sanitation works.<sup>50</sup> The limited nature of these loans is clear, when they are contrasted with the amount of investment required. They are, moreover, naturally conditional on a national financial contribution from the recipient countries.<sup>51</sup> In practice, precisely because resources in those countries are limited, this leads to an even greater limitation.

The above considerations make it clear that a serious and decisive structural limitation exists. The Latin American countries are not in a position to undertake on their own the financing and construction needed to absorb the present deficit of housing and services. Nor are they in a position to divert the whole production system to absorbing this deficit without creating greater difficulties. In spite of efforts at the international and, in some countries, at the domestic level, there are no new factors indicating that the situation might be improved over the short or medium term.

Over and above these structural limitations, Latin America is faced with a serious lack of

<sup>47</sup> See *Programas de financiamiento de vivienda y desarrollo comunal*, report of a United Nations study group made up of Carlos L. Acevedo, Eric Carlson and Jorge Videla (Bogotá, 1956).

<sup>48</sup> See Carlos L. Acevedo, "Evaluación y ejecución de los programas para formación de capitales para la vivienda en América Latina", in *Formación de capitales para la vivienda en América Latina*, op. cit.

<sup>49</sup> See *Housing conditions, policies and programmes in Latin America, 1960-63*, op. cit.

<sup>50</sup> See *Social Progress Trust Fund*, op. cit., pp. 12 and 84.

<sup>51</sup> In general, international credit agencies require national contributions similar in size to the loan granted. Thus IDB, for example, requires a national contribution of 1.06 dollars for each dollar lent. See *Social Progress Trust Fund*, op. cit.

flexibility—also structural in character—in the external sector, which makes it difficult to tackle the problem over the short or medium term. It is well known that, in spite of the widespread idea that the whole range of building materials required for housing can be produced domestically, the production of most of these materials requires a large proportion of imported inputs. Imported equipment, techniques and a certain amount of raw materials are required even in the manufacture of cement, bricks, laminated woods and many other materials produced in the countries. This means that the intensification of housebuilding programmes would, to a certain extent, have an adverse effect on the balance-of-payments situation in the region as a whole and in each individual country. As the techniques used in building and in the production of materials and fixtures become more mechanized, this adverse effect would become more pronounced. Consequently, the countries cannot even increase productivity by using capital-intensive processes of production, because of the decisive effect that this would have on the external sector of the economy as well as the serious implications it would have for the creation of employment opportunities.

The limitations in this field are illustrated by the fact that Latin America cannot even produce the foreign exchange needed to maintain its present rate of development. The trends followed by the terms of trade in the last decade are responsible for this, since the prices of Latin American commodities on the international market—with the exception, perhaps, of copper—have declined or have a tendency to decline, whereas the prices of the manufactures and raw materials bought by the Latin American countries have remained stable or have increased significantly. This explains the paradoxical situation of the tendency for Latin American foreign exchange earnings to decline in spite of the fact that in several countries the volume of exports is increasing.

Thus, on the basis of provisional estimates, it is forecast that for 1970, for example, foreign exchange outgoings will total 16,900 million dollars (15,200 for essential imports and 1,700 for other outgoings), whereas traditional exports will only total 11,900 million dollars, with a resulting deficit of 5,000 million dollars in the external sector.<sup>52</sup> It is clear that any accentuation of this disequilibrium as a result of a significant expansion in housebuilding would further limit the import of essential goods.

<sup>52</sup> See *The Process of Industrial Development in Latin America* (E/CN.12/716/Add.1), p. 131.

### 3. THE URBAN-RURAL IMBALANCE AND ITS IMPLICATION FOR URBANIZATION

Paradoxical though it may seem, the aggravation of the urban housing problem has its origin mainly in the rural areas. Everything seems to point to the fact that the extreme and explosive marginality of the urban sectors most affected by the housing problem is, to a certain extent, the culmination of a structural process beginning in the rural areas.<sup>53</sup> The formulation and development of this hypothesis is of great importance, not only for a deeper understanding of the housing problem, but also for the framing of housing policy.

Owing to the extreme lack of balance between the development of the urban and rural areas, and, in particular, to the serious stagnation of the rural areas, in the last few decades large groups of rural inhabitants have been caught up in an uncontrollable and progressive process of urbanization. This massive movement of country dwellers to the urban areas has not only led to a constant and progressive increase in the housing deficit, but has also profoundly affected the urban real-estate market. The nature and size of this movement has cancelled out, in quantitative terms, all the large-scale efforts to build housing units, which in several cases have constituted a further stimulus to migration to urban centres, not merely because of the prospect of more extensive housing services, but also because of new job opportunities in the construction and building materials and fixtures industries.<sup>54</sup> As is well known, Latin America now has the highest annual population growth rate in the world (2.9 per cent) and there is at the same time a marked trend towards urbanization. Between 1950 and 1960, the number of Latin American countries with an urban population of more than 30 per cent of the total population rose from 11 to 17, and the number of countries with a rural population of 70 per cent or more fell from 9 to 3. The growth of urban population between 1945 and 1960 was approximately double that of the total population, which meant that many cities were faced with the problem of their population doubling in the space of ten years. In the region as a whole, the annual rate of increase in the urban sector was about 5 per cent, except in Argentina, Chile and Cuba, while in the rural sector it was no more than 2 per cent. It is

<sup>53</sup> See Marshall Wolfe, *Some implications of recent changes in urban and rural settlement patterns in Latin America* (WPC/WP/66), paper presented to the World Population Conference (Belgrade, 30 August to 10 September 1965).

<sup>54</sup> See *Evaluación de los superbloques de Caracas*, op. cit.

estimated that between 1961 and 1975 the average annual growth rate of the urban population will rise as high as 4.1 to 4.2 per cent.<sup>55</sup> If the growth rates registered in the fifties remain constant, it can be estimated that by 1975 the combined urban population of the twenty countries will have increased by approximately 100 million inhabitants. The urban population in the Dominican Republic, Haiti and Venezuela will have increased four or even five times, it will be three times as large in Colombia, Ecuador and a number of Central American countries, and in the rest of Latin America—except for Argentina, Uruguay and perhaps Cuba—it will have doubled. The rural population will only increase by about 40 million, with varying rates of growth from one country to another.<sup>56</sup> The distribution of the population over the two sectors in 1950 and the corresponding estimate for 1975 is set out in table 11.

Table 11

LATIN AMERICA: DISTRIBUTION OF THE URBAN AND RURAL SECTORS IN 1950 AND ESTIMATES FOR 1975

Distribution	Number of countries	
	1950	1975
Predominantly urban (urban population of 50 per cent or more) .....	4	10
Urban-rural balance (urban population of 31 to 49 per cent) .....	5	8
Predominantly rural (urban population of 30 per cent or less) .....	11	2

SOURCE: *Statistical Bulletin for Latin America*, vol. II, No. 2 (August 1965), table 4.

An analysis of this situation reveals that the principal motive force behind urbanization—which would entail the construction of 20 million new housing units between 1960 and 1975—can be found, in addition to a number of cultural motivations, in the lack of balance in the development patterns of the different countries. This imbalance is at once cause and effect of the concentration of almost all investment and services in the great metropolitan areas, with the consequent stagnation of rural development. The characteristics and origin of the marginal population found in the great urban centres show that a large part of that population is made

<sup>55</sup> See *The future growth of world population* (United Nations publication, Sales No.: 58.XIII.2).

<sup>56</sup> See *Social development of Latin America in the post-war period*, op. cit., p. 13.

up of in-migrants from small towns and suburban and rural areas, who have come in search of work and urban amenities.<sup>57</sup> This leads to the conclusion that, to some extent, the relegation of the rural areas is a decisive factor in the phenomenon of urbanization.

The enormous movement of the rural population to the urban centres, which is responsible for the constant and progressive increase in the urban housing deficit, does not correspond to any significant raising of the levels of development in the urban areas. On the contrary, in Latin America, unlike Europe and North America, urbanization has preceded industrialization and in the last few decades has maintained relatively higher growth rates (see table 12). As the levels of development in the urban areas are still lower than those required for the original urban population, they cannot provide the necessary employment, income and volume of goods and services to satisfy the minimum needs and growing aspirations of the in-migrants. Thus these new contingents are condemned to form part of the urban social strata with the lowest purchasing power and the lowest standards of living. As a result of the lack of job opportunities, their little or no professional training, the low levels of remuneration and the lack of an effective system of social services, these masses of in-migrants inevitably remain on the margin of urban life. The end result of the long process of marginality begun in the country is that these groups live in rented slum dwellings in the central districts or in the huge shanty towns situated in the areas with fewest urban amenities.<sup>58</sup>

Because of the structural character of urbanization, the possibilities of controlling it and its resulting housing and social marginality are at the present time very remote. Even though rural-urban migration may be encouraged by a number of cultural and psychological factors,<sup>59</sup> or may on occasion be a response to particular circumstances,<sup>60</sup> its main motivation is unmistakably structural: the stagnation and economic and social imbalances characteristic of rural areas in Latin America. This stagnation manifests itself in many different ways.<sup>61</sup>

<sup>57</sup> See "Rural settlement patterns and social change in Latin America", *Economic Bulletin for Latin America*, vol. X, No. 1 (1965), pp. 1-22.

<sup>58</sup> For a more detailed treatment of this subject, see Rubén D. Utría, *El tugurio y el hombre* (Consejo de Estudios Sociales, Editorial Iqueima, Bogotá, 1963).

<sup>59</sup> Judging by certain rather generalized interpretations of Venezuela as a country of rapid social changes.

<sup>60</sup> E.g., the political violence in Colombia in the post-war period.

<sup>61</sup> See "Agriculture in Latin America: problems and prospects", *Economic Bulletin for Latin America*, vol.

**Table 12**  
INDUSTRIALIZATION AND URBANIZATION  
PATTERNS IN SELECTED COUNTRIES

(Percentages)

Country	Census year	Urbanization <sup>a</sup>	Industrialization <sup>b</sup>
Chile .....	1920	28	30
	1950	40	30
Cuba .....	1919	23	20
	1943	31	18
Mexico .....	1910	11 <sup>c</sup>	22
	1950	24 <sup>c</sup>	17
Sweden .....	1910	16	27
	1950	30	41
United States .....	1910	31	31
	1950	42	37
Soviet Union .....	1928	12	8
	1955	32	31

SOURCE: "The demographic situation in Latin America", loc. cit., p. 34 (table 17).

<sup>a</sup> Percentage of total population living in localities of 20,000 or more inhabitants.

<sup>b</sup> Percentage of total labour force engaged in mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water).

<sup>c</sup> Percentage of total population living in localities of 100,000 inhabitants or more.

One is in production conditions, which prevent the rural population from attaining the necessary employment and minimum wage levels. Between 1934 and 1960, agricultural production was not high enough to raise per capita production levels to any significant extent. In 1958-60, the aggregate per capita agricultural production index for Latin America was 8 per cent lower than the world average. Between 1945 and 1960, only a few countries achieved higher growth rates for production than for population: Brazil (3.9 as against 2.9 per cent), Ecuador (7.2 as against 3.9 per cent), El Salvador (3.8 as against 2.3 per cent), Mexico (7.1 as against 3.0 per cent), Peru (2.9 as against 2.3 per cent) and Venezuela (4.6 as against 3.7 per cent)<sup>62</sup> (see table 13).

VIII (1963), pp. 147-194; *Social development of Latin America in the post-war period*, op. cit., p. 21 et seq.; "Rural settlement patterns and social change in Latin America", loc. cit.

<sup>62</sup> It should be borne in mind, however, that in respect of the very favourable trends for Mexico and Ecuador, only in the case of the former are they a reflection of general development patterns, resulting from the extension of irrigation zones and other internal factors. In the case of Ecuador, they are mainly the result of an increase in banana production, determined by an increase in demand from abroad.

Table 13

YEARLY RATE OF INCREASE IN POPULATION AND AGRICULTURAL PRODUCTION IN SOME LATIN AMERICAN COUNTRIES, 1945-47 TO 1958-60

Country	Agricultural production	Population
Argentina .....	1.0	2.1
Bolivia .....	1.3	2.0
Brazil .....	3.9	2.9
Chile .....	1.8	2.2
Colombia .....	2.5	2.8
Ecuador .....	7.2	3.0
El Salvador .....	3.8	2.3
Guatemala .....	2.7	3.0
Honduras .....	2.1	3.0
Mexico .....	7.1	3.0
Paraguay .....	1.5	2.4
Peru .....	2.9	2.3
Uruguay .....	1.4	1.6
Venezuela .....	4.6	3.7

SOURCE: "Agriculture in Latin America: problems and prospects", loc. cit., p. 149 (table 2).

It should be added that, in general, the increases in production recorded were in respect of export products and did not necessarily lead to increases in income, because of the downward trend in prices characteristics of the decade.<sup>63</sup> Excluding export products and the total agricultural production of Argentina, a country which registered a marked decline, the annual production growth rate during the period in question was only 2.2 per cent. At the same time, the evaluation of agricultural production was very uneven. On the one hand, between 1934 and 1960 crop farming grew at an annual rate of 2.8 per cent, whereas stock farming achieved a rate of only 1.8 per cent; on the other, this growth was achieved in terms of the export trade, which generally benefits the urban sector, rather than in terms of the needs of the rural population.

Another manifestation of rural stagnation is the markedly traditional character of the agricultural enterprises. Unlike the urban enterprise, it has not attempted to modernize itself but has continued to rely on single-crop farming—which leads to soil exhaustion—and on cultivation

<sup>63</sup> As is well known, Latin American countries have had to increase their volume of exports in order to maintain their 1950 levels foreign exchange earnings. See *Latin America and the United Nations Conference on Trade and Development* (E/CN.12/693).

techniques that give a low yield per unit area. In contrast with other regions in the world, the increase in production in Latin America is attributable to the expansion of the area under cultivation rather than to an improvement in the unit yield.<sup>64</sup> Thanks to the introduction of improved techniques, both Europe and North America made striking advances in the production of nearly every agricultural commodity; Latin America, on the other hand, saw the productivity of a number of important commodities decline, and where increases did take place they were usually smaller than those recorded in other regions. In terms of efficiency, therefore, "there was no radical change in the situation after the war".<sup>65</sup>

Another important factor in the picture of rural stagnation, which perhaps stems from the traditional character of the agricultural enterprise, is that the rural sector does not receive the largest part of the profits from agricultural commodities. Most of the increases in consumer prices, far from benefiting the farmers, are retained in the distribution system.<sup>66</sup> The shortcomings of the marketing processes and the existence of an unduly large number of middlemen have broadened the distribution margins in many places. This explains why the cost of foodstuffs has risen more rapidly than the cost of living in general (see table 14).

The structure of land tenure, which is both cause and effect of this rural stagnation, also clearly reflects the imbalances in the rural sector. Its most striking characteristic is the concentration of large states in the hands of a few landowners, on the one hand, and *minifundio* farming on the other. According to the figures available of the 32 million inhabitants constituting the

<sup>64</sup> Between the pre-war period and 1957-59, the increase in productivity per hectare in respect of nineteen staple commodities—which account for about half the arable land (50 million hectares) was not more than half, whereas the increase in the crop area was 38 per cent. Between 1948-52 and 1957-59, yield increased in physical terms at an annual rate of only 0.8 per cent in Latin America, whereas in Europe and North America the rate was about 2.9 per cent, or approximately 25 per cent in eight years, with an increase in crop area of only 3 per cent in Europe and a reduction of 7 per cent in North America. At the same time, the commodities which achieved the greatest yield in Latin America were precisely those which accounted for the smallest proportion of the total area under cultivation.

<sup>65</sup> See "Agriculture in Latin America: problems and prospects", loc. cit., p. 160.

<sup>66</sup> In some of the Central American countries, 50 per cent of the price paid by the consumers for these commodities is absorbed by the marketing margin, only a quarter of which consists of transport and storage costs, the remainder representing a net profit for the middlemen.

Table 14

SELECTED LATIN AMERICAN COUNTRIES: PERCENTAGE RATIO BETWEEN THE INDEXES OF THE COST OF FOODSTUFFS AND THE COST OF LIVING, RESPECTIVELY, 1950-60<sup>a</sup>

(1950 = 100)

Country	1960
Argentina .....	1.19
Brazil .....	1.18
Chile .....	1.75
Mexico .....	1.02
Peru .....	1.12
Uruguay .....	1.34

SOURCE: "Agriculture in Latin America: problems and prospects", loc. cit., p. 159 (table 16).

<sup>a</sup> The index for the cost of foodstuffs has been divided by the cost-of-living index.

economically active rural population, 100,000 are large landowners, almost 2 million are medium-scale farmers, and about 30 million are *minifundio* farmers or landless agricultural workers. Of a total of 7.5 million agricultural holdings, 100,000, or about 1.5 per cent, cover 65 per cent of the whole agricultural area in the region. In contrast, 5.5 million properties of under 20 hectares each make up less than 4 per cent of that area. This situation, which is much the same throughout Latin America—despite variations from one country to another and from one area to another within each country—gives rise to a similar concentration or rural income and to a traditional-type pattern of social relations, and has encouraged the preservation and strengthening of a number of conservative social institutions. Rudimentary production techniques—with a large number of low-paid hired hands, less than minimum living standards, the predominance of large landowners and of a rudimentary system of labour relations, rural poverty and marginality, etc., are all typical features of rural life, which are reflected in income levels and marginal conditions markedly different from the situation in the urban areas.<sup>67</sup> Thus in the mid-fifties in Chile, for example, the average income of the agricultural-employer sector, which represented 12.4 per cent on the country's total agricultural active population, was fourteen times that of the agricultural-worker sector.<sup>68</sup> In Cuba

<sup>67</sup> See *Social development of Latin America in the post-war period*, op. cit., p. 14.

<sup>68</sup> See Ministry of Agriculture, Department of Agricultural Economy, *Aspectos económicos y sociales del inquilinaje en San Vicente de Tagua-Tagua* (Santiago, Chile, 1960).

in 1956, when the average per capita income for the country as a whole was about 370 dollars, that of the rural population was only 92 dollars, i.e., one fourth as much.<sup>69</sup> In Brazil, the average national income per active person in the agricultural sector is 110 dollars as against 440 dollars in the non-agricultural sectors, while in the Nordeste region, where about one third of Brazil's total population is to be found and almost 80 per cent of whose inhabitants live in rural areas, the over-all average is no more than about 85 dollars a year, while for agricultural workers in the sugar-growing areas it drops to approximately 50 dollars. In Ecuador, the average income of the *huasinpunguero* population<sup>70</sup> in 1959 fluctuated (in terms of dollars) between 11 and 27 cents a day, including both cash and payments in kind. The average daily wage for unattached labourers (*peones libres*)—who are not entitled to remunerations in kind—in the ten sierra provinces was equivalent to a little under 40 cents. In contrast, on the coast of Ecuador in the same year wages reached a daily average of rather more than 60 cents.<sup>71</sup> The contrast with the metropolitan areas is even sharper. Thus, for example, the ratio of the average income in the metropolitan areas to that of the typical rural areas was 10:1 in Venezuela in 1957 (Caracas and the rural areas), 11:1 in Colombia in 1953 (the Departments of Cundinamarca and Chocó) and 10:1 in Brazil in 1960 (States of Guanabara and Piauí).<sup>72</sup>

The low income levels of the rural worker go hand in hand with less than minimum living standards. In spite of the lack of sufficient detailed studies, this is blatantly the case as regards food and nutritional levels. The growing demand for foodstuffs in the urban areas and the latter's greater purchasing power mean that in practice the rural population has little access to the already limited domestic foodstuffs market.<sup>73</sup>

<sup>69</sup> See "Agriculture in Latin America: problems and prospects", loc. cit., p. 166.

<sup>70</sup> Made up of agricultural labourers who have to work for certain number of days a week on the estates in the sierra, receiving in compensation a cash payment and the right to cultivate a plot of land.

<sup>71</sup> See the information supplied by Alfredo Costales of the Ecuadorian Institute of Geography and Anthropology in *Revista del Instituto de Derecho del Trabajo y de Investigaciones Sociales*, year I, No. 2 (Central University of Quito, Ecuador, July-December 1961).

<sup>72</sup> See *The economic development of Latin America in the post-war period*, op. cit., p. 55 (table 57).

<sup>73</sup> Taking the region as a whole—even including Argentina, whose high consumption levels contribute appreciably to raising average per capita for the region, it can be seen that Latin America is very far from attaining the levels existing in the more developed countries. Within this general situation of deficiency,

Sanitation and health conditions also reflect this situation of marginality and stagnation. Thus, for example, in countries where more than 45 per cent of the population is rural, the annual death-rate is almost invariably higher than 100 per 100,000 inhabitants and sometimes rises to over 500. In contrast, in four of the five Latin American countries with a rural population of 45 per cent or less, the annual death rate is about 50 per 100,000 inhabitants.

Housing conditions are even worse than in the urban areas. The most usual type of dwelling consists of a single room, with a mud floor, adobe walls and straw-thatched roof, without drinking water, electric light or sanitary facilities. Some estimates put the proportion of rural housing units that ought to be replaced as high as 80 per cent.<sup>74</sup> In general, it can be asserted that rural housing scarcely offers the rural family proper protection against the rigours of nature, but rather, because of the lamentable conditions, exposes it permanently to countless infections and diseases.

