

# Economic Bulletin for Latin America

Vol. X, No. 1, March 1965

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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.

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#### 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 space is used to separate thousands and millions (3 123 425).

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.

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# ECONOMIC BULLETIN FOR LATIN AMERICA

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Vol. X, No. 1, March 1965



## RURAL SETTLEMENT PATTERNS AND SOCIAL CHANGE IN LATIN AMERICA: NOTES FOR A STRATEGY OF RURAL DEVELOPMENT\*

### A. INTRODUCTION

The present paper explores one of the paths entered upon in the ECLA secretariat's study of "Geographic distribution of the population of Latin America and regional development priorities".<sup>1</sup> Its starting point is the well-known present situation of rapid population growth, combined with apparent incapacity of the rural areas to absorb more than a fraction of their own contribution to this growth, to narrow the very wide gap between their levels of living and those of the cities, to respond adequately to rising urban demands for their products, or to participate effectively in national decision-making. As the earlier study indicated, static or declining employment opportunities in the countryside and the small towns combines with insufficiently rapid growth in urban employment openings to condemn a high proportion of the population increment to a marginal position—drifting from rural to urban under-employment, increasingly finding its way to the peripheral shantytowns of the great cities, multiply handicapped in education, motivations, even physical health, for any effort to escape from its marginality.

The rural lag can be traced to a number of mutually reinforcing causes, some of them deeply rooted in the history of the region, and is now being attacked by many instruments of policy, including agrarian reform, community development, and education. It may be that the effectiveness of these instruments and of development planning in general will be enhanced if they are able to take into account more systematically than hitherto the ways the rural population is distributed upon the land and the relationships between rural people and the local centres of administration, marketing and services.

In attempting a composite picture of rural settlement patterns and the influences that are changing them, the

\* Reference document No. 1, submitted to the Latin American Seminar on the Role of Community Development in the Acceleration of Economic and Social Development (Santiago, Chile, June 1964), organized jointly by the United Nations Bureau of Social Affairs, Bureau of Technical Assistance Operations and Economic Commission for Latin America.

<sup>1</sup> Published in the *Economic Bulletin for Latin America*, Vol. VIII, No. 1, March 1963. At its tenth session, the Economic Commission for Latin America requested the secretariat "to continue research on the geographical distribution of the population and on the causes, characteristics and effects of the various shifts and settlements of both urban and rural population . . ." (resolution 230 (X) of 16 May 1963).

following pages trespass upon several fields of research and policy. According to an axiom more often proclaimed than acted upon, rural life is indivisible; all programmes designed to influence it will gain in effectiveness the more they are integrated with each other and with the formal and informal institutions actually functioning in the countryside, which in turn are closely related to the physical groupings of population and the lines of communication among them.

The intent is to describe patterns and relationships that are widely important in the region. The extreme diversity in local situations that in fact exists would justify a study many times the length of the present; such a study, however, could hardly be made without the prior carrying out of a large number of local monographic investigations. It is to be hoped that the present exploratory work will encourage local institutions to proceed with such investigations, and in particular to give more attention to settlement patterns and related questions in rural studies with other primary interests.

Many of the documentary sources that have yielded information, in fact, have been only secondarily concerned with the themes of this study. Such sources have proved unexpectedly rich on some points, but have provided nothing on others of equal importance. The most systematic information on the rural habitat in Latin America may be found in a series of national surveys made by rural sociologists and anthropologists ten to twenty years ago. More recently, a few valuable surveys of major regions within countries have been made, but most of the recent information is strictly local and of doubtful representativeness. While the study of geographical distribution of population mentioned above was primarily demographic in character, the present work has not been able to draw extensively on demographic statistics; only in a very few countries do these statistics distinguish between types of settlement within the population classified as "rural".

The main sources of information picture the rural scene on the eve of changes that both influence and are influenced by settlement patterns and community organization: land tenure reforms; the appearance of rural mass organizations, new forms of leadership and allegiance to national political movements; the disintegra-

tion of traditional local ties through migration. How widely these forces have affected the rural population, or precisely what their consequences are, is not really known. It is possible, by selection from the fragmentary evidence, to construct a picture of the rural scene as predominantly static and tradition-bound, or as seething with revolutionary forces. This article assumes the risk of faulty selection and misplaced emphasis inseparable from the building up of a composite picture from such evidence. It may also be justifiably accused of abstracting certain problems of the rural population from the national and international economic, social, and political currents that are now the main determinants of the future of this population. The present focus on the situa-

tion in rural localities and on action at the local level, however, does not imply that the major rural problems can be solved by localized remedies, outside the context of national structural changes. It does imply that the local environment places manifold obstacles in the way of incorporation of the rural areas into a dynamic process of growth and that these obstacles are likely to frustrate investment plans formulated at the national level and treating human beings as uniform "resources". The present paper leaves for later discussion the very important question of prerequisites for better functioning links and transmission belts between the national and the local — in other words, for the "regionalization" and "localization" of development planning.

## B. TOWARD A CLASSIFICATION OF RURAL SETTLEMENT TYPES

The groupings of people in rural Latin America can be classified according to size, physical patterns of settlement, administrative status, social ties and degree of social stratification, or economic functions and relationships to the land. Classifications according to these different criteria can be expected to coincide in large part, although never neatly or consistently. The task of classification is complicated to some extent by terminological confusion. The word "community" has been particularly over-worked to cover almost any kind of rural grouping. The terms used nationally and locally are very numerous, and their usage differs from place to place. Within a single country one may find that a term has several alternative meanings, while a given settlement type has alternative names, even in official administrative practice. A number of studies, however, have provided definitions for the terms nationally used, and some of them have proposed uniform terminologies, adapted to Latin American conditions from the terminologies used by geographers and rural sociologists in other regions.<sup>2</sup>

The largest population nuclei with which the present study is concerned are the town (*pueblo*) and the village (*aldea*). No satisfactory population limits for these two settlement types applicable to the whole region can be fixed. The *pueblo* will normally have more than 2,500 inhabitants and the *aldea* more than 1,000, but many

nuclei meeting other criteria fall below these minimum sizes.<sup>3</sup> Both *pueblo* and *aldea* are normally administrative centres (*cabeceras*) for *municipios* (*comunas*, *cantones*, *distritos*, etc.), the basic local territorial units of administration. The *pueblo* and usually the *aldea* have urbanized settlement patterns, with central plazas and at least a part of the houses arranged along regular streets; in most of the region these patterns derive from foundations during the colonial period. (In much of Argentina, Brazil and southern Chile the *pueblos* derive from frontier settlement in the 19th or early 20th century, often originating in a railroad station or a road-river junction; here physical patterns are less standardized. The *pueblo* often and the *aldea* sometimes has a piped water system and public electrical power. Both types have at least three distinguishable social strata:<sup>4</sup> a local upper stratum of officials, merchants and medium landowners (the larger landowners rarely live in a *pueblo* or *aldea*); a middle stratum of small shopkeepers, artisans and small landowners; and a lower stratum of landless workers and *minifundio* holders. Both the *pueblo* and the *aldea* depend for their livelihood mainly on agriculture (leaving aside the relatively small numbers of settlements that depend on fishing, mining, forestry, or specialized artisan activities). The most important distinction between the *pueblo* and *aldea*, as ideal types, lies not in their relative sizes but in the way they are related to the land. The *pueblo* is primarily a marketing, transport, administrative and servicing centre for a rural hinterland and a place of residence for proprietors who do not work their own land. The *aldea* is primarily a compact living area of cultivators who travel daily to and from their fields, but still large and closely knit enough to support a certain range of specialized institutions and services. The *aldea*, in fact, by itself can be considered a "community", although it may also provide services for smaller rural

<sup>2</sup> See, in particular, Richard N. Adams, *Cultural Surveys — Panama — Nicaragua — Guatemala — El Salvador — Honduras* (Pan American Sanitary Bureau Scientific Publications No. 33, Washington, D.C., December 1957); Orlando Fals-Borda, *Peasant Society in the Colombian Andes: A Sociological Study of Saucio* (University of Florida Press, Gainesville, 1955); I. Silva Fuenzalida, "Rural Communities in Central Chile", *Report on the Ninth Annual Round Table Meeting on Linguistics and Language Study* (Georgetown University Press, Washington, D.C., 1960); T. Lynn Smith, *Brazil, People and Institutions* (Louisiana State University Press, Baton Rouge, 1946); Nathan L. Whetten, *Rural Mexico* (The University of Chicago Press, Chicago, 1948); Nathan L. Whetten, *Guatemala, the Land and the People* (Yale University Press, New Haven, 1961); G. Hill, P. Silva and R. O. de Hill, *La Vida Rural en Venezuela* (Caracas, 1958); Venezuela, Consejo de Bienestar Rural, *Problemas Económicos y Sociales de los Andes Venezolanos, Parte II* (Caracas, no date); and Peru, Plan Regional para el Desarrollo del Sur del Perú, *Los Recursos Humanos del Departamento de Puno* (Informes Vol. V, PS/B/9, Lima, 1959). The last of these sources, together with a number of other reports in the same series, contains the most extensive information on settlement patterns, derived from field studies, to be found for any region within a Latin American country.

<sup>3</sup> Studies made for the *Plan Regional para el Desarrollo del Sur del Perú* set limits of 5,000-10,000 inhabitants for a *pueblo chico* and 1,000-5,000 for an *aldea*; in practice, however, the same studies treat settlements well below these population limits but meeting other criteria as *pueblos* and *aldeas*. Whetten, op. cit., in discussing Mexico classifies nuclei of 101-1,000 as "villages" and nuclei of 1,001-2,500 as "large villages", but adds that "many communities reporting a population of about 10,000 inhabitants are little more than a collection of farm villages".

<sup>4</sup> For present purposes, it is not necessary to enter into the complicated question of whether these strata really constitute "classes" in the strict sense.

nuclei. The *pueblo*, ideally, functions as the specialized centre of a larger community. In this sense, many *municipio* capitals with only a few hundred inhabitants are closer to the *pueblo* type than to the *aldea*; however lethargically or parasitically they may conduct themselves as community centres their existence depends on these functions more than on direct cultivation of the land.<sup>5</sup>

The next type of nucleus to be distinguished is the large hamlet (*villorrio*). The *villorrio* is usually smaller than the *aldea*, but the important distinction is not so much in the size as in the relative unimportance of specialized administrative and economic functions and the more rudimentary class stratification.<sup>6</sup> The population of the typical *villorrio* consists almost entirely of small cultivators or agricultural wage workers, some of whom are likely to be part-time shopkeepers or artisans. Its physical appearance is also different; it is a sprawling agglomeration of houses without a centre or regular streets. Community relationships are more limited and informal than in the *aldea*; for most specialized services the *villorrio* must depend on a nearby *pueblo* or do without. Piped water and electrical power are usually lacking.<sup>7</sup> The next broad type, descending in the scales of population size and degree of organization, is the hamlet (*caserío*), a loosely nucleated cluster of not more than 200 people.<sup>8</sup> At this point both the terminology and the patterns themselves become confused or ambiguous. The physical closeness of settlement is likely to depend on geography or land tenure. Houses may be huddled together because of dependence on a single source of water or because of need for protection against prevailing winds or because the only land on which they are tolerated is along a roadside. Where such considerations are not decisive and the families are small holders, they are likely to live more widely scattered, so that *caserío* settlement merges into dispersed settlement. Very often a small nucleus, with school and one or two tiny shops or drinking-places, together with widely scattered single families, constitutes both a natural area of social interaction and an officially recognized subdivision of the *municipio*, the boundaries of the two not necessarily coinciding. In many instances, the *caserío* represents a quite recent and transitional stage in rural spontaneous resettlement or in the disintegration of larger nuclei. The building of a new road attracts families to group themselves along it, and a local airfield,

<sup>5</sup> Some studies touching upon rural settlement in Latin America distinguish between *pueblo* and *aldea* simply on the basis of size and administrative status; using the term *aldea* for the small administrative centres of predominantly rural *municipios*, and *pueblo* for the larger and more urban centres of the next tier of administration. The different distinction suggested here, however, has the advantage of drawing attention to the fact that "village settlement" of the types widespread in Europe and Asia and associated with the conception of compact, complexly organized rural communities is not widely characteristic of Latin America.

<sup>6</sup> The studies of southern Peru cited above set population limits of 200-1,000 for *villorrios*. Silva, *op. cit.*, sets a bottom limit of 100 families for *villorrios* in Chile. Presumably most of the settlements classified by Whetten in Mexico as "villages" (101-1,000) are closer to the *villorrio* type than to the *aldea*.

<sup>7</sup> The "line settlements" found in many parts of Latin America along roads or rivers in general conform more closely to the sprawling unorganized *villorrio* (or the smaller *caserío*) than to the "line villages" known in Europe.

<sup>8</sup> The southern Peru studies limit the term *caserío* to nuclei of 10 to 50 families; Silva of 5 to 60 families; Whetten distinguishes "hamlets" of 11 to 100 people.

military post, construction project, etc., usually acquires a tiny satellite cluster of families.

Sociologically the *caserío* constitutes a neighbourhood, or area of primary contacts; it is too small and undifferentiated to deserve the name of community; the extent to which a wider community exists depends on the relationships between the *caserío* and the *pueblo* with which it is linked administratively and economically. The actual maintenance of primary neighbourhood ties probably depends more on local cultural traditions and on topographical barriers than it does on the degree of clustering or dispersal.

The last ideal type fitting into the sequence, namely dispersed settlement, thus cannot be clearly distinguished from *caserío* settlement in most of Latin America; usually the two are found in combination. Settlement that is dispersed socially as well as physically is also found, however, in which neither neighbourhood ties or links to a larger *pueblo*-centred community are well defined. This seems to be the case in many areas of tropical pioneer settlement, among the remoter *minifundio* cultivators in the highlands, and under quite different circumstances among commercial renter-farmers.<sup>9</sup>

Census-based tabulations for a majority of the countries distinguish a population category living "not in localities". "Localities" are defined as "geographic places having fixed boundaries and an administratively recognized urban-type status, usually characterized by some form of local government, operating under a charter or other terms of incorporation". The "not in localities" category may thus give a rough indication of the importance of the total population living in *villorrios*, *caseríos*, and dispersed settlement, but is by no means equivalent to dispersed settlement alone. Mexico, Panama and Venezuela have attempted complete census classifications of rural nuclei by size, and do not use the "not in localities" category. Percentages of national population in this category may be found in table 5 of the United Nations *Compendium of Social Statistics: 1963*, but comparability of the percentages from country to country is doubtful.

Two major difficulties in a classification of rural settlement patterns remain to be faced: first, the traditional rural groupings must be divided into two broad classes according to land tenure: those owning at least the land on which they are located, and those located on large estates; and second, reforms in land tenure, or measures intended to protect certain forms of tenure, are creating new groupings that in some respects stand apart, in others overlap with the types already described.

In every country of the region except for Bolivia, Cuba, Haiti, and Mexico, an important part of the rural population lives and works on large privately owned estates. Most attempts at classification of rural settlement have distinguished the *hacienda* as a separate type; in terms of economic and social organization this is entirely justified. The *hacienda* constitutes a kind of "community" confined in a paternalistic mould, with its own social hierarchy, its own provision for internal supply of goods

<sup>9</sup> In the cereal-mixed farming areas of Argentina, "local neighbourhoods can be identified only by the sporadic visiting within geographic vicinities and seldom or never as a mutual-aid group. Communities, even trade-center communities, do not exist in any sociological sense". (Carl C. Taylor, *Rural Life in Argentina*, Louisiana State University Press, Baton Rouge, 1948).

and services, and to a large extent its own administrative system assuming the normal tasks of local government. In physical patterns and in population size, however, the *haciendas* differ widely among themselves, and may resemble any of the settlement types already described, except the *pueblo*. There is usually a central nucleus with a mansion, administrative buildings, storerooms, often a chapel and a school, and the majority of resident families are likely to be grouped around it in a *villorrio* or *caserío*. The larger *haciendas*, however, may contain several *caseríos* together with dispersed houses; families of seminomadic herdsmen or tolerated squatters may be scattered about the remoter parts of the holding. In other instances, particularly where the original *hacienda* has undergone sub-division or where the holding stems from recent encroachment on small holders, there may be no central nucleus; the scattered families of workers depend for neighbourhood ties on a *caserío* outside the *hacienda* boundaries. The custom of remunerating the resident worker partly by a plot of land for his own use may also contribute to a dispersal of families on the more marginal lands of the *hacienda*, rather similar to the irregular distribution of *minifundio* cultivators outside; the dispersal of families on hillside lands at some distance from the nucleus is particularly characteristic of Andean *haciendas*. At the same time, the *hacienda* depends in part, at least in peak seasons of activity, on workers from outside, who may come from local *caseríos* or from a distance, who do not form part of the *hacienda* "community", if it exists, but whose ability to maintain other neighbourhood (or even family) ties is restricted by their marginal relation to the *hacienda*. Modern plantations and pastoral enterprises introduce other variations. Here one is likely to find a tightly organized central settlement entirely built and maintained by the management, with trade union organization beginning to replace neighbourhood ties, but with a high proportion of transient workers living in barracks, without families, and with no attachment to the locality. The size and character of the plantation settlements differ according to the labour requirements of the crop (bananas, sugar, etc.) in ways that have been little studied. Throughout the region the cattle or sheep ranch is the type of enterprise associated both with the lowest density of settlement and with the smallest proportion of workers living on the estate in family units.

The newer rural groupings that result from deliberate national policies and programmes may point the way to an eventual planned reform of rural settlement and administration, but at present they are extremely heterogeneous and cannot be fitted neatly into a classification. They have in common special régimes of land tenure, protecting the cultivator but restricting his right to dispose of his holding, and special organs of self-government, answering to public agencies outside the normal administrative hierarchy.

The best known are the *ejidos* of Mexico. The *ejidos* consist of organized groups of families (by law a minimum of 20) that have petitioned for and received grants of land under special tenure restrictions. The *ejido* has its own institutions of self-government with functions specified in the laws — a general assembly of members and elected committees. Its population may range from less than one hundred to several thousands; such a population may be nearly identical with that of an *aldea*,

*villorrio*, or *caserío*, but is usually not entirely so, since some families will not be eligible to receive land (shopkeepers, officials, existing landowners, etc.) and thus will not be members, while the land available for distribution may not suffice for all the eligible families. In the *pueblos* and larger *aldeas* there may be two or more *ejidos*, or the membership of the local *ejido* may be only a fraction of the settlement population. The *ejido* thus represents a grouping that is not integrated either with physical patterns of settlement or with the national system of local administration; a comparison of official statistics from different sources indicates that some *ejidos* are considered settlements, others not.<sup>10</sup>

In the Andean countries an important part of the Indian population belongs to *comunidades* managing their internal affairs and in particular the tenure of their land according to varying local traditions. To a certain extent these *comunidades* coincide with administrative sub-divisions of *municipios* and also with the *villorrios* and *caseríos* in which most of the Indian population is grouped. The very existence of these *comunidades* depends on historical rights to land, usually going back several centuries to colonial measures for the grouping of the Indians in concentrated settlements. Population growth and redistribution over this long period, as well as continual encroachments by the *haciendas* on *comunidad* lands, means that present membership corresponds only in a very loose and erratic way to present settlement patterns. Beginning in the 1920's a long period of government opposition to communal landholdings was replaced by legislation offering the *comunidades* a degree of protection on condition of registration of their holdings and creation of specified organs of self-administration. The general result was probably closer to the stimulation of new forms of rural organization than to preservation of the old. As in the case of the *ejidos*, the "recognized" *comunidades* may or may not be real communities or settlement nuclei, and their relationships with the national system of local administration are not well defined. Some of them are very large, reflecting a long process of population growth and sub-division of the land.<sup>11</sup>

The *ejido* and *comunidad* policies, while they involved the creation of new administrative forms, and while some attention was paid to the services needed by the beneficiaries, did not lead to any systematic planning of rural resettlement in conjunction with the creation of nuclei of services. Several of the more recent colonization and agrarian reform programmes, however, do call for the creation of compact planned settlements, the sponsoring agency sometimes assuming the responsibility for

<sup>10</sup> The Mexican population census of 1950, in a table distributing the population by settlement types, listed 5,582 *ejidos* with 1,615,334 inhabitants. The *ejidal* census of the same year distinguished 17,579 *ejidos* with 1,552,926 *ejidatarios* (heads of families, indicating a probable total population of about 7.5 million).

<sup>11</sup> A *comunidad* recently studied in southern Peru had 3,500 persons and 150 km<sup>2</sup> of land. Of its people, 1,500 form a minority in the population of a town outside the limits of the *comunidad* holdings; 1,200 live in a village on the other side of the holdings; the other 800 live dispersed within their boundaries. The three groups have no present feelings of community solidarity, but joined because their claim for legal recognition was based on a 17th century document defining the communal holdings of their ancestors. Plan Regional para el Desarrollo del Sur del Perú, *Funciones y Medios do Gobierno Local* (Informe Vol. XXIII, PS/F/52), Lima 1959.

construction of houses and a nucleus of buildings for administration and services. These planned settlements as yet include only a minute fraction of the rural population, but can be expected to grow in importance; their problems and prospects are discussed in a later section of this paper. If successful, such settlements should evolve

into something closer to the "village" community than the groupings now typical of the region.

The classification discussed above can be presented schematically as follows—although the apparent order should not tempt anyone to assume that the rural groupings can be fitted neatly into it.

| Name                           | Approximate population limits                                  | Physical pattern   | Administrative status  | Social characteristics   | Economic functions   | Land tenure   |
|--------------------------------|--|--|--|--|--|---|
| <i>Pueblo</i> (town)           | 2,500 to 10,000  | Urbanized (plaza, streets, piped water, electricity at least as strongly felt needs) | Centre of a <i>municipio</i> or higher administrative unit   | Local upper, middle and lower strata; specialized functions as centre for a larger rural community. Formal leaders | Marketing of produce, supply of goods, technical and professional services for hinterland. Residence for some landowners | Small and medium landowners are distributed among all the types of settlement; "free" (landless) workers among all the types except for dispersed settlement; resident workers of <i>haciendas</i> and plantations, members of <i>ejidos</i> , <i>comunidades</i> , colonies, and agrarian reform projects are usually found in <i>villorios</i> or <i>caseríos</i> , but there are many exceptions |
| <i>Aldea</i> village           | 1,000 to 2,500   | More limited "urban" features  | Usually centre of a <i>municipio</i>   | Three strata; a relatively self-contained "community"  | More limited marketing and specialized services; primarily place of residence for cultivators                            |   |
| <i>Villorio</i> (large hamlet) | 200 to 1,000   | Sprawling, few urban features (often in form of a line settlement)                   | Usually centre of a sub-division of a <i>municipio</i> with very limited administrative functions        | More rudimentary social stratification; midway between "community" and "neighbourhood"                             | Limited commercial and artisanal services; place of residence for cultivators  |   |
| <i>Caserío</i> (hamlet)        | 20 to 200  | Loosely nucleated, few or no urban traits  | May or may not be centre of a <i>municipio</i> sub-division  | No clear-cut class distinctions; informal leadership; a "neighbourhood" offering only primary contacts             | Rudimentary services (shop, school, etc.)  |   |
| <i>Dispersed settlement</i>    | Under 20 (Not more than 2 or 3 families living close together) | Houses scattered on individual land holdings   | May or may not belong to a <i>municipio</i> sub-division centring in a <i>caserío</i> or <i>villoría</i> | Most contacts limited to the family, but usually some loose neighbourhood ties centring in a <i>caserío</i>        |  |   |

### C. INFLUENCES OF HISTORY, GEOGRAPHY AND LAND TENURE UPON SETTLEMENT PATTERNS AND LOCAL ORGANIZATION

In the parts of Latin America that acquired a settled agricultural population prior to the 19th century, the distribution of this population and its opportunities for community organization were shaped by two powerful forces, sometimes working together, sometimes in conflict. On the one hand, State and Church policy called for the grouping of the rural population (in most of the Spanish colonies nearly identical with the Indian population) in sizable compact settlements with their own landholdings and their own institutions of self-government, but with the latter under close paternalistic control by the authorities; a system of "indirect rule" simplifying the giving of religious instruction, the collection of taxes, and the recruiting of labour for mines and public works. On the other hand, influential individuals sought owner-

ship of the land and with it control over the population working on the land; these interests also favoured compact settlement, but under the absolute dominion of the landowner and his appointees. There emerged the rival systems of the *hacienda* and the Indian community, the former continually encroaching on the latter and, while producing for the market, building up a high degree of economic self-sufficiency; the latter retreating as far as possible into isolation, but dependent on the central authorities for a degree of protection against the *hacienda*.<sup>12</sup>

<sup>12</sup> For an interesting description of the consolidation of the *hacienda* and the community in the 17th century see Eric Wolf, *Sons of the Shaking Earth* (The University of Chicago Press, 1959). This source, concerned with Mexico and Guatemala, stresses several factors in the survival of the Indian communities

The two main exceptions to this dual pattern appeared in certain coastal areas suited to sugar production, and in the less accessible lands along the fringes of the settled areas. In the former instead of the serf-like *hacienda* population, retaining some community forms along with a localized attachment to the land, slave labour housed in barracks and practically without family, let alone community life, was to be found. In the latter, dispersed settlement dependent on shifting slash-and-burn cultivation began to spread. All of these forms have direct descendants today.

In the early 19th century, with political independence followed by unrestrained domination of national and local governments by the *hacienda* owners, and by laws expressing a new faith in the doctrines of economic liberalism, the official protection enjoyed by the Indian communities came to an end. Measures purporting to replace communal by individual land ownership and to place the Indians on an equal footing with the rest of the population only assisted the encroachments of the *haciendas*. When the communities were not swallowed up altogether they were often physically split or dispersed by the loss of their more centrally located valley lands. At the same time, official policy ceased to exert any consistent pressure toward compact settlement. The proportion of the rural population living in *haciendas*, and the proportion living in tiny *caseríos* or dispersed neighbourhoods of *minifundio* cultivators, probably increased together. To a large extent the compact villages founded during the colonial period survived as local administrative and trading centres rather than as settlements of cultivators.

The previous policies of concentration of settlement had struggled against geographical conditions in many parts of the highlands—which included most of the thickly settled areas. The area of cultivable land accessible from a single centre was likely to be small and divided from other cultivable land by mountain ridges, ravines, plateaux too high for crops, or deserts. As population increased and more of the easily accessible valley land passed into *hacienda* possession the geographical reasons for dispersal of settlement became more pressing. The *haciendas* themselves often included land in several climatic zones and had to distribute their families from tiny clusters of herdsmen on the high plateaux to nuclei of cultivators of sugar cane and fruits several thousand feet below.

The pattern of concentrated settlement in *aldeas* and *villorrios* seems to have kept its predominance in Mexico, through the long history of upheavals in political organization and land tenure, to a much greater extent than in the other older settled areas, including the adjacent

that are relevant to their present potentialities as instruments for rural development: first, the communities were, in the main, not spontaneous survivals of pre-Columbian forms of social organization but products of colonial policies for control of Indian labour; second, the maintenance of community solidarity came to depend on the rejection of innovations and individual initiative; mechanisms such as the obligation of periodic ceremonial expenditure served to prevent the individual from accumulating permanent wealth that would enable him to dominate the community; third, the limited size of community landholdings meant that they could survive only by continually exporting their surplus population, presumably including the elements least adaptable to the static community life. Rural out-migration thus has a long history, and from the beginning this usually led to the loss of distinctively Indian traits among the migrants.

parts of Central America. The reasons are not at all clear. Presumably there was a need for mutual support and protection during periods of rural unrest combined with an unusually strong local community tradition to keep rural nuclei relatively large and compact, but this supposition does not lead very far.

In the other areas of early settlement, while the patterns are quite varied, the commonest shows an irregular combination of *caseríos* and dispersed families, maintaining some community ties with the nearest small town. Settlements meeting the criteria for an *aldea* can be found here and there, but are not common. The following description of *minifundio* settlement in the Andean highlands of Venezuela could apply to many areas from Central America to Chile: "In spite of the Spanish tradition of furthering the establishment of very compact neighbourhoods, the tendency of the peasant families in the high Andean zones to disperse their homes along the mountain slopes has persisted since pre-Columbian times. The tiny houses with thatched roofs, which sometimes can hardly be distinguished from the terrain, are scattered without any apparent system in their distribution. But this is only apparent. The ecological factors determining their distribution are often multiple. Thus, the houses are probably to be found on the slope more favoured by the sun. From what appears at first glance to be a hardly rational dispersal of houses, a more careful examination reveals their more or less systematic distribution along a current of water that meets their daily needs."<sup>13</sup> The results of a 1952 questionnaire answered by 57 per cent of the *alcaldes* (mayors) of the *municipios* of Guatemala, while verifying the predominance of *caseríos* and dispersed neighbourhoods, indicates the heterogeneity of the groupings likely to be found in the long-settled areas. The *alcaldes* distinguished 2,501 "settlements" other than the *cabeceras* of their *municipios*. Of these, 173 were stated to be "clustered and aligned with streets", 333 "clustered with no alignment of streets", 1,407 with houses "scattered but mutually visible", and 588 with houses "isolated and not mutually visible".<sup>14</sup>

In Colombia, this standard term for a rural locality is *vereda*. A number of local studies indicate that the *vereda* is usually a true neighbourhood, with ties reinforced by endogamy and allegiance to one or other of the two national political parties. In size they seem to range from 20 to 120 families, averaging about 70 families or 300-400 people. Such *veredas* may consist of a single nucleus, approaching the characteristics of what in this article has been labelled an *aldea*, or two or three *caseríos* plus scattered houses.<sup>15</sup>

In recent times, the extension of highway systems has had the unintended side effect in several countries of inducing many rural families to regroup themselves in irregularly spaced line settlements of *caserío* or *villorrio* dimensions by the roadside. Other *caseríos* seem to have resulted simply from the growth of one or two original families of small cultivators over a long period; in such *caseríos* the land is sometimes sub-divided to a

<sup>13</sup> Venezuela, Consejo de Bienestar Rural, op. cit.

<sup>14</sup> Nathan L. Whetten, *Guatemala* . . . op. cit., pp. 37-38.

<sup>15</sup> See Orlando Fals-Borda, op. cit. and a series of surveys of individual *municipios* carried out by Sección de Investigación Social, Facultad de Sociología, Universidad Nacional de Colombia, for the land tenure studies sponsored by the Comité Interamericano de Desarrollo Agrícola.



point at which the residents have hardly more than house sites, and except for security of tenure and opportunities for petty trade, are indistinguishable from the landless workers.

The settlements discussed up to this point are, in general, of people attached to a locality, with neighbourhood ties that many retain considerable strength even if the families live dispersed. During the past century, however, overcrowding of many of the older areas, shifts in *hacienda* land use and labour demands with expansion or contraction of the market for various commercial crops, and the opening of new areas of settlement, have combined to foster the growth of categories of rural population that are almost entirely lacking in local ties. For present purposes, two broad groups deserve emphasis: the squatters and pioneer cultivators and the migratory landless labourers.

The extent to which these groups constitute distinct types presumably varies in different parts of the region. In much of Brazil, where ties to specific neighbourhoods or pieces of land are generally weak, recent studies indicate a remarkable degree of fluidity both in labour systems used on the large estates and in the status of rural workers; the same man may be successively or simultaneously a *minifundio* owner, squatter, renter, share-cropper, seasonal wage-worker, etc.<sup>16</sup> A similarly amorphous situation, in which the rural worker cannot be fitted into any of the traditional statistical categories, has been described in Honduras.<sup>17</sup>

Even in some of the long-settled parts of the region scattered shifting cultivators can be found in the remoter parts of large *haciendas* and in marginal lands that are publicly owned or without clearly defined tenure rights.<sup>18</sup> In the thinly occupied tropical lowlands east of the Andes, in Central America, and throughout the interior of Brazil this type of settler has a history going back to the colonial period.<sup>19</sup> In the Santa Cruz area of Bolivia they are known as *tolerados*: "They are the true pioneers of settlement, always living at the fringes of civilization, clearing the land, pushing back hostile bands of Indians and moving on again as settlement approaches. These families are not only 'tolerated' but generally welcomed by the large landowners. Their contribution is largely in the land that they clear and which the owner can

<sup>16</sup> An unpublished study of Brazilian agriculture points out that the various kinds of "residual" or subsistence cultivation act as shock-absorbers for commercial agriculture, expanding when markets for the latter are poor, and shrinking again when the commercial farms need more land and labour; this study asserts that there is no consistent trend toward the absorption of squatters, share-croppers, etc. into wage labour, but a fluctuation (Andrew Gunder Frank, "Brazilian Agriculture: Capitalism and the Myth of Feudalism").

<sup>17</sup> This study asserts that real distinctions among the rural people who cultivate marginal plots of uncertain ownership and seek seasonal wage work "are entirely and exclusively determined by the degree of friendship maintained with the local *patrón-latifundista*" (G. W. Hill, *Estudio Preliminar a una Reforma Agraria en Honduras*, Pan American Union, Washington, D.C., 1962.)

<sup>18</sup> A study of a locality in Central Chile, for example, describes the settlers occupying the poorer mountain lands of the *haciendas* as a type of pioneer, living partly by woodcutting and small mining, partly by shifting cultivation, sometimes on a share-cropping basis, sometimes receiving full right to the crop in exchange for clearing the land (J. Borde and M. Gongora, *Evolución de la Propiedad Rural en el Valle del Puangue*, Instituto de Sociología, Universidad de Chile, Santiago 1956).

<sup>19</sup> See, for example, Celso Furtado, *Formação Econômica do Brasil*, Editora Fundo de Cultura, São Paulo, 1959, pp. 141-142.

appropriate and plant to his own crops whenever he chooses... When the lands they have cleared are taken over by the landlord they become *jornaleros* on the *hacienda* or more commonly move farther into the interior."<sup>20</sup>

In the past, such squatters consisted mainly of families with a tradition of shifting cultivation in a mutually understood relationship with the landowners or the State, and these patterns continue to predominate in some parts of the region. In Paraguay, for example, the typical peasant has been described as having little interest in land ownership. It is to the interest of the owner of the land on which he squats to keep him, mainly so as to have a reserve of labour for sowing and harvest time. If there is any difficulty the squatter is quite ready to abandon his temporary home and drift to another locality.<sup>21</sup> In Panama, more than half the land under cultivation is publicly owned, and is used by shifting cultivators under short-term permits issued by the *municipios*; an important part of the privately owned land is similarly cultivated under short-term rental arrangements.<sup>22</sup> In sparsely populated districts without roads and with only very limited markets for produce, such arrangements can continue for generations without evolving into stable or concentrated settlement. In the true pioneer zones now being penetrated by roads, with rising land values, the position of the squatter changes. Whether by agreement or against his will he becomes a cheap means of clearing land for eventual exploitation by large holdings. At the same time, instead of the hereditary shifting cultivator one finds migrants squeezed out of the long-settled districts and anxious to achieve permanent tenure of a piece of land. In the pioneer zones of several countries formal agreements by which the settler clears land in exchange for full rights to the crops of the first few years, and then moves on, are common. This system is used in clearing coffee land in Paraná, Brazil, for example, and in clearing land for cattle ranches in the low country adjacent to the Andean highlands of Venezuela.<sup>23</sup> In the latter instance, the settlers evicted after two or three years of cultivation either become nomadic workers or retreat to *minifundio* cultivation on the quickly eroded lower slopes of the mountains. Elsewhere, the original settlers may be forced by economic weakness to sell their holdings,<sup>24</sup> or driven out by influential persons living in the town, who obtain title to the land after settlement has begun.<sup>25</sup>

<sup>20</sup> Olen E. Leonard, *Bolivia: Land, People and Institutions* (The Scarecrow Press, Washington, D.C., 1952).

<sup>21</sup> E. Service and H. Service, *Tobatí: Paraguayan Town* (The University of Chicago Press, Chicago, 1954).

<sup>22</sup> Richard N. Adams, op. cit., p. 60.

<sup>23</sup> See Douglas Teixeira Montero, "Estrutura social e vida econômica em una área de pequena propriedade y de monocultura", *Revista Brasileira de Estudos Políticos*, 12 (October 1961); and Jean Tricart, "El desarrollo de los Andes Venezolanos", *Cuadernos de la Sociedad Venezolana de Planificación*, I, 6 January 1963.

<sup>24</sup> The first report of the Instituto Colombiano de Reforma Agraria (INCORA) attributes to this factor a concentration of large holdings in zones opened to settlement in the present century. The large owners have profited from "the huge investments of the community in lines of communication and public services and the heroic sacrifice of the anonymous peasant" (*Informe de Actividades en 1962*, Bogotá, April 1963, p. 43).

<sup>25</sup> For a discussion of this last problem and the conflicts to which it gives rise, see Fernando Henrique Cardoso, "Tensões sociais no campo e reforma agraria", *Revista Brasileira de Estudos Políticos*, 12 (October 1961).

The kinds of squatter and pioneer settlement last described are obviously inefficient and destructive in terms of land use, contributing more to the waste of forest resources and the spread of erosion than to the permanent incorporation of new lands into the cultivable area. Their influence in perpetuating a rootless and disorganized rural population, unable to form more than the most rudimentary neighbourhood ties and almost unreachable by public services, is just as unfortunate. Increasingly, they are also a source of violence; the squatters are no longer willing to move on, or have nowhere to go. To some extent, new forms of local organization are arising among them, even clandestine settlement nuclei; they band together for mutual defence against landowners and authorities, sometimes with the guidance of outside political movements. The shifting cultivators and migrant pioneers represent a rather small proportion of the rural population of the region, but if the huge empty spaces are ever to be filled and a healthier distribution of population attained, their experiences and their relationships to the ways in which more powerful groups secure control over land resources need to be better understood as a basis for planned resettlement.

The landless workers who do not engage in subsistence cultivation, unlike the squatters, are to be found in the zones already fully occupied for agricultural or pastoral purposes. They are recruited in part from groups dismissed from the *haciendas* (sometimes because the *hacienda* cannot employ the natural increase in its resident population, sometimes because changes in crops or production techniques make part of the labour force superfluous, sometimes because the owner wishes to guard against future claims to his land from resident families) and in part from the surplus sons of *minifundio* cultivators, but some of them are descended from several generations of workers in the same plight. They rarely live dispersed, but can be found in all the other types of settlement from the *caserío* to the *pueblo*. It is generally assumed that they are now contributing to the peripheral shantytowns of the great cities, but the relative importance of their contribution to urban migration has not been satisfactorily demonstrated. There is some evidence that youth from the *minifundio* settlements and the small towns show more initiative in migrating, while the landless workers cling to the livelihood they know, however wretched its prospects. Furthermore, seasonal agricultural migrants do not necessarily belong to the landless marginal category. Many who travel hundreds of miles, even across international boundaries, as in the cases of the Mexican *braceros* in the United States or the Bolivians in the sugar zones of Argentina, come from and return to *minifundio* settlements. It can be assumed, however, that an important proportion of such migrants lose their local ties and eventually join the more rootless group.

Descriptions of landless workers from widely separated parts of the region, with quite different types of settlement and land tenure, show remarkable similarities. In Chile, the *afuerino* (outsider) who travels from estate to estate to work in the harvests of different crops is "a man completely uprooted from the soil, a nomad of Chilean agriculture".<sup>26</sup> In Argentina, where the landless

workers make up a particularly high proportion of the rural population, they "have no social institutions or facilities and, if seasonal laborers, live in a no man's land as far as neighborhood and community life is concerned".<sup>27</sup> "Apparently alien to all the economic and juridical transformations carried out in the country in the past ten years, their life seems to have remained unchangeable. Transient workers, they labour for a time on one estate, then begin to drift. Their greatest aspiration is for seasonal work... One is never seen driving a tractor or making a garden in the waste land adjoining his house".<sup>28</sup> In the state of Paraná, Brazil, the *volantes*, or transient workers, "are victims of suspicion both from the *colonos* (workers settled on the estates) and from the owners, who see in them, respectively, dangerous competitors threatening their economic security and persons of unknown origin against whom one must be watchful".<sup>29</sup> In the settlements of small farmers in Costa Rica, the landless workers are described as a marginal group almost entirely excluded from community life.<sup>30</sup> Recent movements for organization of the lower strata of the rural population have naturally had little effect on landless workers of this type. The *Ligas Camponesas* of Brazil, for example, have attracted mainly the workers enjoying some kind of tenancy arrangement or partial compensation in land, and fearful of falling to the status of the landless workers, who have been described by Francisco Julião as culturally so poor and economically so poor and dependent that they are not even organizable.<sup>31</sup>

In parts of the region, particularly in Argentina and Uruguay, the most characteristic form of settlement of the landless workers is a variation on the *caserío* known as the *rancherío*, a small nucleus of shacks along a roadside, without any tenure rights or legal status; such settlements may be inhabited partly by the families of workers, who themselves spend most of their time in barracks on the estates, or by irregular families headed by women. Increasingly, however, the landless workers settle on the fringes of the *pueblos* where life offers a little more variety and there is some chance of part-time work in the agricultural off-season. In Peru, this tendency has been characterized as a "ruralization" of the *pueblos*, as the local upper and middle strata leave for the larger centres and are replaced by migrants from the countryside who thus begin the process of losing their localistic Indian traits.<sup>32</sup> This type of movement presumably contributes to a transition from dependence on agricultural work to a disposition to try anything, the emergence of what a Chilean study characterizes as "multiple men", turning alternately to farm work, artisan activities, hawk-

<sup>27</sup> Carl C. Taylor, op cit.

<sup>28</sup> José Luis de Imaz, "Estratificación social del sector primario en Ucacha", *Desarrollo Económico*, Buenos Aires, 1, 4 (January-March 1962).

<sup>29</sup> Douglas Teixeira Monteiro, op. cit.

<sup>30</sup> Victor Goldkind, *Sociocultural Contrasts in Rural and Urban Settlement Types in Costa Rica*, *Rural Sociology*, 26, 4 (December 1961).

<sup>31</sup> Frank, op. cit.

<sup>32</sup> See the studies previously cited of the Plan Regional para el Desarrollo del Sur del Perú. This kind of ruralization can also affect the physical characteristics of the small towns. In the past, the typical small town was composed of substantial adobe houses, however lacking these might be in modern conveniences. For many of them, the growth of the marginal population means also the growth of improvised shantytowns. The problem of *callampas* and *villas miseria* is not limited to the big cities.

<sup>26</sup> Rafael Baraona, Ximena Aranda, Roberto Santana, *Valle de Putaendo, Estudio de Estructura Agraria* (Instituto de Geografía, Universidad de Chile, 1961, p. 236).

ing, construction or road work, and even small-scale mining.<sup>33</sup> Once the landless worker has reached this point, however, the small towns have little to offer him, and he is ready for the next move to the marginal labour force of the cities.

Among the countries of the region, El Salvador undoubtedly has the highest proportion of landless agricultural workers in its population, and recent surveys indicate that this group has become largely a town population. In the coffee zones, "the farms are nearly deserted except at harvest time... Only the manager and a few overseers live there permanently, and their dwellings are scattered to make vigilance easier... Almost all the workers live in the villages and towns that are capitals of communes".<sup>34</sup> According to another source, landless workers dependent on seasonal farm work

<sup>33</sup> Rafael Baraona and others, op. cit., p. 301. Other descriptions of landless labourers, however, as already indicated, suggest a general lack of initiative, a reluctance to try anything except the work they know.

<sup>34</sup> Jean Tricart, *Un exemple du déséquilibre villes-campagnes dans une économie en voie de développement: El Salvador*, Développement et Civilisations, IRFED, Paris, 11, July-September 1962.

constitute 40 to 80 per cent of the population of most towns.<sup>35</sup> The geographical mobility and urban residence of Salvadoran rural workers coincide with notoriously high percentages of families headed by women and of illegitimate births—demographic indicators of family instability.

The residential patterns of landless rural workers in Cuba up to 1959 seem to have been rather similar, particularly in the zones devoted to cattle-raising. These patterns were incompatible with the subsequent shift to more intensive agriculture requiring a year-round labour force, and the new policy was accompanied by a programme of construction of nuclei of housing and services for families of workers on the new People's Farms. This effort, however, does not appear to have been sufficient as yet to obviate continuing difficulties of absenteeism, transport, etc. associated with the distance from the farms of the homes of many workers.<sup>36</sup>

<sup>35</sup> Richard N. Adams, op. cit.

<sup>36</sup> See Jacques Chonchol, *Análisis Crítico de la Reforma Agraria Cubana*, *El trimestre económico*, 117, 1963; and M. Gutelman, *L'agriculture cubaine: le reforme agraire et les problèmes nouveaux*, *Etudes Rurales*, January-March 1963.

#### D. ADMINISTRATIVE AND POLITICAL STRUCTURES AND RURAL SETTLEMENT PATTERNS

The countries of the region are divided into either two or three tiers of administrative units, commonly called *departamento*, *provincia*, and *municipio*.<sup>37</sup> In most instances, the *municipio* is the only administrative level with which the rural population is at all familiar. The *municipio* is a territorial unit, usually comprising an "urban" centre and a rural hinterland, which may be of considerable extent. Some *municipios*, however, are entirely urban, and a number of the larger cities and metropolitan areas are composed of several *municipios* whose urban populations have fused. At the other extreme, *municipios* may be found in which the administrative centre is no more than a rural *caserío*. Although some of the countries have standards set by law for minimum population, tax resources, etc. of *municipios*, these tend to vary widely both in area and in number of inhabitants.

At the level of the *municipio* several alternative patterns of administration can be found. The *municipio* may have a mayor and council elected from the population of its whole territory (Brazil, Chile, El Salvador, Mexico, Panama), or it may have an authority (*gobernador*, *intendente*, etc.) appointed from above together with an elected council (Colombia, Costa Rica, Paraguay, Venezuela), or an appointed official may govern alone (Nicaragua). In some countries the local régime differs according to the federal unit or according to the status of the *municipio* (based on population size, tax revenues,

<sup>37</sup> The *departamento* is usually the unit immediately below the national level and may be divided into *provincias*, but in Argentina and Chile this usage is reversed. In three federally organized countries (Brazil, Mexico and Venezuela) the larger unit is an *Estado*. Brazil, Colombia, Costa Rica, Guatemala, Nicaragua, Panama, Paraguay and Venezuela have no intermediate administrative level and in Mexico the intermediate unit has only vestigial functions. The meaning of the term *municipio* is closer to the "county" or "township" of the United States than to "municipality".

whether the *municipio* centre is also centre for a higher administrative unit, etc.). In still others (Bolivia, Peru) the *municipio* administrative centre (*cabecera*) has its own elected municipal authorities whose functions are confined to the urban area, while both the urban and rural parts of the *municipio* are under the direct jurisdiction of an official appointed by the higher authorities.

In every country, the territory of the *municipio* outside the *cabecera* is sub-divided for some limited administrative purposes. The commonest pattern is for each subdivision (called *distrito*, *vereda*, *canton*, *section rurale*, *caserío*, *comarca*, *corregimiento*, *parcialidad*, etc. in different areas, with terminology often varying within a single country) to have one or more unpaid local residents charged by the *municipio* authorities to keep the peace, report on local problems, collect taxes, and in some areas recruit labour for public works in lieu of taxes. No country has a national system for election of authorities within the rural sub-divisions of *municipios*, although these authorities may in practice be chosen by their neighbours; and no country provides for direct representation of the rural sub-divisions on the *municipio* councils. If the rural people participate at all in *municipio*-wide elections, it is for lists of candidates who almost invariably live in the *cabecera*.

The *municipio* system has a historical tradition going much farther back than the independence of the countries of the region. In principle, the *municipio* would seem to provide a workable pattern for community organization, with a specialized centre serving the more limited rural neighbourhoods, and local studies indicate that a certain number of *municipios* fill this role adequately enough. Generally, however, they do not, and discussions of the system from different parts of the region are remarkably uniform in describing their shortcomings.

Almost everywhere the revenues under the direct control of the municipal authorities are very limited,

deriving from licences, market dues, fines, etc. In most countries they have no power to tax land. Consequently, the provision by them of more than rudimentary services requires aid from the higher levels of government, and the municipal authorities concentrate all their attention on the securing of such aid. Thus, "... they live on hope from the departmental or national treasury and base their whole future on the aid annually promised them in the departmental government or in Congress to silence their complaints. This aid never comes, or if it does is insufficient".<sup>38</sup>

Many of the *municipios* do not have the population or wealth to support modern services, even if they could draw on local resources more freely. One authority considers, for example, that the 54 per cent of the *municipios* of Mexico with fewer than 5,000 inhabitants cannot provide a sufficient tax base to support modern institutions, that only those with 20,000 or more can do so adequately, and that only the small number with 50,000 or more (almost entirely urban) do so in practice.<sup>39</sup> In Guatemala, according to law, a new *municipio* should have a population of at least 5,000 and "sufficient resources to meet the necessary expenses of self-government"; in 1950, however, 127 out of 315 *municipios* had fewer than 5,000 people.<sup>40</sup> In many parts of the region sparseness of population or topographical barriers would make it impossible to organize *municipios* of ideal population size in which the rural parts could have any contact with the *cabecera*. As it is, some Brazilian *municipios* extend over more than 100,000 km<sup>2</sup>.

Since the wealthier and more influential part of the *municipio* population lives in the *cabecera*, and since the rural neighbourhoods have no effective way of making their demands heard, public services are concentrated in the *cabecera*, and any financial aid received from the higher authorities is spent there, largely on projects that will constitute lasting monuments to the administration of the time — public buildings and parks. "The local government is a self-conscious city-building corporation strongly determined not to let the country's poverty interfere with the prevailing notion of what a city ought to contain in the way of public works".<sup>41</sup>

<sup>38</sup> Colombia, Ministerio del Trabajo, División Técnica de la Seguridad Social Campesina, *Estudio Socio-Económico de Nariño* (Bogotá, 1959).

<sup>39</sup> Gilberto Loyo, quoted by Nathan L. Whetten, *Rural Mexico*, op. cit.

<sup>40</sup> Nathan L. Whetten, *Guatemala . . .* op. cit.

<sup>41</sup> Marvin Harris, *Town and Country in Brazil* (Columbia University Press, New York, 1956, p. 179). On the average, however, the advantages secured by the smaller *municipio* centres are pathetically limited and marginal to their real needs. Among the 2,468 *municipios* existing in Brazil in 1957 only 600 had in the centre (*cidade*) a water system "deserving the name"; in 1954 only 460 *ciudades* had a sewerage system; 206 of them had no electric power. More than 600 *municipios* did not have a single physician, let alone one in public service (Diogo Lordello de Mello, *A descentralização administrativa e a realidade municipal brasileira*, *Revista Brasileira de Estudos Políticos*, 11, June 1961). In southern Peru in 1959, among 461 "urban" *cabeceras* only 6 had an adequate supply of drinking water and 2 had adequate sewerage; 66 and 26, respectively, had water and sewerage systems "needing improvement", while 390 had no water system and 433 no sewers (Plan Regional para el Desarrollo del Sur del Perú, *El Desarrollo Urbano*, Informes Vol. XVIII, PS/E/42, Lima 1959). In Peru as a whole, according to a recent estimate, 725 out of 1,500 *cabeceras* lack an access road linking them with the national highway system (Fernando Belaúnde Terry, *El Mestizaje de la Economía*, *Journal of Inter-American Studies*, October 1963).

The political dominance of the *cabecera* and the superiority felt by its residents over the more strictly rural neighbourhoods is evident even where the *cabecera* itself is really an *aldea* of cultivators, only a little larger than other compact settlements within the *municipio* boundaries.<sup>42</sup> More often, however, the population outside the *cabecera* is divided between *haciendas*, and *caseríos* and dispersed neighbourhoods of small cultivators. The *hacienda* management usually intervenes in *municipio* affairs but keeps its resident workers isolated from them. The *hacienda* does not need to ask for many services from the *municipio* authorities and wants no interference from them. The rest of the rural population receives more demands than services from the *municipio* centre. In the highland parts of Central America and the Andean countries, in particular, where the rural population is mainly Indian and the population of the *cabeceras* mainly non-Indian, traditional relations between them are such as to make the former avoid contacts rather than seek them. Even today, the post of municipal representative in the rural sub-division is commonly burdensome and shunned by the local people. In many Indian areas the traditional system of calling on the rural people for unpaid labour to repair roads, or even undertake improvements within the *cabecera*, has lingered in practice long after losing its legal backing; in view of the scantiness of *municipio* funds this may be the only way of getting the work done at all. The local representative of the *municipio* then has the distasteful job of rounding up a quota among his neighbours for labour service. Situations in which a scapegoat has to be forced to take the post of representative under threat of fine or imprisonment have been described. In large parts of the region, also, the effective authority in the rural neighbourhoods is the local agent of a national police or military force, whether or not the kind of *municipio* representative just described, is also present; such an agent is in a position to direct local affairs in a highly authoritarian way, particularly in the many zones in which rural trade unions or peasant organizations are illegal, or are repressed by the authorities without legal sanction.

A common consequence of past relationships is a rural distrust of all outsiders, a suspicion that any official activity is a subterfuge for some new exploitation. In some Indian areas in recent times, this spirit had led to violent attacks on harmless outsiders, such as census-takers; in others, it has produced a deliberate rejection of traditional local organization: "the group preferring to maintain a bare minimum of social organization based on the family and neighbourhood, or making deliberate attempts to link itself to the national political structure . . . Various *parcialidades* have preferred to remain without any authorities, stating that they did not want to be agents of the abuses of the (district) governors".<sup>43</sup> Some programmes working among rural Indians have concluded that readiness to accept innovations increases the farther the Indians in question are removed from previous contact with and exploitation by a town administrative centre.

<sup>42</sup> See Oscar Lewis, *Life in a Mexican Village: Tepozilán Revisited*, University of Illinois Press, Urbana, 1951, p. 49.

<sup>43</sup> Plan Regional para el Desarrollo del Sur del Perú, *La Organización Social en el Departamento de Puno* (Informes Vol. XXII, PS/F/49 Lima 1959).

Under other circumstances, the dissatisfaction with *cabecera* monopolization of power and resources provokes a continuing struggle by the larger satellite nuclei to break away and become *cabeceras* of new *municipios* — a trend that is partly to blame for the large numbers of *municipios* that are too small to function effectively.

Within the *cabecera* of a predominantly rural *municipio*, political power more often than not is exercised by a clique or rival cliques of *principales* or *vecinos notables*, who derive their influence from a combination of landholdings, trade, and clientele relationships with persons holding office at the national or departmental level. If the *municipio* has elected organs the local notables govern directly; if it is administered by an appointed official he is likely to become one of their circle. In either case, support from above, from outside the community, is politically essential; local public opinion is much less important; the public is usually passively dependent on the ruling clique or cliques. If there are rival cliques their struggles often take on an intensity leading to chronic violence, sometimes spilling over into the rural areas, in which any community consensus becomes impossible, and all local public offices and professional positions — teacher, judge, physician, etc. — are regarded solely as factional spoils. Alternatively, the cliques may be replaced by a single *cacique*, who dominates the formal administrative apparatus, reduces the local notables to puppets, and is in a position to exploit almost any *municipio* activity for personal gain. The local officers of national social services and programmes, even if administratively responsible to a central agency, as is most often the case, cannot remain detached from the local power structure. Their ability to maintain good relations with a locally dominant clique or *cacique* with connexions in the capital may determine their chances of promotion, or even their chances of avoiding dismissal. This circumstance naturally helps to confirm the concentration of services in the *cabecera*, and makes it likely that their local meaning will be quite different from the policies promulgated at the national level.

The studies of southern Peru already referred to contain searching appraisals of the prevailing system of local government and attitudes toward it that could be paralleled from other parts of the region. "In the middle and upper classes, attitudes of dependency are manifested in an almost total expectation that local administrative affairs will be resolved by the Government and its functionaries, combined with a lack of confidence in the capacity of these functionaries and a lack of interest and initiative in solving collective local problems... One consequence is formalism or ritualism in public activity, which respects legal forms while believing that to reach individual ends what is needed is *vara* (influence), or patrons in a strategic part of the relevant hierarchy". While co-operation is formally given a high value by these classes, this overt attitude is contradicted by "attitudes of conformism and fatalism accompanied by passivity in action and skepticism as to the possibility of reaching social and economic ends through co-operation". A kind of self-fulfilling prophecy leads to the failure of attempts at local organization.<sup>44</sup>

<sup>44</sup> Plan Regional para el Desarrollo del Sur del Perú, *La Cultura; Sistemas de Valores* (Informe Vol. XXII, PS/F/50, Lima 1959).

The widespread desertion of the small *cabeceras* by the local upper class, already mentioned, and their invasion by rural families, presumably imply far-reaching changes in the often-described static local politics of conformism, influence-manipulation, clique rivalry and *caciquismo*. The observers in southern Peru saw some evidence of a more dynamic and innovating spirit in the *cholo* lower class coming to dominate the small towns. Presumably the dividing lines between such towns and the rural areas will become increasingly blurred and the former will lose part of their political monopoly. In many areas, it is likely that a rural leadership springing from peasant unions, agrarian reform settlements, or Indian *comunidades* will be able to face the *cabeceras* on even terms or even dominate them, as has occurred in Bolivia<sup>45</sup>. The circumstances under which this shift in political power takes place, however, and the very limited political experience of the rural masses, introduce a danger that the product can be new alignments in political feuds and new types of *caciquismo* rather a healthier community structure.

The *ejidos*, *comunidades*, colonies and agrarian reform settlements already mentioned are partial exceptions to the generalization that there are no strictly rural and local organs of self-government within the *municipios*, but their relations to the national administrative structure need clearer definition, and their elective institutions seem to work rather irregularly. The relevant programmes, by giving rural groups an incentive to organize, and by providing for regular election of representatives charged with the defence of their primary interest in the land, have undoubtedly contributed to the appearance of new and more dynamic types of rural leadership. The Council of elders or the unhappy go-between transmitting orders from the *municipio* authorities to his neighbours is likely to be replaced by a young man with some formal education and some experience of the outside world.<sup>46</sup> On the other hand, the local groups recognized by such programmes are under some degree of paternalistic supervision and protection from a national agency, setting them apart from the rest of the population and limiting their initiative. This difficulty has been particularly serious in government-managed agricultural colonies, many of which, according to official sources, have fallen into a chronic state of dependency.<sup>47</sup> At the same time, the new groupings are not exempt from the evils of *caciquismo* and disruption by battling political cliques — the latter a particularly serious danger

<sup>45</sup> A process of this kind also seems to have occurred since the 1920's under the combined stimulus of favourable access to produce markets, relatively vigorous and adaptable traditional community organizations, and the penetration of new national movements, in parts of the Mantaro Valley in Peru. The *cabeceras* in this area, however, seem to have been from the beginning closer to the *aldea* of cultivators than to the *pueblo*, as they are distinguished in the present paper; see José R. Sabogal Wiese, *La Comunidad Indígena de Pucará*, América Indígena, XXI, 1, January 1961.

<sup>46</sup> See Plan Regional para el Desarrollo del Sur del Perú, *La Organización Social en el Departamento de Puno* (Informes Vol. XXII, PS/F/49, Lima 1959), pp. 23-24.

<sup>47</sup> For a thorough analysis of the consequences of paternalistic administration in colonization programmes, see Venezuela, Ministerio de Agricultura y Cría, Dirección de Planificación Agropecuaria, División de Política Agrícola, *La Colonización Agraria en Venezuela 1830-1957. Estudio Efectuado por el MAC con la Colaboración del IAN* (Caracas 1959).

once rival national political forces come to see in the beneficiaries of agrarian reform a valuable source of organized political support. The successive reforms of the

Mexican *ejido* system intended to make the democratic institutions of the *ejido* work more effectively suggest the difficulties that must be faced throughout the region.

### E. SOCIAL RELATIONSHIPS IN THE RURAL NUCLEI

A significant shift in emphasis can be traced in discussions of rural life in Latin America over the past ten or twenty years. Earlier studies commonly gave a great deal of attention to the survival of traditional forms of co-operation and local solidarity. Social theorists in several countries of the region dreamed of a new social order arising from a revitalization of existing rural community forms. This has not come to pass, however, even where such hopes were reflected in public policies for the support of *ejidos* and *comunidades*. The weight of more recent evidence points to an unexpected prominence of individualism and internal conflict even within the apparently tightly knit local groups found mainly among the Indians, and confirms that local cohesion is weak or lacking in much of the region. Meanwhile, the growth, increasing geographical mobility and growing involvement with national life of the rural population have produced new strains on the traditional forms, and altogether detached an important part of the rural population from their influence.

Even the survival of communal control over land-holdings and of systems of collective labour or exchange labour do not necessarily carry the implications that were formerly attached to them.<sup>48</sup>

One of the most widely reported traits of small-holding peasants in the region is a passion for litigation over land. This is unexpectedly prominent among Andean Indians, even where a local community retains some control over land distribution, as in the form of a prohibition on sale to outsiders. This passion runs counter both to community solidarity and to the general reluctance to have anything to do with official institutions. The role of the *interillo* (small-town notary-scribe) who encourages the peasant in endless litigation and often ends up in possession of the land under dispute is well known. (The larger landowners in the Andean zone are also accused of using litigation as a tactic to intimidate or punish unsubmitive small cultivators.) Struggles over the land have a long history, but are inevitably exacerbated by population increase and suc-

cessive divisions of the land among heirs. The peasant is likely to have a dozen tiny plots, whose boundaries depend on collective memory concerning landmarks, usually without precise legal records of original ownership and transfers; almost inevitably, feuds arise with neighbours over some of them. At the same time, the peasant in many parts of the region is in continual fear of crop or animal thefts — a fear leading either to conflicts with immediate neighbours or to collective hostilities between neighbourhoods.

Such divisive influences are at work even within *caseríos* and dispersed neighbourhoods in which there are no clear-cut distinctions of class or wealth. Usually, no doubt, bickering and neighbourliness alternate and combine in the contradictory way found in most local groups of human beings. Local descriptions can be found of peaceful and well-integrated neighbourhoods, of localities torn by bloody feuds, and of localities in which the small cultivators live in nearly complete isolation from one another, with each family a self-contained social and economic unit.<sup>49</sup>

The social ties that do exist in the *caseríos* and dispersed neighbourhoods are mainly limited to the men, who assemble to drink and talk at a crossroads store. The women have no comparable place of assembly, except where the newer educational and community development programmes have brought them together, and are likely to be prevented both by continual work and by local traditions from visiting neighbouring families.

Two important modern influences that are widening the rural horizon and relieving the drabness of *caserío* life are football and the radio. Football, in fact, deserves more attention than it has received from social investigators as a force both for local solidarity and for integration of the rural neighbourhood with national life. The effort to clear a patch of land for a field (particularly in areas in which level land is very scarce) and to equip a neighborhood team, is often the first and only organized activity to appear spontaneously. According to some accounts, the need to keep fit for football has had a significant effect in reducing drinking (sometimes the only previous form of recreation) among rural youth. At the same time, football and the news of football brought by the radio provide a common frame of reference for people of all classes and localities, a means of identifying with the national society. (In several of the circum-Caribbean countries baseball or bicycle-racing rather than football exert the same kind of influence for rural integration.)

At the same time, it must be remembered that in many areas of heavy out-migration the rural neighbourhoods have an aging population; most of the young adults have

<sup>48</sup> Oscar Lewis, *op. cit.*, constitutes a particularly interesting examination of the situation within a large rural community in which many traditional forms survive, and in which an earlier study had emphasized the elements of solidarity: "Another aspect of the tendency to idealize the free village has been the assumption that collective forms of land tenure are accompanied by cooperativeness and a form of collectivism in the economic organization of agriculture. As a matter of fact, Tepoztecan, like most Mexican peasants, are a highly individualistic group of farmers, and there is a minimum of cooperativeness or collectivization in the system of agriculture. The existence of collective forms of land tenure, in the face of this individualism, has been responsible for much bickering between the villages" (p. 127). Lewis also states that the nearly extinct system of collective public works labour in the same village, is considered "a coercive rather than a voluntary institution" and gave the local authorities "ample opportunity for favoritism and vengeance against political opponents or personal enemies" (p. 110). He cites other local studies that support his conclusion on the dominant individualism of the Mexican peasant (p. 303).

<sup>49</sup> The latter situation is described as typical of *minifundio* cultivators in the department of Nariño (Colombia, Ministerio de Trabajo, *op. cit.*) and of Indian cultivators of Puno (Plan Regional para el Desarrollo del Sur del Perú, *Los Recursos Humanos del Departamento de Puno*, *op. cit.*).

left to look for opportunities elsewhere, and not much initiative in new forms of social relationships can be expected of the middle-aged cultivators who have remained.

As the rural nucleus becomes larger, in the *villorrio* and *aldea*, distinctions of class and wealth become more prominent, and the kind of mutual distrust described in a study of central Chile appears: "... small landowners were consulted regarding the possibility of their participating in a local programme of soil conservation. Their answer was 'let the *patrones* (or *los grandes*) do it first; if it works, we'll follow.' On the other hand the members of the landed elite dismissed any idea of collaboration with the small landholders on the ground that the latter are a totally uncooperative group".<sup>50</sup>

Finally, at the level of the *pueblo*, the population is likely to be deeply divided both horizontally and vertically. Minor indicators of superior status are insisted upon all the more rigidly because of the general poverty of the environment and the scarcity of opportunities for mobility. At the same time, as already mentioned, struggles for political power and perquisites between

<sup>50</sup> I. Silva Fuenzalida, *Rural Communities in Central Chile*, op. cit.

cliques of the local élite with their clients or dependants may divide the *pueblo* into feuding factions.<sup>51</sup> Status distinctions and political factionalism together are reflected in the membership requirements for "social clubs", of which the *pueblo* often has several. Moreover, if recent migration of families from the rural hinterland into the *pueblo* has occurred on an important scale, this group may constitute a new "lowest" stratum, only weakly attached to the locality, and despised or feared by the longer-settled residents.

<sup>51</sup> It is interesting that several studies dealing with migrants coming from rural settlements as well as small towns to the cities found prominent among their memories and motives for migrating a fear of the hostility or "envy" of neighbours in their place of origin, particularly at any sign of prosperity or initiative. See, for example, Humberto Rotondo and others, *Personalidad Básica, Dilemas y Vida Familiar de un Grupo de Mestizos* (Lima, 1960); and Oscar Lewis, op. cit., p. 295. "There is a deeply ingrained fear in the Indians of Tilantongo; fear of extortion, political persecution, economic exploitation, banditry, and blood feuds. In addition to these 'social' fears, there is an ever-present fear of the natural elements, which in one fell swoop, can and often do, wipe out a year's food supply. . . . In Mexico City, the migrants say that they have 'lost the fear' which they had in Tilantongo." (Douglas S. Butterworth, *A Study of the Urbanization Process among Mixtec Migrants from Tilantongo in Mexico City*, *América Indígena*, XXII, 3, July 1962.)

## F. ECONOMIC FUNCTIONS OF THE RURAL NUCLEI

In the *caseríos* the only widely typical specialized economic activities are the keeping of petty shops, one or two to the *caserío*, selling beverages, staple foods, a few necessities such as kerosene, matches and salt, and possibly some articles of clothing. Such shops, which spring up even in the more dispersed neighbourhoods, represent part-time activities of cultivators or their wives, and do not satisfy even the limited purchasing requirements of the rural people. Their social function as meeting places for the men is often more important than the economic. Here and there the decreasing ability of the small holdings to support their cultivators forces more of the latter to try to eke out their incomes by petty trade and, in particular, by clandestine liquor sales; the *caserío* may then become something of a gathering place for *hacienda* workers, and a source of annoyance to the management of the *hacienda* — a trend reported from parts of central Chile. The *villorrio* is likely to have a larger number of petty shops and a few specialized artisans, but does not have a much more complex economic life than the *caserío*. The *villorrio-caserío*-neighbourhood also serves as a framework for the system of formal or informal exchange labour found in much of the region, particularly in the construction of houses or in harvest work, but these systems appear to be generally on the decline.

Most of the cultivators, even if close to the subsistence level, depend to some extent on the nearest *pueblo* or *aldea* as a source of purchases and a market for produce. The towns serve these functions partly through the holding of markets, usually weekly, and partly through permanent shops. In practically all Indian-populated zones and in some of the older settled areas elsewhere, the more important institution to the rural people is the market, which also serves as a social gathering and an occasion for the performance of re-

ligious duties. The market also supports the specialization of different localities in certain handicraft products for exchange.

Even in the Indian zones, the population of the market towns is mainly non-Indian and almost all permanent shops are kept by non-Indians. In the greater part of Latin America, moreover, the public market is of minor importance or missing. The small town shops fall into two main types: first, petty establishments similar to those found in the *caseríos*, run by women as supplementary sources of income and often quite numerous in relation to the population of the town; these can really be considered symptoms of under-employment and economic stagnation. Second, one finds a small number of larger "general stores" with which the peasant has most of his dealings. The merchant commonly both sells to the peasant and buys his produce, extending to him a more or less permanent line of credit. In this relationship, the typical dominance of the moneylender in peasant societies appears; the peasant remains permanently in debt and sells his produce to the shopkeeper whom he knows, without considering whether he can get a better price elsewhere, and often without asking the price. In these transactions very little money changes hands. In fact, in the *pueblos* cash is hard to obtain, even for the better-off strata, and is used mainly in transactions with the exterior. According to studies from several parts of the region, even where public credit institutions intended to help the small farmer are now open in the towns, only a minority of the more prosperous small holders make use of them. The rest continue to depend on the shopkeeper-moneylenders, either because they cannot meet the requirements of the formal credit institutions, or because they prefer the

traditional relationship, without bureaucratic complications or supervision of their uses of the credit.<sup>52</sup>

The merchants often combine political with economic dominance, as the most dynamic element in the local élite. One study describes their multiple roles in the following terms: seven general stores "dictate the price of cash crops and all locally manufactured goods, as well as tastes and fashions in fabrics, cosmetics, combs, kerchiefs... The store-owner is a banker, pharmacist, family counsellor, accountant, public scribe and a news service... Disliked and distrusted as they are because of imposing ever-new necessities and status requirements, they fulfil an important role in the change toward Creole values, and even if their main motivation is more often than not material gain, they frequently show a sincere concern for the 'progress' of the community, often more than do the official authorities or other leading families". In this instance, as a number of shopkeepers occupy official positions in the local administration, many members of the local lower class "believe that the stores are somehow connected with the government, and that the merchants are really government agents trying to 'exploit the poor'... 'We are all slaves of the government's stores' is an expression often heard when people discuss their debts. There is, of course, no connection whatsoever between the authorities and the stores, which are all private enterprises, but many people tend to identify the two".<sup>53</sup>

This quotation suggests questions that cannot be answered from the present limited evidence. To what extent are the *pueblo* merchants agents of change, and necessary intermediaries linking the rural people with national markets? To what extent do their typical systems of trade and credit, avoiding cash transactions, and their typical combination of local economic and political power, tend to perpetuate a static situation, and inhibit the rural people from fuller participation in the national market, with the stimuli to agricultural innovation that might be expected from such participation? Can participation

<sup>52</sup> For local descriptions of the relationships between shopkeepers and small cultivators, see Richard N. Adams, op. cit.; G. Hill and others, op. cit.; Andrew Pearse and Salomón Rivera, *La Tenencia de la Tierra y sus Implicaciones Socio-Económicas en Tenza, Colombia* (Sección de Investigaciones, Facultad de Sociología, Universidad Nacional de Colombia, Bogotá, May 1963); and I. Silva Fuenzalida, *Aspectos de la Organización Económica de las Comunidades Rurales de la Provincia de Nuble, Chile*, Economía, Santiago, 75-76, 1962). The last two of these sources point to the squeeze placed on the small cultivator by continuing inflation in recent years; the prices of the tools and other goods he needs to buy consistently rise faster than the prices of the produce he has to sell.

<sup>53</sup> Gerardo and Alicia Reichel-Dolmatoff, *The People of Ariatama: the Cultural Personality of a Colombian Mestizo Village* (London, Routledge & Kegan Paul, 1961, p. 239 and p. 459).

in the national market along lines beneficial to the small farmers be envisaged without far-reaching changes in the systems of local marketing? The local merchants have had to adapt themselves to quite restricted opportunities, and the typical adaptation may have helped to keep the opportunities restricted. The *haciendas* sometimes depend on them to supply their workers — again through credits offset against the workers' wages — but more often do this through their own commissaries, and try to keep the wages at home. (Nowadays, the *hacienda* commissary sometimes becomes a "fringe benefit" through sale of goods below market prices but such a change leaves the worker even less occasion to deal with the town merchant.) Increasingly, the *hacienda* does not use the town for marketing of its produce; this is often sold directly to wholesalers in the large cities or to export firms. The town merchant then depends on trade with cultivators who have only a small surplus to sell and too little land to increase this surplus very much, for whom the credit system means at least a degree of security in meeting minimum needs for goods they cannot produce themselves. The merchants cannot be blamed for not introducing marketing techniques suited to medium farmers, except where such farmers have actually been present.