The picture that emerges from the above outline of the general conditions of development in the rural and suburban areas of Latin America is one of stagnation and marginality, of a kind that the bulk of the rural population cannot be expected to continue to bear passively. To that is added the attractions of urban life, with its greater supply of goods and services and the prospect—almost always illusionary—of better job opportunities and higher wages. At the same time, the improvement in road and telecommunications systems has meant a considerable reduction in distances and a progressive elimination of all the physical, cultural and psychological barriers separating the rural and suburban inhabitant from the urban centres. In addition,

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the rural population has the lowest consumption levels. General consumption level (both human and animal) is only 25 per cent that of North America and a little more than half that of some European countries. Meat consumption is half that of France and almost a third that of North America. The disparity in the consumption of edible fats and oils is also noteworthy. Only in respect of sugar and cotton is the position relatively equal. With the exception of Argentina and Uruguay, the region's consumption of calories and proteins—particularly animal protein—is highly deficient. Countries like Colombia, Ecuador, Peru and Venezuela register a daily intake per head of little more than 2,100 calories, 53 grammes of proteins in all, and 20 grammes of animal protein, which represents a deficit in relation to the developed countries of 30, 40 and 65 per cent, respectively. (See "Agriculture in Latin America: problems and prospects", loc. cit., p. 158.)

<sup>74</sup> Pan American Union, *Informe sobre la cooperación de las repúblicas americanas en materia de vivienda económica* (Washington, 1953).

administrative centralism and the tendency towards the concentration of investment have meant that almost all development stimuli have been directed towards the big cities, and the rural areas have been left on the same margin of progress. As a result of these imbalances between the city and the rural areas and the imbalances within rural development itself, the rural workers have been forced and encouraged to emigrate to the urban centres and will perhaps continue to do so while the situation of marginality and stagnation in the agricultural sector cannot ensure them minimum subsistence conditions. It is not, therefore, surprising that urbanization has attained such proportions and has become the major factor in the intensification of the urban housing problem.

An analysis of the origins and the dynamics of this imbalance in development and the polarization of development around the great metropolitan areas reveals that the phenomenon is a structural one, which cannot be overcome over the medium term and without first undertaking a complex process of reforms. So long as the great bulk of the rural population does not have sufficient land, so long as investments, job opportunities and services are concentrated in a few centres of power and development, and social and labour relations in the agricultural sector retain their semi-feudal nature, it is to be expected that the rural workers will continue to emigrate in search of the wages and living conditions denied them. It should be borne in mind, moreover, that in spite of the efforts made in a number of countries, this situation has not improved and can be expected to deteriorate. Notwithstanding the continuous exodus, the population of the rural areas and small nuclei continues to grow, with the result that their needs are even more imperative; both the quality and yield of the land in the hands of millions of *minifundio* farmers are deteriorating as a result of intensive and uneconomic farming, and the political obstacles to the just aspirations of the rural masses seem to be increasing daily. All this leads to the conclusion that, while this situation continues to exist, rural housing conditions will get even worse and the urban deficit will inevitably and progressively increase.

#### 4. SOCIO-CULTURAL AND POLITICO-ADMINISTRATIVE LIMITATIONS AND OBSTACLES

To the structural factors noted above should be added other factors inherent in the political, social and cultural spheres, which all contribute to the housing problem in different ways. Special

reference should be made, *inter alia*, to the following: the role of housing in the market and its social function; urban development trends and characteristics; socio-cultural values and standards; trends and characteristics of the construction industry; the limitations of State action; and the limitations in the posing of the problem.

(a) *The role of housing in the market and its social function*

Although, in theory, housing is considered as a good providing an important social service—accommodation, in the context of a market economy it tends to take on another connotation and fulfil certain additional economic functions. In Latin America, as in many other parts of the world, housing represents in terms of the market an expensive, scarce good that is a source of income and can be the subject of all kinds of commercial transactions. The only exception as regards the last aspect is Cuba. The lack of effective action on the part of the State in the organization of housing services has meant that it has become a typical responsibility of the private sector through conventional market mechanism. Owing to the scarcity of the capital in Latin America and the amount of investment required for each housing unit, the supply of housing has gradually become a market factor determined by medium and large investors and, consequently, the subject of big commercial transactions and a source of profit. For investments of a traditional nature, in most Latin American countries the building and purchase of houses is both a source of income and method of insuring and protecting capital whose effectiveness has been proved over and over again, particularly in periods of inflation.

There are several indications of this economic function of housing. One of them is the proliferation of real-estate brokers, agencies and boards in almost all large Latin American cities. Transactions in urban dwellings at present account for a very large share of the market in most countries, the administration of real estate is one of the most developed activities in the modern market in Latin America, and it is well known that in many countries a sizable part of the personal income of certain social strata is derived from the renting of houses. Another indication is the fact that in most Latin American countries no restrictions are imposed on rents.<sup>75</sup> The traditional justification for this is that it is a means

of stimulating private investment in housing.<sup>76</sup> However, considering the size and characteristics of this investment and the results to which it leads, it seems that the investors, and not the community, are the only ones that benefit. The practical effect of this concept of housing as an expensive, scarce, income-producing good is that housing tends to become the subject of all kinds of speculative dealings. The situation becomes even more complicated in a market characterized by a sustained tendency to low levels of supply. In view of this economic and commercial function of housing, it is only natural that the bulk of private investment and a good part of public investment should be directed towards meeting the demand from the sectors with the greatest capacity to pay. From this standpoint, these sectors are only ones that can offer sure guarantees both in terms of actual demand and the fulfilment of all the contractual obligations implied in any transactions of sale or rent. At the same time, the housing units and land urbanized for these sectors are easily negotiable and less subject to the kind of control and limitations imposed by low-cost housing services. This means in practice that the lower-income sectors, which are the most affected by the housing problem, do not benefit by this conventional market. This conception of housing and the part it plays in the market obviously represent a serious obstacle to any attempts to deal with the problem.

In consequence of the situation described, the ownership of urban land and house property does not in practice fulfil a true social function. On the contrary, the legal use and tenure system gives full protection to the undisputed exercise of the right of ownership, and with a very few formal exceptions, releases it from all controls and restrictions that might be imposed by the idea of the common good and the objectives of an efficacious social policy. This conservative approach finds expression in the civil codes of all the Latin American countries, in the shape of a series of privileges and safeguards that make urban land and house property an instrument placed almost entirely at the owner's service. Striking cases in point abound, particularly in respect of leases, mortgage agreements, and barriers to any move in the direction of urban development planning and control.<sup>77</sup> This partly ac-

<sup>76</sup> In Chile, for example, the houses built under the present housing policy are specifically exempt from rent control.

<sup>77</sup> Exceptions are few and far between. In one or two countries, such as Argentina and Uruguay, the use of house property and lease transactions are governed by a proper system of regulations, and rents are frozen.

<sup>75</sup> Some countries—Argentina and Uruguay, for example—do impose rent restrictions.



counts for the failure of the many master plans and urban renewal plans that have been prepared in almost all the large towns of the region.<sup>78</sup> It also explains the fact that whereas such facilities as piped water, sewerage, electric light and gas, parks and approach roads, have progressively acquired the character of non-profit-making public utilities in some countries, urban land and house property—on which they all hinge—are still virtually outside this category and exempt from this social function.

### (b) *Urban development trends and characteristics*

Another serious stumbling-block is constituted by current urban development trends. As a result of the urbanization situation and the population explosion, urban problems have been steadily increasing in number and complexity; while at the same time—for many reasons, including those already adduced—the towns have lacked efficacious instruments and adequate resources for dealing with them. On the contrary, a passive attitude is generally adopted in face of the progressive aggravation of the shortage of housing and community services and there is a tendency to concentrate attention on the ornamental aspects of town-planning; when the evolution of urban development planning and control in Latin America is analysed, it looks as if a greater importance may have been attached to broad avenues and ornamental parks than to the organization of basic housing and community services, although it is these latter that constitute, together with the satisfactory provision of sources of supply, the essential object of town-planning and the *raison d'être* of the municipal authority as a nucleus of community facilities and public administration. The social pressure generated by the magnitude and complexity of housing problems, and the want of a properly mapped out approach to them, have given rise to unfavourable municipal development trends which make urban difficulties still more unmanageable. In addition, the over-centralization of facilities and decision-making has left the mu-

nicipalities virtually helpless to intervene in the promotion and control of their own development. Various factors operating in conjunction seem to have deflected the interests and activities of the Latin American municipal authorities towards the more formal aspects of public administration, such as the collection of certain taxes and the enforcement of building regulations.<sup>79</sup>

### (c) *Socio-cultural values and standards*

Because of what they represent for the family and for the community at the social and cultural level, and perhaps, too, as a result of the economic and political role they have played in the Latin American countries, housing and its community background are closely linked to the socio-cultural concept of "status". At some stages of a given country's development process, certain status symbols in the field of housing may have an adverse effect on rational efforts to improve housing conditions. Although as a rule the aspirations concerned are legitimate enough, some codes of values relating to residential and town-planning design give rise to substantial extra cost items which help to push up the price of housing and allied services and make it more difficult to accord them appropriate treatment. One of the commonest cases in point is the size of housing units in terms of floor space and grounds. Another is the ornamental bias of town-planning design in respect of the characteristics and dimensions of streets and open spaces. Yet another consists in the idea of a housing unit as a detached building with all kinds of individual facilities, including large gardens and plenty of ground. Then, too, there is the needless addition to the cost of façades deriving from expensive and complicated veneers and an intricate display of decorative woodwork. These and other features which in highly developed countries represent normal values and aspirations acquire a special connotation in the developing countries in their bearing not only on the guise assumed by the housing problem but also on the formulation of the relevant policy. Given the underdevelopment currently prevailing, the spread of such values raises costs out of all proportion to the capacity for payment and the resources of the country concerned, thus crippling the possibilities of rational action. Hence the aspirations cherished in respect of housing and allied facilities are unattainable, as is evidenced in the standards—usually set up by groups representing the middle and higher income strata—on which

In Colombia, housing units assigned under official programmes "constitute non-attachable family property", i.e., are not subject to distraint. A few controls were introduced in Venezuela's 1960 Rent Act. In Cuba, a large proportion of urban property was declared a public utility under the urban reform of 1961, and regulations were established for the use and tenure of house property.

<sup>78</sup> As is common knowledge, almost all the large towns of the region have master plans prepared with the co-operation of the most distinguished contemporary town-planners from Europe, the United States and Latin America itself.

<sup>79</sup> See Pan American Union, *Informe Final del Seminario Interamericano de Funcionarios y Técnicos de Planeamiento Urbano*, Bogotá, 1958.

the region bases its conception of the housing problem and the establishment of physical targets for the construction of settlements and housing units.

In recent years, alongside these fairly universal values, others have emerged in Latin America which are more artificial, but also do a great deal to complicate the housing problem. There is a tendency to indulge in indiscriminate imitation of the formal manifestations of culture and technology in the industrialized countries, with the result that certain characteristics are introduced into residential building which, far from facilitating the solution of the problem, may make it more difficult still. One of these is the progressively increasing use of architectural ideas and designs and building materials which are brought in from highly developed countries and as a rule have nothing whatever to do with the culture and tastes of the broad masses of the Latin American population. Sociologists and anthropologists are familiar with the attitude of hostility, or at least of incomprehension, adopted by the urban, suburban and rural lower income sectors in face of the architectural style characteristic of modern housing programmes. This does not mean that the Latin American peoples are incapable of appreciating the virtues of *avant-garde* architecture and construction, or that the experience acquired in the industrialized countries is devoid of significance and applicability. The point is rather to note the reaction of a transitional society like that of Latin America—composed essentially of rural population sectors, workers in process of adaptation to industrial development, and indigenous groups—to the spectacle of towns and housing units almost entirely alien to their culture and their conscious needs, and costly in addition. The alternative consists not in a sort of architectural and technological parochialism, but in a genuine functionalism that would more consistently relate the real functions and cultural values of a transitional society to techniques which, while up to date, would be compatible with development conditions, prospects and requirements. Naturally, those responsible for housing strategy and programming find this aspect of socio-cultural values a serious handicap, jeopardizing all attempts to rationalize national housing efforts.

(d) *Trends and characteristics of the building industry*

The salient feature of the building industry is its duality, since it combines elements of the most advanced industrial development with the

simplest patterns of artisan industry and even of primitive craftsmanship. In almost all construction processes the most highly industrialized and the most traditional building materials and techniques are used concurrently and even in conjunction. This state of affairs would not matter very much, but for the fact that it frequently brings in its train the disadvantages inherent in both types of process, with very few of their advantages. Thus, for example, industrialization of the production of building materials and of construction itself has not perceptibly reduced residential building costs. On the contrary, it often happens that the prices charged by the best-organized firms are the highest on the market. Frequently, too, buildings in whose construction industrial procedures are applied turn out in the end to cost just as much as those constructed on the basis of traditional techniques, or even more. To this must be added the impact of such formal industrialization efforts on the national economy, in terms of capital and foreign exchange inputs. For example, the non-existence of domestic production of the raw material required for certain building materials, such as asbestos-cement, metal structures, porcelain, plastic materials, laminated wood, etc., entails the heavy surcharges implicit in all imports (high cost of foreign exchange, freight, insurance, customs duties, prior deposits, etc.). The shortage of skilled manpower on the domestic markets results in engagement of the services of foreign or Latin American technicians—a costly expedient—or, otherwise, in waste of materials and under-productivity of equipment. The smaller scale of activities means that industrial equipment operates at high cost levels, and as industrialization efforts are usually isolated, minimum synchronization and organization requisites are not fulfilled in the rest of the production system, which often displays the operational characteristics of artisan industry. This lack of cohesion lowers the productivity of industrial equipment and processes, and leads to manifest incongruities in the traditional production system. In the long run, all these anomalies combine to raise production costs.

Another characteristic is the absence of operational organization in construction activities and in the industries producing building materials and household appliances, which in most countries operate as sporadic units and in obedience to no system. There are no indications that each functions as an organic whole, or that the activities of all three are in any way linked up. In cases where a measure of organization exists at the national level, it seems to be geared to the

defence of trade-union interests rather than to technical and industrial co-ordination. As has already been pointed out in connexion with the high costs of construction, the Latin American countries have not yet introduced certain extremely useful production techniques such as standardization and modular co-ordination. Production in general does not seem to be determined by exhaustive market studies, and very few countries possess national construction inventories. There is a striking lack of scientific research in this field, and national technical assistance programmes for the benefit of builders are virtually non-existent. In very few countries are there any institutions for the training of skilled manpower and intermediate-level personnel.

It must also be borne in mind that the construction market is usually affected by many unfavourable factors, one of these being the prevalence of monopolies in respect of building contracts and the production and distribution of materials. In the field of the distribution of building materials and the promotion of their use, one of two extreme cases is generally found; either there are not enough appropriate systems for this purpose, or, conversely, complex and costly publicity and distribution systems call into being a whole expensive contingent of middlemen and sales promoters, and foster over-advertisement. Another noteworthy feature is the lack of distribution machinery in the small and medium-sized towns and in the rural areas.<sup>80</sup> With regard to prices, generally speaking, all these unfavourable factors may be said to make for uncontrolled speculation. Nor have construction and the allied activities any specialized financing mechanisms of their own, despite the progress achieved in some countries through the establishment of construction banks and through machinery for channelling funds into housing programmes, as in Chile.

#### (e) *Limitations of state action*

At the level of state action, significant headway has been made in the last twenty years. Almost all the Latin American countries possess national agencies responsible for the construction of low-cost housing, and in many of them semi-official and private bodies operate with the same end in view. These institutions have greatly benefited by the inter-American programmes that

<sup>80</sup> The lack of distribution facilities outside the large towns gives rise to transport surcharges which in many cases level up the cost of freight with that of the materials and equipment carried, or raise it even higher.

provide long-term loans at low rates of interest, especially under the Alliance for Progress. But their activities have invariably been handicapped by the shortage of domestic capital and in some instances by the lack of appropriate mechanisms for channelling the funds that really can be expediently allocated to housing. Efforts to improve housing conditions have encountered serious difficulties in these official, semi-official and private agencies, partly on account of the low operational capacity resulting from their characteristic bureaucratization and from the political interference by which they are often trammelled, and partly because they are generally unfitted to operate effectively on the market and therefore to control the factors that generate the problem. They seldom have sound financial backing, and are obliged to depend on national budget allocations; they are not authorized to expropriate land and house property or to regulate the market; and, as a rule, they have no functional system of ancillary instruments whereby they could bring simultaneous action to bear on key aspects of housing policy, such as financing, the insurances and mortgage markets, urban development control, and the regulation of house-building output.

Consequently, many national housing agencies drift along without being able to wield any really effective influence. In the first place, only in a few countries is a rational housing policy to be found, and the same is true of national house-building programmes. Secondly, the social character of the housing problem renders national activities in this field the object of general interest and particularly sensitive to the pressure of public opinion, and therefore indissectable from electioneering campaigns. It must be borne in mind that housing programmes and policies affect, in one way or another, urban landowners and the other usufructuaries of the housing market. This means that in practice the activities of national housing agencies are subject to all sorts of restraints and pressures which remove them from the eminently technical sphere in which they should be conducted. Hence it frequently happens that the projects of such institutions display technical shortcomings and deficiencies, and that the families hardest hit by the housing problem are not their chief beneficiaries.

#### (f) *Misconception of the problem*

Lastly, mention must be made of the limiting factors inherent in the traditional Latin American approach to the housing problem and of the flaws in the instruments deriving from it. A care-

ful analysis of the characteristics and practical results of most of the housing efforts undertaken in the region during the last two decades shows their common denominator to be the *idée fixe* that the prevalence of unsatisfactory housing conditions is basically imputable to the housing shortage on the market. This theoretical view of the problem has serious practical implications. One of these is that the diagnosis underestimates the repercussions of the region's characteristic structural rigidities and defects on the over-all housing situation, and, accordingly, attention is concentrated primarily on the operational deficiencies of conventional market instruments. As a result, a tendency to look at the question from the sectoral and operational angles has grown up, together with a body of clearly defined instruments and techniques. No claim is made that these two approaches—the structuralistic and the operationalistic, as they may be conveniently termed—must necessarily be mutually incompatible. What is advocated is rather the introduction of a scale of values whereby the causes and effects of the problem can be more objectively defined and differentiated for the purposes of planning more rational action. It is not merely for the sake of eclecticism that the compatibility of the two attitudes must be taken into account; the main justification is to be found in the study of the problems of a region like Latin America, whose development, despite its apparent homogeneity, shows marked and definite shades of difference. On the basis of the assumption that the housing shortage is the trouble, the most widespread reaction has taken the form of mass house building to absorb the existing deficit. In line with this approach, therefore, the most efficacious policy must be that resulting in the largest possible

volume of housing investment in the shortest possible space of time. The ideal set of instruments for such a policy would naturally comprise all those calculated to channel the biggest flow of funds into housing and to speed up the actual work of construction. As always, of course, there are exceptions to this general rule.

Taken as the basis of this simplified view, the whole complex problem of the inadequacy of housing conditions, together with its causes, and the obstacles to its effective solution over the short term, has been conventionally identified with the "housing deficit". And this—apparently, at least—is reduced to the mere statistical definition of the difference between the number of families and the number of comfortable dwellings existing at any given moment. Consciously or unconsciously, this narrow conception of the housing problem underlies most of the relevant objectives and instruments of action in Latin America. Many efforts and experiments on the part of national institutions, many political campaigns, and many years of specialized activity are based on commitment to this approach. It is hardly likely, therefore, that the necessary changes of attitude can take place, or that the instruments—whether theoretical and conceptual, or methodological—required for an objective study of the situation and for establishing an alternative line of action can be formulated, over the short term. Thus, broadly speaking, efforts in this field are not guided by factual considerations, and the result is under-productivity of the available funds and perhaps the loss of precious time in embarking upon wiser courses. But in the meanwhile the causes of the problem are still in active operation, and its effects are increasingly calamitous.

# METHODOLOGY OF THE NATIONAL ECONOMIC BUDGET

## A recent undertaking in Argentina

By FEDERICO J. HERSHEL and JUAN J. SANTIERI

The object of the present article is to report on what has recently been attempted in Argentina with respect to the preparation of a National Economic Budget and its use as a supplementary instrument in national planning efforts. Since this is one of the first experiments of its kind to be carried out in Latin America, it seems worth while to give a fairly detailed account of the procedures applied, compare the *ex ante* estimates with the final or provisional figures relating to the first year for which such estimates were formulated, and briefly sketch out certain lines of research that should be pursued in the future.

### A. CHARACTERISTICS OF THE NATIONAL ECONOMIC BUDGET

#### 1. NATURE, ORIGIN AND PURPOSE OF SHORT-TERM ESTIMATES

The National Economic Budget may be defined as a complete set of quantitative estimates of the evolution of the chief macro-economic variables and their interrelationships in the immediate future, prepared with the aim of facilitating economic policy decisions and, in countries where development programmes exist, keeping an *ex ante* check on the attainment of annual targets.<sup>1</sup>

Although a few preliminary attempts had already been made during the Second World War, mainly on the basis of Keynes' writings,<sup>2</sup> the systematic preparation of economic budgets began in the post-war years. Among the pioneers in this field was the Central Planning Bureau at The Hague.<sup>3</sup> At the present time, work on national economic budgets is under way in the Netherlands, Norway,<sup>4</sup> Sweden, France and

Israel. In the United Kingdom, the United States and Canada similar forecasts of economic activity are being prepared.

The need for tools of this kind arises as soon as decision-making in the economic field is called upon not only to cope with the developments that have already taken place, but also to predict future trends and so be able to influence the course of events in advance.

An obvious prerequisite for the formulation of national economic budgets is progress in the following fields:

(a) National accounts, so that a basic frame of reference is available for the presentation of data in the national economic budgets, and the accuracy of the estimates can be retrospectively checked;

(b) Macro-economic theory, so that the causal relationships between the major economic aggregates can be accounted for;

(c) Certain research techniques, especially in the mathematical and statistical fields, whereby relations between different variables can be quantified or the evolution of economic variables can be directly predicted, for example, through "business intention" or "anticipation" surveys.