The improvement of communications throughout the region has revitalized some towns and enabled new ones to appear, but seems more often to have helped to drain the local centres of the little economic life they possessed. Itinerant truckdrivers penetrate the rural hinterland to buy produce. (Indeed, some local studies indicate that ambitious rural young men, instead of saving to buy land, do so to buy trucks and become intermediaries between their neighbours and the urban market.) Cultivators can travel by bus to the city to make purchases. The local town is bypassed, and often, where it has constituted a non-Indian island in an Indian countryside, a long history of unprogressive exploitation has made it deserve its fate. This, at least, seems to be the meaning of the economic decay of many small towns where the rural population now has access to a larger centre. Elsewhere, some observers argue that the decline of the small town means that its satellite rural population has even fewer ties than before to the outside world — they fall back on the *hacienda* commissary or the petty *caserío* shop for necessities, or do without. This is particularly likely to be the case where unfavourable price and wage trends have shrunk rural purchasing power. (In practice, both trends may be present in the same locality; the better-off and more enterprising small cultivators broaden their ties with the outside world, while those of the more impoverished and marginal groups shrink.)

## G. PUBLIC POLICY AND RURAL SETTLEMENT PATTERNS

The preceding pages add up to a dark picture of rural institutions that function badly or are ceasing to function at all, with only scattered and ambiguous evidence that institutions better adapted to the needs of today are beginning to replace them. This should be no surprise; the defects of the rural social structure and the rural economic organization have been described often and from many points of view. The next question

is, what can be done? The need for integrated provision of many kinds of services to raise the productivity and the levels of living of rural people, and the indispensability of their own deliberate and organized participation in such efforts are prominent among the commonplaces of international and national reports. What conclusions helpful toward the attainment of these ends can be derived from a combined examination of the way rural



people are grouped on the land, the way in which they are governed or govern themselves, and the web of economic and social relationships in which they are involved?

An exploratory study such as the present cannot avoid falling back repeatedly on an unsatisfying answer that is also a commonplace of international reports; much more representative and reliable local information is needed, permitting sociologists, economists, human geographers and political scientists to advance toward better-founded general conclusions. The case for more extensive local information, however, does not rest primarily on the prerequisites for broad analysis and generalization. One generalization that can already be made with complete confidence is that rural needs cannot be met by uniform national recipes or plans drawn up at a distance. The widely differing types of rural settlement demand differing and flexible strategies that will depend upon an intimate acquaintance with local situations.

At the same time, it should be obvious that really effective reforms in rural institutions demand equally far-reaching changes in national economic, social and political structures that fall outside the scope of the present discussion.<sup>54</sup> If this requirement is not met, the best-intentioned programmes are likely to transform themselves in the course of their application to the rural environment, serving purposes quite different from those envisioned by the programmer, or none at all. As long as national patterns support the kind of clientele relationships between influential groups in the capital cities and ruling cliques in the small towns already mentioned, for example, democratic local initiative can hardly be expected to prevail in the latter; a policy offering the *municipios* more aid or more autonomy may then only strengthen the existing system. As long as *haciendas* retain their traditional dominance over *minifundio* settlements within rural localities, the promotion of "community" self-help in the latter can have only limited and precarious achievements; such a programme may even serve as a device to excuse evasion of the central issue of land tenure.

Under such circumstances, the prerequisites for effective local and wider organization of the rural people deserve primary consideration. Up to the present, the laws of many countries in the region have placed restrictions on the unionization of rural workers in striking contrast to legislative encouragement of unionization of urban workers. The extra-legal sanctions deriving from the local power structures have been even more important in hindering such organization than the actual legislation itself. The situation is now changing but the extent and meaning of the changes are far from clear. Except in Bolivia, Cuba, Mexico, and Venezuela, and in zones of modern plantation agriculture in some other countries, legally recognized and registered rural unions remain very small. In Colombia, according to a recent study, the only recognized agricultural union, Federación Agrícola Nacional (FANAL), had only about 5,000 experienced militants, able to influence about 20,000 less active supporters, in a rural population of between 8

and 9 million. At the same time, there have appeared scattered rural movements without legal status, in which spontaneous local protests are intermingled with organizational forms of a frankly revolutionary character. The scanty available evidence suggests that such movements are supported more actively by *minifundio* holders and various kinds of tenants than by resident *hacienda* workers or landless wage workers, and that their demands are centred on changes in land tenure and local power relationships rather than on wages and working conditions. The new rural movements are forming links between the rural population and the national political structures, and this can only be considered a healthy trend, in spite of the dangers of their use by national factions for purposes unrelated to local needs, or their incorporation into the existing patterns of national-local clientele relationships. The future effectiveness and responsibility of rural unions, political clubs, etc., will in large part determine the practicability of reforms in local administration and in the provision of public services. Such rural organization can be furthered by changes in legislation, and to some extent by technical aid to inexperienced rural groups, but it can be secured and guarded against distortion only by the initiative of the rural people themselves.

One other preliminary general proposition should be mentioned. Rural reforms cannot be envisaged as a transition from unsatisfactory static patterns to satisfactory but also static patterns. Self-sufficient rural communities cannot be created or long preserved in the region, even if this were desirable. The task is to help the rural people acquire institutions that will help them cope better with continuing change, and the high rates of natural increase that are inevitable for some time to come insure that for many of them such changes will involve shifts both in place of residence and in occupation.

Subject to the above reservations, one may conclude that rural development programmes in Latin America need to take into account the groupings of the rural population at two or three levels. First, comes the strictly local level of the *neighbourhood*, the level of primary face-to-face contacts, which may contain fewer than ten or as many as 200 families, depending on density and local distribution of population. Second comes the level of the wider *community* composed of several neighbourhoods and a specialized "urban" centre. The community in this sense might contain from 5,000 to 50,000 people; in the larger population sizes it would normally be mainly urban, with most of the population living in the centre. If the primary neighbourhoods are very small and isolated from any nucleus large enough to function as a community centre, an intermediate level may have to be envisaged, either as a natural grouping of neighbourhoods or as an artificial grouping for administration and provision of services.

Ideally, the two levels should be equivalent to the two levels proposed for rural local authority areas by a United Nations Working Group on Administrative Aspects of Decentralization for National Development in 1961: "At the lower level, the authority should cover the largest area at which a sense of community exists and direct citizen participation in local services is possible; at the higher level, the authority should cover the largest area from which most technical services can be provided efficiently, but the area should not be so large that councillors cannot meet frequently. The latter

<sup>54</sup> For an assessment of the national social structures in relation to development requirements, see the ECLA secretariat study, *The Post-war Social Development of Latin America* (E/CN.12/660).

authority should include rural and urban populations and, if practicable, have a town or city centrally located and serving as local authority headquarters.<sup>55</sup> Unfortunately, as has been seen, in much of the region the largest area at which a sense of community exists is very small, and at the higher administrative level councillors are able to meet frequently, if they do meet, partly because they do not represent the rural areas at all.

#### 1. AT THE NEIGHBOURHOOD LEVEL: PROMOTION OF CLUSTERED SETTLEMENTS, SERVICE NUCLEI, ORGANS OF SELF-GOVERNMENT

Rural sociologists have long agreed on the social advantages of clustered over dispersed rural settlement — advantages admittedly offset, as the cluster grows in size, by losses in agricultural efficiency according to the time the cultivator must spend daily travelling to and from his fields. As already seen, the preference for planned compact settlement was previously held by the Spanish colonial administration. At present, for almost the first time since the colonial period, agrarian reform and colonization projects are beginning to take into account the physical patterns of new rural nuclei.<sup>56</sup>

The typical new policy calls for a nucleus of buildings housing certain basic services — a school, a neighbourhood meeting hall and recreation centre, a repair shop for agricultural machinery, a sports field, a chapel, possibly the office of a project manager or agricultural extension worker — with houses grouped around it. The houses are usually built by their occupants, with technical assistance from the project management which also sees to the provision of piped water and electric power. In a certain number of projects, the houses themselves are built by a public agency, usually with the aid of funds from abroad.

The numbers of families in the limited number of settlements of this type that have been completed bring them closer to the *caserío* or the *villorrio* than to the *aldea*, in the sense in which these terms have been used in the present article. In Venezuela, where the new agrarian reform settlements are in areas without formidable topographical barriers, they average one hundred families each.<sup>57</sup> In Colombia, where the first nuclei under

the agrarian reform programmes are in broken mountainous country, they average only 16 families.<sup>58</sup> In Chile, the first 27 *aldeas campesinas* built by the Instituto de la Vivienda Rural average 40 families each.<sup>59</sup>

Programmes of this kind are too new and too little studied to permit any general conclusions as to their effectiveness. As agrarian reform progresses, experimentation with different types and sizes of nuclei will be justified.<sup>60</sup> Some authorities on rural life are already arguing, however, that compact settlements, aside from their heavy initial costs, do not meet the real needs or wishes of the rural families. "Line settlements", in which houses are aligned on both sides of a road with individual holdings stretching back in narrow strips, are often recommended as a compromise combining a reasonable share of the advantages of compact settlement and accessibility to landholdings. There is, in fact a spontaneous trend toward irregular line settlement in various parts of the region that might well be studied and adapted to present needs; often the building of a rural road is sufficient to start a regrouping of the local population along the roadside.<sup>61</sup> It would also be adaptable to certain recent recommendations for colonization policy which point to the disappointing experiences of paternally managed nucleated colonies, and emphasize instead the building of access roads and provision of opportunities for cultivators to settle along them.<sup>62</sup>

Instances have been reported in which beneficiaries of agrarian reform have refused to occupy houses built

Oficina Central de Coordinación y Planificación, *Proyecto de Desarrollo Integral de Bocono, Primer Curso de Planificación Integral de Asentamientos Campesinos* (August-November 1963). The present approach in Venezuela is influenced by the experience of Israel in agricultural colonization.

<sup>58</sup> Instituto Colombiano de la Reforma Agraria, op. cit.

<sup>59</sup> *El Mercurio*, Santiago, 21 January 1964.

<sup>60</sup> One authority has recommended a hexagonal system of land division, with each hexagon divided into 24 triangular farms, with the 24 families grouped around the centre of the hexagon, each at the point of its own triangle, and with a nucleus of services in the centre (T. Lynn Smith, *Una sugerión para la planeación de las comunidades rurales en América Latina*, Revista Mexicana de Sociología, XXII, 2, 1960).

<sup>61</sup> "More than concentration in small towns, the peasant who works the land is interested in access to the main roads so as to be able to use the transport services that permit him to carry his products to more profitable markets. Furthermore, access to the main roads permits him to send his children to the better equipped schools. The Chilean peasant is accustomed to living by the roadside; in settlements it would be hard for him to guard his animals or care for them conveniently.

"This tendency to live on the land is combatted by the planners of rural housing programmes in Chile. To them the clustering of buildings is the only way of solving the problems presented by modern construction. The creation of *villorrios agrícolas* does not in any way solve the problem of a peasant.

"On the contrary, once he is at a distance from the land he will seek other forms of work, will use political pressure to enter the public administration or to obtain a licence to sell alcohol or open a shop." (Oscar Domínguez, *El Condicionamiento de la Reforma Agraria: Estudio de los Factores Económicos, Demográficos y Sociales que Determinan la Promoción del Campesino Chileno* (Université Catholique de Louvain, Collection de l'Ecole des Sciences Politiques et Sociales No. 173, 1963, p. 182.)

<sup>62</sup> See, for example, Alfonso Villa Rojas, *Notas sobre la Distribución y Estado Actual de la Población Indígena de la Península de Yucatán, México*, América Indígena, XXII, 3, July 1962; and International Bank for Reconstruction and Development, *The Economic Development of Venezuela* (The Johns Hopkins Press, Baltimore, 1961). The latter report criticizes earlier colonization projects for, *inter alia*, "excessive expenditures on housing, community facilities, and land clearing with insufficient attention to the economic productivity of the farms created".

<sup>55</sup> United Nations Technical Assistance Programme, *Decentralization for Local and National Development* (United Nations publication: Sales No. 62.II.H.2), p. 21.

<sup>56</sup> In the 19th and early 20th century, a good many colonies of European migrants in the countries in the southern half of South America were organized according to the patterns of large compact villages in the migrants' countries of origin, but these examples did not influence the rest of the rural population, and in many instances the emigrants eventually turned to more dispersed settlement. Whetten (*Rural Mexico*, op. cit., p. 49) emphasizes that most of the new rural settlements deriving from the Mexican agrarian programme since 1930 received "little or no planning in regard to the location of the homes in relation to the farms or to the spacing of houses and lots with reference to one another".

<sup>57</sup> The Venezuelan agrarian reform policy calls for the organization of beneficiaries in groups of about 100 families with a nucleus of services, but in most of the earlier local projects the families have lived dispersed on their plots, with the nucleus located so as to have access to a road; while clustered settlement is now preferred only a few have been organized. One of the newer projects envisages *centros poblados* of about 140 families, with the size of nuclei determined by the criterion that landholdings (of 10 hectares each should not be more than 3-3.5 kilometres from the centre, considered the maximum convenient distance for transport of crops, etc. by animal power (Venezuela,

for them or inherited from a previous *hacienda* nucleus, preferring to build huts on their own land. In at least a few other instances rural workers already living on an estate undergoing subdivision but deemed unqualified for farm management have been settled in nuclei of houses with small garden plots, without adequate consideration of local employment opportunities, leaving a group unable to support itself and resented by the recipients of larger holdings as a source of crop and animal thefts.

It is significant that a high proportion of the new rural nuclei providing houses and community centres that have been created in the older settled areas have been financed through special aid from abroad. The high initial costs would make this kind of planned resettlement out of the question, at least in the short run, for the great majority of the families now subsisting in *caseríos* or dispersed neighbourhoods. The Cuban example previously cited differs from other projects of this type in that the sudden change from pastoral activities to intensive agriculture, in estates that were to be retained as large productive units, demanded a rapid increase in the number of workers living close to their jobs, but even here the cost of the new settlements seems to have prevented their construction on a scale matching the changing labour requirements.

Whatever conclusions may be reached as to the practicability under differing circumstances of the types of nuclei just described, a greater degree of clustering of the rural population than now exists in the region is desirable for many reasons. The more scattered *minifundio* cultivators and squatters cannot be reached by roads or educational services except at prohibitive cost, and much of their land should be withdrawn from cultivation altogether; if not, erosion and soil exhaustion will eventually force them to leave it. In these as well as in less extreme cases, the most hopeful approach may be a combination of incentives to clustering and improvement of communications, flexibly adapted to local situations and cultural traditions.

The location of nuclei of services at points accessible to the greatest possible number of rural families may by itself exert an influence toward clustering of settlement. This is said to be happening at present among the extremely dispersed population of the Bolivian *altiplano*. An appreciable number of such nuclei now exist in different countries, as a result of "community development" or "nuclear school" programmes as well as agrarian reform or colonization, but criteria for the location of the nuclei or the range of services offered by them are rarely formulated in precise terms or in relation to the pre-existing groupings of the rural population.

The 1961 Working Group on Administrative Aspects of Decentralization, referred to above, sought criteria for "optimum minimum" populations to be served by different rural "technical services", defined as services requiring, at the same time, "substantial co-ordination at the local level, popular participation, adaptation to local circumstances and technical support from higher levels". Specialists in the different services reported to the Working Group that the optimum minimum area for primary education would supply 120 children (ages 6-12) for a three-teacher primary school; that one agricultural extension worker could effectively serve 600 to

1,000 farmers; and that minimum standards for health personnel would include one nurse to 1,000-1,500 people and one general practitioner for every 4,000-5,000. No numerical ratio was ventured for social welfare services.<sup>63</sup>

These non-comparable standards do not take us very far, but do suggest that an efficient nucleus of "technical services" should serve a larger population than that found in most rural settlements or neighbourhoods at present, including the newer planned settlements — say a minimum of 200 families or 1,000 people.<sup>64</sup> The relevant population for such a nucleus, however, would include not only the families in its immediate vicinity but also those able in practice to reach it in a reasonable amount of time — whether on foot, by horse or mule, or by motorized transport. The effective radius would depend as much on local habits as on the actual travel time; peasants in some areas are quite willing to walk for several days to a market, while others rarely stir outside their immediate neighbourhood; in a good many localities, factionalism might inhibit the peasants of one settlement from using services placed in another. The nucleus for technical services should normally be also a nucleus for some commercial and artisanal services, including an establishment for repair of tools and machinery. Up to the present, criteria for the location and character of such services in the rural areas have received even less attention than criteria for educational and health services. This last question is only one aspect of the larger problem of bringing the rural population into more effective contact with national markets; the promotion of local co-operatives in conjunction with the extension of local "technical services" offers the most promising answer. The experiences of the *tiendas del pueblo*, hundreds of which have been established in the countryside by the Cuban Instituto Nacional de Reforma Agraria, also deserve study.

As a minimum, effective planning of the location of rural technical and other services will require accurate information on the physical and human geography of the rural localities — including size and location of settlement clusters, distribution of dispersed families, roads and trails, actual patterns of movement within the locality and functions of present gathering places. Up to the present, systematic information of this kind is remarkably scanty, except for the occasional localities that have been the subject of special sociological or geographical surveys. Large-scale mapping of the countries through aerial photography is only now in progress.<sup>65</sup> Maps of the *municipios*, if they exist at all, are often inaccurate, and

<sup>63</sup> United Nations Technical Assistance Programme, op. cit., p. 15-16. The Working Group distinguished *technical services* from *centralized field services* "such as postal services and telecommunications, which lend themselves to highly centralized forms of field administration"; and *local services*, "such as construction and maintenance of local roads and irrigation works, which can be performed effectively without technical support or supervision from higher levels".

<sup>64</sup> One of the very few systematic discussions of standards for such nuclei, however, applying itself to Uruguayan conditions, proposes a three-teacher school for 60-70 children and a clinic in charge of a first aid attendant, visited weekly by a physician, to serve a group of 400-500 people. Educational levels in most of the other countries would preclude a three-teacher school for such a small number of children (Centro Latinoamericano de Economía Humana, *Interpretación del Uruguay Rural*, Librería América Latina, Montevideo, 1963).

<sup>65</sup> For a summary of mapping progress up to 1963, see "Los Recursos Naturales en América Latina, Su Conocimiento Actual e Investigaciones Necesarias en Este Campo" (E/CN.12/670).

few censuses have distinguished the strictly rural nuclei in their tabulations.

The areas to be served by the lowest units of the different technical services should presumably coincide with one another as far as practical<sup>66</sup> and also should try to coincide with recognized sub-divisions of the *municipio*—although the latter would in many cases benefit from reorganization either to bring them into closer correspondence with true neighbourhoods or to standardize their sizes. These administrative-unit-neighbourhoods, centring in a *caserío* or *villorrio*, would be the natural units for local organization co-operating with the technical services. Whether such local organizations should receive formal status as units of local government with their own sources of revenue and powers of coercion can hardly be given a general answer. There are strong arguments against the multiplication of small weak local authorities, and in much of the region the criteria set forth by the Working Group for lower-level local authorities could hardly be met. Once again, solutions should depend on study of what is happening locally. In some countries it may be feasible and desirable to make the sub-divisions the basis for representation in the *municipio* council, so that a local person with a mandate from his neighbours handles relations between them and the technical services and also represents them before the larger local authority. In other instances, a variety of special-interest local rural bodies may be more effective—organizations of beneficiaries of agrarian reform, trade unions in *hacienda* and plantation settlements, co-operatives, school boards or parent-teacher associations.

For some purposes very small and entirely local nuclei will be needed. Not many rural schools in the region can boast three teachers or 120 pupils. For the foreseeable future, the most widely distributed “technical service” will continue to be the tiny one-teacher school. For at least four decades, rural programmes in some countries of the region have hoped to make such schools serve purposes wider than the elementary instruction of children. The more ambitious programmes along these lines have been frustrated both by the limitations of the *caserío* environment and those of the untrained and underpaid teachers. Nevertheless, such schools constitute natural meeting places and focuses for neighbourhood effort. Better training and incentives for their teachers, support from larger nuclei of technical services, as in the nuclear school system, in combination with measures giving real hope to the rural people themselves, could make them effective instruments of progress.

The problem of rural housing, with the attendant needs for potable water, sanitation, and electric power requires separate discussion. While compactness of settlement may not be of decisive importance in relation to rural access to the technical services already mentioned, it is of obvious importance in relation to the costs of construction by other than traditional methods, and the costs of water supply and power lines.

Rural housing policy in the region has struggled for several years with its initial dilemma; on the one hand, rural housing almost everywhere is intolerably poor by any objective standards; on the other, no country can afford to subsidize better rural housing on a scale having

<sup>66</sup> The functions of administration and co-ordination of the services would in general be handled at higher levels.

any relation to the needs, and the rural people themselves, unlike the urban, do not make any insistent demands on the authorities for housing aid. Most peasant families continue to provide their own shelter by traditional techniques with assistance only from their neighbours, and the wretchedness of the housing derives as much from low standards as from lack of resources. The rural population is increasing only slowly, so that there is no reason to expect a general deterioration in housing conditions such as the cities have seen in the past decade, although general impoverishment of *minifundio* cultivators, increase in the numbers of landless labourers, or exhaustion of local supplies of timber or other building materials, have no doubt brought about a deterioration in some localities. At the same time, several observers have concluded that increased rural incomes do not generally result in better homes: “Modern standards of housing are simply not recognized by the vast majority of the rural inhabitants as being important. Such standards rank low on the scale of cultural values.”<sup>67</sup> Some rural groups, particularly among Indians, prefer to avoid any show of prosperity that might lead to higher taxes. The migratory workers, resident *hacienda* workers, and shifting cultivators are all lacking in real incentives for building more than a minimum of shelter.

Aside from the limited number of agricultural colonies and nuclei constructed with aid from abroad, rural housing measures have followed two main lines: first, *hacienda* and plantation owners have been required by law or stimulated by tax incentives to provide housing meeting minimum standards. Such measures have brought visible improvements in the *hacienda* settlements of some areas, but in others may have encouraged the tendency toward reduction of the number of resident families and greater dependence on labour from outside. Second, community development and related programmes have experimented with techniques of motivating and aiding the families of small cultivators to build better houses for themselves. A considerable body of information on such techniques has by now been assembled, but the impact on rural housing levels has remained limited and local.<sup>68</sup>

A higher degree of clustering of rural settlement, with secure tenure and a strengthening of neighbourhood ties, is undoubtedly a prerequisite for faster progress in housing improvement through self-help. Such clustering would facilitate co-operative labour and more efficient local production of building materials, as well as the provision of minimum public services. It would also promote—though not guarantee, to judge from past experience with “model houses”—a spirit of emulation in the adoption of housing improvements. In any case more systematic evaluation is needed of the experiences of rural housing projects in the region, including their relationships to settlement patterns, neighbourhood and community organization, and other services affecting levels of living.

<sup>67</sup> Nathan L. Whetten, *Rural Mexico*, op. cit., pp. 302-303.

<sup>68</sup> The main stimulus for pilot projects and local research has been the Centro Interamericano de Vivienda y Planeamiento (CINVA). See, for example, its publications on *Experiencias sobre Vivienda Rural en el Brasil* (Bogotá 1961) and *La Vereda de Chambimbal: Estudio y Acción en Vivienda Rural* (Bogotá 1958).

## 2. AT THE LEVEL OF THE WIDER COMMUNITY: STRENGTHENING OF THE *pueblo* AND THE *municipio*

The preceding pages have contrasted the potential importance and the actual shortcomings of the small semi-urban centres, the *pueblos* or *cabeceras* of *municipios*, in a region in which most of the rural-agricultural population is not grouped into villages large and varied enough to function as communities. Ideally the small towns should provide for the rural people a wide range of services that cannot be provided efficiently at the neighbourhood level—secondary schools, hospitals, markets, credit institutions, courts, civil registries, cinemas, newspapers and radio stations featuring local news, etc. Rural development, except in the zones close to large cities, will depend in large part on a strengthening of the *pueblos* that have been assessed in such unflattering terms.

Present population and employment trends in the region, moreover, imply that another kind of very important rural-urban liaison function must be demanded of the towns. The population of the strictly rural-agricultural localities can be expected to increase slowly in absolute terms during the foreseeable future, but to continue its present decline as a percentage of total regional population. The rate of “natural” increase in the rural population of the region is probably above 3 per cent annually, while the net increase is no higher than 1.5 per cent. The remainder of the natural increase is moving from the rural localities to urban centres of one kind or another.<sup>69</sup> In spite of the potentialities for agricultural employment of agrarian reform and the opening of new lands, a still lower rate of rural net increase and a higher rate of urbanization might be economically desirable—if only non-agricultural jobs could be created fast enough and if migrants from the countryside could be qualified to fill them.

These conditions are not being met even at the present rates of urbanization, and the consequent ominous accumulation of huge numbers of under-employed marginal workers and their families on the periphery of the larger cities is directing public attention to the possibility of securing a healthier geographical distribution of the increment to the rural population. If this increment cannot be kept on the land except at the price of perpetuating the disastrous *minifundio* system and insuring the eventual resumption of rural exodus on a still larger scale, and if the cities can absorb productively only a part of it, where is the remainder to go?

The only constructive answer seems to lie in the expansion of employment opportunities in the small and medium-sized urban centres. The towns should be able to absorb part of the surplus rural labour force permanently and for another part act as a half-way house, providing vocational training and initiation into urban ways of life prior to migration to larger centres.

The fragmentary evidence now available leaves one with the impression that the towns are at present very weak links in the urban-rural network—if such a net-

work can be said to exist—and that the majority are in serious danger of losing their present economic capacities and local industries, if any, deteriorating into more nuclei of local public-office holders or agglomerations of marginal rural workers who have nowhere else to go.

The prerequisites for their strengthening as community centres and sources of productive employment are far from simple, even if the national authorities are prepared to grant wider local self-government, technical aid and more adequate sources of revenues. Some countries in the region have alternated historically between the delegation of extensive responsibilities to the *municipios* and systems of extreme centralization. The *municipios* in many instances have been deprived of educational, public health, policing and other functions with which they were previously entrusted, as national standards for these services rose, and municipal ineffectiveness become more notorious. At present, it does not appear that municipal affairs in the countries in which the *municipios* retain a degree of autonomy and wide legal responsibilities are in a healthier state than in the countries with more centralized systems.<sup>70</sup>

It has already been stated that the local social structures are likely to transform specific reforms and aid programmes into something quite different from what was intended, unless measures are accompanied by the appearance of a real local public opinion in which the rural population as well as the lower strata of the towns can make themselves heard. Such a public opinion in turn depends on agrarian reforms, educational reforms, and the growth of mass organizations really responsible to their members. This prerequisite is particularly important if public policy is directed toward the systematic use of under-employed local labour in roads and other public works. This resource can be of very great value, but past experience shows that unless its use is controlled by the rural people themselves, it can be a source of intolerable abuses and exploitation.

It must be expected that if a reasonable degree of community solidarity and popular participation in local government is attained, demands on the central authorities for aid will become more insistent and more effective. In spite of the real likelihood that the tapping of local initiative and the use of under-employed local labour can make important contributions to infrastructural investment, neither the small towns nor the rural neighbourhoods can be expected to provide for themselves, with only inspiration and technical advice from outside, the kind of services the national authorities normally provide for the wealthier cities. National policy makers and planners must be prepared for a continuing struggle to rationalize local demands, approximate them to national developmental priorities, and overcome the two deeply rooted political traditions of concentrating resources on highly visible prestige projects and of scattering token aid among all claimants.

One indispensable step will be a systematic assessment of the present resources and functions of the towns considered as community centres.<sup>71</sup> The broad questions to be considered include the following:

<sup>69</sup> See “Geographic Distribution of the Population of Latin America and Regional Development Priorities”, loc. cit. Some of the smaller Caribbean and Central American countries show much higher rates of rural net increase and a few countries, including Argentina, Chile and Venezuela show no increase at all.

<sup>70</sup> See the discussion of local government and field services in Brazil by Diogo Lordello de Mello, in United Nations Technical Assistance Programme, op. cit., pp. 133-148.

<sup>71</sup> The studies made for the Plan Regional para el Desarrollo del Sur del Perú constitute almost the only attempt up to the

1. Standards for optimum size of the *municipio* and its *cabecera*. In general, these units should probably be fewer and larger; the universal tendency for the *cabecera* to monopolize municipal services has stimulated a contrary pressure toward sub-division. Once the national Governments face the need for more effective aid to the *municipios*, the burden of an excessive number of small units requiring permanent subsidies if they are to maintain minimum services can become very heavy. A satisfactory population range for predominantly rural *municipios* might be between 20,000 and 50,000. This would coincide in general with the population standards for the second tier of technical services (secondary school, hospital, etc.) proposed by the United Nations Working Group previously cited.<sup>72</sup> In practice, however, the sparseness of rural population, geographical barriers, lack of roads, etc. in much of the region may require the maintenance of local units well below a satisfactory minimum in regard to population;

2. Standards for division of responsibilities between local authorities and national or regional agencies, for co-ordination of the two, and for *municipio* financial resources. The present typical relationship has been called a "dual system" in which "central ministries administer technical services directly, with local authorities having autonomy legally to perform local services and to do what they can do foster local development, but actually performing few if any technical services", a system characterized by "separateness and conflict" between the two.<sup>73</sup> In practice, the *municipio* authorities often confine themselves to a few residual functions, such as licensing, that also constitute their only dependable sources of funds;

3. Standards for local infrastructural investments and services, related to assessments of the facilities now present. Uniform criteria for investment priorities might do something to discourage the misapplication of funds now typical of the authorities in the *cabeceras*. The important points to be considered are the functioning of the services and their real availability to all the people of the *municipio*. It is not enough to know that a hospital, school, or rural credit agency exists in the form of a

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present to make such an assessment for a major part of a country. One of these studies, *El Desarrollo Urbano* (Informes Vol. XVIII, PS/E/43) offers a framework for assessment of urban facilities and needs in small centres. The Report of the Working Group on Decentralization for National and Local Development offers extensive advice on standards for local government areas and for their relationships with higher levels of authority.

<sup>72</sup> United Nations Technical Assistance Programme, op. cit., p. 16.

<sup>73</sup> *Ibid.*, p. 10.

building and a staff. The desideratum of wider availability for services located in the *cabecera* generally implies a need for more investment in local roads connecting the rural nuclei with the *cabecera* and in buses and trucks to use the roads;

4. Assessment of potentialities for local industries and other sources of employment. Presumably many of the existing towns have no real future as industrial, commercial, transport, or administrative centres; others should specialize in one or more of these functions. A national programme for aid to the *municipios* will be under continual pressure to spread its resources thinly, in accord with political pressures rather than local potential. Systematic knowledge of the local potential and placement of the localities in a framework of planning for regional and national development will not, of course, do away with such pressures, but are indispensable if the pressures are to be effectively resisted or channelled;

5. National arrangements for technical assistance to *municipios* in rationalizing their administrative methods, in planning, and in execution of local projects; and for channelling of grants-in-aid to them. In the past, relations between the *municipios* and the national Government in a majority of countries have been handled through the provincial representatives of Ministries of Interior, have concentrated on enforcement of legislative restrictions on *municipio* activities and uses of funds, and have been countered by the kinds of political manoeuvres previously described. A change in emphasis from regulation to assistance within this system offers one alternative approach; but several countries are also initiating national agencies outside the traditional administrative system. In Colombia, for example, in 1950 an Instituto de Fomento Municipal was set up, conceived as a financial mechanism of the *municipios* for the organization of some of their basic services — water and sewerage systems — and in 1962 Venezuela created an autonomous Fundación para el Desarrollo de la Comunidad y Fomento Municipal, supported by external funds, with multiple responsibilities for research, financing, and technical aid in relation to municipal public works, housing, and local economic projects (including co-operatives, savings and loan associations and small industries). Associations of *municipios* offer another alternative, and such associations now exist in several countries. The financial, administrative and political weaknesses of the *municipios* mean, however, that such associations require consistent and extensive central support if they are to acquire any ability to offer technical services to their members.

## H. SOME RESEARCH NEEDS

The preceding pages have pointed to a number of questions that cannot be answered satisfactorily from the present evidence, although tentative answers to some of them have been risked. An extensive listing of interesting topics for further research might serve no immediate purpose, in view of the scarcity of regional resources for rural studies and the present commitment of such resources to certain high-priority projects. The following summary limits itself to a few important lines

of study that derive directly from the analysis made in this article, and that at the same time fall within the fields of interest of international bodies and private research organizations now active in Latin America:

*Demography*: how much further information on relative population sizes, population structures, rates of growth, and currents of migration in the different types of rural and semi-urban nuclei can be derived from past censuses and other demographic sources? What are

the prerequisites, in terms of census definitions, questions, and tabulations, for the obtaining of more adequate information through future censuses?

*Human geography:* how are the different settlement types distributed over the region? How are they influenced by topography, crops and systems of cultivation, land tenure, cultural patterns, and deliberate government policies? What are the effects, under defined conditions, of the construction of service nuclei, main highways, local access roads?

Case studies of new settlements and of the economic and social consequences of new roads are particularly needed. Such studies should be made at the time of construction of the settlement or road and again three, five, or ten years later, and should permit the evaluation of alternative policies both in the older cultivated areas and in the zones of colonization.

*Local administration and community organization:* what services do the local centres provide in practice and how are these services controlled and distributed? How do political parties, trade unions and other organizations representing sectors of the public function at the level of the small town and the rural neighbourhood, and as channels for communications between these localities and the national political and social structures?

*Agrarian structure, local economy, marketing:* what are the implications, of the types of agricultural enterprise locally dominant (plantation, *hacienda*, medium-sized commercial farm, small cultivator) for the economic and social functioning of small towns and rural neighbourhoods? What are the implications for agricultural productivity and for local initiative of alternative systems of remuneration of rural labour, marketing of produce and supply of credit? What are the possibilities and prerequisites of expansion of non-agricultural enterprises in the small towns?

*Regional planning:* can the *municipios* be envisaged as a basis for the lowest level of units in a hierarchy of "regions" for planning purposes? If so, how should their optimum size and other characteristics be defined, and what changes in administrative patterns are needed? Can the *municipios*, provinces, etc. be envisaged as "building blocks" within flexible systems of regional planning? If so, how should relationships be defined between the regional planning institutions and (a) national planning bodies (b) provincial and local administrative bodies? How do the semi-urban centres of *municipios* relate themselves at present to the larger urban centres, and what should be the criteria for such relationships within a system of regional planning?





# THE CENTRAL AMERICAN COMMON MARKET FOR AGRICULTURAL COMMODITIES<sup>1</sup>

## 1. INTRODUCTION

The Central American Economic Integration Programme is an instrument designed with a view to the formation of an economic system which, through exploitation of the opportunities afforded by a broad market and a joint economic policy, will help to remove some of the stumbling-blocks to the economic development of each individual Central American country.

The execution of various programmes and the establishment of a Central American Common Market have represented the first steps towards breaking down the narrow confines of the individual country markets, which are too small to support specific industrial structures, encourage the expansion of basic activities and raise the technical standards of agricultural activities to a satisfactory level.

If the economic development of the Central American countries is to proceed on co-ordinated and complementary lines, and at the regional level, there must be close co-ordination between the national programmes carried out in the different economic sectors, especially those relating to investment and promotional measures in the major productive activities.

The institutional and organizational framework of the common market as it exists at present has enabled attention to be concentrated on specific activities and on the shaping of a co-ordinated regional policy for the promotion of economic development in all its various aspects.

From the particular standpoint of the economic integration of the agricultural sector, one aim is to stimulate the growth of trade between producer areas and consumer centres in the region, with a view to the expansion of production on the basis of the import substitution possibilities deriving from the complementarity of the Central American economies; another is to attain a higher standard of efficiency in respect of specialization within the region, in consonance with the resources existing in each area, as well as to increase the flow of income accruing to farmers, and to maintain consumer prices at reasonable levels.

The integration of the market for agricultural commodities is especially important in Central America's case. In the first place, the agricultural sector needs to speed up its rate of development, which is lagging behind that of other sectors (even falling short of levels for which the lower income-elasticity of agricultural commodities might account); the situation is particularly serious where production for home consumption is con-

cerned,<sup>2</sup> since average *per capita* nutritional levels have declined in respect of staple foodstuffs, and the share of imports in the supply of agricultural products is following an upward trend. Consequently, the integration of the market in question must be expedited, in order both to provide additional incentives for the Central American producer and to promote a vigorous import substitution process in those lines of production for which Central America offers favourable conditions.