The salient characteristic of these estimates consists in their use as an instrument of stabilization policy.<sup>5</sup> The explanation lies in the fact

<sup>1</sup> For a definition of the national economic budget as "a forecast covering the whole set of economic interrelationships linking a country's various economic agents with one another and with the rest of the world", see H. J. Meyer, "Réponses à quelques questions sur les budgets économiques", *Etudes de Comptabilité Nationales*, N° 2, 1961.

<sup>2</sup> See J. M. Keynes, "How to pay for the war", reproduced in *Readings in Fiscal Policy*, selected by a Committee of the American Economic Association (Richard D. Irwin, Inc., Homewood, Illinois, 1955).

<sup>3</sup> Central Planning Bureau (Netherlands), *Scope and Methods of the Central Planning Bureau*.

<sup>4</sup> See P. J. Bjorve, *Planning in Norway, 1947-1956* (Amsterdam, 1959).

<sup>5</sup> Organisation for Economic Co-operation and Development (OECD), *Techniques of Economic Forecasting* (Paris, 1965), p. 10.

that when the war was over the European countries were faced essentially with two types of problems: fluctuations in internal activity, linked with endeavours to prevent unemployment crises like those that had followed the First World War, and possible inflationary pressures of which signs had already been observable during the Second World War; and balance-of-payments disequilibria, which found their most obvious expression in the dollar shortage. Generally speaking, the weapons employed to combat these dangers were policies of an over-all type (tax and monetary measures, for example). The application of instruments of this kind was consistent, up to a point, with the theoretical and statistical equipment which could best be used at that time, and which was based on broad macro-economic aggregates. The structural features peculiar to the national economies in question also enhanced the value of such instruments, except where the disequilibria existing immediately after the war were concerned. There was also a good deal of homogeneity among the sectors of the economy, flexibility in the factors of production, institutional stability, and so forth. All this seemed to indicate that assumptions as to the efficacy of these over-all measures were, on the whole, well-founded.

The attention of the Latin American countries was essentially concentrated during the post-war decade on the analysis and projection of economic development. Hence it was that national planning agencies and the Economic Commission for Latin America devoted considerable effort to the preparation of long-term or medium-term plans. In the execution of these, however, difficulties frequently arose, either through failure to adopt the policy measures required for the implementation of the over-all plan, or because what might be termed short-term problems<sup>6</sup> slowed down the rate of development. Accordingly, the conclusion was reached that "in order to formulate a calculated policy, machinery will always have to be established for taking decisions, fixing targets and selecting methods of action; this machinery must keep abreast of the experience gained and the results of the measures applied in order to adjust them or to amend them constantly in the light of changing economic conditions or gradually increasing knowledge of the economic process."<sup>7</sup>

<sup>6</sup> For a distinction between short-term and long-term policies, see E. S. Kirschen, "General Theory", *Economic policy in our time*, vol. I (Amsterdam, 1964), pp. 4-5.

<sup>7</sup> *The experience of the advisory groups and the practical problems of economic development* (E/CN.12/584), p. 6.

As a result of this concern for closer co-ordination between long-term (or medium-term) and short-term policies, on the theoretical side emphasis was placed on the role of the economic budget as an over-all guide to short-term decision-making,<sup>8</sup> and, in practice, several countries attached increasing importance to the relation that should be maintained between the policy dictated by immediate circumstances and development plans.

## 2. THE NATIONAL ECONOMIC BUDGET IN ARGENTINA

A special department of the National Development Council (Consejo Nacional de Desarrollo—CONADE) began work in the early months of 1964. A preliminary estimate of the gross product was prepared in April of that year, and the first complete economic budget report for 1964 was presented in October. Although a few indexes (for example, data on production of certain goods) were available for use, the time-lag which in general was—and to some extent still is—characteristic of the preparation of statistics in many fields suggests that this first economic budget, despite the date of its presentation, was in the nature of a forecast. This point is worth noting, since in the present report the results of the *ex ante* estimates formulated for 1964 are evaluated.

The budget report for 1965 was presented in May of that year, and it is hoped that the preparation of future budgets can be expedited so that they may be published nearer to the ideal date.

Those presented hitherto have served as economic forecasts and as ancillary instruments for checking how far development plan targets have been attained. To this end, close collaboration has been established between the department concerned with the national economic budget and those responsible for over-all programming.

In its capacity as a tool for policy-making, the national economic budget has been used only as a general frame of reference, especially in connexion with the presentation of the public-sector budget. More direct use of it as an ancillary instrument of economic policy will, it is hoped, be possible in the future. For that purpose, an econometric model—even if a relatively simple one—is felt to be necessary as a means of assessing the results of alternative policies in quantitative terms.

<sup>8</sup> See *Algunas consideraciones sobre las relaciones entre la programación del desarrollo y el presupuesto fiscal* (E/CN.12/BRW.2/L.5, 14 August, 1962).

Even if an econometric model is available, only some of the basic macro-economic variables can be analysed. As the execution of the development plan will entail the adoption of given measures in more specific sectors, the econometric model will have to be supplemented by other methods, among which that of arithmetical trial and error may perhaps prove fruitful.

In all the countries that prepare economic budgets, there has been discussion as to whether the estimates should be based essentially on an econometric model, or on a more eclectic system.<sup>9</sup> The adoption of the latter, far from implying that no use will be made of econometric functions or even of complete models, merely means that the main emphasis is shifted to other procedures. Hitherto, the preparation of Argentina's national economic budget has been based on the eclectic method, although from the outset great importance has been ascribed to estimates of certain key functions,<sup>10</sup> with the twofold aim of using them to check the estimates reached by other means, and subsequently incorporating them in an econometric model.

The following were the reasons for the choice of the non-econometric procedure in the first stage of the work:

(a) The construction of an econometric model takes time, since the requisite data have to be assembled and analysed, the evolution of the relevant time series during the years under consideration has to be studied, and hypotheses on the behaviour pattern of economic agents have to be formulated and subsequently checked. This task was the more difficult in the case under discussion, because it has so far been the exception rather than the rule for econometric models or functions to be constructed in relation to the Argentine economy,<sup>11</sup> such as might have provided the basis for a model that would meet national economic budget requirements, i.e., that could be used as an instrument for making forecasts and for analysing alternative policies. In addition, the Argentine economy is characterized by certain special obstacles to the construction of a model in a relatively short space of time, namely:

- (i) The possible lack of statistical data for certain variables (for instance, there are no estimates of industrial inventories);
- (ii) The method of obtaining statistical data may not be strictly appropriate to the variable to be estimated. For example, private investment in equipment and machinery is estimated by the flow-of-goods method, which may result in discrepancies with the firms' real investment figures;<sup>12</sup>
- (iii) In some cases, moreover, the evolution of economic agents may be affected to an abnormal extent by the influence of extra-economic factors or other determinants peculiar to Argentina;<sup>13</sup>

(b) As a rule, the level of aggregation of econometric models is high,<sup>14</sup> the classification comprising only a few sectors or industries. For the purposes of the analysis needed in Argentina, and above all for keeping check on the attainment of plan targets, a much fuller breakdown was required, extending as far as branches of industry.

The figures given in the economic budget always relate to the whole calendar year; in other words, no estimates are made that can indicate trends which may develop "during" the year. Although this would be a very desirable goal, it is unlikely to be attainable for some time, primarily because the same deficiency exists in the case of national income statistics, which have not hitherto been prepared on the basis of quarterly or four-monthly figures, so that extrapolation is difficult. This obstacle is encountered in other countries as well.<sup>15</sup>

<sup>12</sup> It is even open to discussion whether investment should be recorded on the date when the item is actually installed in the plant or at the time when the decision to invest is taken. A more strict analysis might lead to a conclusion in favour of the latter alternative. (See Albert G. Hart, "Capital Appropriations and the Accelerator", *Review of Economics and Statistics*, vol. LVII, No. 2 (May 1965), pp. 123 *et seq.*)

<sup>13</sup> For some observations in this connexion, based on a comparison of industrialized and under-developed countries, see Angel Monti, "The programming of short-term financing", *Economic Bulletin for Latin America*, vol. X, 1965, p. 74.

<sup>14</sup> The characteristics of the models in current use are analysed in the following articles, *inter alia*: D. B. Suits, "Forecasting with an Econometric Model", *American Economic Review*, vol. LII, No. 1, March 1962, p. 104; M. Nerleve, "A Quarterly Econometric Model for the United Kingdom", *ibid.*, p. 154; C. F. Christ, "Aggregate Econometric Models", *ibid.*, June 1956, p. 385; Central Planning Bureau (Netherlands), *Central Economic Plan, 1961* (The Hague, 1961).

<sup>15</sup> See *Techniques of Economic Forecasting*, op cit., p. 24. In Argentina, a private organization has recently made a quarterly breakdown of the product, but no corresponding official estimates exist.

<sup>9</sup> *Techniques of Economic Forecasting*, op. cit., p. 26.

<sup>10</sup> See for example, Ivo E. de Barreiros, A. Fucaraccio and F. J. Herschel, "Funciones de consumo en la Argentina" (mimeographed edition), 1965.

<sup>11</sup> See, however, D. Pastore, *Ingreso y dinero, Argentina 1935-60* (Buenos Aires, 1964); and A. A. Guadagni, "Un simple modelo econométrico de la Argentina", *Revista de Economía Latinoamericana*, 1964. But it must be borne in mind that national income data were revised after the publication of the study and article in question.

Generally speaking, the social accounting system has been applied, as derived from the presentation of the national accounts.<sup>16</sup> All the figures are computed in terms of pesos at constant prices, including the national accounts data prepared as a test of consistency. This being the end in view, differences in the evolution of relative prices have not been taken into consideration so far.

<sup>16</sup> See CONADE, *Cuentas nacionales de la República Argentina* (Buenos Aires, 1965).

## B. GENERAL ASPECTS OF THE PREPARATION OF ESTIMATES FOR THE NATIONAL ECONOMIC BUDGET

The construction of the national economic budget is based on the following definitional equation:

$$\text{GDP} + \text{M} = \text{C}_p + \text{I}_p + \text{C}_g + \text{I}_g + \text{V} + \text{X}$$

The first term of the equation, i.e., the gross domestic product (GDP) plus imports (M), represents the total supply of goods available for the satisfaction of internal and external demand.

The calculation procedure is based essentially on the determination of supply. The product is computed analytically, by sectors, groups and branches of origin. Imports are also estimated separately, by types of goods. This procedure differs from the method applied in most countries,<sup>17</sup> in which estimates are established on the basis of demand. A few remarks on the methodology followed will therefore be in order.

In the first place, in sectors where information is obtained directly from enterprises through surveys or official questionnaires, it may be assumed that the firms themselves, in making their estimates, take into account the market's capacity to absorb the output contemplated.

Another justification for the approach adopted is the behaviour of the supply-and-demand mechanism in an inflationary economy.<sup>18</sup> According

<sup>17</sup> In Norway too, the method applied is based on forecasts of supply (see, *Planning in Norway*, op. cit.).

<sup>18</sup> See Geoffrey Maynard and Willy van Rijckeghem, "Stabilization policy in an inflationary economy. An analysis of the Argentine case" (mimeographed edition), 1966, for an account of the process followed in the construction of the model. A preliminary econometric analysis of investment and consumption functions in Argentina led to the conclusion that an attempt to study the effect of stabilization policies through their influence on demand would not be very fruitful... and that it would be better to pursue quite a different line of reasoning, hinging on the relation between stabilization policy and production. Emphasis was thus placed on the probable impact of monetary restrictions

As already shown, the national accounts serve as a frame of reference for the national economic budget and a means of retroactively checking the figures it contains. This does not mean that the estimates must be confirmed to those obtainable by national accounts methods. In some cases it may be necessary to prepare estimates which are not included in national income data, but are desirable for the purposes of an over-all evaluation of future economic trends in a given country.

to the model cited, the expansion of production (in the non-agricultural sector) depended basically on an increase in the credit accorded to the private sector. In other words, the short-term limit to the growth of the product may be described as set by the availability of liquid assets rather than by the volume of demand.

Of the components of total expenditure, the following are determined specifically: gross fixed investment, inventory changes and exports. Consumption is estimated residually, by subtraction.

As pointed out in earlier paragraphs, the direct projection is checked against partial estimates of the components of demand based on econometric functions.

In the case of the year 1964, for example, the figure for private consumption worked out at 692,200 million pesos (at 1960 prices) by the direct-estimate method, and at 719,600 million, on the basis of the following consumption function:

$$\begin{aligned} \log C &= 0.270 \log Y_d^a + 0.377 \log Y_d^a \\ &\quad (0.050) \quad (0.059) \\ &\quad + 0.377 \log C_{-1} + 0.029 \\ &\quad (0.076) \end{aligned}$$

in which

C = consumption in year  $t$

$Y_d^a$  = disposable income of wage-earners in year  $t$

$Y_d^n$  = disposable income of non-wage-earners in year  $t$

$C_{-1}$  = consumption in year  $t-1$

Observation period: 1951-61  $R^2 = 0.938$

on the determination of real demand. It should be mentioned in this context that when Argentina's national economic budget estimates for 1965 were presented, attention was drawn to the fact that "an unnecessarily stringent monetary policy might jeopardize the rate of economic growth".



Similarly, estimates were formulated on the basis of private of private investment and employment functions.

It is of supreme importance to analyse the causes of the discrepancies noted. Hitherto there has been no opportunity of making headway in this aspect of the work, since the statistics relating to the use of the gross product have not yet been published. It seems reasonable to argue, however, that a single observation is not enough to warrant any conjecture as to possible reasons for the difference between the results obtained.

To sum up, the stages of the calculation are as follows:

- (a) Determination of product and investment by the flow-of-goods method;
- (b) Separate calculation of imports, exports and government expenditure;
- (c) Residual calculation of private consumption;
- (d) Statistical computation of private consumption and investment;
- (e) Over-all analysis of discrepancies be-

tween the estimates of the above-mentioned variables prepared by the two different methods.

As has already been shown, one of the specific objectives of the national economic budget is to enable plan targets for each year to be checked against projections based on the assumption that the economic policy in force at the time of construction of the national economic budget will undergo no change. Thus, in fact, it is a forecast, especially where the estimates relating to private-sector variables are concerned. From a comparison of this forecast with the development plan targets, conclusions of great significance for the execution of the plan may be drawn. There would seem to be two possible types of adjustment:

- (a) It may prove necessary to modify economic policy so as to create stronger incentives or disincentives, with a view to ensuring the attainment of plan targets;
- (b) In some instances—for example, in cases of *force majeure* (poor crops as a result of weather conditions)—the plan targets themselves may have to be altered.

## C. COMPARISON OF ESTIMATES PRESENTED IN THE NATIONAL ECONOMIC BUDGET FOR 1964 WITH THE FINAL OR PROVISIONAL FIGURES FOR THAT YEAR AVAILABLE TO DATE

As the present analysis is intended to serve mainly methodological purposes, more thorough investigation of the discrepancies encountered will be of use from the standpoint of improving estimates in the future. Thus, the formulation of the national economic budget should be regarded as a continuing process, by virtue of which a higher standard of accuracy may be reached, in time, in the preparation of estimates and in the identification of the factors determining changes in the economic variables used in projections.

In analysing the differences between real figures and estimates, various sources of error in the latter may be suggested:<sup>19</sup>

- (1) Subsequent changes in the data used for the base year may affect the estimates;
- (2) The exogenous factors influencing the variables concerned (for example, changes in the external markets) sometimes cause unforeseen variations;
- (3) Assumptions as to economic policy may subsequently fail to materialize.

<sup>19</sup> See Central Planning Bureau (Netherlands), *Scope and Methods of the Central Planning Bureau*, part 2, chap. IV.

The discrepancies noted so far may be described as non-systematic. Systematic errors are also likely to be committed which, being imputable to the method of calculation applied, of course deserve special attention.

The following analysis, although confined in the present instance to the Argentine economy, may be of more general interest, inasmuch as it indicates the type of problems that may arise when the *ex ante* estimates are compared with the *ex post* data.

At the time of writing, in some cases no information at all was available on development in 1964, while in others the figures to hand were only provisional or subject to revision at a later date.

The different results obtained in the *ex ante* and *ex post* estimates of the major variables are listed below.

### 1. GROSS DOMESTIC PRODUCT

The discrepancies between the expansion envisaged in the national economic budget (9.4 per cent) and the growth actually achieved (8.5

per cent) are broken down at the sectoral level in table 1.

Table 1

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF GROSS DOMESTIC PRODUCT, 1964

(Percentage variations in relation to preceding year)

Sector	National economic budget (ex ante)	Provisional estimate prepared by Central Bank and CONADE (ex post)
Agriculture .....	7.0	9.6
Crop farming .....	11.6	14.1
Stock farming .....	2.8	5.7
Own-account construction and improvements .....	7.0	6.0
Fishing .....	30.8	30.8
Mining and quarrying ..	2.7	4.9
Manufacturing industry	18.2	14.3
Construction .....	4.8	8.8
Electricity, gas and water	8.1	10.2
Transport .....	8.7	8.5
Communications .....	1.8	3.6
Commerce .....	7.6	5.6
Banking, insurance and other financial services	0.2	0.5
House ownership .....	0.4	2.1
Government services ....	0.5	0.3
Other services .....	3.7	3.2
TOTAL	9.4	8.5

SOURCE: National Development Council (Consejo Nacional de Desarrollo—CONADE) and Banco Central.

In the agricultural sector,<sup>20</sup> the discrepancies are attributable to the complexity of the task of estimating one of the most important variables influencing value added in the sector in question, i.e., changes in herd inventories. Furthermore, the estimates of agricultural production prepared by specialized agencies differ according to the different times of year at which they are made, so that the annual results obtained vary in accordance with the data used.

In the fishing sector, the forecasts coincided with the final figures, whereas in mining and quarrying the predicted expansion fell short of that actually recorded. One of the reasons for this discrepancy is the lack of time series relating to the production of most kinds of ore and quarystone (the latest official production statistics relate to 1962 and in part to 1963).

The growth rate was overestimated in the manufacturing sector, because expectations of

<sup>20</sup> For the methodology used to calculate the product in the various sectors, see the annex to the present study.

the group of entrepreneurs covered by the survey were unduly optimistic in relation to the levels of output actually attained.

Comparisons by industrial groups reveal that in the case of food and beverages the estimated reduction was less than the contraction that in fact took place; the principal discrepancies occurred in the estimates for soft drinks, wine and sugar, whereas in respect of meat (the main item) the estimated variations coincided with the real figures. In the textile and clothing group, the differences stemmed chiefly from the opinions expressed by entrepreneurs, referred to above; while for wood and wood products, paper and board, printed matter and publications, petroleum products, metals, and electrical machinery and appliances, the estimates were virtually the same as the *a posteriori* observations. In the case of rubber and rubber products and in that of the vehicles and machinery group, the discrepancies are again imputable to entrepreneurs' estimates. (It should be noted that the powerful influence of this last group did most to account for the difference in the over-all growth rate for the industrial sector as a whole.) With regard to leather and leather products, the discrepancy noted is due to the slackening of the rate of production in the last two months of the year, attributable to sales difficulties. Lastly, in relation to the chemicals group, the differences must be ascribed to the inadequacy of the basic data for some branches and the excessively piecemeal character of certain lines of production, which makes it difficult to estimate the variations concerned (see table 2).

There are well-known difficulties in measuring the evolution of the construction sector, as regards both *ex ante* and *ex post* estimates. Hence, it is reasonable to assume that differences will arise according to the method of calculation used.

The *ex ante* estimates for the services sectors are, in general, much the same as the final results.

Figures I and II show the deviations alluded to above, as well as those cases where the *ex ante* estimates were the same as the actual figures.

## 2. AGGREGATE DEMAND

The difference between the projected gross domestic product and the provisional *ex post* calculation for 1964 affects projected investment, since this variable is obtained by sectors of origin; therefore, if the estimated production volumes are different, investment will also differ. The widest disparities are in the motor-vehicle

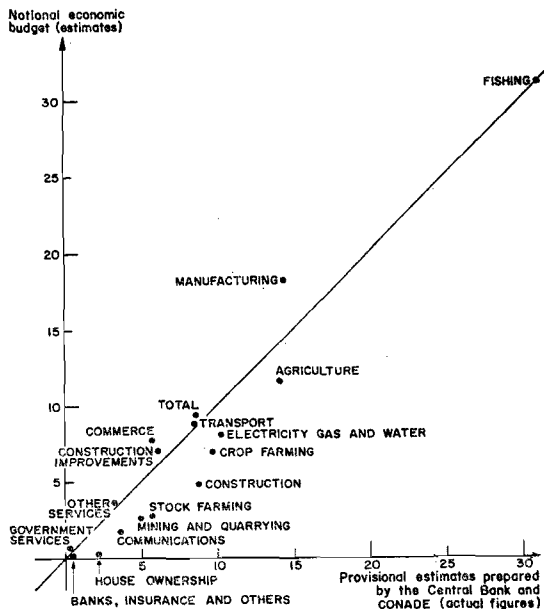
**Table 2**

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF THE PERCENTAGE VARIATIONS IN MANUFACTURING OUTPUT IN 1964 WITH RESPECT TO THE PRECEDING YEAR

Industrial classification	National economic budget (ex ante)	Provisional calculations prepared by the Central Bank and CONADE (ex post)
Food and beverages ..	-6.1	-10.4
Tobacco .....	2.7	8.0
Textiles .....	19.3	28.6
Made-up goods .....	19.4	23.9
Wood .....	16.0	15.2
Paper and paperboard	13.5	13.0
Printing and publishing	8.4	9.2
Chemical products ...	18.9	11.8
Petroleum products ..	4.4	5.1
Rubber .....	31.0	21.7
Leather .....	21.8	16.7
Stone, glass and pottery	13.1	6.9
Metals .....	34.0	36.4
Vehicles and machinery	51.9	32.0
Electrical machinery and appliances ....	16.0	17.7
Miscellaneous .....	18.2	14.3
Industries not covered	18.2	14.3
<b>TOTAL</b>	<b>18.2</b>	<b>14.3</b>

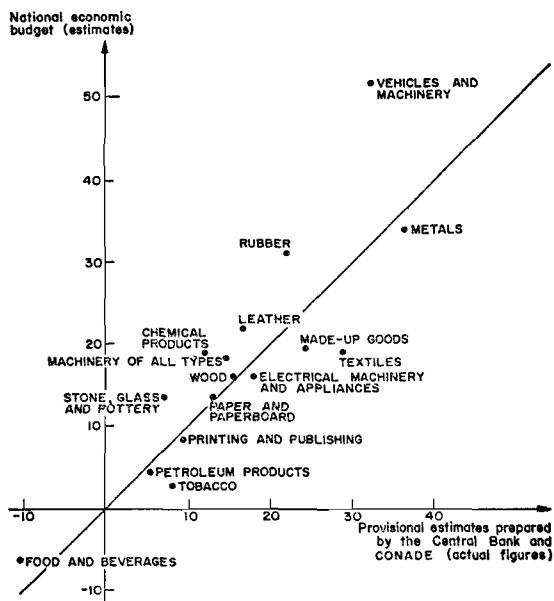
**Figure I**

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF PERCENTAGE VARIATIONS IN THE GROSS DOMESTIC PRODUCT IN 1964 WITH RESPECT TO THE PRECEDING YEAR



**Figure II**

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF PERCENTAGE VARIATIONS IN MANUFACTURING OUTPUT IN 1964 WITH RESPECT TO THE PRECEDING YEAR



sector, where the entrepreneurs' production expectations proved too optimistic. Conversely, projected investment in tractors and other domestically produced machinery and equipment was practically the same as the actual figure. The fact that imports of machinery and equipment were overestimated can be ascribed to the application in the second half of 1964 of exchange regulations which restricted the inflow of this type of goods by delaying the granting of foreign exchange for imports; hence, the real imports of these goods fell short of the figure originally envisaged (see table 3).

The construction trend forecast was less favourable than that actually followed, especially as regards public construction. The difference in the private sector was not so marked.

As a result of the foregoing considerations the *ex ante* estimate of gross fixed investment was 6.5 per cent higher than the actual figure (see figure III).

The estimated figure for changes in stocks in the national economic budget was lower than the real value, owing mainly to the difficulty of measuring the evolution of the livestock herd. If the changes in stocks are included in the com-

Table 3

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF GROSS DOMESTIC INVESTMENT AND ITS MAJOR COMPONENTS, 1964

(Millions of Argentine pesos at 1960 prices)

Concept	National economic budget (ex ante)	Provisional calculations prepared by the Central Bank and CONADE (ex post)	Percentage difference
Motor vehicles .....	47,047.9	37,133.2	+26.7
Tractors .....	6,799.2	6,521.1	+4.3
Machinery and other equipment .....	35,624.3	35,816.7	-0.5
<i>Sub-total</i>	<i>89,471.4</i>	<i>79,471.0</i>	<i>+12.6</i>
Repairs .....	13,466.7	12,406.1	+8.5
TOTAL, investment in domestic equipment	102,938.1	91,877.1	+12.0
Imported equipment .....	38,269.5	32,664.2	+17.2
TOTAL, investment in equipment	141,207.6	124,541.3	+13.4
Construction .....	89,940.7	92,526.6	-2.8
Public .....	(33,363.0)	(34,964.4)	-4.6
Private .....	(56,577.7)	(57,562.2)	-1.7
Gross fixed domestic investment	231,148.3	217,067.9	+6.5
Changes in stocks .....	10,814.7	15,138.1	-28.6
Gross domestic investment	241,963.0	232,206.0	+4.2

parison, it will be seen that the *ex ante* estimate of gross domestic investment was 4.2 per cent higher than the real figure.

As regards government consumption, the national economic budget estimate was 2.2 per cent higher than the provisional *ex post* calculation. At the same time, inasmuch as investment was overestimated, private consumption—equal to the difference between total supply (gross domestic product and imports) and the remaining components of total demand—was underestimated by 3 per cent.

### 3. BALANCE-OF-PAYMENTS POSITION ON CURRENT ACCOUNT

The balance on the merchandise account in the national economic budget was higher than the Central Bank figure, mainly because exports were overestimated by 2.8 per cent (see table 4 and figure IV).

This is explained by the fact that the value of exports of meat, hides and wool were expected to be higher. The difference was partly offset by the underestimated figure for external sales of cereals and flax (-4 per cent) (see table 5).

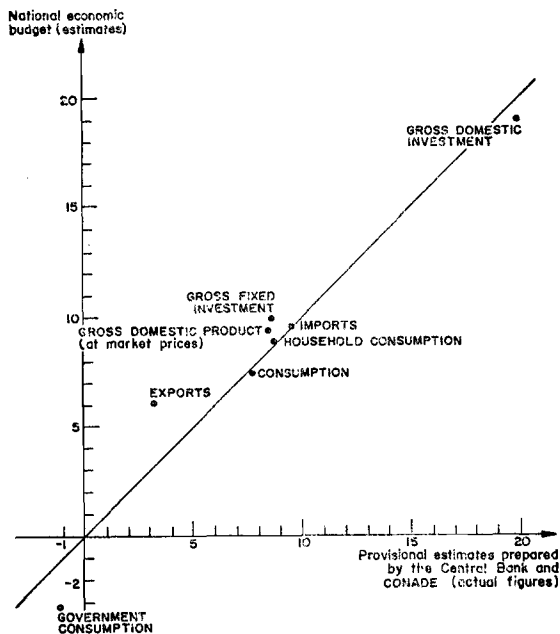
As far as meat is concerned, the various internal measures taken to build up the livestock inventory had the effect of restricting supply, and, consequently, of raising domestic prices. Concurrently, the National Meat Board adopted several measures intended to regulate shipments with a view to avoiding a drop in world prices, which would have been inevitable had meat supplies from Argentina increased on the world market. This caused a gradual decline in the growth rate of exports, which sharpened in the last four months of the year and was responsible for the disparity between the two calculations.

The projected value of exports of hides and wool was higher than the real figure because stockpilers and exporters, discouraged by the exchange rate in force, held back a proportion of the supplies, particularly in the last few months of the year. The reduction in slaughtering of beef cattle mentioned above also affected export of hides.

The discrepancies in cereals and flax are attributable to an upswing in exports—especially wheat—in the last few months of 1964, as a result of the sales made in the second half of the

Figure III

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF PERCENTAGE VARIATIONS IN THE COMPONENTS OF TOTAL SUPPLY AND DEMAND IN 1964 WITH RESPECT TO THE PRECEDING YEAR



Note: Imports and exports on the basis of dollars at current prices. Remaining variables on the basis of Argentine pesos at 1960 prices.

year and the expediting of export operations by the National Grain Board.

An examination of the total import figures shows that the *ex ante* calculations are virtually the same as the data furnished by the National Statistics and Censuses Department (see table 6). However, if the total value is broken down by item, some discrepancies will be noted in the case of iron, machinery and fuels. The *ex ante* estimates of iron and fuel imports proved to be lower than the actual figures, while the opposite was true of machinery. In all other items the figures were either the same or showed minor discrepancies.

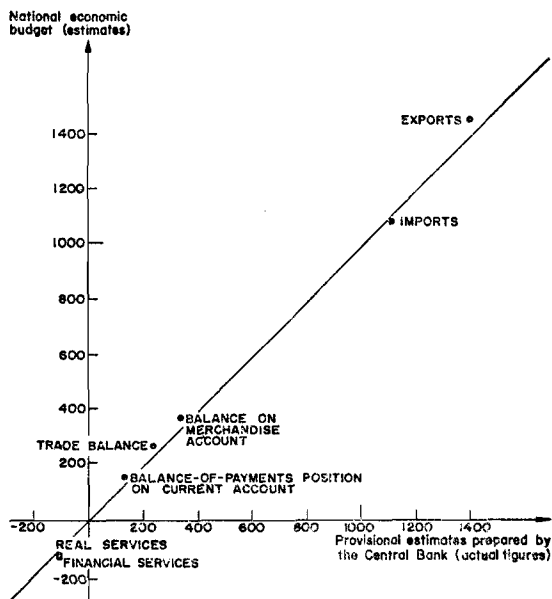
The main cause of the discrepancies between the respective estimates of machinery imports is the delay on the part of the Central Bank of Argentina in dealing with import applications, which somewhat slowed up inflows of capital goods.

Lastly, the differences in the figures for iron are mainly attributable to the acceleration of SOMISA's production in the last few months

Figure IV

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF THE BALANCE-OF-PAYMENTS POSITION ON CURRENT ACCOUNT, 1964

(Millions of dollars at current prices)



of the year, which had the effect of increasing imports over and above normal levels.

#### 4. GENERAL GOVERNMENT SECTOR

Broadly speaking, the estimates for the government sector are influenced by the lack of data for the provincial and municipal authorities, and this implies the possibility of discrepancies. Indeed, the need to estimate their respective evolution according to past trends might culminate in sizable disparities after a number of years. It should be noted that, after the first national economic budget had been completed, the figures for the government sector were modified, especially in relation to the two authorities in question; this explains the differences in absolute terms between the two estimates.

In particular, the most important items whose expected evolution differed from the actual trend are consumption expenditure and indirect taxes (see table 7). The data available when consumption expenditure was estimated were insufficient to permit an accurate assessment of wage increases in the last few months of the period concerned, since they were paid mainly in October, the last month of the fiscal year. There

Table 4

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF THE BALANCE-OF-PAYMENTS POSITION ON CURRENT ACCOUNT, 1964

(Millions of dollars)

<i>Concept</i>	<i>National economic budget (ex ante)</i>	<i>Provisional calculations prepared by the Central Bank (ex post)</i>	<i>Percentage difference</i>
Exports .....	1,450.0	1,410.5	2.8
Imports .....	1,075.0	1,077.4	-0.2
<i>Balance on the merchandise account</i>	375.0	333.1	12.6
Real services .....	-107.0	-102.5	-4.4
<i>Trade balance</i>	268.0	230.6	16.2
Financial services .....	-112.0	-102.0	9.8
<i>Balance on current account</i>	156.0	128.6	21.3

Table 5

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF EXPORTS, 1964

(Millions of dollars)

<i>Group and item</i>	<i>National economic budget (ex ante)</i>	<i>National Statistics and Censuses Department (ex post)</i>	<i>Percentage difference</i>
I. <i>Stock farming</i> .....	649.0	590.0	10.0
(a) Live animals .....	22.0	24.0	-8.3
(b) Meat .....	350.0	329.0	6.4
(c) Hides .....	70.0	58.0	20.7
(d) Wool .....	150.0	129.0	16.3
(e) Dairy products .....	34.0	31.0	9.7
(f) Livestock products .....	23.0	20.0	15.0
II. <i>Crop farming</i> .....	670.0	695.0	-3.6
(a) Cereals and flax .....	480.0	500.0	-4.0
(b) Flour and other products .....	25.0	27.0	-7.4
(c) Oil-seeds .....	119.0	120.0	-0.8
(d) Processed grain .....	9.0	8.0	12.5
(e) Fresh fruits .....	26.0	28.0	-7.1
(f) Dried fruits .....	6.0	8.0	-25.0
(g) Other agricultural products .....	5.0	4.0	25.0
III. <i>Forestry</i> .....	17.0	16.0	6.3
IV. <i>Mining</i> .....	19.0	13.0	46.2
V. <i>Hunting and fishing</i> .....	5.0	4.0	25.0
VI. <i>Miscellaneous items</i> .....	90.0	92.0	-2.2
<b>TOTAL</b>	<b>1,450.0</b>	<b>1,410.0</b>	<b>2.8</b>

Table 6

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF IMPORTS, 1964

(Millions of dollars)

Group	National economic budget (ex ante)	National Statistics and Censuses Department (ex post)	Percentage difference
I. Food .....	54.7	53.4	2.4
II. Tobacco and tobacco manufactures .....	0.3	0.4	-25.0
III. Beverages .....	2.8	2.8	—
IV. Textiles and textile manufactures .....	49.8	51.3	-2.9
V. Chemicals and chemical products .....	112.1	114.9	-2.4
VI. Paper, paperboard and manufactures thereof	38.1	37.8	0.8
VII. Wood and wood manufactures .....	67.8	67.7	0.1
VIII. Iron (including iron ore) .....	120.2	134.8	-10.8
IX. Machinery .....	380.1	339.3	12.0
X. Metals .....	88.3	91.7	-3.7
XI. Stone, glass and pottery .....	14.1	16.2	-13.0
XII. Fuels and lubricants .....	73.1	83.7	-12.7
XIII. Rubber and rubber manufactures .....	33.5	38.8	-13.7
XIV. Miscellaneous items .....	40.1	44.5	-9.9
TOTAL	1,075.0	1,077.2	-0.2

Table 7

ARGENTINA: COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF GENERAL GOVERNMENT CURRENT EXPENDITURE, 1964

(Percentage variations with respect to 1963)

Concept	National economic budget (ex ante)	Provisional data (ex post)
1. Current income .....	18.4	21.1
(a) Indirect taxes .....	12.0	16.3
(b) Direct taxes on stock companies .....	-5.4	-5.5
(c) Direct taxes on households .....	-5.4	-5.5
(d) Contributions to pension funds .....	43.1	43.3
(e) Income from property and entrepreneurship, and current transfers, n.e.c., from households	23.5	60.9
2. Current expenditure .....	29.8	37.4
(a) Consumption expenditure .....	22.8	35.0
(b) Subsidies .....	38.8	38.3
(c) Interest on the public debt .....	45.7	47.1
(d) Current transfers to households .....	39.1	41.1
3. Saving .....	—	—

were also significant increments in expenditure on compensation of employees in the provinces and municipalities, particularly in the Municipality of Buenos Aires where it practically doubled during 1964, another fact which could not be taken into account.

The difference in indirect taxes is due to the fact that the estimates for provinces and municipalities were based on an evolution similar to that projected for the national Government, and this prevented due account being taken of the larger increases recorded there, especially in the Municipality of Buenos Aires.

Two minor items (transfers, not elsewhere classified, from households, and income from property and entrepreneurship) present marked differences, because although they were estimated on the basis of past trends, their evolution in 1964 did not follow the normal pattern.

## 5. COMPARISON ON AN INTERNATIONAL BASIS

In order to gain a clearer understanding of the discrepancies that have arisen in the estimates contained in Argentina's first national economic budget, tables 8 and 9 *ex ante* estimates and actual figures are compared in tables 8 and 9 with the corresponding figures for Norway and Sweden.

**Table 8**

COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF THE GROSS DOMESTIC PRODUCT IN ARGENTINA (1964) AND NORWAY (1947)

Sector	Gross domestic product for preceding year = 100		Percentage difference
	Ex ante	Ex post	
<i>Argentina, 1964</i>			
Agriculture .....	107.0	109.6	-2.6
Crop farming .....	(111.6)	(114.1)	-2.5
Stock farming .....	(102.8)	(105.7)	-2.9
Construction and improvements .....	(107.0)	(106.0)	1.0
Fishing .....	130.8	130.8	—
Manufacturing, and mining and quarrying .....	117.2	113.8	3.4
Construction .....	104.8	108.8	-4.0
Electricity, gas and water .....	108.1	110.2	-2.1
Transport .....	108.7	108.5	0.2
Commerce .....	107.6	105.6	2.0
Other sectors .....	101.8	101.8	—
TOTAL	109.4	108.5	0.9
<i>Norway, 1947</i>			
Crop farming .....	105.0	115.0	-10.0
Forestry .....	109.2	109.8	-0.6
Fishing .....	108.3	166.7	-58.4
Whale fishing .....	147.6	244.4	-96.8
Manufacturing and mining (including electricity)	111.3	117.8	-6.5
Construction .....	104.5	116.2	-11.7
Shipping .....	114.1	136.2	-22.1
Other transport .....	100.9	117.4	-16.5
Commerce .....	107.3	114.6	-7.3
Other sectors .....	101.5	100.6	0.9
TOTAL	107.4	113.6	-6.2

SOURCE: Norway: P. J. Bjerve, *Planning in Norway*.

**Table 9**

COMPARISON BETWEEN *EX ANTE* AND *EX POST* ESTIMATES OF THE PERCENTAGE VARIATIONS IN THE BALANCE OF RESOURCES IN SWEDEN (1963) AND ARGENTINA (1964) WITH RESPECT TO THE PRECEDING YEAR

Concept	Sweden, 1963		Argentina, 1964	
	Ex ante	Ex post	Ex ante	Ex post
<i>Supply</i>				
Product .....	4.5	3.5	9.4	8.5
Imports .....	4.0	7.0	9.6	9.8
<i>Demand</i>				
Gross private investment .....	1.5	0.5	10.1	8.6
Central government investment .....	5.5	2.0		
Local government investment .....	11.5	14.0		
Exports .....	6.5	7.0	6.2	3.3
Private consumption .....	4.0	4.0	9.0	8.9
Central government consumption .....	7.0	7.5	-3.3	-1.1
Local government consumption .....	5.0	5.0		

SOURCE: Sweden OECD, op. cit., p. 89.



**Table 10**

**EXAMPLES OF INDUSTRIAL INTERRELATIONSHIPS TO BE ANALYSED  
IN THE REVIEW OF MANUFACTURING TRENDS**

<i>Item</i>	<i>Used in the following industries</i>
Flour (production)	Bread Noodles, etc. Food pastes Biscuits and pastries
Sugar (production)	Soft drinks Jams, marmalades and jellies Chocolate, and all types of sugar confectionery Distilled spirits and other alcoholic beverages
Pure alcohol	Lard, cream, cheese and other dairy products
Processed milk	Wines
Grapes for wine making (production)	Cotton yarn and fabrics
Cotton fibre (production)	Stockings
Cotton (consumption of spinning mills)	Knitted cotton fabrics and other articles Wearing apparel of all kinds
Processed wool	Wool yarn and fabrics Stockings Knitted wool fabrics and other articles Wearing apparel of all kinds
Synthetic fibre yarn (production)	Fabrics of silk and artificial silk Stockings Wearing apparel of all kinds
Synthetic fibres (rayon, cord, etc.) (production)	Tires
Newsprint (imports)	Newspapers and periodicals
Pulp (production)	Paper of all types
Pulp (imports)	Artificial silk yarn
Paper (production)	Printing and publishing
Sulphuric acid (production)	Index of volume of activities: (a) Chemical industry (b) Paper making (c) Textiles
Crude petroleum (production)	Petroleum refining
Crude petroleum (imports)	(production of all types of items)
Rubber (imports)	Index of volume of activities: Rubber Tires and inner tubes Rubber footwear
Slaughtering of beef cattle (hides)	Leather footwear Hides (tanned or dressed)
Limestone (production)	Lime Cement
Cement (production)	Volume of construction
Bricks (production)	
Rolled steel (production)	
Paints (production)	
Parquet flooring blocks (production)	
Carpentry work (metal and wood)	
Paints (production)	Metal-transforming motor-vehicle workshops
Tires and inner tubes (production)	
Motor vehicles (inventory)	
Motor vehicles (production)	
Iron (production)	Machines and motors (other than electrical)
Steel (production)	
Cement (production)	Tiles Cement and fibre cement
Steel (production)	Volume of the metals group
Steel sheets (production)	Cooking stoves and other similar items

## D. RECENT INNOVATIONS IN THE METHODOLOGY FOR PREPARING THE NATIONAL ECONOMIC BUDGET

The experience thus far gained in determining the figures in the national economic budget, in conjunction with the requirements set by the decision-making bodies, has led to the consideration of future needs and the best way to meet them. It was believed essential:

(a) To improve the primary data on which the national economic budget was based, especially in relation to the construction sector;

(b) To make more use of the national economic budget in analysing alternative policies;

(c) To use instruments of analysis—e.g., the input-output matrix—which could serve as consistency tests for the projections.

The following comments relate to some of the work started with a view to fulfilling these aims.

### 1. ANALYSIS OF CONSTRUCTION

This sector is of considerable importance in the national economy. It represents 4 per cent of the value added and 42 per cent of total gross fixed investment; moreover, this investment is equal to 9 per cent of the gross national income used. At the present time, while considerable unemployment persists, attention is also drawn to the high income-elasticity of employment in the construction sector. Another point to be borne in mind is the importance of certain housing standards in a social policy programme.

For the reasons given above, it would seem advisable to have direct estimates of the future evolution of construction. It should be noted that the *ex post* calculation of the national product is far from perfect, owing to deficiencies in the basic statistics. This is yet another reason for undertaking a special investigation of the sector.

Accordingly, a start has been made on a survey of about a hundred construction firms in Buenos Aires proper and Greater Buenos Aires, by means of personal interviews. To supplement this survey, a questionnaire prepared along similar lines will be sent by post to 500 concerns in the interior. Clearly, certain obstacles arise in this sector that are not encountered by industrial enterprises, e.g.: (a) the small number of enterprises in relation to total production; (b) the impossibility of obtaining complete information on them all and, therefore, the need to take a representative sample; and (c) the peculiar features of the construction sector,

which make it difficult to determine the increase in production volume. In order to obtain useful data for the formulation of a housing policy, it is considered expedient, both in the projections and in the estimates of actual figures, to establish a certain minimum level of aggregation which will make it possible to include figures for low-cost housing.