Secondly, in view of the fact that agricultural exports are Central America's main source of foreign exchange earnings, a joint regional policy might considerably strengthen its world market position, and would be conducive to co-ordination between internal supply policy and the measures adopted with respect to the sale of surpluses abroad.

Although it might be imagined that the similarity between the conditions and structures of agricultural production in the various countries represents an obstacle to the short-term expansion of inter-Central American trade flows, there are in fact complementarity and import substitution opportunities which are already beginning to be exploited for the common good, as can be seen from the rapid rate of growth of intra-area trade. Nor should it be forgotten that trade in agricultural commodities affects basic aspects of over-all economic integration policy, and that its results and prospects must not therefore be evaluated separately but in relation to other facets of the same process. Consequently, the economic complementarity possibilities deriving from local differences in the supply of natural resources, and other factors that determine production costs and structures, cannot be considered in terms of their repercussions on a specific branch of economic activity, but must be viewed in the light of the trade situation as a whole and of inter-sectoral relationships in the Central American economy.

Accordingly, the future development of Central American agricultural production must be envisaged in relation to the over-all integration programme of which it forms an essential part. This implies stepping up the effort to establish a broad regional agricultural development policy, subject to periodic revision, and serving to channel and co-ordinate national activities in the fields of agricultural development and trade policy.

Such a regional agricultural development policy would comprise a number of different aspects, including (a) the adoption of guiding principles for extra- and intra-area trade; (b) the formulation of programmes for the

<sup>1</sup> Document E/CN.12/CCE/SC.6/4 and FAO/CAIS/64/6, prepared jointly by the secretariat of the Economic Commission for Latin America and the Food and Agriculture Organization of the United Nations. It was presented at the first meeting of the Central American Agricultural Development Sub-Committee, a subsidiary of the Central American Economic Co-operation Committee, held at San José, Costa Rica, on 28 October 1964.

<sup>2</sup> While the annual growth rate of the Central American economy as a whole, in real terms, was 4 per cent in 1950-62, and the industrial sector's 5.3 per cent, that of the agricultural sector in the aggregate was only 2.5 per cent. This is largely attributable to the expansion of exports registered in the early fifties, and, subsequently, in 1960-62.

development of production and the improvement of infrastructure; (c) the co-ordination of national policies with respect to support prices, tax legislation and incentives, etc., with a view to eliminating or reducing artificial distortions in the location of agricultural activities; and (d) the creation of institutional machinery for the periodic study and review of problems relating to agricultural market organization.

In several of these respects significant progress has been made, especially in connexion with trade in agricultural commodities, the formation of a free-trade area and the equalization of tariff duties applicable to third countries. It therefore remains to co-ordinate the measures adopted in specific fields under a broader programme for the promotion of production, whereby the scope of the regional market for agricultural commodities already established can be improved and extended.

The essential features of agricultural trade policy were defined in the General Treaty on Central American Economic Integration, in which bases were laid down for the liberalization of intra-area trade, the establishment of special interim régimes of exemption from immediate free-trade treatment, and the equalization of tariff duties on imports from third countries. In practice, about 65 per cent of the tariff items comprising agricultural and livestock products have been freed, at the multilateral level, from the former restrictions on their circulation in Central America. By virtue of bilateral agreements, some measure of free trade exists in respect of another important group of items, included in the schedules forming annex A to the General Treaty. As regards the adoption of a common tariff *vis-à-vis* third countries, standard tariff levels have been agreed upon except for two items; these equalized duties are already in force for many items, and others will be applied as soon as the relevant protocols have been ratified.

Consequently, the two basic requisites for the establishment of a regional market for agricultural commodities have been virtually met by means of the agreements concerted with respect to tariff equalization and free trade. The stage of full operation of the common market will be attained *ipso facto* upon the abolition of the special interim régimes established during the transitional phase preceding the complete liberalization of intra-area trade. The volume of transactions subject to restrictions of various types amounts to 24 per cent of Central America's trade in agricultural commodities, and covers 35 per cent of the tariff items relating to agriculture.

But the significance of the abolition of the special interim exemption régimes is much greater than the foregoing figures suggest, first, because they apply to the group of products of the greatest economic importance from the standpoint of internal consumption and exports; secondly, because the prolonged application of restrictive treatments — and, in particular, the postponement of the formulation of prior agreements or protocols on the liberalization of trade in certain products — would tend to create an atmosphere of uncertainty that would act as a disincentive to investment in crop farming for the regional market;<sup>3</sup> and, thirdly and lastly, because the existence of a free-trade system among certain countries side by side with restrictive

<sup>3</sup> Apart from the fact that, generally speaking, it would hold up programmes for the development of production within the common market.

régimes among others, in respect of products in the same category, is liable to distort location and supply patterns, as well as to foster the concentration of trade in specific areas and the emergence of regional disequilibria. Hence the importance of a detailed study of the relevant problems and their solutions, so that within the time limits stipulated in the General Treaty, procedures can be applied which will conduce to the complete establishment of the free-trade area as far as agricultural commodities are concerned.

The fact that almost all agricultural products are protected by a standard customs tariff *vis-à-vis* third countries constitutes a powerful stimulus to domestic production and to the expansion of intra-area trade flows, so that use is made of the import substitution opportunities arising with respect to such commodities as milk products, fats and oils, certain varieties of cereals, tobacco, etc. But tariff policy may be deprived of some of its efficacy if it is not concurrently supplemented by a series of measures designed to protect the consumer against unjustifiable price increases and to ensure that tariff incentives reach the agricultural producer.

Alongside the tariff policy applicable to agricultural imports from outside the area, a Central American policy needs to be formulated with respect to the importation of inputs (fertilizers, insecticides, seed, etc.) and capital goods for agriculture. In this respect, considerable strides have already been made, and standard customs tariffs have been agreed upon, which, although for the moment they are higher than the average duties previously applied, are much lower than those levied on agricultural consumer goods. An attempt has been made in this way to reconcile the need to protect agricultural production and reduce its costs with that of creating incentives for new or expanding industries.

There is also other machinery for the development of manufactured production — such as the Central American Agreement on Fiscal Incentives to Industrial Development — whereby the biggest concessions are granted to industries processing agricultural raw materials, as well as to those producing inputs and capital goods for agriculture. In so far as these incentives, together with the credit facilities offered by national financing institutions and by the Central American Bank, make for the installation of efficient industries, the agricultural sector will reap the benefit of an expansion of demand for primary commodities, and at the same time will be guaranteed supplies of Central American inputs at prices relatively competitive with those of the corresponding imported products. The results obtained in the next few years will have to be carefully studied, so that the development measures adopted to date can be revised as and when it proves necessary. Otherwise, there would be a risk of disproportionate increases in the prices of agricultural inputs, which would hinder the introduction of improved techniques in the agricultural sector.

Central America's agricultural trade policy may still leave something to be desired if the measures adopted are not further supplemented by the formulation of a common external marketing policy. In this context, it must be borne in mind that the aggregate balance-of-payments position largely depends upon exports of

agricultural commodities,<sup>4</sup> and that the well-ordered and balanced expansion of production for external markets is therefore of vital importance for the development of Central America. In other words, a standard marketing policy would enable Central America to improve its world market position, as well as to undertake joint activities in the fields of promotion of exports and mechanization and expansion of the supporting lines of domestic production, which would not be carried out to the detriment or at the expense of domestic supplies.

Furthermore, Central America cannot expose its agricultural production to the hazards of world market competition, since the international prices of certain staple foodstuffs are often determined not by the free interaction of supply and demand but by the subsidizing policies which certain exporter countries pursue. Consequently, agricultural import policies should be co-ordinated with a view to ensuring that external purchases of agricultural commodities cover real regional deficits and do not imply the displacement of Central American production.

In combination with a standard exemption policy, a solution of this kind would maximize the dimensions of the market available to Central American producers, and at the same time would encourage intra-area trade and would help to strengthen economic ties among the countries members of the common market. This in turn presupposes measures for the direct encouragement of agricultural production and marketing activities. Such supplementary measures should include the improvement or installation of the agricultural sector's economic infrastructure, the expansion of technical and credit assistance in order to raise the technical standards of agriculture, the co-ordination of national financing policies and the formulation of specific plans of action, properly co-ordinated at the regional level.

The Governments of the area have already launched, either on their own account or through the integration agencies, many projects designed to encourage agricultural production. With regard to infrastructure, mention may be made of the establishment of the Central American highway network, the programme of construction and expansion of storage facilities for basic agricultural commodities, and the joint electrification and irrigation programmes which will benefit certain agricultural areas. At the national level, in addition to credit and agricultural extension programmes, measures have been adopted to promote the industrial processing of certain agricultural commodities and the production of inputs for agricultural use. But in most instances such programmes have been dictated by specific requirements and piecemeal approaches to the problems of Central American agriculture; the assignment of priorities has not been determined in relation to any general frame of reference. It is natural that in the initial stages of the formation of its common market Central America should have been unable to draw up comprehensive agricultural plans, since prerequisites for their formulation were the creation of the regional agencies responsible for carrying them out and the completion of the transitional stage leading to the establishment of the free-trade area in its final form. Now that the phase of building up the juridical and institutional organization of the

common market has been left behind, and the elimination of intra-area trade restrictions is at hand, the situation has altered.

The urgency of the need to formulate joint programmes, covering, for the time being, the most important groups of agricultural products, stems from the fact that the supply of the area's requirements and the proper exploitation of import substitution opportunities call for combined action on the part of the Central American countries which will permit the orderly expansion of agricultural production. Such action should take the form of co-ordinated promotion activities designed, in the first place, to make it feasible to speed up the rate of increase of supply, so that the gap left by imports susceptible of replacement by domestic production may be filled; and, secondly, to obtain new lines of supply as a means towards keeping pace with the natural growth rate of the population and gradually eliminating the deficits in average *per capita* levels of food consumption.

In short, the development of the common-market economic system should include the establishment of agricultural development programmes geared to integration and taking into account both alternative production possibilities within the agricultural sector itself and its inter-relationships with other sectors. The smoothly co-ordinated development of the various activities, and the achievement of a satisfactory balance in aggregate intra-area trade, would thus be facilitated.

Accordingly, a prerequisite for steady progress towards economic integration in the agricultural sector would seem to be, at the present time, a closer linking-up and co-ordination of policies affecting agriculture at both the national and the Central American level. To this end, regional machinery might be set up to co-ordinate the action of member Governments and propose bases for the organization of the area's market for the staple agricultural commodities. Through this machinery, too, might be channelled technical activities relating to the formulation of principles for agricultural policy, and the preparation of programmes to encourage and regulate the expansion of production and supplies at the regional level, always within the frame of reference of the over-all economic integration process. If this suggestion were considered acceptable, study would have to be devoted to the question of what specific organizational patterns would be most consonant with the structure of the integration agencies contemplated in the General Treaty.

Whatever the pattern of co-ordination adopted, the important thing, in the last analysis, would be to give cohesion to the agricultural sector's integration programme, establish an order of priority for the objectives proposed, and co-ordinate the activities of Central American Governments and institutions, in a common and closely welded effort to promote agricultural development.

Various steps have already been taken towards laying down bases for the organization of the regional market for agricultural products. As the result of periodic meetings of price stabilization and development agencies convened by the secretariat of the General Treaty (SIECA), a work programme for the study of agricultural marketing problems has been drawn up and recommendations have been formulated on the adoption of specific measures to fix uniform price levels with the

<sup>4</sup> Exports of agricultural commodities account for about 80 per cent of total receipts on current account.

aim of regulating grain trade flows. In September 1963, the Co-ordinating Committee on Marketing and Price Stabilization for Central America and Panama (Comisión Coordinadora de Mercadeo y de Estabilización de Precios para Centroamérica y Panamá) was set up as a regional organ which, besides performing its own price-regulating functions, will undertake the study of other matters relating to grain sales policy, and the task of establishing classification standards, as well as other similar technical responsibilities.

In the specific field of the organization of markets for agricultural commodities, the essential underlying principle is that as far as possible prices should fulfil their natural function of regulating the interaction of supply and demand. But in order to prevent abrupt price fluctuations, and abnormal inter-country trade flows unwarranted by the real demand situation, provision has been made for the establishment of uniform prices in the area and the conduct of marginal market transactions in respect of certain staple products. Hitherto, price stabilization operations have been carried out solely at the national level; if they are to work satisfactorily in the future, the fixing of uniform prices will have to be accompanied by the adoption of a joint financing system which will enable the cost of market intervention to be met.

The list of problems to be tackled by Central America's agricultural development and integration policy would not be complete without mention of certain longer-term questions which will be bound to arise as the Central American common market assumes its final form. Some

of these relate to the necessity of improving the operation of intra-area competition through the gradual elimination of the most outstanding disparities in the fields of tax legislation, costs, social burdens and incentive policies, and other such artificial dissimilarities, which are liable to make for the concentration of agricultural activity in particular areas to the detriment of others whose production potential is much the same or even greater. The real magnitude of these problems should be accurately assessed, and background data should be obtained which may serve as a basis for the formulation of a co-ordinated regional policy whereby production can be channelled in conformity with requirements or with the most efficient utilization of the area's resources and specialization possibilities.

As time goes on, the liberalization measures agreed upon by the member countries in respect of their reciprocal commodity trade will have to be extended to the factors of production, in order to broaden the scope of the integration process and impart the greatest possible flexibility to the internal expansion of economic activities. This is particularly important in the case of agriculture, since within the area there are marked differences in land tenure systems, in the distribution of the rural population and in the average wages and remunerations of the agricultural labour force. It therefore seems advisable, as a means of facilitating the establishment of a common policy for the most efficient utilization of available resources, to conduct research on the supply of labour and land available in each of the main agricultural areas, on seasonal or permanent labour requirements, and on existing levels of remuneration.

## 2. INTRA-AREA TRADE

The countries members of the Central American common market imported in the aggregate agricultural commodities to a total value of 80 million dollars in

1962. Purchases of domestic production amounted to 25 million dollars in all, thus representing 31 per cent of the total (see table 1).

Table 1

CENTRAL AMERICA: IMPORTS OF AGRICULTURAL COMMODITIES FROM THE AREA AND FROM THE REST OF THE WORLD, 1959-1962

(C.i.f. values in thousands of dollars at current prices)

| Country               | 1959   |                 | 1961   |                 | 1962   |                 |
|-----------------------|--------|-----------------|--------|-----------------|--------|-----------------|
|                       | Total  | Central America | Total  | Central America | Total  | Central America |
| Costa Rica .....      | 19 905 | 3 464           | 13 418 | 2 455           | 12 391 | 1 918           |
| El Salvador .....     | 21 991 | 10 020          | 21 334 | 9 231           | 27 533 | 14 990          |
| Guatemala .....       | 18 709 | 1 346           | 17 652 | 3 162           | 19 382 | 2 706           |
| Honduras .....        | 9 627  | 2 470           | 9 829  | 2 556           | 10 603 | 3 195           |
| Nicaragua .....       | 6 866  | 790             | 7 751  | 861             | 10 404 | 2 108           |
| Central America ..... | 76 698 | 18 090          | 69 984 | 18 265          | 80 313 | 24 917          |

Source: ECLA, on the basis of official statistics.

It would be somewhat premature to attempt a detailed analysis of the effects of the common market on production and trade in respect of the area's own agricultural products. In the first place, a very short time has elapsed since the General Treaty on Economic Integration signed in 1960—which established intra-area free trade for a wide range of products and formulated the bases for

the organization and operation of the Central American market—entered into force in the various countries.<sup>5</sup> Consequently, its effects have been only partly reflected in production and trade trends. Secondly, the data

<sup>5</sup> The Treaty entered into force in June 1961 for Guatemala, El Salvador and Nicaragua; in March 1962 for Honduras; and in September 1963 for Costa Rica.

available for the period immediately following the formation of the free-trade area are chiefly indicative of the changes in the structure of trade flows deriving from the altered competitive position of domestically produced commodities *vis-à-vis* their imported counterparts. In this connexion, the economic complementarity possibilities potentially existent before the formation of the common market can be turned to account on the basis of efficient use of existing production and installed capacity. But the more significant and lasting dynamic effects generated by the expansion and diversification of production to meet the needs of a broader market cannot be expected to make themselves fully felt in so short a space of time.

Nevertheless, although trade in agricultural commodities is still hampered by substantial restrictions within the area, significant changes have taken place. Intra-area trade in the products in question increased by 36 per cent between 1961 and 1962, rising from 18 to 25 million dollars. This is all the more interesting in relation to the following facts: (a) the expansion of trade took place in a segment of productive activity in which the Central American economies are highly competitive and complementarity possibilities are therefore relatively limited to begin with; and (b) intra-area trade in agricultural commodities had shown little

dynamic vigour in the preceding period, having remained stationary at a level of 18 million dollars from 1959 to 1961, in sharp contrast to the evolution of trade in manufactured goods (see again table 1).

The growth of trade in agricultural commodities is unquestionably the result of more efficient utilization of the area's production capacity, and of the inception of a regional import substitution process in respect of items for whose production Central America presents favourable conditions. It should be noted in this context that while intra-area trade rapidly increased, imports of agricultural products from outside the area decreased by 6 per cent from 1959 to 1962.

Still more favourable changes are observable in the case of certain individual items. Intra-area trade in oils and fats expanded by 157 per cent in the same period, whereas imports from outside the area contracted by 31 per cent; the reciprocal purchases of cereals and pulses, and of agricultural raw materials, made by the countries members of the common market increased by 34 and 59 per cent respectively, whereas the external import flow remained virtually stagnant. The expansion of the volume of trade in some minor items was even more spectacular, but their relative importance in the composition of trade is negligible as yet (see table 2).

Table 2  
CENTRAL AMERICA: IMPORTS OF AGRICULTURAL COMMODITIES FROM WITHIN THE AREA AND FROM  
THE REST OF THE WORLD, 1959 AND 1962  
(*C.i.f.* values in thousands of dollars at current prices)

| Category of the products              | From within the area |        | From the rest of the world |        |
|---------------------------------------|----------------------|--------|----------------------------|--------|
|                                       | 1959                 | 1962   | 1959                       | 1962   |
| <i>Livestock products</i> .....       | 6 004                | 4 850  | 19 163                     | 17 849 |
| Cattle .....                          | 3 702                | 1 163  | 611                        | 554    |
| Pigs .....                            | 899                  | 1 657  | 30                         | 11     |
| Poultry .....                         | —                    | 36     | 667                        | 515    |
| Meat .....                            | 97                   | 216    | 1 646                      | 754    |
| Preserved milk .....                  | 50                   | 28     | 5 329                      | 5 927  |
| Butter and cheese.....                | 173                  | 358    | 236                        | 274    |
| Other milk products.....              | 140                  | 173    | 1 015                      | 1 288  |
| Eggs .....                            | 344                  | 109    | 254                        | 68     |
| Fish, crustaceans and molluscs.....   | 143                  | 79     | 1 188                      | 1 503  |
| Lard .....                            | 11                   | 75     | 2 940                      | 485    |
| Hides and skins.....                  | 71                   | 226    | 29                         | 4      |
| Tallow .....                          | 77                   | 3      | 2 095                      | 2 699  |
| Leather and leather manufactures..... | 297                  | 720    | 3 123                      | 3 220  |
| Animal fibres .....                   | —                    | 1      | —                          | 120    |
| Miscellaneous .....                   | —                    | 6      | —                          | 427    |
| <i>Agricultural products</i> .....    | 12 086               | 20 066 | 39 445                     | 37 547 |
| Cereals and pulses.....               | 4 547                | 6 269  | 23 224                     | 23 268 |
| Fruit and vegetables.....             | 1 792                | 3 058  | 3 982                      | 2 696  |
| Sugar and sugar preparations.....     | 1 730                | 1 692  | 1 170                      | 927    |
| Aromatic beverages and spices.....    | 265                  | 1 614  | 937                        | 1 102  |
| Prepared foodstuffs .....             | 120                  | 386    | 1 954                      | 1 525  |
| Tobacco and tobacco manufactures..... | 567                  | 642    | 2 229                      | 1 645  |
| Oilseeds .....                        | 47                   | 197    | 211                        | 324    |
| Vegetable fibres .....                | 163                  | 104    | 142                        | 327    |
| Oils and fats.....                    | 1 295                | 3 569  | 888                        | 1 874  |
| Animal feed .....                     | 593                  | 581    | 3 482                      | 2 547  |
| Raw rubber .....                      | 97                   | 98     | 300                        | 994    |
| Wood .....                            | 810                  | 1 487  | 243                        | 119    |
| Wood products .....                   | 55                   | 369    | 619                        | 194    |
| Miscellaneous (including cork).....   | 5                    | —      | 64                         | 5      |
| TOTAL                                 | 18 090               | 24 916 | 58 608                     | 55 396 |

Source: ECLA, on the basis of official statistics.

Trade in agricultural commodities within the Central American common market is not evenly distributed. The biggest trade flows are between El Salvador (the leading importer centre) and Honduras (the principal exporter country). In 1962, the former country absorbed 60 per cent (15 million dollars) of total imports of agricultural products<sup>6</sup> (see table 3), while Honduras came second, with 3 million dollars. This latter country's exports

amounted to 10.6 million dollars, which represented 43 per cent of intra-area trade<sup>7</sup> (see table 4). Other substantial flows pertained to Guatemala, as the most important supplier of fruit and vegetables (70 per cent), and to El Salvador, as the chief exporter of processed agricultural commodities (oils and fats, sugar and sugar preparations, agricultural raw materials, etc.).

<sup>6</sup> In the year referred to, El Salvador purchased 77 per cent of the fruit and vegetables exported, 88 per cent of the cereals, 51 per cent of the cattle and almost all the pigs.

<sup>7</sup> Honduras sells about 80 per cent of inter-Central American exports of cattle and pigs, and over 70 per cent of those of cereals and beans.

**Table 3**  
CENTRAL AMERICA: MARKETS OF DESTINATION OF INTER-CENTRAL AMERICAN IMPORTS BY GROUPS OF AGRICULTURAL COMMODITIES, 1962  
(C.i.f. values in thousands of dollars at current prices)

| Product                                   | Costa Rica | El Salvador | Guatemala | Honduras | Nicaragua | Area total |
|---|------------|-------------|-----------|----------|-----------|------------|
| Cattle .....                              | 14.0       | 590.3       | 525.1     | 28.3     | 5.1       | 1 162.8    |
| Pigs .....                                | —          | 1 653.3     | 3.1       | 0.2      | 0.1       | 1 656.7    |
| Meat .....                                | 2.0        | 81.0        | 5.9       | 121.2    | 6.2       | 216.3      |
| Milk and dairy produce <sup>a</sup> ..... | —          | 528.1       | 118.0     | 25.2     | 2.4       | 673.7      |
| Cereals .....                             | 0.6        | 3 446.9     | 154.1     | 281.6    | 33.1      | 3 916.3    |
| Fruit and vegetables.....                 | 24.6       | 2 072.9     | 83.2      | 601.0    | 276.7     | 3 058.4    |
| Beans .....                               | 203.5      | 2 123.5     | 5.6       | 19.7     | 0.1       | 2 352.4    |
| Sugar and sugar preparations...           | 68.1       | 377.3       | 39.2      | 987.7    | 219.6     | 1 691.9    |
| Food preparations .....                   | 38.4       | 118.0       | 14.5      | 127.7    | 87.8      | 386.4      |
| Aromatic beverages and spices..           | —          | 310.5       | 17.5      | 81.4     | 1 204.7   | 1 614.1    |
| Tobacco and tobacco manufactures .....    | —          | 626.5       | 3.3       | 12.2     | —         | 642.0      |
| Edible oils and fats.....                 | 778.9      | 561.4       | 1 544.4   | 298.2    | 107.0     | 3 289.9    |
| Industrial oils and fats.....             | 111.7      | 2.4         | 11.7      | 45.6     | 83.4      | 254.8      |
| Animal feed .....                         | 355.4      | 106.8       | 53.2      | 48.6     | 17.2      | 581.2      |
| Fish, crustaceans and molluscs..          | 10.1       | 28.9        | 12.3      | 27.7     | —         | 79.0       |
| Raw materials .....                       | 310.6      | 2 362.6     | 115.1     | 488.5    | 64.2      | 3 341.0    |
| TOTAL IMPORTS                             | 1 917.9    | 14 990.4    | 2 706.2   | 3 194.8  | 2 107.6   | 24 916.9   |

Source: ECLA, on the basis of official statistics.

<sup>a</sup> Including eggs and honey.

**Table 4**  
CENTRAL AMERICA: MARKETS OF ORIGIN OF INTER-CENTRAL AMERICAN IMPORTS BY GROUPS OF AGRICULTURAL COMMODITIES, 1962  
(C.i.f. values in thousands of dollars at current prices)

| Product                                   | Costa Rica | El Salvador | Guatemala | Honduras | Nicaragua | Area total |
|---|------------|-------------|-----------|----------|-----------|------------|
| Cattle .....                              | 25.2       | 105.6       | 93.3      | 927.2    | 11.5      | 1 162.8    |
| Pigs .....                                | 0.1        | 3.2         | 91.8      | 1 273.1  | 288.5     | 1 656.7    |
| Meat .....                                | —          | 33.4        | 164.0     | 15.7     | 3.2       | 216.3      |
| Milk and dairy produce <sup>a</sup> ..... | 32.0       | 134.9       | 201.8     | 206.8    | 98.2      | 673.7      |
| Cereals .....                             | 130.5      | 374.4       | 54.6      | 2 800.8  | 556.0     | 3 916.3    |
| Fruit and vegetables.....                 | 60.5       | 392.3       | 2 254.9   | 310.1    | 40.6      | 3 058.4    |
| Beans .....                               | —          | 6.5         | 51.1      | 1 762.9  | 531.9     | 2 352.4    |
| Sugar and sugar preparations...           | 199.9      | 968.6       | 476.9     | 13.2     | 33.3      | 1 691.9    |
| Food preparations .....                   | 19.4       | 141.0       | 226.0     | —        | —         | 386.4      |
| Aromatic beverages and spices             | 62.2       | 1 243.9     | 120.1     | 10.7     | 177.2     | 1 614.1    |
| Tobacco and tobacco manufactures .....    | —          | 4.7         | 7.5       | 629.8    | —         | 642.0      |
| Edible oils and fats.....                 | 123.2      | 1 672.0     | 397.9     | 1 091.7  | 5.1       | 3 289.9    |
| Industrial oils and fats.....             | 0.5        | 231.3       | 21.9      | 1.1      | —         | 254.8      |
| Animal feed .....                         | 1.0        | 434.8       | 66.6      | 16.2     | 62.6      | 581.2      |
| Fish, crustaceans and molluscs..          | 0.7        | 49.2        | 7.7       | 7.2      | 14.2      | 79.0       |
| Raw materials .....                       | 388.4      | 385.9       | 637.0     | 1 538.1  | 391.6     | 3 341.0    |
| TOTAL IMPORTS                             | 1 043.6    | 6 181.7     | 4 873.1   | 10 604.6 | 2 213.9   | 24 916.9   |

Source: ECLA, on the basis of official statistics.

<sup>a</sup> Including eggs and honey.

The special structure of intra-area trade in agricultural commodities is partly attributable to economic complementarity requirements, and partly to the legal and institutional provisions incorporated in the General Treaty on Economic Integration. Thus, El Salvador's importance as a consumer centre stems, *inter alia*, from its greater concentration of population and relatively limited endowments of agricultural resources.

Costa Rica's more recent accession to the General

Treaty and the existence of a tradition of reciprocal trade on the part of Guatemala, Honduras and El Salvador—which has been reflected in a comparatively liberal policy—helped to account for the greater dynamic impetus of trade among the last-named countries. As has already been pointed out, the secondary effects of the formation of the common market in expanding and redistributing agricultural activities to supply regional demand cannot yet be fully appraised.

### 3. TRADE REGIMES

The General Treaty on Economic Integration established a free-trade régime for commodities produced in the member countries, with the exception of certain goods, listed in annex A to the Treaty, which are subject to interim restrictions of various kinds. These special exemption régimes are applicable to a limited schedule of agricultural products, some of which are of considerable economic importance.

#### (a) FREE TRADE

By 1962, four fifths of intra-area trade in agricultural commodities had been liberalized. Out of the total value of 24.9 million dollars reached by the transactions negotiated in 1961, 20.9 million corresponded to goods enjoying this free-trade régime.

Within this trade flow, a distinction should be drawn between two categories. In the first may be grouped all those products which, upon the entry into force of the General Treaty, automatically became subject to the

multilateral free-trade régime. The second comprises those goods which, while covered by special exemption régimes, enjoy a measure of free trade by virtue of agreements concluded between particular Central American countries.

In 1962 the former group—those enjoying complete free trade—represented 65 per cent of the agricultural items included in intra-area trade, but only 36 per cent of the value of the transactions concerned. This was partly because the free-trade régime covers certain items whose production possibilities in Central America are limited, or that are still produced only on a small scale, or are inferior in quality to their imported counterparts.<sup>8</sup> Nevertheless, trade in these goods notably increased, its value rising from 6.0 to 8.8 million dollars between 1961 and 1962 (see table 5).

<sup>8</sup>In the first group, wheat should be mentioned, and in the second, milk and dairy produce, cereal preparations, canned fruit, meat extracts and other food preparations, agricultural raw materials (such as rubber and leather) and similar products.

Table 5

CENTRAL AMERICA: TOTAL AND INTRA-AREA IMPORTS OF AGRICULTURAL COMMODITIES, BY TRADE RÉGIMES APPLIED, 1961 AND 1962

(*C.i.f.* values in thousands of dollars at current prices)

|  | 1961          | 1962          |
|--|---------------|---------------|
| Total imports .....                                | 69 984        | 80 312        |
| Extra-area trade .....                             | 51 719        | 55 395        |
| Intra-area trade .....                             | 18 265        | 24 917        |
| <i>Free trade</i>                                  |               |               |
| In products subject to no restrictions.....        | 6 035         | 8 776         |
| In products affected by some restrictions....      | 9 535         | 12 176        |
| <i>Trade subject to restrictions.....</i>          | <i>12 230</i> | <i>16 141</i> |
| In products enjoying a measure of free trade..     | 9 535         | 12 176        |
| In products subject to restrictions.....           | 2 695         | 3 965         |
| Free trade on expiry of interim period.....        | 1 313         | 788           |
| Free trade upon signature of protocol.....         | 880           | 1 355         |
| Free trade upon signature of agreement.....        | —             | —             |
| Trade subject to controls for an indefinite period | 502           | 1 222         |

Source: ECLA, on the basis of official statistics.

In contrast, despite the fact that the second category includes products of great economic importance, transactions in goods partly benefiting by the free-trade régime expanded by only 28 per cent, i.e., from 9.5 to 12.2 million dollars, in the period under consideration.

#### (b) SPECIAL RÉGIMES OF EXEMPTION FROM FREE TRADE

The purpose of the special régimes of exemption from immediate liberalization contemplated in the General Treaty is to prevent harmful or unduly abrupt changes

in established trade flows and practices. It was thus agreed that the total liberalization of trade should be preceded by an interim period (of five years in most cases) to facilitate the adjustment and modification of national economic policies, while the problems that might arise from the introduction of a free-trade régime were studied in detail, and a minimum of uniformity and co-ordination was imported to the policies in question.

The agricultural commodities that were subject to restrictions of one kind or another represented 35 per cent of the total number of tariff items corresponding to this sector and 7 per cent of the total number of items in the Standard Central American Tariff Nomenclature (NAUCA). They include goods of great economic importance — coffee, cotton, beans, rice, livestock products, etc. — which in the aggregate account for about 80 per cent of the value of the agricultural sector's output.

This does not mean that restrictions are applied to the whole of the intra-area trade in the commodities mentioned (16.1 million dollars in 1962). Irrespective of the volume of transactions freed from controls of any kind by virtue of bilateral free-trade agreements, only 24 per cent (4.0 million dollars in 1962) of the total intra-area trade conducted under special exemption régimes is in practice subject to specific restrictions (see again table 5).

The Central American Governments, through the integration agencies, have made substantial progress as regards both the co-ordination of certain aspects of their economic policies that affect trade in agricultural products, and the definition of the problems arising and the possible solutions that might be applied in order to put into full operation the free-trade régime that has been agreed upon in principle.

The importance of securing the abolition of the exemption régimes that still subsist derives not only from the advantages inherent in the constitution of a customs union, with its implications in the shape of free circulation of goods within the area and the establishment of a common tariff applicable to imports from third countries, but also from the specific benefits that will be secured once the common market for agricultural commodities is in full operation. These will firstly include, in practice, the proper exploitation of significant import substitution opportunities, which will mean an increase in the capacity to import that can be used to purchase capital goods and other essential items, and will be conducive to the improvement of employment levels in the sector where the highest indexes of under-employment are to be found. A second result will be the elimination of restrictions on trade in staple foodstuffs such as livestock, meat, grains, dairy produce, and so forth. All this, in combination with a regional production policy, might gradually lead to the establishment of a more efficient intra-area distribution pattern in terms of costs and prices, and, in the last analysis, would redound to the benefit of Central American population's consumption levels. Finally, in so far as the co-ordination of national supply policies were extended to those products which are not only in demand at home but are also exported, it would afford a possibility of devising a common external trade policy linked to programmes for agricultural development and intra-area trade in staple foodstuffs or basic agricultural products.

(i) *Preferential tariff.* The interim system of restrictions on intra-area trade in agricultural commodities has consisted in the establishment of a preferential tariff, subject to progressive reductions which will gradually lead to the total liberalization of trade.

The considerations which have determined the adoption of this preferential tariff régime in Central America are chiefly connected with the need to aim at progressive adaptation of the various fiscal and production systems to the new conditions of intra-area competition.

In no case does the application of this régime extend to all transactions effected in respect of a particular product by any or all of the Central American countries, and as a general rule it affects only the bilateral trade of specific member States, its existence coinciding with that of different systems (primarily the free-trade régime to which transactions between other countries are subject).

Another important characteristic of the preferential tariff régime is that it relates chiefly to agricultural or livestock products which in the great majority of instances have undergone some form of industrial processing.<sup>9</sup>

The restrictions established affect essentially, although not exclusively, the agricultural trade carried on between Nicaragua and the other Central American countries.<sup>10</sup> Nicaragua's imports of products subject to this régime in fact represent 99 per cent of the total Central American trade covered by preferential tariffs, i.e., 120,000 dollars. It should be noted that these figures constitute only a small fraction (20 per cent) of the total intra-area transactions (amounting to 630,000 dollars) to which the products in question give rise, since, as has been pointed out, there are other trade régimes that regulate the trade flows between countries which have not adopted the preferential tariff.

(ii) *Control régimes.* The second procedure used to regulate inter-Central American trade flows in agricultural commodities during the period of transition to free trade has been the establishment of export and/or import controls. By this means an attempt has been made to graduate the normalization of commodity flows which, if advantage were taken of intra-area differences in costs and price levels, might in the initial phase imply competition that would be very unfavourable to the domestic production of certain countries.

The trade that is subject, either wholly or partly, to such controls covers a wide variety of products, some of which are of unquestionable importance in intra-area trade. In 1962, trade in goods affected by regulations of this type amounted to a sum of 1.8 million dollars, whereas the value of transactions in the same commodities negotiated under bilateral free-trade agreements exceeded 7 million dollars. In effect, the importance of the trade subject to controls is over-estimated, because, in the first place, the figure noted includes exceptional sales of coffee to a value of 1.2 million. Setting aside this sum, over 90 per cent of the residual trade consisted

<sup>9</sup> Cases in point are meat and meat preparations, tomato and vegetable juices, preserves and pickles, coffee extracts, essences and other preparations, margarine and synthetic butter, cigarettes, vegetable oils and hydrogenated oils and fats.

<sup>10</sup> Among the most important are livestock and certain meat preparations; dairy produce (milk, cream, cheese, butter); grains and pulses (rice, maize, sorghum and beans); vegetable oils; tallow; cotton and cottonseed; tobacco; coffee and cigarettes.



of transactions in certain products, such as beans, rice, maize and cottonseed, which totalled 560,000 dollars in the same year (1962).

As can be deduced from the foregoing data, most of the transactions concerned were already conducted under the aegis of partial free-trade systems, the proportion of inter-Central American trade still subject to restrictions being relatively small. The expansion of inter-Central American consumption, however, and in particular the acceleration of the import substitution process, will continue to be delayed until the existing controls are finally abolished.