In order to gather data for evaluating the soundness of the *ex post* estimate made thus far (which were based, as mentioned before, on permits to build), one question will deal with the building permits obtained by every firm covered by the survey in each of the past three years. Since up to now, for want of other data, the future trend of construction has been estimated on the basis of projections of industries supplying this sector with inputs, another question was included regarding the materials used (iron, cement sanitary fittings, glass, etc.). An attempt will also be made to elicit information concerning the number of persons employed.

### 2. INDUSTRIAL INTERRELATIONSHIPS AS A CONSISTENCY TEST

So far, certain tests of the internal consistency of the national economic budget projections have been performed. These are essentially of two types: over-all tests, based on definitional macro-economic equations (e.g.: the supplies of goods and services available and their uses), and those applied to the various products or branches of industry (for example, it is established that wheat supplies—resulting from one year's harvest, plus the stocks accumulated in previous years—are equal to domestic consumption, plus exports, plus the remaining balance at the end of a given period).

However, the relationships existing between inputs and the final product have not been extensively analysed. It is considered feasible to examine them through the use of correlations (by way of illustration, table 10 presents some relationships to be analysed in the future) or the input-output matrix.

Two types of tests can be performed by using the input-output matrix:

(a) A minimum test, based on the value added vector and using the matrix of technical coefficients, by means of which final demand (Y) would be determined in order to ascertain that there are no negative values for Y;

(b) On the basis of an estimate of exogenous final demand, it would be attempted to determine whether such an estimate was consistent with the estimate of value added obtained outside the matrix. In this case, it would have to be established that the X vector determined by the following equation was consistent with the figures obtained:  $(I-A)^{-1}Y = X$ . The same result can be reached by starting with the value added—as in (a)—, and comparing the value thus obtained for Y with an exogenous projection of the final demand vector.<sup>21</sup>

### 3. ANALYSIS OF THE DEMAND FOR CONSUMER GOODS

So far consistency tests have been carried out between total consumer supply (in terms of total supply minus investment, exports and government consumption) and private consumer demand, estimated on the basis of consumption functions. Consumption functions at lower levels of aggregation should be established to carry out similar tests by sectors and possibly by commodities. Plans have been made to carry out a survey of consumption for the purpose of improving previously obtained information and verifying a number of functions already determined.<sup>22</sup> In the future, a number of questions on expectations (anticipated changes in income and acquisition of durable goods) could be included.

### 4. PROBABLE TRENDS DURING THE PROJECTION YEAR

Forecasts should be made not only of the changes likely to occur in a future year, but also of the behaviour of the variables during that year. For this purpose the more important indexes are now being compiled on a monthly basis; nevertheless, the effectiveness of this type of analysis is seriously limited by the small number of indicators available. The ideal solution would be to begin the quarterly analysis by calculating the national income, for which there would have to be an improvement in industrial statistics. Without this preliminary basis, it would be difficult to achieve any significant progress in this field.

<sup>21</sup> See H. S. Levine, "Input-Output Analysis and Soviet Economic Planning", in *American Economic Review*, vol. LII, No. 2 (May 1962), p. 132.

<sup>22</sup> See CONADE, "Encuesta sobre presupuestos de consumo de las familias urbanas por niveles de ingreso para 1963", in the *Estudio sobre politica fiscal en la Argentina*, prepared for the Joint OAS/IDB Tax Program, March 1965.

### 5. RECONCILIATION OF INVESTMENT BY ORIGIN AND DESTINATION

The industrial survey includes data on future investment plans within the sector of activity. These data give some indication of the size of investment, but so far it has not proved possible to integrate it with the estimate of investment made on the basis of the sectors of origin.

The national economic budget section has analysed investment with a view to a preliminary disaggregation by sectors. So far a distinction has been made between the following sectors: (i) mining, industry and construction; (ii) crop and stock farming and fishing and (iii) services. In addition, CONADE has carried out a reconciliation based on the plan's goals. As this reconciliation is based on projected figures rather than on an empirical *ex post* determination, it too cannot be adopted immediately as a reconciliation model.

In addition to the difficulties inherent in obtaining the data described above, the data obtained from the survey also need to be analysed in great detail in order to be made comparable with the over-all projections in question (definition of investment, classification of goods, reference period, etc.).

### 6. USE OF THE NATIONAL ECONOMIC BUDGET AS AN ECONOMIC POLICY TOOL

In order to make the national economic budget more useful in the future, the results of alternative policy measures should be indicated so that it can be used as a basis for decision-making.<sup>23</sup>

As all possible measures cannot be taken into consideration, the obvious approach seemed to be to choose, as economic policy instruments, quantitative variables relating to the economy as a whole rather than to a particular sector, and whose effectiveness seemed at first sight to be significant.

So far the following variables have been regarded as fulfilling these conditions: government expenditure, subsidies, direct taxes, indirect taxes, surcharges and drawbacks, restrictions on the imports of capital goods, the exchange rate and money supply.

<sup>23</sup> Although a start had already been made in the 1964 budget on determining certain functions, the contribution of the Harvard advisory group has been of vital importance. Particular mention should be made of the research done by Mr. W. Van Rijkegham and, more recently, of the work done by Professor P. de Wolff in an advisory capacity.

There are differences in the way in which these instruments are used, since some are dependent on the reaction of other economic agents outside the Government's control, as in the case of taxes, for example. The difficulty in this case cannot be solved by substituting the variable "tax rate" for the variable "taxes", because in point of fact the real rate depends on the reaction of the taxpayers, which is difficult to gauge, principally because of tax evasion. In other cases, the radius of action of the instruments is limited by political or social restrictions. Once the variables have been chosen, they must be cast in the form of a model before their possible effect can be weighed. It must be pointed out that, so far, certain difficulties have been encountered in attempting to do this. To take the monetary factor in particular, initially it is sufficient to assume that the money supply must adapt itself to the changes occurring in the real product and in the movement of prices. This supposes—according to the quantitative theory—that the rate of circulation remains constant. However, it is clear that such a premise, although very useful as a first approximation, cannot be maintained, since the rate has varied in the past. If these variations can occur again in the future, then there may be as a result an over-supply or a shortage of money. Although it can

always be argued that the monetary authorities should take action to meet unforeseen circumstances, it would seem to be the responsibility of the national economic budget to estimate as accurately as possible the changes in the instrumental variables. If there is a shortage or over-supply of money, the problem arises of forecasting the consequences, and this necessitates these variables being considered as basic determinants within the system.<sup>24</sup>

If it were possible to incorporate the variables in a complete model, the effectiveness of the alternative measures could be indicated by the coefficients  $a$  in the following equation (establishing a single goal and disregarding other considerations, such as those of a political and social nature):

$$M = aP_1 + aP_2 + \dots$$

in which  $M$  represents the goal and  $P$  the policy. It would, of course, be interesting to supplement this quantitative information with some indication of the qualitative aspects, for which a number of elements derived from the industrial survey and from an earlier study on the tax problem already exist.

<sup>24</sup> A number of tests have been carried out—e.g. of the effect on investment—without producing any results.

## Annex

### METHODOLOGY USED IN CALCULATING THE PRODUCT AND INVESTMENT IN THE NATIONAL ECONOMIC BUDGET ESTIMATE

#### A. CALCULATION OF THE PRODUCT

##### 1. AGRICULTURE

##### (a) *Crop farming*

In accordance with the methodology used in calculating national income in Argentina, the amount produced in the different components of the crop farming sector is ascribed to the year in which the commodities were marketed. Each crop has its corresponding cycle and the year to which production is ascribed is determined on that basis. The wheat crop, for example, is gathered for the most part in November and December (year  $t$ ), and it is generally referred to as the crop for the year  $t/t + 1$  and considered as the product of the year  $t + 1$ .

Because of the different characteristics of each crop (coarse and fine grain, summer and winter fruits, etc.), different situations exist when the national economic budget is drawn up. In the case of commodities for which preliminary output estimates are available,<sup>a</sup> for

<sup>a</sup> These estimates are prepared by the Department of Agriculture on the basis of inspections carried out in the different zones of the country and of consultations and meetings between representatives of the producers and direct agents of the Department.

example, the most recent figures are used for calculation purposes. Where these data are not available, probable output estimates are made on the basis of the area sown and probable crop yield. In calculating the yield, account is taken of the results recorded in recent years (usually the preceding five years) and of the views of specialized agencies on the development of the crop cycle. To this end, an analysis is made of the material contained in the Department of Agriculture's monthly crop farming reports.

Once the physical output of the different crops has been determined, each of them is assigned the base year (1960) price in order to establish the value of crop production at constant prices. The increase in production for the year  $t$  in relation to the year  $t-1$  is applied to the value added, on the assumption that the ratio of the value added to production remains constant.

Fifty-one commodities are considered annually for the purpose of calculating the value added of the crop farming sector, according to the following distribution: cereals and flax (9), industrial crops (10), fruits (14), vegetables and pulses (18). (See table 11).

Table 11

ARGENTINA: COMMODITIES AND BRANCHES OF  
ACTIVITY ANALYSED IN CALCULATING THE  
GROSS PRODUCT

Sector	Unit	Quantity
Crop farming .....	Commodity	51
Stock farming .....	Commodity	11
Mining and quarrying .....	Commodity	9
Manufacturing .....	Branch	83
Construction .....	Branch	2
Trade .....	Branch	82
Transport .....	Branch	13
Communications .....	Branch	6
Electricity, gas and water ....	Branch	3
Other services .....	Branch	10
TOTAL		270

The following comment might help to throw some light on the true purpose of the national economic budget. As was indicated above, even before the end of the year  $t-1$ , in the case of certain crops estimates of the sowings made during that period are available, together with the corresponding crop expectations for the year  $t$ , the estimates being those arrived at in calculating the product within the national economic budget. This is a necessary step in obtaining figures in respect of the product and its sectoral distribution, in accordance with the methodology used in national accounts, and it enables the estimates to be compared with the *ex post* calculation. It should be borne in mind, however, that the national economic budget is not intended merely as an instrument for making projections, but also as an aid in choosing between alternative policies. For the purposes of this latter function, a further step should be taken—at least theoretically—and an estimate should also be made of the crop to be sown in the year  $t$ , since only on the basis of that estimate can any fundamental policy measures be taken.

(b) *Stock farming*

The calculation includes the following components: stock production (cattle, sheep, pigs, etc.) wool, milk, poultry, eggs, honey, beeswax and other farm products. Cattle plays a large part in the estimate, since it represents 60 per cent of the total livestock and 28.2 per cent of the stock farming sector.

Total cattle production is obtained by adding the expected slaughtering for the year in question (including the export of live animals) and the anticipated inventory changes. Expressed in algebraic terms:

$$PN_0 = PB_0 - M_0 = F_0 + VE_0$$

$$VE_0 = EI_1 - EI_0$$

where:

- $PN_0$  = Net production in year 0
- $PB_0$  = Gross production in year 0
- $M_0$  = Mortality in year 0
- $F_0$  = Slaughtering in year 0 (including exports of cattle on the hoof)
- $VE_0$  = Inventory changes in year 0
- $EI$  = Total initial inventory

(i) *Slaughtering*

Slaughtering estimates in a time series include data on slaughtering in registered slaughterhouses and refrigerating plants, and estimates in respect of unregistered slaughterhouses and slaughtering for immediate consumption. Projections for the following year are obtained from the National Meat Board and are based on an analysis of domestic consumption and export possibilities under the policy in force. It should be added that the Argentine Government is at present strictly supervising both consumption trends and exports in an effort to achieve the quantitative goals that have been set.

(ii) *Inventory changes*

Although past figures are not entirely reliable, they do provide useful information after certain adjustments have been made. Estimates for a future year are very difficult to forecast. In general, all the available sources are consulted and an evaluation is made of the criteria on which the figures supplied are based. These figures are derived from information supplied by respondents from the interior of the country, who are in a position to know how much land is being devoted each year to stock farming and to what extent herds are being restocked or depleted.

Once the figures for slaughtering and inventory changes have been obtained in terms of head of cattle, possible changes in yield (kilogrammes of meat per head of cattle) can be analysed for both consumption and exports.

The same procedure is followed in respect of pigs and sheep, but the information is less complete, particularly so far as forecasts are concerned.

The production of wool, milk, poultry and eggs is likewise calculated on the basis of consultations with the sectors and/or experts directly concerned. With regard to wool and milk, the application of average yields to the inventory of sheep and cows cast some doubt on the figures supplied and it is necessary, in many cases, to go back to the source of information in order to obtain additional explanations.

The physical production indexes obtained for each of the categories mentioned are applied to the value of production figures for the base year (1960), thus bringing up to date the total value added of stock farming at constant prices.

## 2. MANUFACTURING AND EXTRACTIVE INDUSTRIES

(a) *General concepts*

This sector has the largest share in Argentina's gross national product, amounting at the present time to 35 per cent of the total. Its importance is even greater if it is taken into consideration that it can have a direct or indirect influence on the growth of other sectors, such as trade (with respect to the marketing of industrial products), transport and storage, and electricity (demand for which is largely derived from industry and is therefore affected by changes in the industrial product). If to that is added the fact that this sector has experienced marked fluctuations in the past (a growth of 14.3 per cent in 1964 and a decline of 7.4 per cent in 1959), which determine to a large

extent the changes in the gross product, it is understandable that fundamental importance has been attached to ensuring growth in this sector.

The industrial development estimates are based fundamentally on a survey made of the manufacturing and extractive industries. The data obtained are controlled and in some cases adjusted on the basis of other information, which consists mainly of the following:

A. Consultations with experts belonging to the industries section of CONADE;

B. Consultations with official agencies (Department of Industry, Tractor Board, Winegrowers' Institute, Department of Textile Containers, etc.);

C. Consultations with representative bodies of the production sectors (Association of Automobile Manufacturers, Iron and Steel Manufacturers' Associations);

D. Other verifications, consisting mainly of:

(i) Analysis of past trends in the sector;

(ii) Evolution of the sector providing raw materials other than those provided by the industrial sector (e.g. oil-seed production in relation to the production of vegetable oils, sugar-cane production in relation to that of sugar, grape harvests in relation to wine production, etc.). In most cases, this type of interrelationship has been analysed approximately, without working out any correlations;

(iii) Consistency tests on the basis of relationships of a technological nature between different industrial groups. The dependence of one activity upon another may arise because the growth of a particular commodity *A* may be connected with commodity *B*, in that *B* is an essential input for the processing of *A* (e.g. the relationship between steel production and the production of vehicles and machinery, between paper production and the output of the printing, publishing, pulp, paper and board industries, etc.);<sup>b</sup>

E. Finally, in addition to the survey referred to above, contact is being maintained with the most important enterprises in order to keep abreast of their subsequent development. This type of procedure was used, for example, in estimating the production figures for 1965 contained in the *1965 National Economic Budget*, for which purpose enterprises were visited or were asked to supply information.

#### (b) Description of the survey of production and investment expectations

For the sake of greater unity of exposition, the general characteristics of the survey are described below, since this type of inquiry was first carried out in the industrial sector and has served as one of the instruments for estimating the product. However, as will be seen, its radius of action has been or is being extended at the present time to include other sectors.

<sup>b</sup> Table 10 contains examples of a number of variables that are of interest in connexion with the analysis contained in paragraphs (ii) and (iii) above.

In recent years business intentions surveys have been increasingly used in different countries;<sup>c</sup> and it has been maintained that this type of anticipatory data can be extremely valuable, particularly when they are used in conjunction with other available information.<sup>d</sup>

The quantitative questions included in the survey are of the internal anticipations type (called by some authors intentions or plans)<sup>e</sup> which are dependent on the action taken by the entrepreneur in question. It is generally recognized that anticipatory data are likely to be more useful when this type of projection is involved, rather than external projections relating to specific market prospects.<sup>f</sup> It should be borne in mind, however, that the variables included in the survey are dependent on the interaction of market forces as well as on the activities of the respondent entrepreneurs. Thus the fulfilment of the forecasts depends, in short, on: (i) the extent to which the enterprises have formulated plans; (ii) whether the plans, once formulated, are put into operation; and (iii) whether the micro-economic changes envisaged by the enterprises correspond to the changes occurring at the level of the branch of activity.

With regard to the first problem, most Argentine enterprises seem to have made such progress in their internal organization (market research, offices of economic and financial studies, a greater degree of production planning) that it is both possible and necessary for them—in the face of competition from other enterprises—to formulate definite plans.

As regards the actual implementation of those plans, the premises on which the forecasts of the enterprises are made will have to be taken into account before it can be ascertained whether changes in general conditions will also affect what has been planned. The question on obstacles to production and investment growth, as formulated in the survey under consideration,

<sup>c</sup> Particular mention can be made of the surveys of investment intentions carried out in the United States by the Department of Commerce and the Securities and Exchange Commission, and the McGraw-Hill investment survey and the Dun and Bradstreet survey of expectations (employment, inventories, new orders, sales and profits) also in the United States.

In the Federal Republic of Germany, the most outstanding work has been done by the Munich Institut für Wirtschaftsforschung (IFO). For the United Kingdom, see the article by R. J. Ball and Pamela S. Drake, "Investment Intentions and the Prediction of Private Gross Capital Formation", *Economica*, No. 123 (August 1964), pp. 229-247. In Argentina, the Central Bank has conducted surveys—mainly in the form of approximate figures—of present trends in enterprises.

<sup>d</sup> Arthur M. Okun, in "The predictive value of surveys of business intention", *American Economic Review*, vol. LII, No. 2 (May 1962), pp. 218 *et seq.*, justifies the use of this type of variable—which he calls non-causal, symptomatic variables—arguing that the best explanation of the behaviour of economic agents does not necessarily provide the best forecasting technique.

<sup>e</sup> See G. Hart, Modigliani and Guy Orcutt, introduction to *The Quality and Economic Significance of Anticipations Data* (Princeton, 1960), p. 5.

<sup>f</sup> Arthur M. Okun, "The Value of Anticipation Data in Forecasting National Product", in *The Quality and Economic Significance of Anticipations Data*, *op. cit.*

tends to stress the importance of the factors that might affect the behaviour of the entrepreneurs. The third inquiry, on the other hand—which is in the process of being conducted—includes a question on the amount of confidence placed in the plans by the enterprises, or, in other words, the degree of variation between what is forecast and what is actually produced, in the experience of the enterprise.

As regards the third factor, it is clear that the evolution of the respondent units will reflect that of the whole branch of activity to which they belong, provided that the sample used is reasonably representative. As in general large and medium-scale enterprises have been chosen, and as long-term trends seem to reveal a process of concentration of industrial production, it might be thought that the enterprises included in the survey grow more rapidly than the remainder. However, this process of concentration is so slow that it is unlikely to have a distorting effect on short-term estimates.

The industrial survey covered manufacturing and extractive, private, mixed and State enterprises established in Greater Buenos Aires.<sup>g</sup>

Enterprises accounting for a high percentage of the branch's output were chosen to make up the planned sample.<sup>h</sup> Thus, 350 enterprises were selected for the first survey, and 500 for the second and third. In these surveys the enterprises belonged to approximately eighty-five branches of activity.<sup>i</sup>

The enterprises included in the survey were assigned to their corresponding industrial branches in accordance with standard census procedure, i.e., according to the goods whose production value in 1963 was greater in relation to the total production of the enterprise. However, where an enterprise was engaged in various lines of production or completely different activities, each activity was defined as a separate establishment. Consequently, 460 establishments in all were included in the first survey and 660 in the second and the third.

The criterion adopted in choosing the enterprises was that of the largest enterprises in each industrial branch. The average representativity of the sample was 33.5 per cent.

<sup>g</sup> It should be remembered that, even where enterprises in the interior are extremely important in the case of certain commodities (e.g. regional commodities, such as those produced by the wine-growing and sugar industries), almost all of them have their head offices in Buenos Aires.

<sup>h</sup> The sample was drawn up on the basis of a list prepared in 1961 in connexion with a study on "Demand for Skilled Labour" by the Economic Research Centre of the T. Di Tella Institute. The list was brought up to date and enlarged on the basis of information supplied by the Industrial Union, the General Economic Confederation and associations of industrialists, and of the list of companies registered with the Stock Exchange and the available information on new enterprises obtained from industrial directories and lists.

<sup>i</sup> Estimates of ninety-six industrial branches are made for the *ex post* calculation of the product.

In order to determine the increase in production in each enterprise,<sup>j</sup> the value and amount produced in the year adopted as base year were requested, thus enabling unit prices to be established for that period. These same prices were applied—for each commodity—to the output estimates for the future year. In this way, production estimates in constant terms were arrived at for each enterprise, which when added together gave production by the branches of activity corresponding to the sample.<sup>k</sup>

To arrive at the change in production of each industrial group, the branches are weighted by their share in the value of production of each group. To arrive, in turn, at the change in total industrial production, the weighting used is the value added of each industrial group in industry as a whole in the base year.

It should be emphasized that the enterprises are asked not only for data on expected production in the national economic budget year, but also for the corresponding data for the period already completed. As the studies under consideration only began in 1964, so far only for that year can a comparison be made between plans and achievements, by enterprises. In general, the results can be said to be satisfactory. (See table 2 for projected and realized production in the industrial group.)

There are good prospects that the predictive value of the survey will be improved in the future, since the sample is more representative and, as time goes by, the production structure of industry, its interrelationships and the factors determining entrepreneurial decisions will all become clearer. However, one important reservation should be made: the results obtained so far refer to boom periods in the national economy. Should it be established that there is any systematic bias towards a certain psychological exaggeration on the part of the entrepreneurs (over-optimism), this factor could be expressed in quantitative terms and incorporated in the estimates. As, on the other hand, there are no results relating to periods of recession, no conclusions can be drawn on the predictive value of the survey in such a situation.

In addition to the data on production and obstacles to growth, the survey includes figures on the following

<sup>j</sup> It is noteworthy that in the United States estimates of sales and investment, but not of total production, are made. However, it has been suggested that "the production schedule may be the key decision variable of the firm over a short horizon, and illuminating results might be obtained by requesting a direct forecast of production". (Arthur M. Okun, "The Predictive Value of Surveys of Business Intentions", *op. cit.*, p. 225.)

<sup>k</sup> Where  $P$  represents the production of enterprise  $j$  at base year prices, the relative change in the product of branch  $i$  in the year  $t$ , with respect to the level of the previous year, would be:

$$\frac{\sum_{j=1}^n P_{ij}(t) - \sum_{j=1}^n P_{ij}(t-1)}{\sum_{j=1}^n P_{ij}(t-1)}$$

for  $n$  enterprise in the branch.

variables:<sup>1</sup> investment plans; the building up of stocks (of raw materials and finished products); capacity utilization; expected changes in production costs; breakdown of the cost of production, and the financial situation as reflected by current and projected balance-sheet data.

These data not only directly supplement the items included in the national economic budget, but will also enable interesting conclusions to be drawn in the future on the behaviour of the different variables in each of the enterprises or industrial groups.

### 3. CONSTRUCTION

Private and public construction activities are analysed separately.

#### (a) Private construction

The *ex post* estimate of the product is based on the statistics on building permits issued in the principal administrative districts of the country, allowing in advance for permits not taken up.

The projection for the national economic budget is based on the growth studies of the industrial branches providing construction inputs. The growth rate indexes used are weighted in accordance with their share in the cost of construction, the structure of which is taken from the corresponding section of CONADE.

The volume of production index obtained is applied to the value added of the base presupposing—as is always the case—a constant relationship between inputs and production.

#### (b) Public construction

The value of construction activities chargeable to the Central Government is obtained from the annual budgets, adjustments being made where information subsequent to the drawing up of the budgets is available. The budgetary allocations are expressed in terms of current prices and therefore need to be deflated by the price index calculated for the estimate year.

### 4. THE SERVICES SECTORS

#### (a) Commerce

When commerce is estimated for an *ex post* calculation of the product, a constant margin for marketing costs is allowed for over and above the prices of the sectors of production whose goods go through intermediate stages (wholesalers and/or retailers) before reaching the final consumer. The same criterion was adopted for calculating value added by the trade sector for the purposes of the national economic budget, which meant that an extensive analysis had to be made of the evolution of the sectors of production. To make the analysis three groups of basic products were distinguished, i.e., industrial, primary and imports, and then further broken down into subgroups or branches. Exports were included in the primary sector.

<sup>1</sup> See CONADE, *Results of the survey of the production and investment expectations of industrial enterprises* (March 1965).

The growth of each of these components was applied to the figure for the value added by commerce (in the base year), in the case of each subgroup.

#### (b) Transport and storage

In order to gauge the probable evolution of this sector, an examination was made of its component parts. The main sources of information on the railways, water-borne traffic and air traffic were the respective sections of CONADE. The data for lorry transport and storage were based on the growth of production in the sectors that make most use of road freight carriers. Lastly, the probable evolution of taxi transport, measured by the new licences issued for this type of vehicle, was estimated on the basis of past trends.

#### (c) Communications

The basic yardstick for calculating postal services is the number of letters dispatched. From the data furnished by the relevant CONADE section an estimate was made of annual investment and its effect on the product, with due regard for price elasticity given the probable trend of postage rates.

The evolution of telephone services was calculated from the number of telephones installed. For the purposes of the projection, an analysis was made of investment, mainly in lines to be set up, since the method of *ex post* calculation for this item assumes a direct correlation between increases in production and in investment.

#### (d) Electricity, gas and water

For electricity, the CONADE national economic budget section referred directly to the plans of the three major enterprises, subsequently checking their figures against the data on capacity and probable future utilization supplied by the electricity section of CONADE.

Gas was calculated in terms of the volume of sales that the State enterprise expected to make. The resulting estimate was compared with another estimate made by the Secretariat of Power, based on incoming gas supplies.

Water was calculated on the basis of National Department of Sanitation figures, which provided detailed estimates of probable drinking and sewage water supplies.

#### (e) Government services

The value added was estimated in accordance with the probable evolution of employment in the National Government sector.

#### (f) Ownership of dwellings and other services

For "Banking" the method used to determine future employment figures was to approach the principal banks in the area for information.

As it was difficult to collect the necessary information on the other items, the estimates were based on the trends of certain indirect indicators.



## B. ESTIMATE OF TOTAL GROSS DOMESTIC INVESTMENT

In calculating total investment, a separate analysis was made of gross fixed investment (imported goods, domestic machinery and equipment and construction) and of changes in inventories.

### 1. GROSS FIXED INVESTMENT

The figures for imported goods were based on estimates of foreign trade in capital goods. For domestic machinery and equipment, the figures for the base year were increased by the amount of change estimated to have taken place in the output of the respective branch of production during the period under consideration on the assumption that the production-investment ratio remained the same. For motor vehicles, production was divided into investment and consumer goods, according to the different makes and models manufactured. Investment in machinery and equipment was calculated on the basis of the value of production at the consumer's price, i.e., with the sales margin added to the factory price.

Investment in construction was computed from the estimates of the product for public and private construction, and for building in the agricultural sector. In all three cases, the ratio of value added to the volume of production was assumed to be constant.

### 2. CHANGES IN INVENTORIES

The only elements to be taken into account in estimating changes in inventories were the agricultural product, and the product of the livestock and allied industries, in keeping with the methodology used to calculate national income.

*Cattle and sheep:* The figures for changes in inventories used to calculate the product can also be used to work out this item.

*Crop farming and the remainder of the livestock sector:* This is determined by calculating the supply of each product and then deducting the amount of utilization that is expected to take place during the year.

## C. GOVERNMENT EXPENDITURE

Government consumption and investment were calculated on the basis of the annual budgets prepared by the national Government. The information on provincial and municipal expenditure was very slow to come in, even for past years, which meant that no figures were available when the national economic budget was being drawn up and the totals given by the national Government had to be directly expanded.

In some cases, it was possible to readjust the budget data in the light of subsequent information on changes in the original credits.

One of the main problems posed by the Government account is the deflation of current values.<sup>m</sup> The deflating factor is usually the index of prices implicit in the national income. However, in order to estimate the value added by the Government to the product, the deflation was based on the wage index for the sector, thereby demonstrating changes in employment and excluding the productivity effect.

<sup>m</sup> This is an exception to the method of estimation used for the other variables, which are calculated directly in terms of constant values.

## D. EXTERNAL SECTOR

The external sector comprises an analysis of the balance of payments in dollars at current prices and at constant pesos.

There are two main reasons for basing calculations on constant 1960 prices: (a) to enable the external sector of the economy to be integrated with the other major aggregates of final demand in homogeneous monetary units; (b) to screen out the incidence of changes in the prices of exports and imports of goods when calculating the trade balance, and thus enable the results of the terms of trade to be estimated together with their effect on the purchasing power of exports.

### 1. BALANCE OF PAYMENTS IN DOLLARS AT CURRENT PRICES

The value (volume and price) of exports was based on data from the relevant section in CONADE, sup-

plemented by information obtained through interviews with associations of exporters for the different products. The figures were then compared and checked against the growth of domestic production of the major items and probable future trends.

Imports of goods, divided into current and capital goods, were also calculated from data provided by the corresponding CONADE section. The projection was based on estimates of import requirements drawn up by the individual sectors. Wherever possible, imports were broken down by quantities and prices, while for the remaining groupings, the total value was estimated in current dollars.

The other balance-of-payments items were worked out with the aid of data furnished by the respective CONADE section and the Central Bank.

## 2. BALANCE OF PAYMENTS IN CONSTANT PESOS AT 1960 PRICES

In order to determine the terms of trade, the balance of payments was estimated in terms of constant pesos through projections of the indexes of volume and price. Figures were worked out for exports of goods, the freight balance, exports of other real services, imports of goods, imports of real services and the financial services balance.

Usually only one of the two indexes (volume and price) is determined directly, the other being worked out from it.

## E. EMPLOYED POPULATION

The extent of the information available made it necessary to focus the analysis on the wage and salary-earning sector which accounts for 70 per cent of the total number of occupations. It was assumed that the remaining 30 per cent, consisting of employers, their families and own-account workers, would follow much the same trend, a hypothesis which, though unproved over the long term, seems to be valid for shorter periods of time.

The number of occupations is slightly larger than the working population because of the duplications arising from the fact that a person may hold down more than one job.

The analysis covered six major sectors of the economy: agriculture, manufacturing industry, construction, trade, general government and other services as a whole. The last group does not represent more than 25 per cent of the total.

The figures were obtained by applying the annual percentage increase to the base year statistics in accordance with the criteria outlined below.

The changes in agricultural employment were worked out from the data recently collected in the respective CONADE section for the preparation of the Development Plan, since the results of the survey tallied with the annual estimates. The quantitative or qualitative variables considered were: (1) the autonomous process of urbanization and migration from rural areas; (2)

In each of the categories named above, the most representative products were considered in order to obtain satisfactory coverage. For instance, exports of goods comprised live animals, meat, hides, wool, dairy produce, wheat, maize, oil-seeds, flour and fresh fruit, which make up 80 per cent of the total exported in 1964.

In estimating the price index for imports of goods, past trends were taken into account. The price indexes for the other items were calculated by analysing the principal components in each one.

the phases of prosperity and depression in the crop and livestock sectors; (3) the level of economic activity in industry; (4) the variations in the area sown and cultivated; (5) the composition of the area sown in terms of crops that are more or less labour-intensive; and (6) the mechanization of farming.

In manufacturing, the employment trend was calculated on the basis of the employment elasticity in respect of the product in accordance with the results of the industrial survey made by the sector.<sup>a</sup>

The figures for construction and trade were determined by applying employment elasticities in respect of the product to the evolution of the volume of activity in the respective sectors.

Employment in general Government was obtained by extending to the whole sector relevant figures taken from budget appropriations or based on the views of officials regarding the possibilities of meeting the budget targets.

The category "other sectors" was estimated from very general indicators for several of its components.

The total number of wage and salary-earners obtained from adding up the sectoral figures can be compared with the estimates of the total population and the working population. The proportion of unemployment can be worked out in the same way.

<sup>a</sup> Section A, 2 of the present annex.

## F. FUNCTIONAL DISTRIBUTION OF INCOME

This was calculated directly from wages and salaries, the balance corresponding to capital and entrepreneur income (including professionals' fees and the earnings of own-account workers).

As regards wages and salaries, the base-year figures were obtained by dividing the total number of paid occupations by the total value of wages and salaries after pension contributions had been deducted. The sectors analysed are the result of the disaggregation adopted for calculating employment.<sup>o</sup>

<sup>o</sup> Information on past trends was based on the following series: (a) for the agricultural sector, the statutory wage paid to rural labourers (the category with the

The procedure consists in determining the increases in the average remuneration, applying them to the base-year figure and multiplying the result by the number of wage and salary-earning occupations in the year for which the estimate is being made.

highest incidence in the agricultural labour force). In 1964 and 1965, other factors were also taken into account, namely, the incidence of the minimum wage, the family allowance supplementing the basic wage and the partial failure to pay that allowance; (b) in industry (for the manual worker), in trade (for the office worker) and in construction (for the labourer), the figures compiled by the Ministry of Labour and Social Security; (c) for the Government, information obtained from the annual budgets.

In every case, the annual increment in the average wage of the sector is based on an analysis of the probable evolution of the minimum wage established in collective labour contracts. This procedure makes no allowance for the extent to which the real wage may exceed the contract wage, but there are no statistical data available from which to measure the influence of this factor satisfactorily and well enough in advance to meet the requirements of the national economic budget.

The increases stipulated in the wage agreements were understandably seldom in line with the average annual increases in sectoral wages and salaries, which were the figures required by the economic budget. Some preliminary studies of an empiric nature were therefore made, and showed that the increase in average remuneration in the year  $t$  had a quantifiable relation-

ship to the percentage increases obtained upon the conclusion of the wage agreements in years  $t-1$  and  $t$ .

There is also a certain feature of the wage system that enables the data to be projected some time in advance. As the wage agreements are valid for about a year from the date of signature, it is possible to extrapolate the wages that would be paid in the first few months of the year following that in which the estimates are made. The average wages for the first three or four months of the coming year can thus be compared with those paid during the same period of the current year, and a preliminary idea obtained of the increases that are likely to take place during the year as a whole. The analysis can be completed by a reasonable hypothesis regarding the terms on which the agreements would be renewed during the rest of the year, with due regard for the fact that the increases agreed upon in the early months generally influence the tenor of subsequent agreements.

### G. PROJECTION OF PRICES

The estimates made in earlier reports have been expressed in constant terms. However, it is now planned to project national accounts in terms of current pesos as well, and thus take the first step towards the integration of real and financial estimates, which is essential for analysing the monetary policy planned for the national economic budget year. The movements of over-all prices have therefore begun to be studied. This type of survey is extremely important as an initial contribution to the study of inflation.

In order to estimate the over-all price level (index of prices implicit in the gross national income), a number of explanatory variables were studied. Correlations were made between sixteen independent variables, some referring to the previous year and others to the current year. The variables were also combined in a number of ways, resulting in thirty-six

different correlations. The factors analysed were the following: (i) creation of means of payment (gold and foreign exchange, loans to the Government and to the private sector); (ii) volume of the product (total and agricultural); (iii) wage rates; (iv) exchange rate; (v) prices of agricultural products; and (vi) general price levels in the previous year. Certain conclusions emerged from the analysis as regards the possibility of using some of these variables for estimating future price trends, but there was no pretence of ascertaining the causes of the inflationary process in that way. What has been made clear is that some of the variables are interdependent, and that, for a more exhaustive analysis, a general model would have to be constructed that would take into account the interaction of prices and the factors that determine their levels.

The best function obtained was as follows:

$$p = 0.4794 w + 0.1029 t + 0.2959 p_a - 0.4273 q + 0.0457 p_{-1} + 0.8039 R^2 = 0.99$$

(0.0765)    (0.0311)    (0.0527)    (0.1877)    (0.0476)    (0.1760)

In this function:

- $p$  = prices implicit in the gross national income
- $p_{-1}$  =  $p$  in the previous year
- $w$  = real hourly wage paid in manufacturing industry
- $t$  = average exchange rate for the export and import dollar
- $p_a$  = prices implicit in the gross agricultural product at factor cost
- $q$  = real gross domestic product at factor cost

The observations covered the years 1940-63 and all the variables were expressed in terms of annual percentage increases.

As this function shows, the hourly wage index for industrial workers is the variable that carries the greatest weight in determining the general price level. Following it in order of importance, among the variables with a positive influence, are the prices of agricultural products. The third explanatory factor is the dollar exchange rate, but its weight is far less (one fifth of that of industrial wages). Lastly, there

is the important role played by real production in keeping down the rise in prices through increasing the supply of goods available.

This function was tested by comparing the annual price increases obtained from it with the increases that actually occurred in the past. The results of the comparison have been eminently satisfactory as the high coefficient of determination indicates.

On the basis of prices in 1965, three different assumptions were made as to the future evolution of the independent variables: a maximum, a minimum, and an intermediate which is considered to be the most realistic unless events prove otherwise.

The estimated industrial wage index for 1965 was based essentially on the variations that were expected to take place in the movable wage, in the half-yearly wage increases agreed upon and on the incidence of price increases on future wage agreements. The estimates for 1965 are given, for purposes of illustration, in table 12.

**Table 12**  
**ARGENTINA: ESTIMATED INDEX OF IMPLICIT PRICES FOR 1965**

<i>Variables</i>	<i>Weight</i>	<i>Hypotheses of percentage increase</i>			<i>Resulting estimates</i>		
		<i>Maximum</i>	<i>Minimum</i>	<i>Adopted</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Adopted</i>
$P_{-1}$ Implicit prices in 1964 .....	0.0457	24.7	24.7	24.7	1.13	1.13	1.13
$q$ Index of the volume of the product	-0.4273	5.0	8.0	7.0	-2.14	-3.42	-2.99
$w$ Index of industrial wages .....	0.4794	38.0	32.8	36.8	18.22	15.72	17.64
$P_a$ Index of implicit agricultural prices	0.2959	18.5	8.0	18.0	5.47	2.37	5.33
$t$ Exchange rate .....	0.1029	24.0	18.5	19.0	2.47	1.90	1.96
Constant .....	0.8039				0.80	0.80	0.80
WEIGHTED INCREASE IN IMPLICIT PRICES					25.95	18.50	23.87

## RECENT ACTIVITIES OF ECLA

### I

#### The Secretary-General's visit to Latin America

Two important events for ECLA took place towards the end of August 1966: the visit of the Secretary-General to several Latin American countries, including Chile, and the opening of the United Nations building in Santiago.

During a lull in the activities that usually keep him at United Nations Headquarters in New York, the Secretary-General visited Mexico and Chile in the last week of August and, as part of his itinerary, made brief stays in Panama, Quito and Lima.

As a guest of the Government in those countries, the Secretary-General had the opportunity of meeting with the Chiefs of State and top officials. He also talked to the directors and representatives of the specialized agencies working in the region.

In Mexico he was received by President Gustavo Díaz Ordáz, in Panama by President Marco Aurelio Robles and in Chile by President Eduardo Frei. In all three countries, the Secretary-General also met with the Ministers for Foreign Affairs and other members of the Government. During his stay in Quito, talks were held with the Ministers for Foreign Affairs of Ecuador, and in Lima, with the Ministers of Labour and top-level government officials.

One of the main reasons for the Secretary-General's visit to Latin America was to open the United Nations building in Santiago, Chile, which is to house the Economic Commission for Latin America and the Latin American Institute for Economic and Social Planning.

The building, which thus becomes the third to be owned by the United Nations, was designed by Mr. Emilio Duhart, the Chilean architect, and built on land donated by the Government of Chile. Its long low silhouette stands out against a spur of the cordillera of the Andes, which surrounds the capital. It is divided into three main parts: the outer square, which forms a continuous working floor; the main block housing the ancillary services; and the conference room, which has a capacity of over 300. The main structural materials are concrete and

glass, and the floors are of marble, fine woods or plastic. Many of the inside walls, particularly those in the library and the conference room, are panelled in fine woods, which together with the marble and other materials were donated by States members of the Commission.

The inauguration ceremony, which took place on the morning of Monday, 29 August, was attended by the President of Chile and several of his Ministers, representatives of the legislature and judiciary, the diplomatic corps and the Church, as well as by the directors and staff of the various United Nations organizations in Chile. Also present were the architects and engineers responsible for the construction, and the workmen themselves. Speeches were made by Mr. Gabriel Valdés, Minister for Foreign Affairs; the Secretary-General; Mr. José Rabat, Mayor of the Commune of Las Condes; and Mr. José Antonio Mayobre, Executive Secretary of ECLA. After the inaugural ceremony, the Secretary-General was the guest of honour at a luncheon given by the President.

In the afternoon, the Secretary-General planted a tree in the grounds of the building, and then met with officials from the different United Nations organizations. Speeches were made, on the occasion, by Mrs. Rosa Doren, Chairman of the ECLA/Institute staff committee, Mr. Luis María Ramírez-Boettner, Resident Representative of the United Nations Development Programme, and Mr. Clive Mitchell, Chairman of the Staff Committee of the FAO Regional Office.

In reply, the Secretary-General spoke at length on the functions of the United Nations and its Secretariat. Stressing the importance of the economic activities of the United Nations, he deplored the fact that its great accomplishments in that field were not yet appreciated at their true worth. He went on to describe the part played by the United Nations in building and keeping the peace, and its role as a mediator in times of conflict. Its task was difficult in a world full of the tensions produced by differing political ideologies, economic disparities, the

vestiges of colonialism and racial strife. Referring to the tragic war in South-East Asia with its ever-increasing toll of death and destruction, he asserted that there could be no peace in the world until there was peace in the minds of men.

He warned that, without a radical change of heart, mankind might find itself on the brink of a new world war, and that man's great accomplishments now stood threatened in the shadow of the atomic bomb. It was necessary to cultivate tolerance and a policy of "live and let live" if the people of the world were to be united. In emphasizing the importance of education for achieving those goals, he pointed out that in technological societies, such as the United States, Western Europe and the Soviet Union the main purpose of education was to develop the intellect and the understanding of external and material objects, while, in the East, education traditionally stressed moral and spiritual values and ignored the outside world. To develop a fully integrated human being, intellectually, morally and spiritually, it was necessary to combine the two kinds of education.

In conclusion, the Secretary-General paid tribute to Chile's activities in the United Nations, and thanked the Government and the people for the warm welcome they had given both to him and to his aides: Mr. José Rolz-Bennett, Under-Secretary for Special Political Affairs in charge of the Office of Public Information,

Mr. Ramsés Nassif, Press Liaison Officer, and Mr. Donald Thomas, Personal Administrative Assistant to the Secretary-General. Before leaving, the Secretary-General talked to the staff members of the United Nations and specialized agencies in Chile.

On the following day, the Secretary-General held a press conference, gave a lecture at the University of Chile and attended a dinner in honour of the President and members of the Government.

From his arrival, on the afternoon of Sunday, 28 August, to his departure on the morning of Wednesday, 31 August, the Secretary-General was applauded by every sector of the population for his work in the cause of peace. In the Supreme Court of Justice, in Congress, in the university and in the streets of Santiago, the authorities and people of the city demonstrated over and over again their confidence and appreciation, both during the spring-like weather that greeted him on his arrival and in the rain that fell as he left. The feelings aroused by his visit can perhaps best be summed up in the words of Mr. José Isla, Acting Chairman of the House of Deputies, who said:

"You have won the hearts of the people of Chile. We have seen this each time you walked through our streets, where you were given the applause that Chile reserves for those who, armed only with their faith, fight for peace in the world and justice for small countries."