It should be mentioned in this context that in addition to the import substitution possibilities to which reference will be made later — those relating to cereals, meat and meat products, for instance — Central America presents favourable conditions for a considerable expansion of its production and trade in respect of preserved milk and other milk products. In 1962, for example, purchases of powdered, evaporated and condensed milk from outside the area amounted to 5.9 million dollars, whereas the value of imports from within Central America itself barely reached 28,000 dollars.

In order to deal with this problem, the Central American Governments, in the protocol to the Agreement on Equalization of Import Duties and Charges, signed at San José, Costa Rica, agreed to grant one another immediate freedom of trade in powdered milk, and at the same time established import quotas for purchases from third countries, as well as a uniform customs tariff.<sup>11</sup> Under this system, the quotas can be progressively reduced as internal supplies increase, the Executive Council being empowered to fix them at levels not lower than 15 per cent of each country's commercial consumption of powdered milk.<sup>12</sup>

<sup>11</sup> The protocol was signed in July 1962, and will enter into force one year from the date of its ratification by a minimum of three countries.

<sup>12</sup> With regard to the treatment accorded to imports of other types of milk, the Executive Council is empowered to formulate regulations and submit them to the Central American Governments for approval in cases where this is deemed a necessary precaution to safeguard the region's supplies, prevent production distortions in individual countries, or protect consumer interests.

#### 4. PROCEDURES FOR THE ABOLITION OF SPECIAL EXEMPTION REGIMES

As has been shown, none of the special régimes of exemption from free trade is confined exclusively to a particular product or group of products; one and the same commodity may be subject to different regulatory systems, which are applied on an *ad hoc* basis to trade flows between specific countries. In such circumstances, procedures for the elimination of trade restrictions cannot be aimed directly at the abolition of the special exemption régimes, since each of these frequently covers groups of products of widely differing kinds.

Consequently, the machinery contemplated in the General Treaty involves four types of indirect procedures to establish free trade by commodities or groups of commodities, irrespective of the special régimes to which they are subject. The first type covers products on which restrictions will be automatically abolished on the expiry of the interim periods explicitly stipulated in the Treaty

(iii) *Régime of basic quotas*. The principle underlying the basic quota régime is the allocation of fixed quantities of goods which Central America's exporter countries can sell without subsequent restrictions of any kind in the buyer's market. In some instances, provision is also made for the possibility of enlarging the quotas established in the General Treaty in order to absorb certain regional surpluses, with the consent of the other member countries, while in others such surpluses are automatically subject to controls, preferential tariffs or full tariff duties, according to the specific treatment agreed upon.

The amount represented by the transactions negotiated under this special régime was 1.8 million dollars in 1962, and seems to be following a rising trend. The principal group of products subject to basic quotas corresponds to part of the trade in cereals and pulses (maize, sorghum, rice and beans), but the régime has also been extended in some measure to other trade flows such as those comprising confectionery, chocolates, lard, edible fats, sugar and certain wood products (veneers and plywood).

(iv) *Régime of basic quotas combined with a preferential tariff*. This method of regulating trade consists in the establishment of quotas in accordance with the procedure described in the preceding paragraph, and making them subject to a customs tariff lower than that applicable to similar products imported from third countries.

The régime in question only covers trade in a small number of products between certain Central American countries. Mention may be made of the trade in eggs and meat preparations between Costa Rica and Nicaragua; in coconut oil and cottonseed between El Salvador and Nicaragua; and in coffee extracts, essences and other preparations between several of the countries of the area.

In 1962, the value of the transactions subject to basic quotas and preferential tariffs amounted to 203,000 dollars, while that of trade in similar products under bilateral free-trade agreements reached 1.5 million dollars.

itself. The second relates to the group of commodities that will enjoy free trade upon the conclusion of *ad hoc* agreements to regulate intra-area supplies and trade or to equalize the pertinent tariff duties. The third is applicable to products in which trade is regulated by controls for an indefinite period of time, and which are not included in any other category; and the last, to commodities in whose case the liberalization of trade is contingent upon the signature of a protocol establishing principles for the regulation and co-ordination of intra-area trade in the products concerned.

##### (a) COMMODITIES IN WHOSE CASE TRADE WILL BE AUTOMATICALLY LIBERALIZED

The group of agricultural commodities in respect of which intra-area trade will be automatically liberalized on the expiry of the stipulated interim periods comprises

60 NAUCA tariff items. The said time limits will be up in June 1965 or June 1966, according to the kinds of goods traded or the countries involved, so that by the end of the latter year the free-trade régime will have been brought into full operation for approximately one-fourth of total intra-area trade in agricultural products. Apart altogether from the expansion of trade that might be stimulated by full liberalization of transactions relating to this group of products, the elimination of the restrictions to which they are subject will imply an increase of 13 per cent in total value of the free trade concerned, the remaining 87 per cent being already carried on under the aegis of bilateral free-trade agreements.

The chief products included in this category are meat and sausages (beef, pork and poultry), eggs, milk and

milk products, confectionery, chocolate and chocolate preparations, canned vegetables, animal feed, oils and fats, and wood (see table 6). The value of the transactions to which they gave rise in 1962 amounted to about 6 million dollars, but the proportion of this trade which was subject to restrictions represented only 788,000 dollars. This latter trade flow decreased between 1961 and 1962 (see again table 5) as the result of the decline of trade in animal feed and the deflection of commodity flows towards the channels exempt from restrictions that had been opened up by the free-trade arrangements incorporated in annex A to the General Treaty. In contrast, the trade in the same items which was conducted on a liberalized basis increased from 3.3 to 5.2 million dollars in the same interval.

**Table 6**

CENTRAL AMERICA: IMPORTS OF COMMODITIES IN WHOSE CASE TRADE WILL BE AUTOMATICALLY LIBERALIZED,<sup>a</sup> 1962

(C.i.f. values in thousands of dollars at current prices)

| Product  | Intra-area trade        |         | Imports from the rest of the world |
|--|-------------------------|---------|------------------------------------|
|  | Subject to restrictions | Free    |                                    |
| Fresh meat and meat preparations.....                    | —                       | 178.2   | 199.8                              |
| Milk and dairy produce.....                              | 0.6                     | 374.1   | 6 065.0                            |
| Canned vegetables and vegetable preparations.....        | —                       | 82.6    | 388.0                              |
| Confectionery, chocolate and chocolate preparations..... | —                       | 706.1   | 281.0                              |
| Animal feed .....  | 117.4                   | 428.5   | 2 422.9                            |
| Oils and fats.....                                       | 550.2                   | 3 096.7 | 5 058.2                            |
| Cottonseed .....   | 119.6                   | 2.5     | 300.2                              |
| Wood .....   | —                       | 372.8   | 194.2                              |
| TOTAL  | 787.8                   | 5 241.5 | 14 909.3                           |

Source: ECLA, on the basis of official statistics.

<sup>a</sup> On expiry of the interim period (June 1966).

Standardization of the conditions governing intra-area trade in the agricultural commodities listed in the schedule under discussion would probably do much to create incentives and to promote the expansion of production with a view to satisfying a larger proportion of the area's requirements. Imports of similar goods from outside the area amounted to 14.9 million dollars in 1962, and comprised purchases of milk, tallow, animal feeds, vegetable oils and other items which can perfectly well be produced in Central America. Again, the import substitution process could be speeded up if the stimuli spontaneously generated by the broadening of the free-trade area were reinforced by special incentives based on regional programmes for the development of production and the indirect regulation of trade flows.

(b) COMMODITIES IN WHOSE CASE LIBERALIZATION OF TRADE IS CONTINGENT UPON THE CONCLUSION OF SPECIAL AGREEMENTS

The terms of the General Treaty leave room for trade in some commodities to be exempt from liberalization until *ad hoc* agreements have been signed to regulate supplies from third countries, or until import duties have been equalized.<sup>13</sup>

<sup>13</sup> In this category of goods the following tariff items are classified; wheat flour, food pastes made from wheat flour, bakery products, leaf tobacco and cigarettes. In the remainder of the

Inter-Central American trade in goods in this category reached a figure slightly exceeding 800,000 dollars in 1961, and increased by 30 per cent in the following year. It should be pointed out that this is a much smaller volume of trade than that conducted with third countries. For example, in 1962 imports from outside the area amounted to 10.4 million dollars, despite the fact that they had decreased by 23 per cent in relation to the purchases effected in 1959 (see table 7). In practice, restrictions have virtually wiped out intra-area trade. Such transactions as have taken place have all been negotiated under free-trade agreements concluded between certain Central American countries.

(i) *Wheat and wheat flour.* For ecological reasons wheat is not produced in most of the Central American countries. Guatemala, which is the only exception, grows it on certain parts of the western highlands, but the output does not supply more than one third of the country's consumption.

present section, reference will be made only to wheat flour and tobacco, and the analysis of problems relating to trade in food preparations based on wheat flour will be shelved, since restrictions on trade in these products affect only Costa Rica's trade with Honduras and Nicaragua, a major proportion of such transactions (96 per cent) being conducted under the free-trade régime. In addition, it should be pointed out that the above-mentioned restrictions will disappear once the import duties on wheat and wheat flour have been equalized.

Table 7

## CENTRAL AMERICA: IMPORTS OF COMMODITIES IN WHOSE CASE LIBERALIZATION OF TRADE IS CONTINGENT UPON AGREEMENTS OR TARIFF EQUALIZATION

(C.i.f. values in thousands of dollars at current prices)

| Product                                | Intra-area trade           |       | Imports from<br>the rest of<br>the world |
|--|----------------------------|-------|--|
|  | Subject to<br>restrictions | Free  |  |
| Wheat flour .....                      | —                          | —     | 8 497.6                                  |
| Preparations based on wheat flour..... | —                          | 189.3 | 270.9                                    |
| Tobacco and tobacco preparations.....  | —                          | 642.0 | 1 636.5                                  |
| TOTAL                                  | —                          | 831.3 | 10 405.0                                 |

Source: ECLA, on the basis of official statistics.

Although the measures adopted by Guatemala to encourage wheat-growing have made it possible to surpass the production levels existing prior to the inception of the programme, it seems difficult to increase supplies on a sufficiently large scale to cover the area's consumer requirements,<sup>14</sup> for unit yields are far below the average levels attained in other producer countries, and since the initial spurt neither productivity nor production has shown very favourable trends.

Furthermore, although no exact information is available on the area that could be used for expanding wheat production, it seems very unlikely that there would be enough suitable land to permit an increase of any significance from the standpoint of the regional market.

In these circumstances, the development of a substitution programme in respect of wheat imports from outside the area seems to be a prospect beyond Central America's immediate reach. It is estimated that in order to satisfy the aggregate demand of the Central American countries at the present time the amount of land under cultivation would have to be increased tenfold if current average yields were maintained, or fivefold if at the same time a 75 per cent increase in yields per unit of area were achieved. In addition, on this latter hypothesis, radical changes would have to be introduced in the production methods currently applied in the main wheat-growing districts, most of which are of the kind proper to small farms where levels of technique are low.

This does not mean that the idea of expanding internal supplies of wheat must be kept within modest bounds or given up altogether. In the last analysis, the determining factor will have to be a more exact evaluation of the real possibilities of turning over more land to wheat-growing on a sound economic basis, and of the rates of return on resources used for this activity as compared with those that could be obtained in other types of farming.

In any event, even if the existence of concrete opportunities for the short-term expansion of wheat production were verified, the establishment of regional development programmes would not bring about any very significant changes in the existing structure of supplies.

Unlike wheat, wheat flour does offer reasonable prospects for the expansion of production for the integration area's internal consumption. At the present time,

domestic production satisfies almost the whole of demand in Guatemala and over 70 per cent in El Salvador and Honduras. The situation is different in Costa Rica and Nicaragua, where the development programmes are of very recent date. It is worth pointing out, however, that installed capacity in the flour-milling industry would allow production figures to be doubled without need for additional investment.<sup>15</sup>

Imports of wheat and wheat flour are among the items whose incidence on the area's balance of payments is heaviest. In 1961-62, the average figure for purchases abroad fluctuated around 16 million dollars, i.e., about 22 per cent of total agricultural imports. Although the installation of new mills has tended to reduce the share of flour imports in relation to those of wheat, the former still represent about 50 per cent of the total value of the items in question. Once the free-trade régime is established, it will probably be possible to make more efficient use of installed milling capacity and at the same time to expand intra-area trade flows; this will imply some net saving of foreign exchange, although not a great deal, since the value added in the processing of wheat flour is not very high.

While the wheat produced in Central America enjoys a free-trade régime, flour is subject to the tariff duties in force. The equalized tariff levels applicable to imports from the rest of the world are awaiting determination by the Central American Governments, this being a prerequisite for bringing the common market into full operation where wheat and wheat flour are concerned. The subject has been discussed at several sessions of the Central American integration agencies, with a view to defining the economic repercussions of the establishment of a common tariff.

At its twelfth session (February 1962), the trade Sub-Committee considered for the first time the establishment of uniform tariff levels for wheat and flour, and recommended the application of the following equalized duties: 0.01 dollars per gross kilogramme plus 10 per cent *ad valorem* in the case of wheat, and 0.08 dollars and 10 per cent *ad valorem* in that of flour. It was proposed at a special advisory meeting that tariff equalization in respect of these products should be the subject of an *ad hoc* agreement laying down general principles for regulating trade in the goods concerned, co-ordinating

<sup>14</sup> See ECLA *Nota de la Secretaría sobre la situación de la actividad productora de trigo y de la industria elaboradora de harina en Centroamérica* (E/CN.12/CCE/SC.1/78).

<sup>15</sup> See SIECA, *Nota de la Secretaría sobre las actividades productoras de trigo y elaboración de harina de trigo en Centroamérica* (SIECA/CE/21), Guatemala, 6 August 1963.

national policies and ensuring freedom of trade. Lastly, the Executive Council of the Treaty dealt with the question at its fifth session (August 1963) and adopted the following decisions: (a) to postpone the determination of uniform tariff level until some countries had carried out special studies which would provide them with sufficient background data on which to base their definitive position (regarding both equalized tariff levels and import controls); and (b) to incorporate in the records of the meeting the provisional position of the various countries with respect to the duties they would be prepared to adopt.<sup>16</sup>

The foregoing considerations raise a series of questions whose detailed study would furnish fuller background data for the establishment of common tariff levels applicable to imports of wheat and wheat flour, as an integral part of a broader policy of the development of production and of intra-area trade in these commodities. The first problem relates to the real facilities existing within the area for the replacement of flour imports by domestic production. In the Central American milling industry there are wide margins of idle capacity, but the possibilities for their utilization are contingent upon the elimination of obstacles to intra-area trade and upon factors connected with cost levels, quality and types of output, distribution margins, patterns of plant location in relation to consumer centres, and intra-area transport cost. Moreover, although consumption of flour in Central America may be expected to increase at a rate comparable with that registered in the last decade, consumption should be broken down by the kinds of flour used as raw material in the bakery industry, on the one hand, and in industries making food pastes and biscuits on the other, and separate projections should be formulated for each category; it would also seem advisable to extend the terms of reference of the research to the predictable incidence of the use of flour from Central American sources on production costs and consumer prices.

Another question concerns the prospects of establishing a long-term substitution policy in relation to Central America's wheat imports. To define these, field research on the following lines would be called for: (a) evaluation of the feasibility of programmes to raise yields on the land at present under cultivation, and determination of how they could best be organized; and (b) assessment of the amount of suitable new land potentially available for the expansion of wheat-growing. When the possible characteristics of a wheat development programme had been explored and the resources it would absorb had been specified, its advantages and drawbacks both from the economic standpoint and for the purposes of regional integration policy could be evaluated. In this context, two important aspects of the study would consist in

<sup>16</sup> These duties were as follows: *wheat and spelt*, Guatemala and Nicaragua, 0.01 dollars per gross kilogramme and 10 per cent *ad valorem* c.i.f.; El Salvador, 0.01 dollars per gross kilogramme and 5 per cent *ad valorem* c.i.f.; Honduras, 0.02 dollars per gross kilogramme and 10 per cent *ad valorem* c.i.f.; Costa Rica, 5 per cent *ad valorem* c.i.f. only; *wheat flour*, Costa Rica, 10 per cent *ad valorem* c.i.f. only; other countries, 0.08 dollars per gross kilogramme and 10 per cent *ad valorem* c.i.f.; *semola, semolina and other kinds of coarse meal*, Guatemala, El Salvador and Nicaragua, 0.08 dollars per gross kilogramme and 10 per cent *ad valorem* c.i.f.; Honduras, 0.06 dollars per gross kilogramme and 10 per cent *ad valorem* c.i.f.; Costa Rica, 10 per cent *ad valorem* c.i.f. only.

estimating the rates of return of wheat-growing as compared with those of other lines of production and other ways of using credit and capital resources, and computing the net foreign exchange saving that would accrue from investment in import substitution in respect of wheat, as against other alternative possibilities open to the Central American economies. Particular interest would attach to the analysis of world price and production trends, which are clearly leaning towards a greater increase in supply than in consumer demand, mainly as the result of improved yields. In many of the principal importer areas the result has been a contraction in their purchases, which have been declining since the beginning of the fifties, while stockpiles have accumulated in some of the exporter countries. Were these trends to persist, international wheat prices would be likely, over the medium or long term, to undergo relative reductions or stabilization, so that the comparative advantages of the Central American import substitution programme for wheat would be lessened.

To supplement the studies suggested, others might be undertaken in connexion with production of wheat and wheat flour and trade in these items; one of outstanding interest would be an examination of the fiscal repercussions that might be generated by tariff equalization and the establishment of a free-trade régime in the integration area. Significant changes in fiscal revenue would not be likely to ensue,<sup>17</sup> but it would be worth while to quantify the foreseeable effects of the programme, on the basis of alternative proposals for the equalized tariff levels. The foregoing research would define the implications of a programme for the development of wheat-growing and flour production in Central America as a whole.

(ii) *Tobacco*. In 1948-63, tobacco production in Central America expanded at a relatively slow rate (averaging 2.9 per cent yearly), and chiefly on the basis of internal market demand, output increasing from 7,400 to 11,100 tons. Production increments are attributable to improved yields, since the areas under cultivation have remained practically the same since the end of the forties (between 13,000 and 15,000 hectares).<sup>18</sup>

Even so, the yields currently obtained are quite a long way (39 per cent) below average world productivity levels. Consequently, since Central America possesses land suitable for the cultivation of different varieties of tobacco, there do not seem to be any serious obstacles on the supply side to the achievement of a considerable increase in production and productivity.<sup>19</sup>

Exports of tobacco to third countries have been effected only on a very small scale so far. In 1962, for example, about 100 tons of leaf tobacco were sold, to a value of 107,000 dollars; at the present time, study is being devoted to the production of wrapper tobacco and other

<sup>17</sup> See *Nota de la Secretaría sobre la situación de la actividad productora de trigo y de la industria elaboradora de harina en Centroamérica*, op. cit.

<sup>18</sup> The average figure for the increase in yields does not reveal the marked differences that exist from one country to another. In El Salvador, yields were practically doubled, while in Guatemala the increment was about 20 per cent; in other countries the improvement in productivity was appreciably less, and in some cases an actual deterioration was registered.

<sup>19</sup> In El Salvador crop yields are 5 per cent higher than the world average (1.1 tons per hectare).

varieties with a view to exporting them to the United States market.

Imports from outside the area chiefly consist of varieties usable for blends or to meet the demand for milk tobaccos that are not grown in Central America; in recent years, such purchases have followed a slightly declining trend, fluctuating around 1.6 million dollars *per annum*.

Intra-regional trade, on the other hand, shows more dynamic impetus, and absorbs over 28 per cent of Central America's international tobacco transactions. Between 1955 and 1962 the volumes of this trade rose from 1,300 to 1,851 tons, and its value from 453,000 to 642,000 dollars. The biggest trade flow, accounting for more than 95 per cent of inter-Central American trade in tobacco takes place between Honduras — the leading exporter country — and El Salvador.

Since no important limiting factors exist on the supply side, the prospects of expanding production in the future seem to depend upon the study and implementation of programmes co-ordinated at the regional level and designed to enlarge the areas under cultivation, rechannel a proportion of production for the home market or for export towards the varieties of tobacco that are in most demand, and raise the yields of the existing plantations. An increase in internal consumption, combined with the possibility of substituting domestic production for a substantial proportion of the purchases at present made from third countries, would imply a relatively considerable volume of effective demand which could be turned to account for the purpose of strengthening programmes.

As regards external markets, some estimates suggest that tobacco exports from under-developed countries will be likely to increase in the forthcoming decade at an annual rate of about 2.7 per cent. Central America's special position as a marginal exporter may facilitate the enlargement of its share in world markets. Furthermore, since Cuba tobacco — which used to represent approximately two thirds of United States imports from under-developed countries — has disappeared from the United States market, demand has been deflected towards other countries, particularly those of Latin America, which produce dark tobacco, for whose processing Central America can offer favourable conditions.

With the exception of Costa Rica, the Central American countries conduct their reciprocal trade in leaf tobacco under a free-trade régime. The restrictions affecting transactions between Costa Rica and the remainder of Central America are imputable only to the differences in State development and control policies with respect to tobacco production. The objective pursued by Costa Rica has been that of adapting production to the requirements of the domestic market, since its exports to Central America and the rest of the world have been virtually nil. Tobacco production and sales are regulated through a State agency. Production quotas are distributed by districts and producers, and sales prices are fixed by contract in accordance with predetermined standards of quality. The other Central American countries have long been carrying on reciprocal trade in tobacco or applying complementarity practices in its production, and State intervention in the tobacco market has been comparatively limited.

Under the terms of the General Treaty, trade in tobacco will be fully liberalized throughout the area as soon as the Governments have signed an *ad hoc* agreement establishing the necessary measures for the regulation of intra-area trade and the co-ordination of production, internal taxation, price and supply policies.

Obviously, the establishment of machinery to regulate the regional supply would only partly fulfil the aims pursued through the liberalization of trade and the economic integration of Central America. In other words, the formulation of a policy of uniform prices and the conclusion of intra-area sales agreements with the leading tobacco manufacturers would have to be accompanied by programmes for the development of production with a view to the internal and external markets and for the protection of producers and consumers.

It would not only be a question of diversifying and improving the grades of tobacco produced in Central America, but also of organizing the well-balanced expansion of production and gradually eliminating the cost and price differences existing today.

In this context, the background data on which the *ad hoc* agreement to be signed by the Governments could be based might be assembled in a study covering at least the following aspects of the problem: (a) production costs; (b) prices paid to the producer, transport costs and other marketing margins; (c) internal taxation on both production and consumption; (d) possibilities of enlarging the areas under cultivation and improving yields; and (e) prospects for the diversification of production with a view to import substitution or the expansion of sales to external markets.

As regards industrially processed tobacco products, the difficulties of establishing a free-trade régime seem less formidable. Trade in cigars and cheroots already enjoys this prerogative, and although the cigarette trade is subject to various restrictions,<sup>20</sup> the price differences registered are not large enough to constitute an obstacle to their abolition. Furthermore, significant features of the industrial tobacco market are the existence of few manufacturing enterprises which operate in most of the Central American countries, and a fairly standardized output with similar characteristics.

#### (c) PRODUCTS SUBJECT TO CONTROLS FOR AN INDEFINITE PERIOD

In the special régimes of exemption from free trade established in the General Treaty there is a list of products subject to controls for an indefinite period, which represents, broadly speaking, the main export items of the Central American countries, or items whose domestic trade is governed by special régimes.<sup>21</sup>

Once the General Treaty entered into force the intra-area trade in these products continued to expand slowly, from 2.0 to 2.6 million dollars between 1961 and 1962 (see table 8).

<sup>20</sup> Basic quotas and preferential tariff in the case of trade between Guatemala and Costa Rica; preferential tariff as between El Salvador, on the one hand, and Guatemala, Honduras and Nicaragua on the other; and import controls and tariff duties in Costa Rica's trade with El Salvador and Nicaragua.

<sup>21</sup> The list includes non-pedigree cattle, coffee and coffee products, raw cotton, and other less important items.

Table 8

CENTRAL AMERICA: IMPORTS OF PRODUCTS SUBJECT TO INDEFINITE CONTROLS, 1962

(Values at current prices in thousands of dollars, c.i.f.)

| Product               | Intra-area trade |         | Imports from<br>the rest of<br>the world |
|-----------------------|------------------|---------|--|
|                       | Restricted       | Free    |  |
| Beef cattle .....     | 11.2             | 1 062.5 | 0.7                                      |
| Cheese and curds..... | —                | 291.6   | 204.6                                    |
| Coffee .....          | 1 208.4          | —       | 156.5                                    |
| Cotton .....          | 1.9              | 41.7    | 150.6                                    |
| TOTAL                 | 1 221.5          | 1 395.8 | 512.4                                    |

Source: ECLA, on the basis of official statistics.

However, this should not be taken to mean that the whole of the inter-Central America trade in these products is subject to restrictions. There are actually two systems, since some countries maintain a free-trade system with each other for some of these products. Thus 75 per cent of the total trade (1.5 million dollars) in 1961 represented transactions not subject to restrictive provisions, while in 1962 this percentage fell to 53 (1.4 million dollars) because of the increase in the volume of transactions between the countries that maintain the restrictions.

The trends described indicate not so much an expansion of the trade flows affected by the controls as a change in their structure, due mainly to the decline in the trade in beef cattle, which was offset to some extent by exceptional purchases of coffee from El Salvador by Nicaragua in 1962. If this had not occurred there would have been a continuation in the decline in the volume of trade in the items in question, due to the falling-off in the trade in cattle, which has traditionally been the major item.

(i) *Beef cattle.* Intra-area trade in beef cattle amounted in value to 3.6 million dollars in 1959, but declined to 1.5 million in 1961 and 1.1 million in 1962. This was due to the fact that the purchases by Costa Rica for meat processing, mainly from Nicaragua, came to an end when Nicaragua established its own processing plants.<sup>22</sup>

At present over 90 per cent of the intra-area trade in beef cattle is on a free-trade basis, and represents exports from Honduras for Guatemalan and El Salvador markets. The remaining trade, which is subject to import and/or export controls, amounted in 1962 to only 11,000 dollars.<sup>23</sup>

These figures are in sharp contrast with the increasing importance of exports of cattle and beef to third countries, which between 1959 and 1962 rose from 7.2 million dollars to 18.3 million (see table 9), while there was a decline in the *per capita* consumption of meat within the region.

<sup>22</sup> Imports by Costa Rica fell from 2.2 million dollars in 1959 to 407,000 dollars in 1961, and by 1962 had practically ceased.

<sup>23</sup> Provisional calculations indicate that imports of fresh, chilled and frozen meat (of the type exported by Central America) into the United States will probably continue to grow in the next decade at an annual rate of slightly over 2 per cent.

Table 9

CENTRAL AMERICA: EXPORTS OF BEEF CATTLE AND BEEF TO THE REST OF THE WORLD

(Thousands of dollars f.o.b.)

|                        | 1959      | 1962       |
|------------------------|-----------|------------|
| <i>Costa Rica</i>      |           |            |
| Beef cattle .....      | 679 577   | 1 421 650  |
| Beef .....             | 2 870 971 | 2 712 474  |
| TOTAL                  | 3 550 548 | 4 134 124  |
| <i>El Salvador</i>     |           |            |
| Beef cattle .....      | —         | —          |
| Beef .....             | —         | —          |
| TOTAL                  | —         | —          |
| <i>Guatemala</i>       |           |            |
| Beef cattle .....      | 92 340    | 93 615     |
| Beef .....             | —         | 3 838 039  |
| TOTAL                  | 92 340    | 3 931 654  |
| <i>Honduras</i>        |           |            |
| Beef cattle .....      | 254 622   | 674 269    |
| Beef .....             | 457 643   | 2 591 492  |
| TOTAL                  | 712 265   | 3 265 761  |
| <i>Nicaragua</i>       |           |            |
| Beef cattle .....      | 1 079 934 | 986 238    |
| Beef .....             | 1 806 052 | 5 993 390  |
| TOTAL                  | 2 885 986 | 6 979 628  |
| <i>Central America</i> |           |            |
| Beef cattle .....      | 2 106 473 | 3 175 772  |
| Beef .....             | 5 134 666 | 15 135 395 |
| TOTAL                  | 7 241 139 | 18 311 167 |

Source: ECLA, on the basis of official statistics.

As there are extensive possibilities of increasing regional output, a Central American policy is needed to encourage the development of stock-farming, based partly on the domestic market and partly on the expansion that can be envisaged in the export markets. This would require a study of production conditions in Central America, and the establishment at the regional level of a well-defined policy of domestic supply properly coordinated with a policy, also at the regional level, of

exports of beef and beef cattle. The relating of foreign trade policy to objectives for domestic development and supply are particularly important because some export controls have been established mainly to ensure that the domestic market of certain countries is adequately supplied.

Apart from the foregoing considerations, which relate to the kind of background information and administrative arrangements that have to be taken into account in drafting agreements aimed at establishing intra-area free trade, there do not appear to be any fundamental obstacles to the gradual elimination of restrictions on trade in beef and beef cattle. On the contrary, the fact that two of the major cattle-producing zones are outside the Central American market probably means that full use has not been made of the opportunities opened up by the establishment of the integration area. In this connexion it should be stressed that the levels of meat consumption are very low, and consequently if average income were increased or costs and prices reduced, which would be more likely if production were on a larger scale, Central American demand would tend to expand considerably.

(ii) *Other products.* Intra-area trade in cheese, although its total volume is small, has expanded rapidly in recent years in response to the stimulus of the regional market, and its value doubled between 1959 and 1962, rising to 300,000 dollars. As with beef cattle, the bulk of the trade flows were on the basis of the free trade which was established between some of the Central American countries at a time when trade was practically non-existent because of import controls.<sup>24</sup>

As *coffee* is one of the main export items of most Central American countries, intra-area trade rarely attains any considerable volume. The purchases by Nicaragua from El Salvador in 1962, to the value of 1.2 million dollars, were due to special circumstances.<sup>25</sup>

Much the same is true of *cotton*, and trade in this item has tended to decline in recent years. Whereas in 1959 its value was 162,000 dollars, and in 1961 199,000

<sup>24</sup> There are import controls only on the trade between Honduras and Nicaragua for an indefinite period, and between Honduras and Costa Rica.

<sup>25</sup> Intra-area trade in *coffee* is subject to import and export controls for an indefinite period between Nicaragua and Costa Rica, while the remaining trade is subject to import and export charges for an indefinite period.

dollars, in 1962 it was only 44,000 dollars. In this case also the bulk of the trade was on the unrestricted basis established between certain countries.<sup>26</sup>

Of the list of products subject to controls for an indefinite period (apart from beef cattle and, to a lesser extent, cheese) the surpluses produced by most of the countries, over and above the needs of the domestic market, constitute a natural brake on the expansion of intra-area trade, because of the low degree of complementarity between the output of the various countries. However, in view of the progress of the integration area, and the use made of the opportunities for expanding the supply of these two items, it appears desirable to study what machinery could be adopted to achieve liberalization of this trade within a reasonable period.

In this connexion, it should be noted that the Central American Economic Co-operation Committee, in resolution 118 (CCE), which it adopted at its eighth session, asked the secretariat of the General Treaty (SIECA) to study the instruments and measures required for the elimination of the restrictions for an indefinite period, and during the Committee's discussions it was suggested that these restrictions should be revised with a view to establishing progressive tariff reductions that would further that aim, before the transition period comes to an end.

#### (d) LIBERALIZATION OF TRADE THROUGH THE SIGNING OF SPECIAL PROTOCOLS

In accordance with the provisions of the General Treaty, special protocols are to be signed, which will be annexes to the Treaty, as a prerequisite for the full liberalization of intra-area trade in sugar and cereals.

The total volume of imports of sugar and cereals (excluding wheat and wheat flour) amounted to 9.6 million dollars in 1962 (see table 10). Of this total, two thirds represented intra-area trade and the rest imports from third countries. Intra-area transactions have been increasing, having risen in value from 6.3 million to 8.0 million dollars between 1959 and 1962.

<sup>26</sup> There is free trade between Costa Rica and the other Central American countries, and between Guatemala and Honduras. There are restrictions on the trade between Guatemala and El Salvador, in the form of export and import controls, and on Nicaragua's trade with Guatemala and El Salvador, in the form of import controls for an indefinite period.

Table 10

CENTRAL AMERICA: IMPORTS OF PRODUCTS SUBJECT TO PROTOCOL, 1961 AND 1962

(C.i.f. values in thousands of dollars at current prices)

| Product               | From Central America |         | From the rest of the world |         |
|-----------------------|----------------------|---------|----------------------------|---------|
|                       | 1961                 | 1962    | 1961                       | 1962    |
| Cereals .....         | 3 291.3              | 6 056.1 | 1 300.1                    | 2 917.4 |
| Rice in the husk..... | 104.4                | 99.7    | 5.4                        | 68.8    |
| Polished rice .....   | 487.5                | 697.6   | 946.2                      | 613.0   |
| Maize, unmilled ..... | 812.1                | 2 827.7 | 332.0                      | 2 106.5 |
| Beans .....           | 1 663.2              | 2 352.4 | 15.2                       | 126.5   |
| Sorghum .....         | 224.1                | 78.7    | 1.3                        | 2.6     |
| Sugar .....           | 406.7                | 606.1   | 35.1                       | 16.1    |
| TOTAL                 | 3 698.0              | 6 662.2 | 1 335.2                    | 2 933.5 |

Source: ECLA, on the basis of official statistics.

With respect to the composition of intra-area trade, it should be noted that the trade that is free of any restriction greatly exceeds in value that carried out under other types of régime, for all products, other than sugar and polished rice; the free trade amounts to 4.7 million dol-

lars as against only 1.9 million dollars for the restricted trade (see table 11).

(i) *Sugar.* Production in Central America has been increasing rapidly since the beginning of the fifties, rising from 96,000 tons to 376,000 tons between 1949/50 and

**Table 11**  
CENTRAL AMERICA: IMPORTS OF PRODUCTS SUBJECT TO PROTOCOL, 1962  
(*C.i.f. values in thousands of dollars at current prices*)

|                       | <i>From Central America</i> |             | <i>From the rest of the world</i> |
|-----------------------|-----------------------------|-------------|-----------------------------------|
|                       | <i>Restricted</i>           | <i>Free</i> |                                   |
| Cereals .....         | 1 352.8                     | 4 703.3     | 2 917.4                           |
| Rice in the husk..... | 32.5                        | 67.2        | 68.8                              |
| Polished rice .....   | 510.0                       | 187.6       | 613.0                             |
| Maize, unmilled ..... | 212.4                       | 2 615.3     | 2 106.5                           |
| Sorghum .....         | —                           | 78.7        | 2.6                               |
| Beans .....           | 597.9                       | 1 754.5     | 126.5                             |
| Sugar .....           | 606.1                       | —           | 16.1                              |
| TOTAL                 | 1 958.9                     | 4 703.3     | 2 933.5                           |

*Source:* ECLA, on the basis of official statistics.

1962/63. The average annual growth rate was 11 per cent, but the period of most rapid expansion or production began after the 1959/60 season (annual increase 17 per cent), when conditions in the export markets were particularly favourable. The area harvested increased at a rate that was appreciably lower (3.6 per cent annually), and rose from 86,000 to 137,000 hectares in the period in question. These developments seem to indicate a considerable increase in average yields, due partly to real increases in productivity, but even more to the change-over from *panela* and other forms of low quality raw sugar to the more refined products.

Central American climatic and soil conditions make possible a high output in the production of sugar cane, although the yields obtained at present (both in cane production and in the saccharose content of the cane) compare unfavourably with those in the main world exporter countries. Nevertheless, although the prevailing methods of cultivation are inefficient and many of the processing plants are technically out of date, the main factors that limit the expansion of production seem to be the evolution of demand and Central America's competitive position in foreign markets.

Up to 1960 sugar production increased in line with the expansion of the domestic market, and there were relatively small surpluses for export. From 1956 to 1962 the apparent consumption of sugar rose at an annual rate of 6 per cent, from 18 to 22 kg *per capita*, mainly as the result of population growth, higher incomes, and the replacement, to a marked degree, of inferior products by refined sugar.

Central American sugar exports, which in the mid-fifties represented only marginal sales of the surpluses over domestic consumption, have now become considerable, and absorb a third of the region's total production. Foreign sales, which in 1956 amounted to 5,000 tons and in 1959 to 38,000 tons rose in 1962 to 124,000 tons.

All the Central American countries except Honduras are fully launched on world sugar markets, where they

dispose of volumes that range from between 20,000 and 50,000 tons per country. During the above period Honduras reduced its domestic sugar deficit from 11,000 to 3,000 tons, which indicates that it may begin to export sugar in 1966 if the trend continues.

This radical change in Central America's position on the world sugar market is attributable to the higher demand in the United States in recent years, in conjunction with the rising trend of world prices. The import quotas of the United States market for Central American sugar increased fivefold (from 15,422 tons in 1959 to 78,925 in 1963), while in 1963 prices rose to a level that they had not attained since the twenties.

As the production of most of the Central American countries enables them to meet their own needs, intra-area trade is confined to covering the shortages registered in Honduras; this trade has been declining, and in 1962 represented a value of only 606,000 dollars.

In accordance with the provisions of the General Treaty, intra-area trade in raw and refined sugar with Honduras is subject to a mixed régime of basic quota and import control. The treatment applied to the trade in sugar between Honduras and the other Central American countries has consisted in making it subject to a basic quota and import control on the surpluses, until the end of the transition period of five years provided for the establishment of free regional trade.

In view of the circumstances of the sugar market in Central America, the main problems relate not so much to questions of intra-regional trade as to the establishment of a common strategy for developing sugar production, in line with a common policy on exports to countries outside the area. In this connexion the General Treaty provided for the drafting of a special protocol whose aim would be to establish the basis for a joint Central American trade policy on sugar.

The organization of a common trade policy may take a number of forms, from the mere co-ordination of the



separate negotiations of the member States, to the signing of agreements of treaties with third parties on the basis of block negotiations. Although the latter method would improve the bargaining position of the integration area, and ensure an equitable distribution of the resulting benefits among the member States, its adoption would involve the establishment of machinery that would go beyond the problem of trade in a particular product and would, in fact, have to cover a major part of import and export trade with the rest of the world.

Whatever course is finally chosen, the formulation of a common trade policy with third countries is an instrument of the first importance for standardizing the development of foreign trade and ensuring a substantial flow of foreign trade to the integration area, once full free trade has been established.<sup>27</sup>

In the specific case of sugar, thought should also be given to how far sugar cane production should be expanded with a view to foreign trade. This involves analysing world market prospects in the light of the competitive position that Central America may be able to achieve in coming years.

It should be noted that the world market has recently passed through an abnormal period, which began when the world harvest declined in 1961/62, and Cuban exports were diverted to the socialist countries. These two developments led in turn to a rapid increase in world prices and a higher demand in the United States market for Latin American sugar, in order to fill to some extent the vacuum created by the diversion of Cuba's output to other markets. Trade flows have now been more or less adjusted to the structural changes in the market; the recovery of world harvests seem to indicate the renewal of the trends that prevailed during the early post-war years, with a constant surplus of output over the increase in consumption.<sup>28</sup> Consequently, prices are likely to continue to decline in the immediate future, and the exporting countries may find it difficult to place their surpluses on terms as favourable as during the last three years.

The fact that the Central American countries considered individually are almost all able to supply their own needs simplifies the problems of intra-regional trade. However, when in 1966 the existing domestic controls are removed, there may be temporary maladjustments pending a satisfactory degree of uniformity in costs, sales taxes and prices in the various countries. In that connexion it would be useful to study the features of production in the main cane-producing areas, and those in the processing centres, to pinpoint the origin of the existing differences in costs, internal charges, qualities, prices<sup>29</sup> and marketing mark-ups, and possible methods of reducing such differences. In particular, research in this field would provide the basis for establishing a system of regionally co-ordinated prices, at both the pro-

<sup>27</sup> Broadly speaking the application of a common trade policy should include, *inter alia*, the following: tariff equalization, negotiation of treaties and agreements, the application of a uniform policy as to quantitative restrictions, and the adoption of uniform methods to prevent dumping or export subsidies by third countries.

<sup>28</sup> Estimates of the 1963/1964 harvest indicate that world output will amount to 59.4 million short tons, which is 10 per cent higher than the annual average between 1955/60 and 1962/63; even greater increases are expected for the 1964/65 season.

<sup>29</sup> At present consumer prices of sugar range between 17 and 24 dollar cents per kg.

ducer and consumer level, in line with an economic policy similar to that described in later paragraphs.

(ii) *Cereals*.<sup>30</sup> Problems of the intra-regional trade in cereals have been the subject of a number of studies in recent years. Some of the Central American countries, as well as FAO, SIECA and ECLA, have carried out studies on production conditions, marketing, storage and price policy for cereals from a regional standpoint.<sup>31</sup> Furthermore, those bodies, at the request of the Co-ordinating Committee on Marketing and Price Stabilization are making a detailed analysis of problems relating to the trade in rice. These studies, which have in the main been examined at meetings of the agencies concerned with development and price stabilization, provide background information and general outlines that can serve as a starting point for preparing the protocols to be signed shortly in order to initiate free trade in these products in the integration area.

Although cereal production provides the basis for feeding the population of Central America, for over a decade the average annual growth rate has been less than 1 per cent. The annual average value of production (at constant prices for 1954-56) increased only from 156.8 million dollars during 1951-53 to 161.9 million in 1959-61. This slow growth has had repercussions on the structure of supply, and on the levels of cereal consumption, that need to be studied in some detail. In the first place, there has been a fairly marked rising trend in the imports from third countries, and a declining trend in sales abroad. Thus while imports increased by 200 per cent between 1951-53 and 1959-61, exports remained at about the same average levels. Consequently, there was a radical change in the international balance in grains in Central America, from an annual average surplus (at constant prices for 1954-56) of 3.3 million dollars in 1951-53 to an annual average deficit of 0.8 million in 1959-61.

The most obvious indication of the growth of imports from outside the region were the purchases of maize and rice, all the more striking with respect to the latter because in the early fifties there had been surpluses of rice for export.

Apart from Honduras, where the stimulus of the Common Market has led to a considerable expansion in total grain exports, there was a reduction in the Central American countries in the contribution of domestic production to the internal market, or in the volume of exports. In El Salvador, in particular, there was a rapid rise in imports (from 2.3 million to 5.1 million dollars between 1951-53 and 1959-61), and in Nicaragua the foreign trade surplus in cereals, which in 1951-53 was about 6.3 million dollars, had almost disappeared by 1959-61.

It should be added that the increase in supplies from outside the region, and in the flows of intra-regional trade, has not offset the slow expansion in the production of the region as a whole, and there has been a sharp falling-off in the supply of cereals for home consumption.

<sup>30</sup> The term "cereals" in this section covers only four items: maize, rice, beans and sorghum.

<sup>31</sup> See the following reports: *El abastecimiento de granos en Centroamérica y Panamá* (E/CN.12/CCE/119); *Los granos básicos en Centroamérica y Panamá* (SIECA/IFE/IV/DT.1 and 2), and *Coordinación de los precios de sustentación en el mercado integrado de granos en Centroamérica* (SIECA/IFE/V/DT.3).

Between 1951-53 and 1959-61 there was an average decline of 17.5 per cent in *per capita* consumption in Central America as a whole, and in some countries the decline was between 25 and 35 per cent.

If the Central American economies had continued in isolation behind the trade barriers that existed before the integration movement began, the problems of internal supply of cereals would undoubtedly have become much more serious, and so would the regional imbalances in terms of surpluses and deficits between countries, which would have been extremely difficult to settle satisfactorily. In that connexion, the effect of the bilateral agreements, at the first stage, and later of the General Treaty, have made it possible to increase the degree of complementarity in the production and markets of Central America, while restricting the growth of the deficit in the supply of cereals, which would otherwise have had to be made up by imports from third countries.

This is confirmed to some extent by the rapid expansion in the intra-area trade in cereals, which rose by 85 per cent (from 3.3 million to 6.1 million dollars) between 1961 and 1962, while its contribution to the total intra-regional trade in agricultural products rose from 18 to 24 per cent. However, during the same period imports from outside the region increased still more rapidly, from 1.3 million to 2.9 million dollars (see again table 10).

The intra-area trade in cereals, as in other products, is subject to different trade régimes. Trade between some countries is free under specific agreements that have entirely abolished the trade barriers that existed formerly, and between other countries there are restrictions that vary according to the product and the countries concerned (see again table 11).

The value of the transactions of the countries between which trade is free amounted to 4.7 million dollars in 1962. This represents an increase of over 65 per cent compared with 1961. The main flows of this trade (98 per cent) are between El Salvador and Honduras.<sup>32</sup>

The intra-area trade in cereals that is subject to various restrictions also rose sharply, from 470,000 dollars in 1961 to 1.4 million in 1962. This indicates the expansion that can be expected if the restrictions on trade are removed, and the possibilities of making the region self-sufficient in cereals.

The exception to the free trade in cereals within the integration area consist mainly of quotas or import or export controls. The existing system of quotas governs Costa Rica's trade with Guatemala and Honduras, and Nicaragua's trade with El Salvador and Guatemala. In accordance with the provisions of the General Treaty, the present quotas are to be abolished within four or five years from the date when they were established, according to the products and the countries concerned (see table 12).

<sup>32</sup> The free trade in rice between El Salvador and Honduras was established in 1960. However, since relatively little rice is consumed in either country, and output is small, the value of the transactions increased only slowly, amounting in 1962 to only 252,000 dollars. Free trade in maize, on the other hand, which was established in April 1962, expanded in a spectacular manner, and amounted in 1962 to 2.6 million dollars, a figure five times that for 1961. The trade in beans between the two countries lies midway between these extremes, and rose from 1.5 million dollars in 1961 to 1.7 million in 1962.

The system of controls on both imports and exports of cereals applies to the trade between El Salvador, on the one hand, and Costa Rica and Nicaragua, on the other. It has been agreed that this special régime will give way to free trade in June 1966, except as regards maize, for which free trade will begin in June 1965.

In addition to the restrictions described above, there are others, such as a simple control of imports or exports, which govern some of the transactions of Honduras with Guatemala and Nicaragua, and of Costa Rica with Nicaragua (see again table 12).

In accordance with the provisions of the General Treaty, the restrictions now applied to the trade in maize, beans, rice and sorghum are to be removed by June 1966. This prospect of free trade in the near future for the basic cereals underlines the need to work out and introduce a regional policy on the production and marketing of these cereals, to co-ordinate the action of the individual countries within the framework of the Central American Common Market.

The studies on this subject<sup>33</sup> have made it possible to pinpoint certain problems whose solution would facilitate the process of adapting production and marketing to the new conditions in which the Central American trade in cereals will have to be conducted. In this connexion attention is drawn to the differences in the various national policies on price support and stabilization, to the uneven distribution of storage and other marketing facilities in the region, and the difference in the purchasing capacity of the national regulating agencies.

In view of these differences between the countries, the lack of a common policy on cereal supply may lead to a disruption of the flows of intra-area trade when the existing controls and restrictions are removed.<sup>34</sup>

The studies on the liberalization of the trade in cereals have made it possible to work out a series of basic principles that can provide a foundation for defining a regional policy on supply and on development of production in the participating countries, and can also be applied to other products traded in the integration area. In accordance with the provisions of the General Treaty, these principles must be set forth in a special protocol, whose aim will be to establish rules for joint action to promote a regulated trade in cereals in line with the general aims of the integration programme.

One group of problems related to the co-ordination of national policies in the regulation of prices and marketing of cereals, since it has been agreed that if the measures taken to encourage grain production in Central America are to succeed, minimum guarantees with respect to prices and the absorption of output must be established on standard lines for the whole region. It is hoped that this would help to establish a stable and well-balanced price structure for the whole of Central America, which would protect the consumer and stimulate production, and would conduce to a well-organized intra-area trade once the restrictions on the free transit of these products have been removed.

<sup>33</sup> See *Informe sobre los trabajos realizados en el sector agropecuario dentro del Programa de Integración Económica Centroamericana* (E/CN.12/CCE/SC.6/2; FAO/CAIS/64/5).

<sup>34</sup> For example, the different price levels and different stabilization policies may give rise to unnecessary and costly movements of cereals across national frontiers, and create artificial price fluctuations.

Table 12

CENTRAL AMERICA: TEMPORARY SPECIAL RÉGIMES OF EXEMPTION FROM THE FREE TRADE IN CEREALS,  
BY PAIRS OF COUNTRIES

| <i>Pairs of countries</i>     | <i>Free trade</i>                 | <i>Export and import control</i> | <i>Import control</i>                     | <i>Export control</i> | <i>Basic quota</i>                          |
|-------------------------------|-----------------------------------|----------------------------------|---|-----------------------|---|
| Guatemala }<br>El Salvador }  | Sorghum<br>Beans                  | Rice***<br>Maize**               |   |                       |   |
| Guatemala }<br>Honduras }     | Rice<br>Sorghum<br>Beans          |                                  |   | Maize***              |   |
| Guatemala }<br>Nicaragua }    | Sorghum                           |                                  |   |                       | Rice***<br>Maize***<br>Beans***             |
| Guatemala }<br>Costa Rica }   |                                   |                                  |   |                       | Rice**<br>Maize**<br>Sorghum**<br>Beans**   |
| El Salvador }<br>Honduras }   | Rice<br>Maize<br>Sorghum<br>Beans |                                  |   |                       |   |
| El Salvador }<br>Costa Rica } | Sorghum                           | Rice**<br>Maize**<br>Beans***    |   |                       |   |
| Honduras }<br>Nicaragua }     |                                   |                                  | Rice**<br>Maize**<br>Sorghum**<br>Beans** |                       |   |
| Honduras }<br>Costa Rica }    |                                   |                                  |   |                       | Rice***<br>Maize***<br>Sorghum**<br>Beans** |
| Nicaragua }<br>El Salvador }  | Sorghum                           |                                  |   |                       | Rice**<br>Maize***<br>Beans <sup>1</sup>    |
| Nicaragua }<br>Costa Rica }   |                                   |                                  | Rice**<br>Maize**<br>Sorghum**<br>Beans** |                       |   |

\* Free trade from June 1964.

\*\* Free trade from June 1965.

\*\*\* Free trade from June 1966.

<sup>a</sup> Quota of 20,000 quintals a year.<sup>b</sup> Quota of 50,000 quintals a year.<sup>c</sup> Quota of 100,000 quintals a year.<sup>d</sup> Quota of 30,000 quintals a year.<sup>e</sup> Quota of 150,000 quintals up to June 1965 and 200,000 quintals up to June 1966.<sup>f</sup> Quota of 200,000 quintals a year.<sup>g</sup> Quota of 100,000 quintals a year.<sup>h</sup> Quota of 200,000 quintals a year.<sup>i</sup> Quota of 80,000 quintals a year.

In this connexion, a study was made of the minimum capacity of the storage facilities that should be available to support the programmes of price standardization and purchasing by State bodies.<sup>35</sup> According to studies of potential production, the volumes of cereals that may be available for marketing, and the projection of the evolution of demand up to 1970, an estimated expansion of about 80 per cent will be needed to meet the requirements likely to arise out of regulation of the trade

<sup>35</sup> *Los granos básicos en Centroamérica y Panamá*, op. cit., chapters V and VI.

in cereals. The above calculations also cover the increase in State purchasing that will be called for by the regulation of the distribution over the year of the sales of cereals by countries exporting to the rest of Central America.<sup>36</sup>

Furthermore, on the basis of the existing storage capacity, and the demand in each country, a preliminary programme has been drawn up for the geographical

<sup>36</sup> Total State purchases are estimated as 180,000 tons a year, expressed in the equivalent of maize with a 12 per cent moisture content.

distribution of the new facilities. This provides that Guatemala, which is responsible for about 40 per cent of the region's output of cereals, would build about 50 per cent of the additional capacity, the rest being distributed among Costa Rica, Honduras and Nicaragua. El Salvador would have sufficient facilities during the period in question to permit the application of the regional programmes of marketing and price stabilization.

The formation of a network of storage facilities<sup>37</sup> is only one of the policy instruments that will regulate the intra-area trade in cereals. Another important element is the financial capacity of the price stabilization bodies that will have to apply the cereal purchasing policy and price regulation in each country. For this purpose a considerable increase will be needed in the government allocations to the stabilization agencies to enable them to extend the systems of price guarantees and purchases to the producer level in some cases, and in others to purchase stocks in order to prevent excessive movements of goods between national frontiers, mainly during the harvest season.

By this means, through the establishment of a uniform and effective system of agricultural prices in the region, it will be possible within a short period to lay one of the essential bases for the effective application of other measures for the direct encouragement of production (such as programmes of supervised credit, the use of improved seeds, fertilizers or pesticides, and in general the introduction of improved agricultural techniques), whose success depends largely on the establishment of firm guarantees for the producers with respect to prices and sales. If this is not done, the present system of cereal production, characterized by a predominance of small farmers who are unlikely to be able to raise their average productivity on the basis of their own resources, is likely to persist, with unfavourable consequences for trade and for increased regional self-sufficiency.

The main reason why a policy of this type is urgently needed — apart from social and economic considerations relating to the protection of the consumers' purchasing power and the raising of the farmers' real income — is the rapid population growth in conjunction with the declining trends recorded for over a decade in the average output of the main crops used to feed the population. In these circumstances the adoption of agreements and programmes aimed at establishing the basis for self-sufficiency of these basic foods in Central America is now one of the main conditions for a balanced development of the individual economies and of the Common Market, and for the raising of the levels of living of the bulk of the population. The *per capita* supply of the basic cereals has been falling off considerably and this has led to a deterioration in average levels of nutrition, because it has not been offset by increases in the consumption of any other type of food produced internally or imported. Furthermore, in some countries of the region the stagnation in the production of basic foods is due to a steady deterioration in standards of cultivation, mainly in the form of loss of soil fertility through erosion and lack of fertilization, and in general the use of unsatisfactory systems of production.

<sup>37</sup> Some Governments have begun negotiations for international loans to make up the funds needed for the construction of the network of silos required under the programme described.

Thus it must be emphasized that the strengthening of food production, especially cereal production, requires some strong impetus that can swiftly be transformed into measures of encouragement at the national and regional levels. Consequently, there must be not only an expansion in the producers' marketing prospects, through the establishment of free trade in cereals in the region, but also the provision of broader guarantees for the producers regarding sales within the Common Market through the formulation of joint programmes on production and trade. Although the immediate problem of the Central American countries is to define the conditions that must be established for such trade, this definition requires the formulation of the principles of a policy of regional promotion and co-operation that will eventually lead to an increase in the production of cereals and other basic foods.

Hence the need to include in the cereal protocol a series of instruments for co-ordinating the action of the different Governments and permitting them to undertake the solution of the problems raised by a system of co-operation and mutual support. Once general or specific agreements have been reached (such as the establishment of uniform prices, the organization of systems of purchase and sale within the integration area and in relation to other countries, and the approval in principal of certain investment programmes that have been studied), the type of policy adopted, and the operational instruments that will have to be used, call for the designing of flexible machinery for co-ordination and co-operation in order to shape this joint government action in accordance with the changing circumstances and unforeseen problems that may arise in carrying out the programmes. And all this must be done without prejudice to the long-term objectives and without ill effects on the normal working of the integrated market for the basic food products. This will mean, first, co-ordinating the Governments' agricultural programmes, and secondly, signing periodic agreements adjusting the guaranteed prices to the producer, and the sales prices of the stabilizing agencies, to the changes in market conditions, and regulating other aspects of regional supply.

Mention should be made, as background to the foregoing, of the decision taken by the production development and price stabilization agencies to establish a Committee on the Co-ordination of Marketing in Central America and Panama.<sup>38</sup> This agency held its first meeting in February 1964, and has continued the work begun by the agencies referred to, mainly in relation to the construction of a system of regional support prices and the establishment of standard rules for the classification of cereals.

However, the work of price regulation is merely a first step, and will not suffice in itself to bring about a sustained and orderly expansion of production and trade

<sup>38</sup> This step was taken during the eighth meeting of the price stabilization agencies, held in September 1963, and was approved with certain amendments by their governing bodies. The Committee was given powers to study and take decisions on all matters relating to (i) co-ordination at the regional level of producer support prices; (ii) the establishment of rules for the standard classification of cereals and other products; (iii) the maintenance of an exchange of information on production, marketing and prices of cereals and other agricultural products, and (iv) co-ordination and efforts to standardize the working methods of the national price stabilization agencies.

in the basic agricultural products in the Common Market. In this connexion, it should be noted that the participation of whatever government departments are made responsible for the execution of such programmes might be an appropriate means of extending and facilitating the work of regional co-operation and co-ordination at the production and trade levels.<sup>39</sup>

On bases such as those indicated here, the Central American Governments could provide the Integration Programme with a means of promoting and regulating the trade in agricultural products, which could be used as an instrument of the common development policy in a process that gives rise to problems of a special nature, best approached on the basis of co-ordinated action by the member countries. It would also be possible to draw up the outlines of a Central American policy in agricultural matters relating to three basic questions: (a) the marketing and prices of the agricultural products that are the subject of intra-area trade; (b) the orderly development of the production of food items with an eye to the Common Market, and (c), in close relationship with the foregoing, the study of questions of the balancing up of trade flows, with a view to giving special priorities or advantages, under the development programmes, to the relatively less developed areas, and to recommending the best distribution among the participating countries of

<sup>39</sup> As already noted, strictly speaking the machinery of co-ordination should not be confined to cereals, but should also cover, as far as necessary, a study of the problems relating to other food products suitable for intra-area trade.

## 5. TARIFF EQUALIZATION FOR AGRICULTURAL COMMODITIES

The analysis of free trade in agricultural commodities which is undertaken in this document would be incomplete without a reference to the adoption of a common tariff applicable to the rest of the world as one of the salient integration policy tools for developing regional trade and encouraging import substitution.

In principle, tariff equalization has been virtually completed through its extension to 98 per cent of the Central American tariff items. Agricultural commodities are no exception, since a uniform duty has now been set for every item apart from wheat, wheat flour and some food preparations.

In accordance with the Equalization Agreement, national tariffs have been standardized in two ways: (a) through the immediate adoption of equalized duties; and (b) through the progressive adjustment of duties to the uniform levels agreed upon. In the case of agricultural commodities, the latter method has been applied to slightly over 10 per cent of the tariff items.

Not all the uniform duties specified are in force because the supplementary protocols appended to the Equalization Agreement are still in process of ratification.<sup>40</sup>

<sup>40</sup> The Equalization Agreement, which is observed in all the Central American countries, has been improved upon and completed by means of protocols adopted at a number of subsequent meetings.

The Managua Protocol entered into force on 4 June 1961 in Guatemala, El Salvador and Nicaragua, and on 16 August 1962 in Honduras. The subsequent accession of Costa Rica became operative in Guatemala, El Salvador and Costa Rica on 25

the financial and technical burdens involved in the programme.

From another standpoint it should be noted that the new machinery for the co-ordination and development of production and the regulation of the prices of agricultural products, unlike the other agencies for the regulation or liberalization of trade, cannot only supplement any general measures relating to the trade in basic food items, but can also perform a useful function in the orderly development of agricultural production aimed at replacing imports or meeting the increased regional demand for those items.

The form and functional features of the co-ordination machinery need to be studied in more detail, on the lines of whatever criteria are established at the first meeting of the Sub-Committee on Agricultural Development. In that connexion, various views can be advanced as to the scope of the functions to be performed, the participation of national and regional agencies, and the instruments of economic policy to be used in achieving the co-ordination of programmes within the integration area.

Without prejudice to the foregoing, it is advisable, in view of the need to continue the work already being done, to support the activities of the Co-ordinating Committee in the field of price stabilization and regulation of supply, subject to some modification of its functions once the necessary decisions have been taken, and the studies concerned have been carried out.

So far uniform duties are being applied in the five countries of the area to 63 per cent of the agricultural commodities on the tariff schedule. They are officially enforced in three countries on 33 per cent of the items, only a smaller number remaining unratified (see table 13).

In these circumstances, the equalization of duties on imported agricultural commodities is likely to give an added impetus to the growth of production and intra-Central American trade in the very near future.

### (a) GENERAL TARIFF POLICY ASSESSMENT

The basic economic criteria adopted by the Governments for transforming the customs tariff into an effective economic and fiscal policy instrument to speed up economic development consisted in the establishment of uniform duties differentiating between groups of products according to the importance of each group to the process of growth. Broadly speaking, goods that can be produced domestically are given greater protection, and goods to be used in expanding or improving installed capacity

December 1963, and in Nicaragua on 6 July 1964. The Government of Honduras has not yet ratified this instrument of accession.

The San José Protocol, signed in July 1962, entered into force for Guatemala, Honduras and Costa Rica on 28 June 1964, with only El Salvador and Nicaragua still to ratify.

The San Salvador Protocol, concluded in January 1963, will take effect throughout Central America as soon as it has been ratified by Honduras, Nicaragua and Costa Rica.

Lastly, August 1964 witnessed the signature of the Guatemala Protocol.

Table 13

CENTRAL AMERICA: NUMBER OF ITEMS REPRESENTING AGRICULTURAL COMMODITIES AND INPUTS SUBJECT TO EQUALIZED CUSTOMS DUTIES

| Equalization instrument  | Number of items by type of equalization |           |             | Date of entry into force of the equalization instruments |             |            |           |            |
|--|---|-----------|-------------|--|-------------|------------|-----------|------------|
|  | Total                                   | Immediate | Progressive | Guatemala  | El Salvador | Honduras   | Nicaragua | Costa Rica |
| Central American Agreement on the Equalization of Import Duties and Charges..... | 99                                      | 86        | 13          | 29-IX-60   | 29-IX-60    | 16-VIII-62 | 29-IX-60  | 23-IX-63   |
| Managua Protocol .....   | 100                                     | 93        | 7           | 4-VI-61  | 4-VI-61     | 16-VIII-62 | 4-VI-61   | 25-XII-63  |
| San José Protocol.....   | 103                                     | 73        | 30          | 28-IV-64   | —           | 28-IV-64   | —         | 28-IV-64   |
| San Salvador Protocol.....   | 7                                       | 6         | 1           | —  | —           | —          | —         | —          |
| Guatemala Protocol .....   | 1                                       | 0         | 1           | —  | —           | —          | —         | —          |
| TOTAL EQUALIZATION .....   | 310                                     | 258       | 52          |  |             |            |           |            |
| Pending equalization .....   | 4                                       | —         | —           |  |             |            |           |            |
| TOTAL ITEMS  | 314                                     | 258       | 52          |  |             |            |           |            |

Source: ECLA, on the basis of official statistics.

(intermediate and capital goods) and ensuring adequate supplies of essential items are less heavily taxed. In addition, activities connected with the processing of regional raw materials have been promoted and the development of the basic industries safeguarded. Lastly, the importance of certain items was taken into account in establishing tariff levels so as not to reduce fiscal revenue unduly.

The analysis of equalized duties for agricultural commodities and inputs shows that their average incidence is 62 per cent of the c.i.f. value of all such imports.<sup>41</sup> In comparative terms, the average incidence of the common tariff was 12 per cent higher than the average duty previously applied in Central America.

The changes in the tariff structure can be discerned more clearly if commodities are divided into groups and sub-groups (see table 14). The average incidence of the equalized tariff for foodstuffs and agricultural raw materials is 104 per cent, and its increase over the average duty applied in the past is 18 per cent. Duties on imports of inputs for agricultural use and capital goods promoting and modernizing agricultural development have been kept at a relatively low level (10.5 per cent of the c.i.f. value of such purchases), despite an average increase of 5.7 per cent over their average pre-equalization level of 4.8 per cent.

In the majority of the more detailed groups there was a general rise in tariff levels (see again table 14). The only two exceptions are the categories comprising milk and dairy products and animal feed. The smallest increases were mainly in the duties on the more popular foods (cereals, meat, vegetable oils and fats) and on agricultural raw materials. The greatest increases were for non-essential foods, commodities in which it was hoped to speed up the process of import substitution or those easily obtainable in the region (fruit, vegetables, tobacco and tobacco manufactures, fish, animal oils and fats, etc.).

<sup>41</sup> What is meant by *average incidence* is the percentage represented by the charges obtained from the application of the tariffs in question to the c.i.f. value of imports in a given year. In this case, the calculation has been made on the basis of imports effected in 1960.

Table 14

CENTRAL AMERICA: COMPARISON BETWEEN THE AVERAGE INCIDENCE OF THE COMMON TARIFF AND OF THE AVERAGE NATIONAL TARIFFS PREVIOUSLY APPLIED TO AGRICULTURAL COMMODITIES AND INPUTS

(Percentage of the c.i.f. value of 1960 imports)

| Commodity group                       | Common tariff | Average national tariff |
|---------------------------------------|---------------|-------------------------|
| <i>Agricultural commodities</i> ..... | 105.6         | 87.6                    |
| Livestock and meat.....               | 30.1          | 24.1                    |
| Milk and dairy products.....          | 40.6          | 49.5                    |
| Fish, crustaceans and molluscs.....   | 96.2          | 69.6                    |
| Cereals .....                         | 79.6          | 72.5                    |
| Fruit and vegetables.....             | 310.9         | 260.9                   |
| Sugar and sugar preparations.....     | 125.4         | 104.1                   |
| Stimulating beverages and spices..... | 86.1          | 63.8                    |
| Food preparations .....               | 117.2         | 78.3                    |
| Vegetable oils and fats.....          | 84.4          | 81.4                    |
| Tobacco and tobacco manufactures....  | 258.0         | 190.0                   |
| Animal feed .....                     | 10.5          | 12.9                    |
| Other raw materials.....              | 54.9          | 44.5                    |
| Animal oils and fats.....             | 168.6         | 88.2                    |
| <i>Inputs</i> .....                   | 10.5          | 4.8                     |
| Insecticides, pesticides, etc.....    | 11.7          | 4.6                     |
| Agricultural machinery .....          | 6.4           | 5.1                     |
| Draught animals .....                 | 11.6          | 11.2                    |
| TOTAL AVERAGE INCIDENCE               | 62.9          | 50.3                    |

Source: ECLA, on the basis of official statistics.

In order to determine how far the structure of the new standard tariff follows the criteria laid down, agricultural commodities have been classified in three different groups (see table 15). The first comprises the main products exported by Central America to world markets and those in which the region is relatively self-sufficient. The new duties for these have been made a good deal higher than past average levels owing to the ample possibilities of building up domestic supplies on the basis of local production. The only item excepted is live-

stock and meat, on which the equalized duty is low because of the preference given to imports of livestock for breeding purposes.

The second category covers agricultural commodities for domestic consumption and those offering increasing possibilities of import substitution. Tariffs on these products are usually high, and in some cases the level of protection went up appreciably with the establishment of

uniform duties. For cereals and vegetable oils and fats, however, the increases were fairly small as the previous levels were high, and it was decided not to levy excessively heavy duties on articles in general use because of the possible impact on consumer prices. All in all, the changes in the tariff structure fulfil the basic aim of stimulating import substitution, and, in certain cases, of increasing the flow of revenue into the Treasury.

Table 15

CENTRAL AMERICA: COMPARISON BETWEEN THE ESTIMATED AVERAGE INCIDENCE OF THE COMMON TARIFF AND OF THE AVERAGE NATIONAL TARIFFS PREVIOUSLY APPLIED TO AGRICULTURAL COMMODITIES

(Percentage of the c.i.f. value of 1960 imports)

| Agricultural commodity and activity                                  | Common tariff | Average national tariff | Difference in incidence | Percentage of imports |               |                 |
|--|---------------|-------------------------|-------------------------|-----------------------|---------------|-----------------|
|  |               |                         |                         | Total                 | Rest of world | Central America |
| <b>A. Mainly for export</b>  |               |                         |                         |                       |               |                 |
| Livestock and meat.....  | 30.1          | 24.1                    | +6.0                    | 100                   | 37            | 63              |
| Sugar and sugar preparations.....                                    | 125.4         | 104.1                   | +21.3                   | 100                   | 35            | 65              |
| Fruit and vegetables.....  | 310.9         | 260.9                   | +50.0                   | 100                   | 34            | 66              |
| Stimulating beverages and spices.....                                | 86.1          | 63.8                    | +22.3                   | 100                   | 41            | 59              |
| <b>B. For domestic consumption</b>                                   |               |                         |                         |                       |               |                 |
| Cereals and cereal preparations (except wheat and wheat flour) ..... | 79.6          | 72.5                    | +7.1                    | 100                   | 42            | 58              |
| Tobacco and tobacco manufactures.....                                | 258.0         | 190.0                   | +68.0                   | 100                   | 72            | 28              |
| Animal oils and fats.....  | 168.6         | 88.2                    | +80.4                   | 100                   | 98            | 2               |
| Vegetable oils and fats.....   | 84.4          | 81.4                    | +3.0                    | 100                   | 34            | 66              |
| <b>C. In course of development or representing a potential</b>       |               |                         |                         |                       |               |                 |
| Milk, dairy products and eggs.....                                   | 40.6          | 49.5                    | -8.9                    | 100                   | 92            | 8               |
| Fish, crustaceans and molluscs .....                                 | 96.2          | 69.6                    | +26.6                   | 100                   | 95            | 5               |
| Raw materials .....  | 54.9          | 44.5                    | +10.4                   | 100                   | 64            | 36              |
| Food preparations .....  | 117.2         | 78.3                    | +38.9                   | 100                   | 80            | 20              |

Source: ECLA, on the basis of official statistics.

The third group consists of agricultural commodities that are largely supplied from abroad and in which, despite substantial prospects of expansion for domestic production, there is no hope of import substitution on any significant scale in the near future. Generally speaking, they are products that require industrial processing with more extensive use of technical production methods. In the case of this group, tariff policy had to reconcile the need for an easy flow of goods with that of giving a margin of protection to development of domestic production. Consequently, the increments in tariff levels have usually been kept within fairly strict bounds and in a few instances it has been thought advisable to supplement the incentives of the uniform tariff by measures of other kinds.

For example, the treatment accorded to milk and dairy products, apart from being liberal in policy, included special measures establishing import quotas and controls on merchandise from third countries, which will subsequently be modified as regional production expands.

In short, the new tariff policy as a whole represents an agricultural development policy that is commensurate with the need for a gradual reduction in the substantial

purchases of goods that could be produced economically in Central America.

The incidence of the new tariff is relatively low for intermediate and capital goods. The heaviest increase (7.1 per cent) in incidence is shown by intermediate goods for agriculture, with smaller increments for capital goods and animal feed (see table 16). The new tariff structure for such products undoubtedly provides a margin of protection for a whole series of industries already existing or about to be established in Central America (fertilizers, insecticides, etc.). This might lead to a rise in agricultural production costs which would be justified by the region's need to create its own industrial base. But as there is an equally urgent need to modernize agricultural development, the growth of the new industries should be made increasingly dependent on measures of other kinds, such as those deriving from a regional development policy (technical assistance, credit and tax incentives). In this way an attempt could be made to form a highly efficient industrial sector for the production of agricultural inputs that would not lay an extra burden on the agricultural sector for an indefinite length of time.

**Table 16**

**CENTRAL AMERICA: COMPARISON BETWEEN THE ESTIMATED AVERAGE INCIDENCE OF THE COMMON TARIFF AND OF THE AVERAGE NATIONAL TARIFFS PREVIOUSLY APPLIED TO SELECTED AGRICULTURAL COMMODITIES**

(Percentage of the c.i.f. value of 1960 imports)

| Commodity group                          | Common tariff | Average national tariff previously applied |
|--|---------------|--|
| Animal feed .....                        | 10.5          | 12.9                                       |
| Insecticides, pesticides and others..... | 11.7          | 4.6  |
| Draught animals .....                    | 11.6          | 11.2                                       |
| Agricultural machinery .....             | 6.4           | 5.1  |

Source: ECLA, on the basis of official statistics.

**(b) WHEAT AND WHEAT FLOUR**

Full equalization of import duties on agricultural commodities will have come about as soon as an agreement

has been reached on uniform tariffs for wheat and wheat flour. Uniform tariff levels and, more generally, a regional supply policy for these commodities derive from the different tariff and development policies that have in the past influenced the factors of growth and imports in the individual Central American countries. At the present time, the disparities between the duties in force—especially on flour—make it difficult to bring the protectionist policy employed by some of the countries as their principal method of stimulating production with the possible effect that extension of that policy may have on the processing costs and consumer prices of flour and its by-products in the other Central American countries.<sup>42</sup>

<sup>42</sup> Duties on the value of wheat flour imports range from 82 per cent in Guatemala to 5 per cent in Costa Rica. Meal, for which tariff levels vary between 73 per cent in Guatemala and 4 per cent in Costa Rica, is another case in point (see again table 17). Approximate calculations indicate that import substitution in respect of flour from outside Central America would, in present conditions, raise consumer prices in Nicaragua and Costa Rica by 12 to 25 per cent.