## II

### Conference of Ministers of Education and Ministers Responsible for Economic Planning in Latin America and the Caribbean\*

(Buenos Aires, Argentina, 21-28 June 1966)

The Conference of Ministers of Education and Ministers Responsible for Economic Planning in Latin America and the Caribbean was held at Buenos Aires from 21 to 28 June 1966, under the joint sponsorship of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Economic Commission for Latin America (ECLA). The main purpose of the Conference, which was convened in conformity with UNESCO resolutions 1212 (b) and 1322 (a) and ECLA resolution 256 (XI), was to formulate guiding criteria and principles to help Member States in Latin America in planning the development of education at the national level, and to make

recommendations concerning the nature and trend of UNESCO's future education programmes in the region following completion of the Major Project on the Extension and Improvement of Primary Education in Latin America.

Opening addresses were delivered by Dr. Arturo Illia, President of Argentina; Mr. René Maheu, Director-General of UNESCO; and Mr. José Antonio Mayobre, Executive Secretary of ECLA.

The Conference was attended by representatives of twenty-five countries and several United Nations agencies. Six other countries and a number of inter-governmental and non-governmental organizations sent observers. Mr. Carlos

\* See the *Final Report* of the Conference.

R. S. Alconada Aramburu, Minister of Education and Justice of Argentina, acted as President, assisted by the other heads of delegations in the capacity of Vice-Presidents. Mr. Eduardo Rivas Casado was appointed Rapporteur-General; Mr. Carlos Cueto Fernandini, Minister of Education of Peru, was Chairman of Commission I; and Mr. Agustín Yáñez, Minister of Education of Mexico, was Chairman of Commission II.

The following were the main topics discussed:

1. Survey of progress made by the countries of the region in education and in the relevant sectors of economic and social development since the Conference of Ministers of Education in Lima (1956), and of the extent to which educational services are contributing to national development.
2. Prospects for the economic and social development of Latin America, and its needs in respect of the expansion of education and the training of human resources. Present and future availability of and demand for technical personnel and skilled manpower.
3. Reforms needed for the economic and social development of the countries of the region, in regard to the structure, quality and administration of their educational services, with particular reference to:
  - (a) General education as a prerequisite for specialized training of all kinds and at all levels;
  - (b) Technical and vocational education;
  - (c) Continuing education for young people and adults, and literacy programmes;
  - (d) Training of personnel for the educational services.

The UNESCO secretariat prepared two basic documents for the Conference: *Educational developments in Latin America, 1956-1965* (UNESCO/MINEDECAL/6), which describes the main educational developments in Latin America that have more particularly affected economic and social development during the past decade; and *Education and development in Latin America: Bases for an educational policy* (UNESCO/MINEDECAL/7), which gives a systematic picture of the problems and factors most closely related to the reforms needed for the social and economic development of the countries of the region, in regard to the structure, quality and administration of their educational services. The ECLA secretariat prepared a document entitled *The training of human resources in the economic and social development*

*of Latin America* (UNESCO/MINEDECAL/9),<sup>1</sup> in which it reviews the prospects of economic and social development in Latin America and its needs in regard to the expansion of education and the training of human resources. The report of the Evaluation Committee for the Major Project on the Extension and Improvement of Primary Education in Latin America was also submitted to the Conference.

At the last plenary meeting, the Conference adopted the recommendations set out below.

#### GENERAL RESOLUTION

*The Conference of Ministers of Education and Ministers Responsible for Economic Planning in Latin America and the Caribbean,*

*Meeting in Buenos Aires for the purpose of formulating criteria and principles that would give a new impetus to educational development in the region.*

#### I

1. *Notes with satisfaction* the considerable educational progress made during the last ten years thanks to the large and growing efforts of the Latin American countries, the number of students enrolled in the educational system at the three levels having increased from 24 million in 1956 to 40 million in 1965, with an increase of 58 per cent in primary, 110 per cent in secondary, and over 90 per cent in higher education;

2. *Stresses in particular* the favourable repercussions of the comprehensive educational planning measures taken, which have provided a more accurate and inclusive picture of educational needs and helped to ensure a greater degree of rationalization in the general development effort;

3. *Observes* the growing interest of the various social sectors, even those farthest removed from cultural life, in education, an interest which contrasts with the previous attitude of indifference of certain groups, especially country people, to compulsory schooling and the question of access to education;

4. *Thanks* UNESCO for its help to the countries of the region, both in drawing up their educational plans and in carrying out some of the activities included in them, particularly in connexion with the Major Project on the Extension and Improvement of Primary Education in Latin America;

<sup>1</sup> Included in this issue of the *Economic Bulletin for Latin America*.

5. *Duly appreciates* what the United Nations Economic Commission for Latin America has done to ensure that national development planning agencies take into account the importance of education in promoting economic and social development;

6. *Notes with satisfaction* the increasingly sympathetic attitude towards educational projects of the international agencies providing technical and financial assistance;

7. *Thanks* UNESCO and ECLA for convening and organizing this Conference and for the valuable contribution to it represented by the working documents prepared by the two organizations, and expresses the hope that similar conferences will be called periodically in the future to evaluate the progress made and prepare operational plans to ensure that education will make an increasing contribution to development.

## II

Despite the very satisfactory results obtained during the last ten years, the Conference considers that grave problems remain, of which the following are of particular importance:

1. The still inadequate degree of integration of educational planning in general economic and social development policy and planning;

2. The still low retention rates in the different sectors and at the different levels of education which, in primary education, average only 25 per cent;

3. The deficiencies in the quality of education, both in yield in relation to socio-economic requirements, and in the educational process proper;

4. The antiquated structure of the educational systems, characterized in some cases by their inadequacy in relation to development needs, a lack of liaison between and within the various levels of education, and in many cases the absence of adequate links between the university and the rest of the educational system;

5. The existence of an educational administration which in general lacks the structure, services, staff or equipment to cope with the growing complexity of educational problems and obtain the most from all the resources placed at its disposal;

6. The shortcomings in the training and in-service training provided for teachers, and their unsatisfactory economic and professional status;

7. The inadequacy of technical secondary and vocational education;

8. The existence of over 50 million illiterates in the adult population, and the lack of proper attention to the education of indigenous population groups;

9. The inadequacy of the resources which national economies allocate for education, and the limited amount of international economic aid for education, due principally to the use of criteria in granting it that do not always take account of the special features of educational problems in the region.

## III

With due regard to the characteristics of the existing educational situation, development prospects in the region, and likely social changes in the future, the Conference recommends that, in deciding its educational policy, each country should do so on the following general lines:

1. Educational development should be widened in scope in order to take in elements potentially favourable to education which are to be found in society, while at the same time eliminating obstacles outside the school which hamper access to education;

2. Governments should adopt the necessary measures to co-ordinate educational plans very closely with comprehensive national development plans in both the theoretical and the operational aspects;

3. A common basic education and real equality of educational opportunity should be ensured to everyone with no limitations other than those dictated by the limits of the individual's ability to study;

4. An effort should be made to maintain the high rates of expansion in education in order to reinforce what has been achieved during the last decade, ensure harmonious and balanced development at all levels and in all branches, eliminate the anomalies in the education pyramid—in particular, by improving retention rates—and provide for the training of the cadres required for economic and social development;

5. More should be done to improve the quality of education, by taking action in regard to the training and continuing in-service training of teachers, the content of teaching and its methods, the utilization of the resources which modern technology offers—thereby also making it possible to extend the benefits of education—and education research;

6. Systematic measures should be taken to reduce drop-out and repetition and targets fixed for that purpose;



7. Due priority should be given to the training and continuing in-service training of the senior administrators, planners and specialists in other sectors affecting public and private education required in growing numbers by the countries in the region for the purposes of institutional, economic and social development. The work of existing centres should be utilized, extended and co-ordinated for that purpose;

8. The scope of first-cycle secondary education should be extended to provide a broader general education as a basis for the diversified vocational and technical training required for the purposes of national economic and social development;

9. An attempt should be made to involve the university more fully in the national planning of education as a whole, and of development;

10. In collaboration with the universities and research agencies, and in conjunction with development plans, a vigorous science and technology policy should be introduced or pursued with a view to promoting science and technology and discouraging the emigration of scientists and technicians;

11. Energetic action should be taken to establish adult education and functional literacy in particular on a sound basis, which would take into account the causes of illiteracy in each country or area and ensure co-ordination with the development plans;

12. Steps should be taken to ensure that those who qualify from education of all kinds and at all levels acquire a social awareness that will help them to understand development problems and needs and encourage them to use their qualifications in the service of the community;

13. It should be one of the aims of education to inculcate a respect for human rights, promote international understanding, and, by cultivating favourable attitudes, to help achieve the cultural and economic integration towards which the countries of the region are striving;

14. An appropriate rate of increase in the financial resources allocated to education should be maintained, their distribution being made in proportion to the needs at each level and in each educational sector, and efforts should be made to ensure they are put to the best use. To make good the countries' shortage of resources for implementing educational development plans, and to avert possible disequilibria in financing them, lending agencies and friendly countries are invited to provide or increase financial aid for educational purposes.

### *Considering*

That educational policy should be based on the principle of the dynamic integration of the educational system in comprehensive economic and social development; that, in consequence there must be full liaison between educational planning and general development planning; and that such liaison demands that the general plans provide, as a point of reference for educational planning, an adequately detailed evaluation of present and future requirements in terms of human resources necessary for economic and social development,

### *Resolves*

1. *To stress* the advisability, at national level, of including the planning of manpower training as an integral part of over-all planning and in conjunction with educational planning. In this connexion, it is deemed advisable that the over-all plan should incorporate an occupational policy designed to ensure that the best possible use is made of the manpower potential at all occupational levels, providing general guidelines into which the educational plan should fit;

2. *To recall* that any reforms which may be proposed in the educational system should—apart from the cultural and social objectives of the community—pay due regard to the structure of the labour force by sectors of economic activity and levels of qualification; they should be compatible with the proposed aims of economic and social development, and with the general aims of the country's national plans;

3. *To point out* that such reforms, linked to the prospects of economic and social development, must pay due regard to processes of change which operate in such areas as the structure of economy, agricultural modernization and agrarian reform, urban growth and its effects on the rural population, technological assimilation and progress, institutional changes and changes in administrative structures and, in general, changes of attitude in regard to traditional values and the new cultural values demanded by the process of economic and social development;

4. *To recommend* governments to set up working groups, wherever necessary, in their national planning agencies in order to determine how far the present systems are fulfilling the educational planning aims assigned to them, and speed up their efforts to make an inventory of their manpower resources and provide a systematic flow of information on the subject;

5. To point out that, despite the importance of the concept of developing human resources, the humanist spirit that should characterize the educational effort should be accentuated with a view to allowing the individual to have the career he desires but with due regard to the needs of society;

6. To recommend, that UNESCO, ECLA, the Latin American Institute for Economic and Social Planning, ILO, OAS and other interested agencies

(a) Undertake more detailed methodological studies, particularly in relation to the criteria governing the incorporation of the manpower aspects in general planning, and the standardizing of basic statistics, employment classifications and educational profile analyses; and

(b) Increase their efforts to train technical personnel for manpower and educational planning, with the co-operation of the public and private sectors.

#### STRUCTURE OF THE EDUCATIONAL SYSTEMS

##### *Considering*

That the structure of Latin America's educational systems is not sufficiently in tune with the demands of the employment structure, inasmuch as it has failed to include certain specializations and forms of education required by present-day society and lacks a flexible system of co-ordination between the different educational levels or within each particular level,

##### *Recommends*

1. That the structure of the educational systems be revised on the basis of studies to determine the educational requirements of the various professional levels, in order to bring them more into line with the needs of a changing society, and that it should be so arranged as to ensure unity of the educational process and flexibility and co-ordination between the various cycles and forms of education;

2. That the differences that still exist in the duration of the primary cycle in urban and rural schools, to the detriment of the latter, be eliminated;

3. That while it is desirable for the educationally more advanced countries to prolong compulsory schooling, most countries of the region should concentrate their efforts on improving the retention rates in order to provide a full primary education for the whole school-age population;

4. That the structure of each country's educational system should *mutatis mutandis* conform

to the following general pattern: a pre-school course, a common general cycle lasting 8 to 9 years, a second cycle with different branches and a higher education level comprising, besides the traditional courses, new specializations and short courses, as well as such post-graduate courses as the employment structure may require;

5. That institutes for higher studies should be more closely linked to the whole educational system;

6. That, in the revision of curricula for the different levels, representatives of the consecutive levels should participate in order to ensure that they are better co-ordinated;

7. That adult and other special educational services be included in the educational structure;

8. That—with due regard to future employment openings—short vocational training courses be organized for students who have completed or abandoned their secondary schooling but have no possibility of going on to higher studies;

9. That the plans for structural reorganization cover the educational needs of both sexes without discrimination.

#### QUALITY OF EDUCATION

##### *Considering*

That the Latin American countries should endeavour not only to expand education but also to raise educational standards to the highest level,

That the quality of education depends upon the extent to which the educational system is in line with the ideals and needs of society, and upon the internal efficiency of the educational process,

##### *Recommends*

1. That broad, systematic and continuous action be planned with a view to improving educational efficiency at all levels. To this end simultaneous and co-ordinated action in the following sectors will be needed:

The structure of the educational system,

Its administration,

The persons who play the most outstanding role in the educational process,

Educational institutions,

Curricula, syllabuses, methods and materials, Comprehensive school welfare services and, in particular, vocational and professional guidance;

2. That systems of continuous evaluation of education be established with appropriate stand-

ards for each level, so as to guarantee a minimum promotion level;

3. That supervisory services for the different levels of education be improved, that the personnel in charge of these services be given specific training for the work, that their numbers be increased as required, and that supervisory methods and techniques be reviewed;

4. That priority attention be given to the training and in-service training of teachers, and to their economic and social situation, in view of the decisive effects on the quality of education of their level of training and their personal situation;

5. That national and sub-regional educational research centres be established with the following main functions:

The training of research workers,

The conduct of research in co-operation with social, scientific and other research institutions, for the purpose of drawing up, along general lines, a schedule of the main demands that will be made of pupils by the society they live in, and consequently of providing suitable training to meet those requirements,

Experimental work on curricula, syllabuses and teaching methods,

Research into the causes of school drop-out and repetition and study of the steps needed to eliminate or offset them;

6. That the help of the Inter-American Committee for Mathematics and other similar international bodies be obtained for the preparation of plans for improving the teaching of mathematics at all levels;

7. That more widespread use be made of new educational techniques, like television, that can help to counteract the scarcity of teachers, help in the work of teaching, bring urban and rural education to equivalent standards and reduce costs;

8. That a system of scholarships, adequate in quality and quantity be established in order to ensure equal educational opportunities and the access of all children and young people to the highest levels of study without any other limitations than individual aptitudes and abilities;

9. That the effective duration of the school year be increased in all the countries in order to attain the objectives of at least 200 school-days a year and 5 hours of classes a day recommended by the 1962 Santiago Conference;

10. That, bearing in mind the influence of school buildings upon the quality of education, particular attention be paid to everything relating to school building programmes and that, in the execution of these programmes, use be made of the technical services offered by the Regional School Building Centre for Latin America;

11. That educational documentation and information centres—local, regional and national—be established in accordance with the recommendations of the international agencies and, in particular, the Mar del Plata Proceedings of the First Latin American Meeting of Directors of Educational Documentation and Information Centres;

12. That UNESCO maintain and, as far as possible, expand its regional information and specialized assistance services; and, in particular, that the publication be continued at the Regional Office for Education of a periodical in which educational progress in Latin America is recorded and the economic and social problems of education analysed. And that studies and handbooks for the training and information of teachers of all levels and inspectors be published.

#### ADMINISTRATION OF EDUCATION

##### *Considering*

That the increasing complexity of educational administration, the importance of its responsibilities and the amount of the funds devoted to education demand that special attention be given to its reform and improvement,

##### *Recommends*

1. That in the agencies responsible for educational administration—locally, nationally and regionally—governments ensure the effective participation of the representatives of educators, scientific associations, parents' organizations and other interested groups, and that measures be taken to ensure that the opinion of all social sectors, in accordance with the particular system of public representation in each State, is given due weight in all matters relating to the organization and advancement of education;

2. That administrative structures be reformed and brought into line with the objectives of educational policy, and that the duties and responsibilities of any agencies set up or re-organized, and of their staffs, be clearly and precisely defined;

3. That services be rationalized and modern public administration techniques be introduced in order to avoid duplication and the under-utilization of staff and materials;

4. That an attempt be made to decentralize administration, divide up work and delegate responsibilities as far as may be compatible with smooth operation and efficiency;

5. That staff responsible for educational administration—school organization and administration proper, and the economic aspects of educational planning and financing—be given systematic training and in-service training;

6. That ancillary administration services be modernized and, as far as possible, mechanized, with special attention to the organization and operation of educational statistics services, and that for this purpose UNESCO and the Inter-American Statistical Institute provide technical assistance to the countries upon request at regional level;

7. That special attention be devoted to the importance of supervision to assure administrative efficiency, and that the staff responsible for such services be trained, taking into account the recommendation regarding the quality of educational services.

#### COMPREHENSIVE PLANNING AND FINANCING OF EDUCATION

##### *Considering*

1. That from the second inter-American meeting of Ministers of Education held in 1956 and the Conference on Education and Economic and Social Planning held in 1952 to the present, considerable progress had been made towards popularizing and adopting educational planning in theory and practice,

2. That such advances have been noted particularly in the case of the establishment of planning agencies, the development of certain planning methods, the training of specialists, and certain diagnoses and educational development programming projects which are enabling countries to obtain an increasingly comprehensive and accurate picture of their educational needs, and the scope and quantity of the resources needed to satisfy them,

3. That, nevertheless, an objective evaluation of what has been achieved up to the present indicates that Governments and the international agencies concerned must intensify their efforts to improve the organization, methods and above all the quality of the technicians of education and planning, with a view to transforming it into an instrument which can make an effective contribution to the formulation and execution of educational development policies,

##### *Recommends*

1. That to ensure that countries pass more rapidly from the diagnosis stage and the formulation of draft educational plans to their execution, measures be taken, according to development priorities, to translate such plans more effectively into governmental decisions and effective guidelines for action, thereby accelerating educational development and ensuring its maximum efficiency and relevance to the country's requirements;

2. That effective measures be taken to remove certain obstacles which hamper efficient planning and impair its efficiency. Without neglecting other factors, account should be taken:

(a) Of the need to evaluate and define the present functions, organizational structure and staff of the educational planning services, their methods of work and the resources placed at their disposal, in order to improve and strengthen them; they should be able to count on proper interdisciplinary teams, with the necessary financial resources, the backing of the heads of the educational administration, and their duties and relations in regard to the latter should be clearly defined;

(b) Of the need, inside and outside the individual countries, to extend programmes for the training of the wide range of personnel required for efficient planning. This should be done at three levels: training of general planners and the specialists required for specific planning agencies; training of staff for the various levels and aspects of educational administration; inclusion of educational planning as a subject in the curricula for the educational training and in-service training of teachers;

3. That measures be taken to develop machinery to provide liaison between the general educational planning operations of the educational agencies and those carried out in the various services of the educational administration, the universities and other autonomous and semi-autonomous educational sectors, all these operations being co-ordinated with the planning processes of the general development planning agencies, Ministries and other state agencies. On the extent to which this liaison is effective will depend the possibility of obtaining comprehensive educational planning properly linked up with the national development effort;

4. That educational planning should cover all levels, in addition to out-of-school education and, in particular, adult educational training, with a view to enhancing its contribution to the development effort;

5. That educational costing be introduced and, to this end, UNESCO and the Latin American Institute for Economic and Social Planning study systems which take due account of the actual resources that are involved in the educational process and its results;

6. That UNESCO and the Latin American Institute for Economic and Social Planning prepare a regional report as soon as possible on the following points:

(a) Present position of the educational planning services;

(b) Specialized personnel at present available for educational planning tasks;

(c) Characteristics of staff at present working in educational planning services, and their working conditions;

(d) Results obtained and future prospects of existing programmes to provide training and in-service training for technical staff needed for educational planning tasks;

(e) Estimates of future needs in technical staff for proposed educational planning tasks, by specialty and at national and regional level;

(f) The possibility of encouraging more active exchanges between countries of educational planning documents, materials, financial resources and staff;

7. That the Director-General of UNESCO, in consultation with ECLA and other interested international and regional organizations, take measures to evaluate the experience gained by international agencies contributing to the various tasks involved in educational planning, and suggest ways of achieving co-ordination, strengthening the existing machinery or if necessary making new arrangements, in order to ensure maximum efficiency in carrying out the following functions:

(a) Assembling, processing, presenting and analysing information by countries, groups of countries, and for the region as a whole, with special regard to human resources, costs, financing, social attitudes, population, curricula, enrolment, drop-out, promotion, graduation, teachers and premises;

(b) Research and study of ways and means to advance Latin American cultural integration at the same and, if possible, at a higher rate than its political and economic integration;

(c) Providing training, in-service training, and practice for people handling the various aspects of educational planning in countries in the region—in view of the need for planning in education at all levels and its full integration in general development policy—with particular

regard to the training of experts in general educational planning, human resources, curricula, teaching materials, costing, and statistics;

(d) Providing technical assistance for countries in their national programmes for training cadres for educational planning, administration and research;

8. That the governments of the region submit appropriate proposals in regard to the preceding recommendations to the next session of the UNESCO General Conference, requesting UNESCO to provide the fullest aid in giving effect to them and to authorize the Director-General to take any necessary measures;

9. That governments and co-operating agencies taking part in this Conference intensify their efforts to ensure a better integration of educational programming in the community development projects carried out in the region such as those implemented through national co-operation programmes or community or popular action; with such multilateral or bilateral aid as the credits for community development projects provided by the Inter-American Development Bank, or under such joint programmes as the Andean Indian Programme;

10. That the Governments of Latin American countries accord priority to the stepping-up of investment to the extent that the improvement and expansion of the educational infra-structure require. This means that countries will have to make an effort to increase substantially their facilities for preparing, executing and evaluating projects. It is also desirable that agencies providing financial assistance should revise the criteria and procedures currently in use, in order to expedite the external financing which, together with internal resources, is required to meet the urgent educational investment needs;

11. That, in compliance with the requests formulated by those Latin American countries which lack sufficient resources for a rational and continuing programme of educational projects and which at the same time encounter difficulties deriving from the requirements of the international financing agencies and the time which they take to complete the necessary formalities, UNESCO continue sending technical missions to assist these countries in the preparation of their applications to international financing agencies for loans to finance educational projects; and that such applications be drawn up as quickly as possible in view of the urgent nature of the financial operations if countries are to be able to resolve their most pressing problems.