**Table 17**

**CENTRAL AMERICA: COMPARISON BETWEEN THE AVERAGE INCIDENCE OF THE COMMON TARIFF AND OF THE AVERAGE NATIONAL TARIFFS FOR WHEAT AND WHEAT FLOUR**

| Commodity                      | 1960 imports c.i.f. value in dollars at current prices | Uniform incidence <sup>a</sup> |            | Incidence of national tariffs |            |
|--------------------------------|--|--------------------------------|------------|-------------------------------|------------|
|                                |  | Duty (dollars)                 | Percentage | Duty (dollars)                | Percentage |
| <i>Wheat (041-01-00)</i>       |  |                                |            |                               |            |
| Costa Rica .....               | 339 444  | 75 725                         | 22.3       | 6 789                         | 2.0        |
| El Salvador .....              | 828 516  | 178 408                        | 21.5       | —                             | —          |
| Guatemala .....                | 3 911 527  | 860 991                        | 22.0       | 860 991                       | 22.0       |
| Honduras .....                 | 673 400  | 152 820                        | 22.7       | 128 220                       | 19.0       |
| Nicaragua .....                | —  | —                              | —          | —                             | —          |
| Central America .....          | 5 752 887  | 1 267 944                      | 22.0       | 996 000                       | 17.3       |
| <i>Wheat flour (046-01-01)</i> |  |                                |            |                               |            |
| Costa Rica .....               | 3 625 851  | 2 855 142                      | 78.7       | 188 391                       | 5.2        |
| El Salvador .....              | 2 600 949  | 2 003 697                      | 77.0       | 1 158 628                     | 44.5       |
| Guatemala .....                | 162 705  | 134 151                        | 82.5       | 134 156                       | 82.5       |
| Honduras .....                 | 975 454  | 795 987                        | 81.6       | 611 154                       | 62.7       |
| Nicaragua .....                | 1 985 816  | 1 415 552                      | 71.3       | 573 885                       | 28.9       |
| Central America .....          | 9 350 775  | 7 204 529                      | 77.0       | 2 666 214                     | 28.5       |
| <i>Wheat meal (046-01-02)</i>  |  |                                |            |                               |            |
| Costa Rica .....               | 49 707   | 25 897                         | 52.1       | 2 093                         | 4.2        |
| El Salvador .....              | 10 083   | 5 706                          | 56.6       | 4 520                         | 44.8       |
| Guatemala .....                | 184 698  | 106 400                        | 57.6       | 135 710                       | 73.5       |
| Honduras .....                 | 244  | 68                             | 28.0       | 74                            | 30.3       |
| Nicaragua .....                | —  | —                              | —          | —                             | —          |
| Central America .....          | 244 732  | 138 071                        | 56.4       | 142 397                       | 58.2       |
| TOTAL                          | 15 348 394   | 8 610 544                      | 56.1       | 3 804 611                     | 24.8       |

Source: ECLA, on the basis of official statistics.

<sup>a</sup> On the assumption that the duties proposed at the twelfth meeting of the Central American Trade Sub-Committee are accepted. They are as follows:

- Wheat: 0.01 dollars, specific, and 10 per cent c.i.f. *ad valorem*
- Wheat flour: 0.08 dollars, specific, and 10 per cent c.i.f. *ad valorem*
- Wheat meal: 0.06 dollars, specific, and 10 per cent c.i.f. *ad valorem*



There is also a fairly large surplus flour production capacity and the large imports made by some countries are an important source of fiscal revenue.

The equalization of duties on wheat and wheat flour has been discussed by the integration agencies on several occasions. There seems to be a need for a special study to determine the nature and extent of the impact on production costs and consumer prices if uniform duties

were set at a particular level, and the changes that would take place in the competitive positions of the different countries.

For illustrative purposes an estimate is given in table 17 of the average incidence of the uniform duties proposed at the meeting of the Trade Sub-Committee, and a comparison is made with the incidence of existing duties on the basis of c.i.f. imports in 1960.



# FOREIGN TRADE OF ARGENTINA AND AUSTRALIA, 1930 TO 1960 (I)\*

by Ruth Kelly

## INTRODUCTION

For a better understanding of some trade and development problems in the Latin American countries, it is helpful to investigate variations in factors affecting trade and development in other developing countries which appear to have been more successful over the same time span. With this in mind, the Trade Policy Division of the United Nations Economic Commission for Latin America undertook an investigation of the factors which may explain why Argentina's foreign trade dwindled over the period under review, while that of Australia fared considerably better.

Why were Argentina and Australia selected for this type of comparison? In the first place, because they have important economic features in common. Both have developed as large-scale producers and exporters of primary agricultural products, both have been built up through successive waves of immigration, mainly from

\* This article is the first part of a comparative study on the evolution of the foreign trade of Argentina and Australia between 1930 and 1960. General considerations are discussed as well as the factors which had an effect on that evolution. In the second part, to be published at a later date, the differences which occurred in the foreign trade of the two countries will be dealt with by means of an analysis of the trade policy applied. Although the author is a staff member of the Economic Commission for Latin America, the views expressed are her own and do not necessarily reflect those of the secretariat of the Commission.

Europe, and in each country there has been a low ratio of population to land area. In the second place, Argentina and Australia provide particularly interesting case-study material for the type of comparison mentioned above, due to the fact that by 1960 Australia's *per capita* exports had four times the value of those of Argentina; whereas *per capita* exports of the two countries had almost the same value in 1928. Evidence will be presented later to show that if it could have been possible for exports from Argentina to have maintained their volume and price levels as successfully as Australian exports during those thirty years, without prejudice to the level of production for internal consumption which actually took place, then the rate of growth of *per capita* income would have been much more similar in the countries over the period indicated. (The *per capita* rate of growth had been the same in the two countries during the first thirty years of the twentieth century.) This is not meant to imply that the two countries started off on an even footing in 1929-30. This is far from being the case. Australia started the twentieth century with a *per capita* national income that was already about 65 per cent higher than that of Argentina and this was still the position in 1929.<sup>1</sup>

<sup>1</sup> See L. J. Zimmerman, "The Distribution of World Income 1890-1960"; published in *Essays on Unbalanced Growth*, ed. by Egbert de Vries, Mouton & Co., S. Gravenhage, 1962, pp. 48-49, 52-53.

## A. DESCRIPTION OF TRADE DEVELOPMENT OF ARGENTINA AND AUSTRALIA, 1930-1960

The first section of this article will deal with trade statistics of the two countries over the three decades covered by the study, including observations on significant changes which have occurred in its direction and composition.

### 1. LONG-TERM TRENDS IN EXPORTS

Tables 1 and 2 show, for Australia and Argentina, volume, value and unit value of exports and imports, as well as a term of trade index, for 1930-60. Table 3 gives exports *per capita* in current and 1950 prices for the two countries over the same period.

It would have been preferable to have started the series given in Tables 1 to 3 in the pre-Depression period rather than in 1930. Unfortunately the unit value indices available for Australia did not go back far enough.

On the other hand, it is possible to make some limited comparisons between the development of the external sector of one country with the other between the pre-Depression and the post-Second World War periods. A

League of Nations source<sup>2</sup> provides data on Argentine and Australian exports in 1928, in terms both of old gold and new gold dollars. For Argentina the respective figures are 1,017 and 1,723 million dollars and for Australia 646 and 1,094 million. With 1928 populations of approximately 10.9 and 6.3 million respectively, exports *per capita* in that year must have been 93 dollars in Argentina and 102 dollars in Australia, in terms of old gold dollars, with a ratio of 158 to 173 in terms of new gold dollars. In other words, in terms of dollars, exports *per capita* had almost the same value in Argentina as in Australia in 1928. By 1960 Australia's exports *per capita* were, in terms of dollars, roughly four times those of Argentina, as can be seen from the following figures:

|                 | Population | Exports                 |
|-----------------|------------|-------------------------|
| Argentina ..... | 20 956 000 | 1 079.2 million dollars |
| Australia ..... | 10 281 000 | 1 962.0 million dollars |

<sup>2</sup> League of Nations, *Network of World Trade*, Geneva, 1952, pp. 139 and 169.

Table 1

ARGENTINA: VOLUME, VALUE AND UNIT VALUE OF EXPORTS AND IMPORTS AND TERMS OF TRADE INDEX, 1930-60

| Annual averages and years | Exports (FOB)       |                |                             | Imports (CIF)       |                |                             | Terms of trade index 1950 = 100 |
|---------------------------|---------------------|----------------|-----------------------------|---------------------|----------------|-----------------------------|---------------------------------|
|                           | Millions of dollars |                |                             | Millions of dollars |                |                             |                                 |
|                           | At current prices   | At 1950 prices | Unit value index 1950 = 100 | At current prices   | At 1950 prices | Unit value index 1950 = 100 |                                 |
| 1930-34                   | 418.0               | 1 481.0        | 28.8                        | 352.7               | 997.2          | 34.3                        | 82.9                            |
| 1935-39                   | 553.1               | 1 479.4        | 37.3                        | 411.1               | 1 176.7        | 34.8                        | 107.4                           |
| 1940-44                   | 527.3               | 1 192.5        | 44.2                        | 302.1               | 591.3          | 53.0                        | 82.8                            |
| 1945                      | 725.7               | 1 214.7        | 59.7                        | 300.1               | 440.6          | 68.1                        | 87.7                            |
| 1946                      | 1 160.7             | 1 408.2        | 82.4                        | 589.7               | 861.0          | 68.5                        | 120.3                           |
| 1947                      | 1 614.3             | 1 322.4        | 122.1                       | 1 342.2             | 1 580.3        | 84.9                        | 143.8                           |
| 1948                      | 1 577.0             | 1 153.6        | 136.7                       | 1 572.8             | 1 629.3        | 96.5                        | 141.7                           |
| 1949                      | 1 011.1             | 801.2          | 126.2                       | 1 171.1             | 1 093.5        | 107.1                       | 117.8                           |
| 1950                      | 1 144.9             | 1 144.9        | 100.0                       | 964.2               | 964.2          | 100.0                       | 100.0                           |
| 1951                      | 1 169.4             | 900.9          | 129.8                       | 1 477.0             | 1 158.4        | 127.5                       | 101.8                           |
| 1952                      | 677.6               | 629.2          | 107.7                       | 1 181.0             | 882.7          | 133.8                       | 80.5                            |
| 1953                      | 1 099.4             | 1 020.8        | 107.7                       | 795.1               | 691.4          | 115.0                       | 93.7                            |
| 1954                      | 1 029.5             | 1 092.9        | 94.2                        | 979.0               | 807.1          | 121.3                       | 77.7                            |
| 1955                      | 928.6               | 965.3          | 96.2                        | 1 172.4             | 937.9          | 125.0                       | 77.0                            |
| 1956                      | 943.8               | 1 078.6        | 87.5                        | 1 127.6             | 902.1          | 125.0                       | 70.0                            |
| 1957                      | 970.0               | 1 146.6        | 84.6                        | 1 310.0             | 1 102.7        | 118.8                       | 71.2                            |
| 1958                      | 994.0               | 1 245.6        | 79.8                        | 1 233.0             | 1 083.5        | 113.8                       | 70.2                            |
| 1959                      | 1 009.0             | 1 264.4        | 79.8                        | 993.0               | 968.8          | 102.5                       | 77.9                            |
| 1960                      | 1 079.0             | 1 275.4        | 84.6                        | 1 249.0             | 1 218.5        | 102.5                       | 82.5                            |

Source: United Nations, *Análisis y Proyecciones del Desarrollo Económico, V, El Desarrollo Económico de la Argentina*, Mexico 1959, part 1, table III, p. 110; United Nations, *Yearbook of International Trade Statistics*, 1960, p. 51; United Nations, ECLA, *Economic Bulletin for Latin America*, Santiago, Nov. 1961, p. 74; United Nations, ECLA, *Statistical Bulletin for Latin America*, vol. I, No. 2, New York 1964, pp. 74-75.

Table 2

AUSTRALIA: VOLUME, VALUE AND UNIT VALUE OF EXPORTS AND IMPORTS AND TERMS OF TRADE INDEX, 1930-1960

| Periods (annual averages) and years <sup>b</sup> | Exports (FOB)                    |                |                             | Imports <sup>a</sup>             |                    |                             | Terms of trade index 1950 = 100 |
|--|----------------------------------|----------------|-----------------------------|----------------------------------|--------------------|-----------------------------|---------------------------------|
|  | Millions of dollars <sup>c</sup> |                |                             | Millions of dollars <sup>c</sup> |                    |                             |                                 |
|  | At current prices                | At 1950 prices | Unit value index 1950 = 100 | At current prices                | At 1950 prices     | Unit value index 1950 = 100 |                                 |
| 1930-34  | 390.0                            | 1 157.2        | 33.7                        | 299.0                            | ...                | ...                         | ...                             |
| 1935-39  | 501.0                            | 1 311.5        | 38.2                        | 409.1                            | 828.1 <sup>d</sup> | 49.4                        | 77.3                            |
| 1940-44  | 465.5                            | 1 300.3        | 35.8                        | 592.1                            | 902.6              | 65.6                        | 54.6                            |
| 1945   | 502.7                            | 1 134.8        | 44.3                        | 683.1                            | 843.3              | 81.0                        | 54.7                            |
| 1946   | 637.4                            | 1 285.1        | 49.6                        | 568.3                            | 690.5              | 82.3                        | 60.3                            |
| 1947   | 999.9                            | 1 434.6        | 69.7                        | 666.7                            | 693.0              | 96.2                        | 72.5                            |
| 1948   | 1 313.7                          | 1 324.3        | 99.2                        | 1 082.0                          | 982.7              | 110.1                       | 90.1                            |
| 1949   | 1 749.7                          | 1 507.1        | 116.1                       | 1 335.1                          | 1 136.2            | 117.5                       | 98.8                            |
| 1950   | 1 482.0                          | 1 482.0        | 100.0                       | 1 353.9                          | 1 353.9            | 100.0                       | 100.0                           |
| 1951   | 2 199.2                          | 1 377.9        | 159.6                       | 1 660.7                          | 1 547.7            | 107.3                       | 148.7                           |
| 1952   | 1 496.3                          | 1 300.0        | 115.1                       | 2 352.4                          | 1 950.6            | 120.6                       | 95.4                            |
| 1953   | 1 906.0                          | 1 630.4        | 116.9                       | 1 143.5                          | 1 007.5            | 113.5                       | 103.0                           |
| 1954   | 1 824.7                          | 1 585.3        | 115.1                       | 1 520.1                          | 1 370.7            | 110.9                       | 103.8                           |
| 1955   | 1 711.4                          | 1 647.2        | 103.9                       | 1 883.8                          | 1 659.7            | 113.5                       | 91.5                            |
| 1956   | 1 732.6                          | 1 795.4        | 96.5                        | 1 833.0                          | 1 577.5            | 116.2                       | 83.0                            |
| 1957   | 2 192.3                          | 2 037.5        | 107.6                       | 1 605.4                          | 1 360.5            | 118.0                       | 91.2                            |
| 1958   | 1 818.0                          | 1 959.1        | 92.8                        | 1 768.0                          | 1 466.0            | 120.6                       | 76.9                            |
| 1959   | 1 810.4                          | 2 215.9        | 81.7                        | 1 779.5                          | 1 475.5            | 120.6                       | 67.7                            |
| 1960   | 2 077.6                          | 2 285.6        | 90.9                        | 2 071.1                          | 1 704.6            | 121.5                       | 74.8                            |

Source: United Nations, *Yearbook of International Trade Statistics*, 1960, New York, p. 56

<sup>a</sup> FOB values less loading charges.

<sup>b</sup> Years ending June 30 of years stated.

<sup>c</sup> Exchange rates used from above source are in new U.S. cents, except for 1930-Jan. 1934 where figures are given in old gold dollars.

<sup>d</sup> Average for 1937-39 only.

Table 3

ARGENTINA AND AUSTRALIA: VALUE OF EXPORTS *per capita* AT CURRENT AND 1950 PRICES

| Periods (annual averages)<br>and years <sup>a</sup> | Exports per capita<br>(millions of dollars<br>at current prices) |           | Exports per capita<br>(millions of dollars<br>at 1950 <sup>a</sup> prices) |           |
|---|--|-----------|--|-----------|
|   | Argentina  | Australia | Argentina  | Australia |
| 1930-34 .....                                       | 33.4   | 59.3      | 118.4  | 176.0     |
| 1935-39 .....                                       | 40.7   | 75.0      | 108.7  | 196.3     |
| 1940-44 .....                                       | 40.0   | 64.9      | 81.3   | 181.3     |
| 1945 .....  | 44.3   | 68.0      | 78.9   | 153.5     |
| 1946 .....  | 74.1   | 85.4      | 90.0   | 172.2     |
| 1947 .....  | 101.3  | 131.9     | 82.9   | 189.2     |
| 1948 .....  | 96.7   | 170.4     | 70.7   | 171.8     |
| 1949 .....  | 60.4   | 221.1     | 47.9   | 190.4     |
| 1950 .....  | 66.6   | 181.2     | 66.6   | 181.2     |
| 1951 .....  | 66.3   | 261.1     | 51.1   | 163.6     |
| 1952 .....  | 37.6   | 173.3     | 34.9   | 150.6     |
| 1953 .....  | 60.0   | 216.2     | 55.5   | 184.9     |
| 1954 .....  | 55.0   | 203.0     | 58.3   | 176.4     |
| 1955 .....  | 48.6   | 186.0     | 50.5   | 179.0     |
| 1956 .....  | 48.4   | 183.8     | 55.3   | 190.5     |
| 1957 .....  | 48.8   | 227.3     | 57.7   | 211.2     |
| 1958 .....  | 49.1   | 184.6     | 61.5   | 198.9     |
| 1959 .....  | 48.9   | 180.0     | 61.3   | 220.3     |
| 1960 .....  | 51.5   | 202.1     | 60.9   | 222.3     |

Sources: (1) Tables 1 and 2.

(2) Population figures: (a) Argentina: 1925-1940: Dirección Nacional del Servicio Estadístico, *Anuario Estadístico de la República Argentina, 1949-50, Tomo I, Compendio*, Buenos Aires, p. 43; 1941-60 United Nations, *Demographic Yearbook, 1960*; (b) Australia: United Nations, *Demographic Yearbook, 1960*.

<sup>a</sup> For Australia, fiscal year ending 30 June of year stated.

If, instead of looking only at the 1960 export figures, an average over the last ten years for which figures are available is taken, the result is about the same. The annual average value of exports for Argentina and Australia from 1953 to 1962 was 1,026.1 and 1,976.3 million current United States dollars, respectively, and the population ratio between the two countries was approximately the same as in 1960.

A number of conclusions may be drawn from the preceding tables, seen in the light of the above paragraph:

(1) Argentina's exports suffered much more than those of Australia during the thirties, as shown by the following comparison:

|               | Exports in<br>millions of dollars <sup>3</sup> |           |
|---------------|--|-----------|
|               | Argentina                                      | Australia |
| 1928 .....    | 1 017  | 646       |
| 1930-34 ..... | 418  | 390       |
| 1935-39 ..... | 553  | 501       |

Whereas Argentina's exports from 1930 to 1934 represented only 41 per cent of the 1928 level, rising to 54 per cent in the period 1935 to 1939, those of Australia

<sup>3</sup> The figures for both countries are in truly current prices (i.e., in terms of old gold dollars from 1 January 1930 to 31 January 1934). This is in harmony with the procedure followed by ECLA in *Análisis y Proyecciones del Desarrollo Económico*, V, *El Desarrollo Económico de la Argentina* (see table 1) from which trade value figures for Argentina from 1930-57 have been taken. To reconcile the figures for these years with those published (in terms of new gold dollars) in the United Nations *Yearbook of International Trade Statistics, 1960*, the conversion factors given on p. 572 of the *Yearbook* should be used.

were 60 per cent of the 1928 level in the period 1930-34 and 78 per cent in the period 1935-39.

(2) Export prices recovered from the Depression of the thirties more rapidly in Argentina than in Australia.

(3) The volume of exports from Australia increased in the second half of the thirties compared with the first half, whereas in Argentina it was just barely maintained at the same level.

(4) The volume of exports *per capita* from Australia increased by about 10 per cent in the second half of the thirties, compared with the first half, whereas in the case of Argentina it declined by about 8 per cent.

(5) The volume of Argentina's exports declined much more sharply in the forties than in the thirties. Even in the two relatively good years of the forties (1946 and 1947) the volume of exports did not reach the levels of the thirties, let alone the even higher level of 1925-29. The great volume decline that took place in the forties had not been recuperated by 1960. In fact the low level of 1940-44 was the same as that prevailing in the last four years of the fifties. On the other hand, the second half of the fifties shows a decided improvement over the remarkably low levels of the first half. In the case of Australia, the trend for volume of exports shows some similarity with that of Argentina. For example, the poorest showing is in the early fifties and the second half of the fifties shows a decided improvement over the first half. On the other hand the trend in Australia does not show the long term decline of that of Argentina. Exports from Australia in the last five years of the period 1930-60 inclusive had an annual average value (in 1950 dollars) of 1,901 million dollars, which is higher than the average

for any other five-year period included between those 31 years, with the exception of that for 1935-39.

(6) If the terms of trade of the two countries in the periods before, during and after the Second World War, are compared, it is found that they have deteriorated considerably more for Argentina than for Australia. This is much more noticeable through comparisons starting in the thirties than when only the experience in the fifties is taken into account. In the case of Australia it may be said that there has been deterioration throughout most of the fifties compared with 1950 and 1951 but the fifties showed on the average an improvement over the forties and over the last few years of the thirties. On the other hand, in the case of Argentina, the average level for the forties (102.5) was higher than that achieved in any single year of the fifties. The average level for the thirties (95) was exceeded in only one year of the decade between 1951 and 1960, i.e. in the year 1951. A glance at the unit value indices in Tables 1 and 2 will show that the *greater degree* of deterioration of the terms of trade for Argentina than for Australia is the result of the behaviour of export rather than import prices (the increase in the unit value of imports has been steeper in the case of Australia than for Argentina).

From the figures given in Tables 1 to 3 and those set out in the first conclusion drawn therefrom, it may be seen that over the three decades covered by the study exports came to play an ever dwindling role in the economic life of Argentina, whereas in Australia they were maintained at a much more rewarding level. Tables 4 and 5 permit a comparison of this phenomenon with the growth of the gross domestic product in the two countries.

It should be mentioned that the figures at current prices were taken from the Butlin work (see table 1) and had to be converted into 1950 prices (according to the index in the Yearbook of the Commonwealth of Australia, 1963, mentioned in table 1<sup>4</sup>). Those for the years 1939-40 are official estimates and the figures for earlier years are estimates by Butlin. However, both of the two series cover the fiscal year 1938-39 and the difference in the estimates for this year was only one per cent. (The higher figure is used here.)

The population of Australia was approximately 6.3 million in 1928 and 10.3 million in 1960. Income *per capita* in these years, in terms of 1950 prices, was 209 and 381 Australian pounds respectively. This represents an increase of 82 per cent over the thirty-one-year period.

Table 5 presents the gross domestic product of Argentina in terms of 1950 prices for five-year periods from 1925-49 and annually thereafter. The figures for 1950-60 have been taken from the revised national accounts for this decade published in 1964 by the *Consejo Nacional de Desarrollo*, whereas figures for previous years have been taken from the United Nations study on Argentina published in 1959 (see sources for table 5). In order

<sup>4</sup> The limitations of this index for year to year comparisons are acknowledged in the source. For the purposes of observing long-term trends, these limitations are less important. (An index is available in the Butlin work for years prior to 1939-40, constructed more precisely from the standpoint of the needs of measurement of growth of the various components of national income series).

to convert figures for the decade of the fifties from 1960 to 1950 prices, an index was constructed for constant values for these years and multiplied by the current price value in the year 1950.

**Table 4**

AUSTRALIA: GROSS DOMESTIC PRODUCT, 1928-29 TO 1959-60  
(In millions of Australian pounds at 1950 market prices)

| Period  | Value   | Period  | Value   |
|---------|---------|---------|---------|
| 1928-29 | 1 318.2 | 1944-45 | 2 046.5 |
| 1929-30 | 1 263.7 | 1945-46 | 2 058.9 |
| 1930-31 | 1 183.1 | 1946-47 | 2 127.6 |
| 1931-32 | 1 149.6 | 1947-48 | 2 402.4 |
| 1932-33 | 1 251.0 | 1948-49 | 2 481.5 |
| 1933-34 | 1 310.8 | 1949-50 | 2 729.0 |
| 1934-35 | 1 354.5 | 1950-51 | 3 052.9 |
| 1935-36 | 1 451.9 | 1951-52 | 2 763.6 |
| 1936-37 | 1 560.3 | 1952-53 | 2 885.6 |
| 1937-38 | 1 625.1 | 1953-54 | 3 102.7 |
| 1938-39 | 1 603.4 | 1954-55 | 3 278.7 |
| 1939-40 | 1 672.1 | 1955-56 | 3 320.6 |
| 1940-41 | 1 698.4 | 1956-57 | 3 507.9 |
| 1941-42 | 1 846.4 | 1957-58 | 3 511.4 |
| 1942-43 | 2 038.9 | 1958-59 | 3 688.8 |
| 1943-44 | 2 102.8 | 1959-60 | 3 924.6 |

Sources: Butlin, N. G., *Australian Domestic Product, Investment and Foreign Borrowing, 1861-1938/39*, Cambridge University Press, London, 1962, pp. 7 and 468; Commonwealth Bureau of Census and Statistics, *Yearbook of the Commonwealth of Australia, No. 49, 1963, part V, Labour, wages and prices*, Commonwealth Government Printer, Canberra, p. 453.

**Table 5**

ARGENTINA: GROSS DOMESTIC PRODUCT, 1925-29 TO 1960  
(In millions of pesos at 1950 market prices)

| Period  | Value  | Year | Value  |
|---------|--------|------|--------|
| 1925-29 | 33 184 | 1950 | 69 531 |
| 1930-34 | 33 863 | 1951 | 72 104 |
| 1935-39 | 39 754 | 1952 | 68 140 |
| 1940-44 | 45 908 | 1953 | 72 312 |
| 1945-49 | 57 009 | 1954 | 75 719 |
|         |        | 1955 | 81 282 |
|         |        | 1956 | 83 159 |
|         |        | 1957 | 87 122 |
|         |        | 1958 | 91 781 |
|         |        | 1959 | 87 540 |
|         |        | 1960 | 92 685 |

Sources: For years 1929-49, United Nations, *Análisis y Proyecciones del Desarrollo Económico, V, El Desarrollo Económico de la Argentina*, part I, table VIII (Sales No.: 59.II.C.3, August 1959); for years 1950-60, Consejo Nacional de Desarrollo, *Cuentas Nacionales de la República Argentina*, Buenos Aires, April, 1964, pp. 54, 190, 191.

The population of Argentina was approximately 10.9 million in 1928 and 20,956,000 in 1960. Income *per capita* in these years, in terms of 1950 prices was 3,023 pesos and 4,423 pesos respectively. This represents an increase of slightly more than 45 per cent over the thirty-two-year period.

On the basis of the statistical material thus far presented, it is now of interest to examine the quantitative relationship of percentage changes in *per capita* product in the two countries to changes in the value of exports. It was pointed out earlier that the ratio of exports *per capita* in Argentina and Australia in 1928 was 93 to 102, or, in other words, the value of Argentina's exports *per capita* was 91 per cent of the value of those of Australia. In 1960, the percentage corresponding to the same concept was only 25. If the value of Argentina's *per capita* exports in 1960 had still represented 91 per cent of that of Australia's (instead of only 25) it would have amounted to 181 dollars and the total value of Argentina's exports in that year would have been 3,854 million dollars instead of 1,079 million. Such a phenomenon (assuming it could have been achieved without prejudice to the level of production for internal consumption which was in reality gained) would have added 2,775 million dollars to the gross national product in 1960, not to mention the additional income which would have been realized through the action of the foreign trade multiplier, resulting from higher levels of exports in previous years. To appreciate the importance of the magnitudes involved, it is necessary to realize that a 257 per cent difference in level of export income in a country where the value of exports represents about 9 per cent<sup>5</sup> of gross domestic product means a 23 per cent difference in the latter. As indicated above, this still does not take into account the effect of the foreign trade multiplier.

Argentina and Australia are both classified among those countries which are exporters of non-tropical agricultural products and a great deal of analysis, both within Latin America and outside the area, has been made of the special problems which have confronted the foreign trade of this type of exporter. It has been pointed out that it is most adversely affected by the relatively slow growth of world demand for primary products. In the case of the less industrialized countries exporting non-tropical agricultural products it has likewise been stressed that they have suffered from the results of official policies of subsidies to production and exports applied by the Governments of more industrialized countries, particularly the United States.

The interesting question arises of why Argentina's trade succumbed so readily to such external influences whereas Australia withstood them. The apparent reasons for the difference will be gone into after a more detailed examination of the trade statistics of the two countries.

## 2. DIRECTION OF TRADE

Annex I has been prepared in order to show the origin of imports and destination of exports for Argen-

<sup>5</sup> Based on peso values taken from Dirección Nacional de Estadística y Censos, *Comercio Exterior, 1960*, Buenos Aires, 1961, p. 9, and United Nations, *Statistical Bulletin for Latin America*, Vol. 1, No. 2, p. 106.

tina and Australia in selected years between 1928 and 1959. Four of the tables included in the annex give absolute values at current prices<sup>6</sup> and the other four show percentage relationships for the same values. The figures have been carefully examined in an effort to detect any long-term trends for exports and imports to change their patterns of destination and origin, and the following observations result:

### (a) Argentina

(i) *Imports.* The proportion of total imports from the United States, which represented 23 per cent in 1928, reached a peak of 38 per cent in 1948, but since then has exceeded 20 per cent only in 1957, when it was 23 per cent. In other words, no new important trend has become evident.

The percentage of imports from the United Kingdom has shown a long-term decline. In the thirties it was over 20 per cent but in the seven years of the fifties shown in the table never reached as much as 10 per cent.

The decline in the United Kingdom percentage has been compensated for by an increase in the percentage of imports from other Latin American countries. In the case of imports from Venezuela the increase in absolute terms was reversed after 1960 once Argentina began to produce its own petroleum; however, imports from Brazil in recent years have partly compensated for this reversal. The value of Argentina's imports from that country in 1955, 1956 and 1957 was only 11 million, 8 million and 12 million dollars respectively, whereas it was 57.9 million in 1963.

Imports from Eastern Europe and the Middle East are a small fraction of the total. They accounted for a somewhat larger percentage of total imports in the fifties than in previous years. No new trend for increased imports from Asia has become evident and imports from Africa have never exceeded one per cent of total imports.

(ii) *Exports.* Despite one or two good years, no long-term trend in either direction is observable in the percentage of exports to the United States. In terms of value, in current dollars, exports to the United States exceeded the 1928 level after the Second World War, but by 1955 they fell below that level and remained below it throughout the rest of the fifties.

There is a trend for a larger percentage of total exports to go to other Latin American countries.

The long-term percentage decrease in exports to the United Kingdom was much less marked than the percentage decrease in imports from that country. However, in terms of absolute values, exports to the United Kingdom never regained their 1928 level, although they almost did in 1948. By 1951, they had dropped to only half the 1928 figure and remained at roughly that level throughout the fifties.

<sup>6</sup> The fact that the value figures are in current rather than constant prices does not jeopardize their significance for the purposes of the comparisons to be made in this part of the study, since only changes in the direction of trade of the two countries will be examined. It should also be recalled that, for the reasons explained in the notes to the trade statistics of the United Nations publication, *Direction of International Trade*, the direction of trade totals differ somewhat from the totals presented for international value comparability in other United Nations trade statistics and in the IMF's *International Financial Statistics*.

The percentage of total exports to Western Europe in general has declined more than exports to the United Kingdom. The decline is distributed over a number of countries (Belgium-Luxembourg, the Federal Republic of Germany, Spain, Sweden, Norway, etc.).

The percentages and values for exports to Eastern Europe and Asia have been increasing but these still represent minor groups among total exports.

#### (b) *Australia*

(i) *Imports.* The percentage of imports from the United States steadily declined between 1928 and 1951 and then gradually rose until 1959, almost regaining the 1938 level but still much lower than that of 1928.

The percentage of imports from the United Kingdom shows considerable stability over the three decades.

With the exception of the early fifties, when there was an increase, the same may be said of imports from Western Europe as a whole. Imports from the Federal Republic of Germany showed a tendency to rise.

The percentage of imports coming from the Middle East appears to be rising.

Imports from Asia were maintained at a relatively stable percentage during the thirty-year period except in 1951. The percentage from Japan has not shown any great increase nor has that for imports from New Zealand and Oceania.

(ii) *Exports.* There is a gradual tendency for Australia to increase the percentage of exports to the United States. The value of such exports, at current prices, was considerably higher throughout the fifties than in the pre-war period.

The percentage of exports to Western Europe and specifically to the United Kingdom is tending to decline. The value of exports to the United Kingdom at current prices, however, was consistently and considerably higher in the fifties than in 1928, 1935 and 1938.

The percentage to Eastern Europe has increased slightly.

There has been a very significant trend for exports to Asian countries to increase, mainly accounted for by a rise in exports to Japan. The percentage of exports to New Zealand also shows a tendency to increase. The value of exports to Japan and to Oceania, at current prices, more than tripled over the thirty-year period.

#### (c) *Main differences in trade direction trends*

The most significant facts which emerge from the tables in annex I are the following:

1. The relative importance of the United Kingdom as a supplier of Australia has been maintained over the thirty-year period whereas it has lost over half of what might have been considered its share of the Argentine market. In value terms, it has lost more heavily.

2. In terms of current values, Australia has maintained its exports to the United Kingdom over the period, although they represent a declining share of Australia's world market due to the increase in Australian exports to other countries. On the other hand, Argentina lost a very important part of its United Kingdom market.

3. Australian trade with United States markets has been increasing from both percentage and value stand-

point. The value of Argentina's exports to the United States, on the other hand, has declined and there is no sign of any increase in the United States percentage of Argentina's total exports.

4. Australia has found important new markets outside the area of its traditional customers. In the case of Argentina, exports to Asia and Eastern Europe have increased but still represent less than 8 per cent of its total exports.

Against this background of the changes that have taken place in the direction of trade of the two countries, it is appropriate, at this point, to examine the changing patterns of exports of important commodities.

### 3. COMPOSITION OF TRADE

It is convenient to divide the analysis of changes in the pattern of trade into two periods in relation to the Second World War: (a) the pre-war period and (b) the post-war period. The reason for this is that trade figures during the war years were very greatly affected by abnormal conditions, such as lack of shipping space, temporary market distortions, and other factors which combined to obscure completely the long-term changes taking place in trade potential. While it must be recognized that the war itself was accompanied by forces which greatly influenced the international trade trends of Argentina and Australia, the best evidence of these influences is to be found in trade figures for the post-war years.

#### (a) *The pre-war period*

Prior to the Second World War, Argentina's exports consisted almost wholly of agricultural products. Field crops accounted for 57.1 per cent of its total exports and livestock products for 39 per cent. Wheat, maize, linseed, meats, wool and hides represented 81.5 per cent of the country's exports. Forest products amounted to between 2 and 3 per cent of total exports and are not included in the 57.1 per cent figure mentioned above. Australia's exports for the period 1923-24 to 1932-33 were distributed broadly as follows:

|                           |       |
|---------------------------|-------|
| Agriculture .....         | 86.35 |
| Manufactures .....        | 3.36  |
| Mining .....              | 8.90  |
| Forestry and fishing..... | 1.39  |

The dominance of agriculture in Australia's exports, as indicated by the percentage figure given above, was maintained throughout the pre-war period.<sup>7</sup>

Tables 6 and 7 show the percentage shares — in total national agricultural exports of the two countries — of the most important commodities exported.

Having observed the relative importance of the products listed in the above tables, in relation to total agricultural exports and to total exports, it is new of interest to examine the changes that took place in their export values (in terms of some common currency) during the pre-war period and also to see how such exports fared in relation to total world exports of the same products. Table 8 shows what happened (in terms of million Reichsmark) to products making up over 95 per cent

<sup>7</sup> See United Nations, *Yearbook of International Trade Statistics*, 1953, p. 47.