*Considering*

That the concept of a well-integrated human being demands a balance between general and specialized education,

That the more complex the professional activities of an individual, the broader and more difficult will be the functions demanded of him as a citizen and, consequently, the greater will be his need for a broad general education,

That, for the technician and the worker, the more comprehensive such general training is, the better he will be able to cope with the new problems deriving from technological development,

*Recommends*

1. That general education, in addition to providing the student with the knowledge required for a sound general basic culture, should endeavour to develop a responsible attitude towards work, stability in relations with others, adaptability to change, the ability to think objectively and a sensitive approach to culture beyond the limits of specialization;

2. That, in the preparation of curricula and in teaching activities, due account be taken of the fact that an all-round balanced general education requires that equal attention be given to the following: the development of physical aptitudes; sound health; a mastery of the mother tongue and, in addition, knowledge of a foreign language that will allow of subsequent cultural and professional advancement; mathematical skills; an understanding of the physical world, of persons, social groups and forces, economic relationships and cultural contributions, both within his own society and in other past and present societies and cultures; and an appreciation of the fine arts;

3. That during the period of general education use be made of school and vocational guidance services in order to enable the pupils either to go on to one or other branch of secondary education or to go straight to work, depending upon employment requirements and the student's own capacities;

4. That all specialized training plans cover four spheres of action: the modification or adaptation of the general disciplines which develop understanding and provide the basis for the professional training; the actual training for the speciality concerned; and operational training based on the need to co-operate with others and on professional ethics.

*Considering*

1. That the relationship between economic and social development and education requires that special attention be devoted to the technical training and specialization of young people and the existing labour force,

2. The recommendations approved at previous conferences, and in particular the Recommendations on education and technical and vocational training approved by the UNESCO General Conference at its twelfth session (Paris, November 1962); the ILO General Conference at its forty-sixth session (Geneva, June 1962); the Conference on Education and Economic Development (Santiago, March 1962); the Conference on the Application of Science and Technology to Development in Latin America (CASTALA, Santiago, September, 1965); and the Meeting of Experts on Higher Education and Development in Latin America (RESDAL, San José de Costa Rica, March 1966),

*Recommends*

1. That technical and vocational training be given higher priority in national educational policies;

2. That, in order to increase the range and efficiency of technical education at all levels:

(a) The countries correct the present imbalance between general and technical education, according priority to the initiation, reform or expansion (as appropriate) of arrangements for training technical and professional personnel, at the same time laying down national aims and priorities as regards technical and vocational training, including school and out-of-school education, and establishing the bases for a close liaison between the educational systems and the different private and public bodies that provide technical and vocational training;

(b) Maximum flexibility be provided in educational systems to allow maximum mobility to the student, so facilitating reorientation and the continuation of his studies to higher levels and linking up the inner structure of education;

(c) Recourse be had to pilot projects for the purpose both of launching and improving specialized training programmes;

(d) Maximum advantage be taken of collaboration with business for the purpose of improving technical studies and bringing them up to date;

3. That since technical personnel are indispensable to national development, the necessary reforms be introduced to adapt the output

of technical education systems to the structure of employment and to development requirements, in industry, agriculture and services alike;

4. That, in order to channel pupils towards technical occupations and improve retention rates, school welfare measures be widely introduced and extended, particularly in connexion with vocational courses considered to be of key importance for development, adequate legal salary and other incentives and safeguards being likewise provided;

5. That the basic concepts of science and technology be introduced at the earliest possible stage in primary education as a means of contributing to a better understanding of the physical world and subsequently encouraging young people's leanings towards scientific and technical careers;

6. That consideration be given to the possibility of organizing secondary education in two different cycles: an initial or common "basic" course and a diversified course offering various alternatives, selected in accordance with the economic and social development requirements of the country concerned;

7. That intermediate or short courses be provided in the universities to train cadres for management, inspection, operation, maintenance and so on; and that, at the highest level, provision be made for diversified specialization through post-graduate courses, and for the training of research workers;

8. That for urgent development needs, and to give manpower the necessary flexibility, intensive training courses be introduced, in and out of school, it being always borne in mind, however, that technical education should wherever possible be backed by a sound general education;

9. That the guidelines laid down above be followed in Latin America together with those established in greater detail at other meetings, with a view to securing both school and out-of-school education, as a prerequisite to the greater co-ordination in Latin America that regional integration will demand.

#### CONTINUING EDUCATION FOR YOUNG PEOPLE AND ADULTS, AND LITERACY PROGRAMMES

##### *Considering*

That the continuing education of adolescents and adults is vital if requirements in human resources deriving from economic and social development are to be met,

##### *Considering*

That adult literacy and education were thoroughly discussed at the Regional Conference on the Planning and Organization of Literacy Programmes in Latin America and the Caribbean,

##### *Recommends*

That the Conference endorse the recommendations of the Caracas Regional Conference and that Member States, regional agencies and international organizations implement them with due efficiency and, in particular, institute a system of incentives for improving the cultural and vocational levels of workers, through basic legislation and collective labour agreements, and with the support of the private sector.

#### TRAINING OF STAFF FOR EDUCATIONAL SERVICES

##### *Considering*

That the essential factor in improving educational efficiency is, and always will be, the teaching and technical staffs of the educational systems,

##### *Recommends*

1. That the curricula, syllabuses and techniques of teacher-training schools be overhauled and an important place assigned to teaching practice, and that in those countries where the structure of secondary education has been remodelled on the basis of a common cycle of general education, teacher training schools devote themselves entirely to professional training;

2. That secondary school teacher training curricula be revised, special importance being attached to the scientific disciplines, and a new direction being given to the actual training for teaching which, in addition to teaching methods, should impart some knowledge of adolescent psychology, social psychology and educational sociology; an understanding of the out-of-school influences that help to mould young people's personalities; a proper grasp of educational aims and values; and a knowledge of the procedures that might help in developing the pupil's social awareness;

3. That in countries which have begun to reorganize their educational systems, consideration be given to the possibility of training a new type of primary school teacher, specializing in allied subjects, and teaching in an intermediate cycle between the basic cycle of general education and the differentiated secondary education cycle;

4. That teacher training arrangements at all levels be overhauled to ensure that due weight is given to the elements that contribute to the professional, cultural and personal training of teachers, and that wherever possible, the work of training centres responsible to Ministries and universities be co-ordinated and complementary;

5. That the training of non-qualified teachers be continued under arrangements that guarantee the same standards as ordinary training;

6. That permanent in-service training centres be set up for the teaching, technical and administrative staff of the educational services; that those already existing be improved and an attempt made to interest the universities and other centres of higher education in their activities; and that financial and professional in-

centives be provided for staff wishing to pursue higher or specialized studies;

7. That a study be made of the need for educational experts in each of the countries of the region, and that arrangements be made for their training in advanced national or regional centres. In this respect, the training of supervisors, administrators, and specialists in educational research, educational statistics, school and vocational guidance, and audio-visual media is considered of vital importance;

8. That priority attention be devoted to the social and economic status of teachers and that steps be taken to implement the relevant international recommendations regarding tenure, salaries, appointment promotion, social security and welfare.

### III

#### First regional Course on Trade Policy

*(Santiago, Chile, 1 July-10 August 1966)*

Pursuant to resolution 14 (III) of its Trade Committee, the Economic Commission for Latin America (ECLA), in co-operation with the United Nations Bureau of Technical Assistance Operations (BTAO), organized the first Course on Trade Policy, which was held at Santiago, Chile, from 1 July to 10 August 1966. The purpose of this intensive course was to train Latin American government officials who are currently engaged in the formulation of trade policy in their own countries and might eventually take an active part in guiding and directing it. Similar courses will be held in the next few years.

This first course was attended by participants with fellowships from the United Nations or their own Governments, and some twenty technical experts from ministries of foreign affairs; ministries of trade, industry or development; central banks; and other bodies connected with foreign trade. The course comprised lectures, seminars and selected texts for intensive reading, in accordance with the following programme:

#### I. *World trade, integration and economic development*

1. The external sector in the economic process of developing countries.
2. The role of world trade and integration in economic development.
3. The programming of trade policy objectives and measures within the context of development plans.

#### II. *Trade policy, its formulation and execution*

1. Trade policy formulation, instruments and institutions.
2. Export policy.
3. Import policy.
4. Trade policy and its relation to economic and financial policy.
5. Institutional organization and decision-making machinery.
6. Analysis and interpretation of external sector accounts and indicators.

#### III. *International institutions concerned with trade policy*

1. General Agreement on Tariffs and Trade (GATT).
2. United Nations Conference on Trade and Development (UNCTAD).
3. International Monetary Fund (IMF).
4. International financing agencies.

#### IV. *Evolution of trade policy in the Latin American countries*

1. Diagnosis of foreign trade in the Latin American countries.
2. Economic policy trends in the industrialized countries, and their effects on Latin American economies and foreign trade.
3. Trade policy trends in the Latin American countries.
4. Analysis of the present trade policy of selected Latin American countries.
5. Treatment of the external sector in development plans.



#### V. *Latin America's trade policy aims*

1. General trade policy and external financing aims in relation to economic growth.
2. Primary products.
3. Exports of manufactured products.
4. Import policy.
5. External financing; the international monetary system.
6. General Agreement on Tariffs and Trade.
7. Latin American policy with respect to the European Economic Community (EEC), the European Free Trade Association (EFTA) and other groups of countries.
8. Latin America's trade policy in relation to countries with centrally planned economies.
9. Co-ordination of trade policy in the Latin American countries.

#### VI. *Trade policy and regional economic integration*

1. Trade policy problems in relation to regional integration.
2. Latin American Free-Trade Association (ALALC).
3. Central American Common Market.
4. Policy aims and measures to accelerate and broaden the scope of the integration movement in Latin America.

Lectures were given by staff members of ECLA and other international agencies, as well as by specialized government officials from Latin America and Europe. The Director of the course was Mr. Alberto Baltra, Professor of Economics at the University of Chile and former Minister for Economic Affairs.

In the first part of the course, Mr. Manuel Balboa, Deputy Executive Secretary of ECLA, underlined the role of the external sector as a factor of economic development, its important effect on the rate of economic growth, and the consequent need to strengthen it if this rate is to be intensified. He drew attention to the gap in productivity between the Latin American countries and other parts of the world, which reveals a considerable margin for the exploitation of the region's resources and corresponding possibilities for raising its growth rate and levels of living if the necessary financial means are available, a fact which depends largely on the external sector. He also pointed out that trade policy can directly affect productivity inasmuch as it channels activities towards more productive ends.

In the second part of the course, Mr. Pascual Martínez (Regional Adviser on Trade Policy),

Mr. Walter Koller (Chief, National Accounts Section), Mr. Mario Movarec (Chief, Trade Statistics Section) and Mr. Aníbal Pinto (Economic Development and Research Division), all staff members of ECLA, analysed such trade policy instruments as customs duties and charges, direct controls, foreign exchange and payment systems, trade treaties, etc., examining the effects of these instruments and their applicability according to circumstances. They also dwelt on the national machinery and institutions concerned with the formulation and implementation of trade policy; the various indicators that permit an assessment of the external sector position and trends; and, in general, the relations between trade policy and economic and financial policy.

The third part of the course consisted of a review of international agencies, in particular GATT, IMF, UNCTAD and the Inter-American Development Bank (IDB). The characteristic features of the operation of each of these institutions in relation to the developing countries were brought into focus. For some of these topics co-operation was forthcoming from noted experts and staff members of the agencies concerned, and from Latin American and European government officials. Thus, the subject of trade relations between developing and centrally planned economy countries and the Western European countries was handled by Mr. J. P. Saltiel, of the National Foreign Trade Centre, France, and Mr. Janez P. Stanovnik, of UNCTAD, who also lectured on these agencies; Mr. Marcos Monsalve, of GATT, drew attention to this institution's new policy towards the developing countries; and Mr. Jorge Marshall, of Chile's Central Bank and former Director of the International Monetary Fund, described the latter agency and the international monetary system.

Mr. Santiago Macario, Director of the ECLA Trade Policy Division, was, in general, responsible for the fourth part of the course, in which he analysed foreign trade and the present position of the Latin American countries with regard to their external sector, referring specifically to the slow growth of traditional exports from the region as a whole and the factors determining this trend. Among other topics, consideration was given to the repercussions which the policy adopted by the Latin American countries to promote industrial development and safeguard their balance-of-payments position have had on their foreign trade prospects and, in particular, on the development of new export lines, stress being laid on the adverse effects of the

permanently high customs protection provided indiscriminately.

In the fifth part of the course, some of the lectures mentioned above, together with other ECLA staff members such as Mr. Alain Debiez, Mr. Giorgio Gamberini and Mr. Nicasio Perdomo, examined possible lines of action open to the Latin American countries in the field of trade policy. These possibilities related to commodity exports, exports of manufactures, the co-ordination of trade policy among the various countries of the region, closer relations with other markets—especially other developing States and countries with centrally planned economies—the correlation between development programmes, the need to promote new exports, and other specific questions.

During an interesting seminar directed by Mr. Julio Lacarte, Ambassador of Uruguay to the European Economic Community and the Federal Republic of Germany, and Representative in GATT, Mr. Lacarte himself, in conjunction with Mr. Carlos Besa (Director of Economics, Ministry of Foreign Affairs, Chile), Mr. Francisco Borja (Office of the Under-Secretary for Industry and Trade, Mexico), Mr. Gabriel Martínez (National Director of Foreign Trade, Ministry of Trade, Argentina) and Mr. Helio Schlittler Silva (Director, Banco Nacional do Desenvolvimento Econômico, Brazil), reviewed the trade policy of their respective countries. In their statements, which were followed by general discussions with the participants, they analysed each country's recent experience in respect of trade policy, conjointly with the lessons learnt from the different systems, measures and situations, while pointing out the

main problems existing and possible ways of solving them.

The participants in the course made similar statements on the development of trade policy in their own countries. These statements culminated in a general discussion which made it possible to define the main features of trade policy in the Latin American countries and to draw conclusions regarding the best lines of action to follow.

Integration was dealt with in all sectors of the course. The vital importance of the Latin American Free-Trade Association (ALALC) and the Central American Common Market was underlined not only in the description of the international trade framework but also in the diagnosis, and especially in the part dealing with possible lines of action in these fields. The following persons collaborated in the various subjects: Mr. Elvio Baldinelli, Director, Industry Department of ALALC; Mr. Alejandro Power, ECLA's Permanent Representative in ALALC; Mr. Alvaro de la Ossa, Chief, Trade Policy Section of ECLA's Mexico Office; and Mr. Alberto Baltra.

The results of this first Regional Course on Trade Policy may be considered highly satisfactory, because of its value in spreading information as a means of training Latin American officials whose performance in this field is so important in their own countries, because of the development of new concepts deriving from the course itself, and because of the useful discussions which served to clear up many important points relating to the various topics concerned.

#### IV

### **Training Course on Economic Development and Planning for Trade Union Leaders in Latin America**

*(Santiago, Chile, 4 April-13 May 1966)*

The Training Course on Economic Development and Planning for Trade Union Leaders in Latin America, organized jointly by the Latin American Institute for Economic and Social Planning, the International Labour Office and the Economic Commission for Latin America (ECLA), took place at Santiago, Chile, from 4 April to 13 May 1966. The main purpose of the course was to give trade union leaders the benefit of the experience gained from the interpretation of past trends, the present situation and future prospects of Latin America's eco-

nomical and social development; to examine the evolution of the region's economies over the long term, the broad lines of development policy, the major structural and social obstacles and, in general, the whole question of Latin America's development; to analyse a set of criteria that would facilitate a study of the effect of the development process on the working sectors; to consider the role of planning in the region's development; to specify the best methodological criteria and instruments for evaluating the implications of the resulting plans from the stand-

point of wage-earners; and to discuss ways in which organized workers can take part in planning activities. Briefly, the aim was to provide supplementary training for those concerned at the trade union level with interpreting development problems in their own countries, both in general and as they might affect the particular interests of the workers, as well as with evaluating the scope and effects of specific economic policies or development plans.

The course comprised branches of study of two kinds: the main branches, or basic training in each of the subjects dealt with; and the ancillary branches, designed to provide the participants with a common groundwork of concepts and instruments of analysis.

The *main branches of study* were handled by specialists from the organizations sponsoring the course, and were supplemented by round-table discussions in the course of which ideas were clarified and the various subjects were freely discussed. The general curriculum was as follows:

1. Characteristics and problems of Latin America's economic and social development:

(a) Long-term evolution of the Latin American economies and their position in relation to the world economy;

(b) Guiding principles of development policy followed at different stages;

(c) Main structural obstacles;

(d) Role of the external sector and of the public sector;

(e) Characteristics and problems of capital formation;

(f) Social conditions under which the development process has evolved, and existing social bottlenecks.

2. Living conditions of Latin America's population and factors determining them:

(a) Level and distribution of income; factors determining income distribution; significance and scope of the income redistribution policy;

(b) Employment; its relationship with demographic factors, the economic growth rate and the structure of production; effects of productivity and technical progress; employment structure; unemployment and under-employment;

(c) Wage levels and trends; economic and social factors influencing them; remuneration and productivity; inflationary pressures and real wages; the wage adjustment problem;

(d) Social security; the present state of social security in Latin America and the effect of economic conditions on its operation; social

security financing and investment policy; its effect on wages, employment, income distribution and the allocation of resources;

(e) Housing conditions; size and root of the problem;

(f) Health conditions and factors determining them;

(g) Access to education; scope, quality and guiding principles of educational services; technical education and training.

3. Latin American development prospects and basic economic problems affecting future development:

(a) General examination of the significance of structural reforms and their implications for development;

(b) Specific consideration of agrarian reform, industrialization and the economic integration of Latin America.

4. Economic and social development planning:

(a) Role of planning in the light of the diagnosis and prospects of Latin America's growth;

(b) Planning methods and scope in the various countries of the region;

(c) Concept and requirements of a planning process;

(d) Implications of development plans and policies from the wage-earner's standpoint;

(e) Conditions and guidelines for the participation of the people in planning activities.

The *ancillary branches of study* were handled by working groups directed by ECLA and Institute staff members. In view of their supplementary nature, they developed concurrently with the major topics they were intended to clarify, in accordance with the following curriculum:

1. Some general notions of the functioning of the economic system:

(a) Concepts and measurements of production and income, foreign trade, the financial system and the government economy;

(b) Some sociological terms and concepts.

2. Concepts and methods of evaluation of the population's living conditions:

(a) Some notions about concepts and measurements of income distribution;

(b) Definitions of human resources, labour force, employment, unemployment, productivity and labour market;

(c) Components and ways of measuring nominal and real wages;

(d) Significance of price indexes and some notions of how to calculate them;

(e) Some notions of ways of financing social security;

(f) Housing, health and education indicators.

3. Some general notions of the economic policy instruments included in development plans:

(a) The tax system;

(b) Organization of foreign trade and the foreign exchange system;

(c) Rudiments of monetary and credit policy;

(d) Wage policy mechanisms.

4. Instruments of analysis for evaluating the implications of specific development plans for the wage-earning sectors.

The course was attended by twenty-six trade union leaders who had been nominated by the national trade union organizations of nearly all the Latin American countries and were selected by a special committee of representatives

of the sponsoring organizations; they were granted fellowships by the International Labour Office.

Mr. Ricardo Cibotti, Mr. René Livchen and Mr. Pedro Vuskovic were co-directors of the course. In addition, the main lecturers were Mr. Raúl Prebisch, Mr. Osvaldo Sunkel, Mr. Benjamín Hoppenhayn, Mr. Alfredo Mallet, Mr. Rubén Utria, Mr. Simón Romero Lozano, Mr. Eduardo Carvalho, Mr. Norberto González, Mr. Plinio Sampaio, Mr. Héctor Soza, Mr. Aníbal Pinto, Mr. José Ibarra, Mr. Carlos Matus and Dr. Hernán Durán. Mr. Esteban Lederman, Mr. Pedro Guglielmetti and Mr. Tomás Barinaga acted as co-ordinators, and Mr. Oscar Bardeci, Mr. Retórico Fretes and Mr. Enrique Sierra as chiefs of seminars.

At the closing ceremony, speeches were made by the following: Mr. Manuel Balboa, Deputy Executive Secretary of ECLA; Mr. Ricardo Cibotti, Director of the Institute Training Programme; Mr. René Livchen, Director of the ECLA/ILO liaison office, and Mr. Cristóbal Lara Beautell, Deputy Director General of the Institute.