Table 6

## PERCENTAGE SHARES OF SPECIFIED PRODUCTS IN ARGENTINA'S AGRICULTURAL EXPORTS, 1929-37

| Products                    | 1924-28 | 1929              | 1935 | 1936 | 1937 |
|-----------------------------|---------|-------------------|------|------|------|
| Wheat, including flour..... | 20.5    | 31.3 <sup>a</sup> | 19.3 | 11.7 | 22.5 |
| Other small grains.....     |         | 3.2               | 3.9  | 2.3  | 2.6  |
| Maize .....                 | 18.5    | 18.4              | 22.0 | 28.7 | 27.4 |
| Linseed .....               | 12.0    | 13.2              | 14.8 | 13.6 | 12.6 |
| Beef .....                  | 11.2    | 10.0              | 11.5 | 11.5 | 9.1  |
| Mutton .....                | 1.7     | 1.5               | 2.1  | 2.2  | 1.7  |
| Other meat .....            |         | 2.9               | 3.3  | 3.5  | 3.5  |
| Wool .....                  | 8.2     | 7.6               | 7.9  | 9.8  | 7.8  |
| Hides .....                 | 7.6     | 5.7               | 6.7  | 7.4  | 7.0  |
| TOTAL                       |         | 93.8              | 91.5 | 90.7 | 94.2 |

Source: International Institute of Agriculture, *World Trade in Agricultural Products, Its Growth, Its Crisis, and the New Trade Policies*, Rome 1940, p. 1,031.

<sup>a</sup> Exports of wheat in 1929 were 70 per cent above their value for the mid-twenties.

Table 7

## PERCENTAGE SHARES OF SPECIFIED PRODUCTS IN AUSTRALIA'S AGRICULTURAL EXPORTS, 1928/29-1936/37

| Products                         | 1928/1929 | 1935/1936 | 1936/1937 |
|----------------------------------|-----------|-----------|-----------|
| Wool, including tops.....        | 50.6      | 50.5      | 49.9      |
| Wheat, including flour.....      | 21.6      | 17.7      | 19.5      |
| Meat .....                       | 8.9       | 8.1       | 8.0       |
| Butter .....                     | 6.2       | 8.7       | 7.0       |
| Sugar .....                      | 4.3       | 2.1       | 2.3       |
| Fruit, excluding preserved fruit | 2.7       | 3.8       | 3.2       |
| Hides and skins.....             | 1.2       | 3.4       | 4.0       |
| TOTAL                            | 95.5      | 93.8      | 93.9      |

Source: International Institute of Agriculture, *World Trade in Agricultural Products, Its Growth, Its Crisis, and the New Trade Policies*, Rome 1940, p. 1,055.

of Argentina's exports and over 85 per cent of Australia's exports between 1929 and 1937. Table 9 presents, for most of the same products and years, the percentage share in total world exports represented by Argentina and Australia respectively.

It will be noted that table 9 includes the period 1924-28 whereas comparable figures for these years, in absolute terms, were not available for inclusion in table 8. Due to this defect, table 8 gives a somewhat false comparison of Argentina's pre-Depression wheat exports with those of the thirties. Exports of wheat from that country in 1929 were 70 per cent above the average of their value for the middle twenties; therefore the difference between the 1929 figure and the average for the thirties is exaggerated in table 8 by this phenomenon. From table 9 it may be seen that Argentina's percentage share of world exports of grains and linseed improved considerably during the 1930's despite the declines in absolute values shown in table 8. If the averages for 1929-38 are compared with those for 1924-28, Australia's improvement in its relative world position for wheat exports is even greater than Argentina's. Other products in which the

two countries are important competitors are wool, beef and mutton. With respect to wool, Argentina did not show any improvement in its world position, except in 1928. In three of the five years between 1934 and 1938 it dropped below the position it held in 1924-28. Australia, on the other hand, consistently had a larger share of the world wool market from 1929 to 1938 than in the period 1924-28. Percentage figures for beef and mutton (see table 9) are not available for the years after 1934; however the figures included for the periods 1924-28, 1929-33 and 1934 reveal very clearly the sharp decline in Argentina's world position as an exporter of these products and the remarkable improvement in Australia's position. For data on developments in respect of beef and mutton exports in the two countries after 1934 recourse must be had to the absolute value figures in table 8. In the case of mutton, absolute values increased more in Australia than in Argentina. While the reverse was true for beef, the percentage decline in the absolute value of Argentina's beef exports over the nine years shown in table 8 was nevertheless greater than for Australia. Table 8 shows that by 1933-34 Australia was again exporting hides and skins at a value comparable to the 1928-29 level. Argentina's average for 1934-37 did not reach 50 per cent of the 1929 level.

A few items, i.e., butter, sugar and fruits, were of considerable importance among Australia's agricultural exports but were not of sufficient significance in Argentina to be included in the tables under the section for that country. As can be appreciated from table 9, Australia improved its position as an exporter *vis-à-vis* the rest of the world in the case of each of these items.

Summing up the findings of tables 6, 7, 8 and 9, it may be concluded that:

1. Neither in Argentina nor Australia did the percentage share of important export products in total national agricultural exports show any significant change in the thirties.

2. In respect of all important agricultural export products, Australia improved its export position *vis-à-vis*

Table 8

ARGENTINA AND AUSTRALIA: EXPORTS OF SELECTED AGRICULTURAL PRODUCTS, 1929-1937

(Absolute values in million Reichsmark)

| Year or period      | Wheat <sup>a</sup> | Rye, barley, oats | Maize | Linseed | Meat total | Beef  | Mutton | Hides and skins | Fruit <sup>b</sup> | Sugar | Butter | Wool    |
|---------------------|--------------------|-------------------|-------|---------|------------|-------|--------|-----------------|--------------------|-------|--------|---------|
| <b>A. Argentina</b> |                    |                   |       |         |            |       |        |                 |                    |       |        |         |
| 1929 .....          | 1 142.3            | 117.2             | 671.6 | 480.3   | 621.3      | 364.5 | 56.3   | 208.3           |                    |       |        | 278.4   |
| 1930 .....          | 342.1              | 38.1              | 374.3 | 307.6   | 526.3      | 309.9 | 50.5   | 161.8           |                    |       |        | 161.9   |
| 1931 .....          | 267.7              | 46.0              | 474.8 | 251.6   | 388.8      | 228.4 | 39.1   | 102.7           |                    |       |        | 110.0   |
| 1932 .....          | 225.1              | 66.2              | 311.3 | 181.3   | 227.8      | 129.9 | 22.5   | 59.2            |                    |       |        | 73.4    |
| 1933 .....          | 237.7              | 46.0              | 207.3 | 150.8   | 221.2      | 132.9 | 20.4   | 84.8            |                    |       |        | 98.7    |
| 1934 .....          | 257.9              | 26.8              | 254.5 | 143.8   | 181.9      | 113.6 | 16.4   | 69.1            |                    |       |        | 100.6   |
| 1935 .....          | 229.8              | 46.6              | 261.4 | 175.5   | 231.2      | 137.0 | 25.6   | 79.3            |                    |       |        | 93.7    |
| 1936 .....          | 149.6              |                   | 366.6 | 174.0   | 249.5      | 147.2 | 28.2   | 94.8            |                    |       |        | 124.6   |
| 1937 .....          | 404.0              |                   | 491.3 | 226.0   | 289.9      | 163.5 | 29.6   | 125.2           |                    |       |        | 140.5   |
| <b>B. Australia</b> |                    |                   |       |         |            |       |        |                 |                    |       |        |         |
| 1928/29 .....       | 537                |                   |       |         | 444.2      | 58.9  | 44.2   | 30.8            | 61.0               | 106.5 | 153.9  | 1 256.3 |
| 1929/30 .....       | 297.7              |                   |       |         | 303.8      | 51.0  | 47.4   | 18.4            | 74.3               | 44.0  | 139.1  | 727.0   |
| 1930/31 .....       | 318.4              |                   |       |         | 279.1      | 39.0  | 36.7   | 12.3            | 61.4               | 31.5  | 141.6  | 557.4   |
| 1931/32 .....       | 296.7              |                   |       |         | 235.4      | 26.9  | 38.5   | 2.9             | 49.0               | 32.4  | 126.3  | 412.6   |
| 1932/33 .....       | 250.9              |                   |       |         | 206.1      | 21.2  | 30.8   | 3.5             | 68.5               | 17.0  | 105.9  | 415.2   |
| 1933/34 .....       | 128.2              |                   |       |         | 184.6      | 21.3  | 37.8   | 32.2            | 45.6               | 24.2  | 86.5   | 601.4   |
| 1934/35 .....       | 159.1              |                   |       |         | 208.7      | 25.0  | 43.9   | 22.3            | 34.8               | 21.5  | 94.0   | 384.0   |
| 1935/36 .....       | 183.3              |                   |       |         | 198.7      | 24.5  | 44.1   | 35.3            | 34.9               | 21.5  | 89.1   | 514.8   |
| 1936/37 .....       | 240.1              |                   |       |         | 215.4      | 29.9  | 51.6   | 49.7            | 35.0               | 28.5  | 86.8   | 614.9   |

Source: International Institute of Agriculture: *World Trade in Agricultural Products, Its Growth, Its Crisis, and the New Trade Policies*, Rome 1940, pp. 1,032, 1,033, 1,056 and 1,057.

<sup>a</sup> Including flour.

<sup>b</sup> Excludes preserved fruit and including apples, citrus fruits and raisins.

Table 9

ARGENTINA AND AUSTRALIA: SHARE IN WORLD EXPORTS OF SELECTED AGRICULTURAL PRODUCTS, 1924-28 TO 1938

(Percentages of world exports)

| Average or year     | Wheat | Rye          | Barley        | Oats  | Maize   | Grains and maize | Linseed | Beef         | Mutton       | Pigmeat | Wool |
|---------------------|-------|--------------|---------------|-------|---------|------------------|---------|--------------|--------------|---------|------|
| <b>A. Argentina</b> |       |              |               |       |         |                  |         |              |              |         |      |
| 1924-28 .....       | 16.8  | 4.9          | 5.4           | 30.9  | 63.4    | 25.9             | 76.1    | 61.0         | 27.9         | .6      | 12.2 |
| 1929-33 .....       | 18.5  | 8.6          | 7.7           | 37.9  | 66.4    | 29.8             | 80.9    | 54.2         | 21.5         | 1.7     | 12.1 |
| 1934 .....          | 27.5  | 8.3          | 19.2          | 46.4  | 64.6    | 36.2             | 77.0    | 55.8         | 14.6         | 4.3     | 11.4 |
| 1935 .....          | 22.8  | 20.4         | 16.5          | 36.1  | 73.5    | 38.0             | 86.7    | <sup>a</sup> | <sup>a</sup> |         | 11.6 |
| 1936 .....          | 10.1  | 11.4         | 8.1           | 24.7  | 78.4    | 32.8             | 75.1    |              |              |         | 12.0 |
| 1937 .....          | 23.4  | 8.2          | 10.3          | 48.3  | 69.6    | 40.0             | 83.1    |              |              |         | 10.7 |
| 1938 .....          |       |              |               |       |         |                  |         |              |              |         | 13.5 |
| <b>B. Australia</b> |       |              |               |       |         |                  |         |              |              |         |      |
|                     | Wheat | Fresh apples | Citrus fruits | Sugar | Raisins | Beef             | Mutton  | Butter       | Wool         |         |      |
| 1924-28 .....       | 10.5  | b            | .2            | 1.1   | 7.2     | 7.3              | 10.8    | 10.1         | 29.2         |         |      |
| 1929-33 .....       | 15.3  | 10.5         | .2            | 1.9   | 17.1    | 8.2              | 17.0    | 13.8         | 33.6         |         |      |
| 1934 .....          | 14.1  | 14.7         | .6            | 6.1   | 18.4    | 11.6             | 26.1    | 18.5         | 31.4         |         |      |
| 1935 .....          | 15.7  | 11.1         | .4            | 2.6   | 15.8    |                  |         | 18.8         | 35.5         |         |      |
| 1936 .....          | 15.4  | 15.4         | .4            | 3.6   | 16.4    |                  |         | 13.6         | 32.3         |         |      |
| 1937 .....          | 15.8  | 14.7         | .7            | 3.7   | 18.2    |                  |         | 13.5         | 31.9         |         |      |
| 1938 .....          |       |              |               | 4.1   | 20.3    |                  |         | 16.7         | 34.2         |         |      |

Source: Same as table 8, pp. 1,014-1,057.

<sup>a</sup> The volume of beef shipments in 1935, 1936 and 1937 was 4 485 000, 4 723 000 and 5 203 000 quintals respectively and for mutton it was 490 000, 500 000 and 513 000 quintals in the same years. The 1929-33 average for beef exports was 4 876 000 quintals and for mutton exports 756 000 quintals. Thus in the case of beef the volume level average for 1929-33 was regained and surpassed only in 1937 and in the case of mutton the low figure for 1934 was not greatly exceeded in the three following years.

<sup>b</sup> Exports of apples were more than four fifths higher in the middle thirties than before the Depression.

the rest of the world during the thirties, as compared with its position in 1924-28.

3. The same was true for Argentina in the case of wheat, other small grains, maize and linseed; however its position as a wool exporter declined slightly in the middle thirties, while its relative place as an exporter of beef, mutton, and hides and skins exporter also dropped.

4. The improvement in Argentina's export position for products of special importance to the country but not of great significance for Australia (small grains, maize, linseed) roughly offsets the improvement of Australia's position in fruits, butter and sugar — taking into account percentage improvement and the importance of these products among total agricultural exports.

5. Although Argentina falls behind Australia, as a result of the above comparisons, its export performance in the thirties, compared with the rest of the world, may be considered satisfactory. Indeed, at the end of the period, it gave rise to expressions of optimism<sup>8</sup> concerning the country's future prospects as one of the world's major exporters of agricultural products.

#### (b) *The post-war period*

In investigating changes in the volume of exports of specific important commodities in the post-war period, it is convenient to see first what happened to products of the traditional agricultural sector and then examine which new ones were appearing and expanding their position. Table 10 provides figures for twenty-five agricultural products which made up 83 and 73 per cent, respectively, of the value of total exports from Argentina and Australia in 1960. In each country, only four major agricultural groupings accounted for 60 per cent of total exports of all products — meats, wool and wheat common to both, maize in Argentina and sugar in Australia. The table covers the years 1934-38 (for purposes of comparison with pre-war years) and 1945 to 1960. The following observations may be made, on the basis of the data presented:

1. In the most important commodities — those making up 60 per cent of total exports of all products — Australia has progressed or maintained its levels more satisfactorily than Argentina. The following individual commodity notes bear this out:

*Beef.* The combined exports of fresh, chilled and frozen beef from Argentina and Australia, in terms of tons, was approximately the same, on the average, during the last four years of the period shown in the table as in the first four years. However Argentina's share had declined and Australia's had risen. Whereas the volume of Australia's exports of beef had represented, in the period 1934-38, only 26 per cent of those of Argentina in the period 1957-60 they represented 52 per cent.

*Canned meat.* Changes in the volume of canned meat from Australia show a very interesting phenomenon. In 1934-38, Australia exported an annual average of 4,000 tons of canned meat, as compared with 70,300 from Argentina. In the first years after the war, it was exporting more than ten times this amount, and by the mid-fifties the figure had risen to almost 67,000 tons. The volume exported fell below 50,000 tons in only three post-war years — 1945, 1947 and 1960. Argentina's ex-

port of this commodity does not show any long-term tendency to increase. Although its exports have, in general, been on a higher level than those of Australia, the latter constitutes an important competitor and in 1953 even managed temporarily to take the lead.

*Other meats.* Other meats did not follow the same trends in Australia as the economically more important items just described. Mutton exports from Australia declined substantially in the post-war period; in Argentina they rose in the immediate post-war years and declined in the fifties reaching a level about 25 per cent lower than that of 1934-38. Pork exports from Argentina in general were about twice as high in the fifties as in the period 1934-38. Exports of this commodity from Australia dwindled to an almost insignificant quantity in the post-war period, never having been a very prominent item among the country's exports. The item "prepared meats" fluctuated greatly in the case of Argentina, rising in the first years after the end of the war, subsequently declining, with sharp increases in 1958 and 1959, and falling to a very low level in 1960. This item is not of much importance for Australia, with the exception of the increase observable in the second half of the forties.

*Wheat and wheat flour.* Argentina had traditionally been a larger exporter of this commodity than Australia (see table 9 for their respective shares of the world market in the periods 1924-28 and 1929 to 1933). In the period 1934-38 Argentina still had a healthy margin over Australia, although the two were fairly close competitors. During the last six years covered by table 10 (1955 to 1960 inclusive) Australia exported on the average slightly more than Argentina — despite a very bad year in 1958. It is interesting to note that the combined total of exports from Argentina and Australia in the latter years of the period reviewed in table 10 was considerably lower than in 1934-38; the average for each country during the last four years of the period was lower than the average for each in 1934-38.

*Wool.* The figures for wool are presented on a clean rather than an actual weight basis. Since wool loses weight when impurities are removed, the figures in the table may appear low to anyone familiar with the actual weight figures. Despite a few favourable years, Argentine wool exports have remained static in the post-war period at a level comparable with that prevailing in the period before the war. The annual average for 1934-38 was 77,400 metric tons, for 1957 to 1960, 78,500 tons and for the years 1948 to 1960 inclusive barely 77,000 metric tons. Australia's annual average exports during the last four years of the period included in the table was 361,800 metric tons, compared with 206,100 tons in 1934-38. The average for 1948-60 was 320,300 tons. There appears to be a long-term tendency for wool exports from Australia to increase.

*Maize.* Exports from Argentina have dropped sharply from their pre-war levels, with signs of some partial recuperation toward the end of the period. This product is of no importance in Australia's exports.

*Sugar.* By 1953, sugar exports from Australia were far above the 1934-38 level and remained so throughout 1960. In 1957 they were more than twice the 1934-38 level and came close to repeating this performance in 1960. With the exception of seasonal surpluses in a few years, Argentina has not developed sugar exports on a significant scale.

<sup>8</sup> International Institute of Agriculture: *World Trade in Agricultural Products, Its Growth, Its Crisis, and the New Trade Policies*, Rome 1940, p. 1,031.

Table 10

## ARGENTINA AND AUSTRALIA: EXPORTS OF IMPORTANT AGRICULTURAL COMMODITIES (1934-38-1960)

(In thousand metric tons)

| Country   | Product   | 1934-38           | 1945    | 1946    | 1947    | 1948-52 | 1953    | 1954    | 1955    | 1956    | 1957    | 1958    | 1959    | 1960    |
|-----------|---|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Argentina | Wheat and wheat flour.....                          | 3 340.5           | 2 596.3 | 1 441.1 | 2 304.6 | 1 880.5 | 2 551.6 | 3 043.2 | 3 713.6 | 2 568.2 | 2 681.5 | 2 152.4 | 2 423.4 | 2 492.4 |
| Australia | Wheat and wheat flour.....                          | 2 787.1           | 417.2   | 1 491.0 | 1 291.0 | 3 135.6 | 2 733.3 | 1 973.4 | 2 573.6 | 3 701.7 | 2 598.9 | 1 428.4 | 2 735.3 | 3 178.7 |
| Argentina | Rye .....   | 115.45            | 146.8   | 155.5   | 247.4   | 168.2   | 343.1   | 829.9   | 328.0   | 157.9   | 314.7   | 187.8   | 64.2    | 138.4   |
| Australia | Rye .....   | ...               | ...     | ...     | ...     | ...     | ...     | ...     | 2.4     | 2.8     | 2.0     | .3      | 5.7     | .9      |
| Argentina | Barley .....  | 333.8             | 267.2   | 655.7   | 611.6   | 242.0   | 556.8   | 661.7   | 518.9   | 582.4   | 566.1   | 334.6   | 298.9   | 299.9   |
| Australia | Barley .....  | 72.8              | —       | 26.4    | 57.9    | 257.6   | 553.8   | 632.1   | 358.8   | 623.8   | 625.8   | 321.3   | 884.7   | 361.8   |
| Argentina | Oats .....  | 368.7             | 82.3    | 332.8   | 68.4    | 165.2   | 219.2   | 680.4   | 92.3    | 285.4   | 407.9   | 532.1   | 72.2    | 353.2   |
| Australia | Oats .....  | 5.5               | —       | 8.5     | 11.0    | 189.4   | 182.9   | 34.0    | 108.1   | 204.1   | 86.8    | 69.0    | 380.1   | 215.3   |
| Argentina | Maize .....   | 6 526.8           | 571.8   | 2 200.0 | 2 366.1 | 1 068.1 | 1 083.9 | 2 184.8 | 362.4   | 1 065.2 | 790.4   | 1 678.9 | 2 686.0 | 2 569.9 |
| Australia | Maize .....   | 1.5               | —       | —       | —       | 17.9    | 25.1    | 3.1     | 11.1    | 2.9     | 1.9     | 0.1     | 0.8     | 0.1     |
| Argentina | Rice .....  | —                 | —       | —       | —       | 0.8     | 14.1    | 36.2    | 32.2    | 43.5    | 27.7    | 43.5    | 10.4    | 5.3     |
| Australia | Rice .....  | 11.9              | 26.0    | 26.1    | 30.0    | 28.7    | 33.8    | 30.7    | 40.5    | 39.5    | 40.1    | 44.4    | 53.5    | 72.9    |
| Argentina | Sugar .....   | 2.6               | 3.8     | 2.6     | 0.4     | 0.5     | 0.1     | —       | 39.9    | —       | 95.5    | —       | —       | 100.9   |
| Australia | Sugar .....   | 430.4             | 199.7   | 192.9   | 42.4    | 347.1   | 738.2   | 662.6   | 645.8   | 750.9   | 905.8   | 700.9   | 660.6   | 822.4   |
| Argentina | Linseed .....                                       | 1 541.4           | 134.6   | 37.5    | ...     | 69.2    | 9.9     | 11.1    | —       | —       | —       | —       | —       | 63.0    |
| Australia | Linseed .....                                       | —                 | —       | —       | —       | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| Argentina | Linseed oil .....                                   | —                 | 46.3    | 148.3   | 213.5   | 121.4   | 112.5   | 244.9   | 155.8   | 61.0    | 140.7   | 161.8   | 217.5   | 169.0   |
| Australia | Linseed oil .....                                   | —                 | —       | —       | —       | 0.1     | —       | 0.4     | 0.6     | 0.2     | 0.2     | 0.1     | 0.1     | 0.1     |
| Argentina | Other oilseeds and oils <sup>a</sup> .....          | 162.1             | 536.1   | 586.6   | 775.7   | 758.8   | 738.6   | 478.8   | 143.2   | 474.7   | 691.4   | 1 102.6 | 673.9   | 856.0   |
| Australia | Other oilseeds and oils <sup>a</sup> .....          | 7.0               | —       | —       | —       | 0.2     | 0.2     | —       | —       | —       | .3      | 1.5     | 1.9     | 0.1     |
| Argentina | Raisins .....                                       | .4                | 1.1     | 1.1     | —       | 1.1     | 0.9     | 1.0     | 1.0     | 1.6     | 0.7     | 0.7     | 0.6     | 2.0     |
| Australia | Raisins .....                                       | 56.7              | 45.2    | 51.8    | 40.3    | 40.4    | 66.1    | 57.3    | 66.8    | 43.6    | 57.9    | 73.8    | 67.0    | 48.4    |
| Argentina | Apples .....  | 3.1               | 17.8    | 24.0    | 19.0    | 38.4    | 51.2    | 55.5    | 65.9    | 62.0    | 111.7   | 70.4    | 165.3   | 150.3   |
| Australia | Apples .....  | 86.9              | 3.7     | 38.5    | 18.4    | 59.2    | 72.4    | 93.5    | 88.2    | 91.3    | 73.6    | 114.9   | 91.5    | 96.1    |
| Argentina | Citrus fruits .....                                 | —                 | —       | —       | —       | —       | —       | —       | —       | 4.3     | 6.8     | 7.9     | 2.7     | 0.6     |
| Australia | Citrus fruits .....                                 | 11.6              | 3.7     | 7.6     | 12.4    | 12.5    | 11.8    | 11.2    | 9.7     | 13.9    | 12.5    | 8.6     | 12.4    | 10.5    |
| Argentina | Beef, fresh, chilled and frozen....                 | 408.9             | 175.2   | 227.0   | 338.0   | 195.0   | 112.8   | 105.2   | 192.1   | 363.1   | 354.7   | 369.5   | 345.0   | 280.0   |
| Australia | Beef, fresh, chilled and frozen....                 | 107.0             | 48.6    | 68.9    | 107.9   | 69.5    | 158.3   | 114.1   | 149.4   | 125.4   | 160.7   | 166.3   | 229.9   | 147.9   |
| Argentina | Mutton and lamb, fresh, chilled<br>and frozen ..... | 49.5 <sup>b</sup> | 100.9   | 125.0   | 135.5   | 51.5    | 50.6    | 59.5    | 70.5    | 55.5    | 47.2    | 39.1    | 30.7    | 37.5    |
| Australia | Mutton and lamb, fresh, chilled<br>and frozen ..... | 90.5              | 43.5    | 62.4    | 60.1    | 46.3    | 64.4    | 60.7    | 56.1    | 34.6    | 43.4    | 64.3    | 61.8    | 66.1    |
| Argentina | Pork, fresh, chilled and frozen...                  | 10.2              | 77.4    | 26.4    | 5.6     | 11.9    | 14.3    | 16.3    | 4.7     | 24.8    | 29.8    | 24.1    | 20.4    | 13.3    |
| Australia | Pork, fresh, chilled and frozen...                  | 10.5              | 14.5    | 13.7    | 2.5     | 5.0     | 1.6     | 2.3     | 1.8     | 0.7     | 0.9     | 1.1     | .5      | 0.4     |
| Argentina | Prepared meats: bacon, ham, and<br>others .....     | 14.3 <sup>c</sup> | 25.6    | 58.6    | 70.2    | 22.4    | 9.9     | 6.3     | 5.8     | 7.9     | .4      | 66.0    | 29.3    | 3.9     |
| Australia | Prepared meats: bacon, ham, and<br>others .....     | 1.3               | 8.6     | 14.2    | 14.2    | 7.1     | 2.6     | 2.2     | 2.1     | 1.7     | .3      | 1.8     | 1.1     | .7      |

|                 |  |                    |      |      |       |                    |       |       |       |       |       |       |       |       |
|-----------------|--|--------------------|------|------|-------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Argentina ..... | Cattle hides, sheep and lamb skins         | 133.5 <sup>d</sup> | ...  | ...  | 115.0 | 163.3 <sup>b</sup> | 150.1 | 143.7 | 143.7 | 170.1 | 173.7 | 180.7 | 166.1 | 140.6 |
| Australia ..... | Cattle hides, sheep and lamb skins         | ...                | ...  | ...  | ...   | ...                | 46.0  | 45.0  | 49.0  | 45.0  | 51.0  | 59.0  | 71.0  | 76.0  |
| Argentina ..... | Canned meat .....                          | 70.3               | 68.7 | 81.8 | 104.5 | 69.2               | 58.3  | 74.2  | 89.2  | 80.8  | 113.3 | 104.2 | 65.8  | 56.8  |
| Australia ..... | Canned meat .....                          | 4.1                | 42.8 | 52.9 | 40.8  | 56.6               | 63.8  | 66.7  | 61.6  | 51.0  | 59.7  | 61.3  | 53.1  | 33.4  |
| Argentina ..... | Milk, fresh .....                          | .08                | .01  | .03  | ...   | ...                | ...   | ...   | ...   | ...   | ...   | ...   | ...   | ...   |
|                 | Other milk <sup>f</sup> .....              | .05                | 1.0  | 3.0  | 3.8   | 0.6                | 0.1   | 1.9   | 1.9   | 0.5   | 2.4   | 1.2   | 0.7   | 0.8   |
| Australia ..... | Other milk <sup>f</sup> .....              | 8.5                | 30.2 | 46.4 | 42.7  | 49.1               | 34.6  | 45.8  | 54.0  | 62.5  | 49.4  | 59.0  | 66.6  | 46.2  |
| Argentina ..... | Butter .....                               | 8.3                | 12.0 | 13.2 | 15.0  | 6.0                | 15.0  | 15.4  | 11.2  | 15.8  | 15.2  | 8.5   | 23.2  | 24.3  |
| Australia ..... | Butter .....                               | 99.8               | 42.5 | 68.8 | 71.4  | 61.1               | 39.8  | 47.7  | 82.5  | 84.2  | 64.8  | 63.4  | 83.8  | 66.3  |
| Argentina ..... | Cheese .....                               | 1.5                | 10.8 | 16.4 | 11.5  | 6.8                | 4.4   | 3.2   | 3.0   | 3.4   | 2.7   | 3.0   | 3.4   | 3.1   |
| Australia ..... | Cheese .....                               | 8.6                | 12.1 | 20.5 | 25.3  | 22.5               | 23.4  | 23.0  | 20.6  | 18.0  | 13.8  | 8.8   | 19.4  | 19.0  |
| Argentina ..... | Eggs (in the shell).....                   | 3.8                | 5.0  | 2.9  | ...   | 1.7                | 2.5   | 3.1   | 6.2   | 7.1   | 5.8   | 9.6   | 11.6  | 15.5  |
|                 | Eggs (liquid and powdered)....             | —                  | —    | —    | —     | 0.1                | 0.2   | 0.1   | 0.2   | 0.3   | 0.5   | 0.8   | 0.9   | 1.3   |
| Australia ..... | Eggs (in the shell).....                   | 10.5               | 3.6  | 12.1 | 10.2  | 11.5               | 9.0   | 15.2  | 14.5  | 7.1   | 8.3   | 3.8   | 2.1   | 4.3   |
|                 | Eggs (liquid and powdered)....             | ...                | 4.96 | 10.6 | 11.8  | 9.6                | 11.8  | 14.6  | 10.8  | 6.9   | 15.0  | 4.6   | 5.0   | 9.3   |
| Argentina ..... | Cotton lint .....                          | 29.5               | 8.5  | 23.8 | 6.5   | 19.8               | 61.5  | 27.5  | 1.8   | 0.5   | 10.5  | 2.5   | 9.5   | 8.6   |
| Australia ..... | Cotton lint .....                          | .3                 | —    | —    | ...   | —                  | —     | —     | —     | —     | —     | —     | —     | —     |
| Argentina ..... | Wool (clean basis not actual weight) ..... | 77.4               | ...  | ...  | ...   | 77.6               | 98.0  | 61.5  | 68.2  | 70.3  | 57.4  | 71.3  | 93.8  | 91.6  |
| Australia ..... | Wool (clean basis not actual weight) ..... | 206.1              | ...  | ...  | ...   | 300.4              | 302.8 | 275.7 | 314.5 | 321.6 | 368.8 | 321.4 | 384.6 | 372.5 |

Sources: FAO, *Yearbook of Food and Agricultural Statistics, 1948 and 1955.*

FAO, *Trade Yearbook, 1958 and 1962.*

United Nations, *Yearbook of International Trade Statistics, 1950, 1953, 1957, 1960.*

Dirección Nacional de Estadística y Censos, *Comercio Exterior, 1955-1957, Buenos Aires, 1960.*

<sup>a</sup> Mostly oilseed cake and meat and sunflower-seed oil.

<sup>b</sup> Average 1937 and 1938.

<sup>c</sup> "Others" amounted to an 8.3 average for 37/38, taken as representative of period.

<sup>d</sup> 1938 only.

<sup>e</sup> Excludes 1949.

<sup>f</sup> Condensed, evaporated and powdered.

2. In the case of cereals other than wheat (barley, oats, rice) Australia has been able to expand its exports remarkably in most years of the post-war period whereas Argentina's percentage increase of barley and oats in good years has been lower and the country has not been able to achieve a sustained long-term increase for any of the three products. The following commodity notes elaborate on this point:

*Rice.* By the end of the period, rice exports from Australia had increased sixfold over the 1934-38 level. Exports of rice from Argentina in the years 1954-58 were on levels competitive with those of Australia but dropped greatly in the last two years of the period covered by table 10.

*Barley.* Exports of this product from Argentina have shown wide fluctuations in volume, ending with an 1958-60 average lower than that for 1934-38. However, the figures for 1946, 1947, 1953, 1954, 1955, 1956 and 1957 were from 60 to 100 per cent higher than for 1934-38. There was a spectacular development of exports of this commodity from Australia rising from an average of only 72,000 tons in 1934-38 to 434,600 tons in 1948-60. In the period 1934-38, Argentina exported more than four times as much barley as Australia, whereas the annual average for 1948-1960 was significantly lower than that for Australia, the ratio being 386,800 tons to 434,600 tons.

*Oats.* Exports of this product show a development in some respects similar to that for barley. There is a remarkable long-term increase in the case of Australia, whereas Argentina has had difficulty in maintaining, on the average, its 1934-38 position.

*Rye.* Australia's exports of this product are of relatively little significance among her total exports. Exports of rye from Argentina rose sharply in the middle of the fifties only to decline in 1958-60.

3. For the remaining groups of products included in the table, some individual commodities are of importance to only one of the two countries. These groups include oils and oilseeds, fruits, dairy products and hides and skins. On the whole it appears that these are the groups where it is more difficult or impossible to find a contrast between the export performance of Argentina and Australia.

*Linseed, linseed oil and other oilseeds and oils.* The drop in exports of linseed from Argentina is offset by the increase in exports of linseed oil and "other oilseeds and oils", the main element of which is oilseed cake and meal. This category is not significant for Australia.

*Dairy products.* These products are relatively more important to Australia's exports than they are to Argentina's. In the case of the former country, butter exports (the most important item) declined in the post-war period, as compared with the years before the war. However, increases in exports of other dairy products (cheese and preserved milk) compensated for this. Argentina was able to increase butter, cheese and egg exports in the post-war period with the result that exports of dairy products are about three times what they were before the war; however, its *per capita* exports of dairy products are still not even one sixth of Australia's.

*Hides and skins.* The table presents only cattle hides for Argentina and sheep and lamb skins for Australia, these being the principal items in the hide and skin

categories of each country. Both countries have expanded exports of these items in the post-war years. The percentage increase in the case of Australia appears to be greater.

*Fruits.* Exports of raisins from Australia show a few good years in the fifties but there is no discernible long-term upward trend for the volume of exports of this commodity. It is a minor item in Argentina's exports. Exports of apples from Argentina expanded greatly in the post-war period as compared with pre-war years whereas in the case of Australia there was only a modest increase in the period 1954-60. Exports of citrus fruits do not show any important change for either country in the post-war period.

Aside from what has been happening to exports of the traditional agricultural sector, Australia's exports have become more diversified in recent years, with manufactured goods increasing their share in the total value, whereas until 1960 at least this was much less true of Argentina. It will be recalled that in the first half of the thirties exports of manufactured goods from Australia represented less than 4 per cent of the value of total exports. In 1960 merchandise included in the three SITC classifications 6, 7 and 8, designated "manufactured goods", "machinery and transport equipment", and "miscellaneous manufactured articles" made up 12 per cent of total exports. In Argentina these classifications represented only 1 per cent of total exports in the same year. This percentage prevailed on the average between 1957 and 1960, both inclusive. For the same years the corresponding proportion for Australia was between 11 and 12 per cent.<sup>9</sup> Had Argentina been able to increase its exports of manufactured goods, not in the same proportion, but in the same actual value as Australia was able to do between 1935 and 1955, the total value of its exports would have been 16 per cent higher than it actually was in 1960, other things being equal.

If in discussing Australia's increasing exports of manufactured goods, it is proper to take into account the increase in its exports of canned meat and canned milk (which have already been included and analysed in the preceding section on agricultural products) then the 12 per cent in the previous paragraph would be raised to 14 per cent and the 16 per cent figure to 20 per cent.

Base metals (iron and steel plates and sheets, lead, zinc, copper and alloys) and manufactures of metals made up more than half of the exports of those manufactured goods from Australia in 1960 which were classified in the three groups mentioned earlier. Other prominent items were power generating machinery and motor vehicles.

As indicated earlier in this study, the mining sector accounted for 8.9 per cent of the total exports from Australia in the early thirties. The percentage was almost the same in 1960. Forestry and fisheries products represented less than 1 per cent in 1960 and chemical products a little over 1 per cent. The diversification which took place in Australia's exports during the period under review thus represented a reduction in the relative importance of crude agricultural products and an increase in the importance of manufactured goods, with no significant change in the relative importance of other sectors.

<sup>9</sup> United Nations, *Yearbook of International Trade Statistics*, 1960, New York, 1962.

On the other hand, Argentina's exports at the end of the period still consisted mainly of foodstuffs, raw materials and fats and oils, the first category making up 22 per cent of the total, the second 66 per cent and the third 7 per cent. Exports of chemicals (almost half of which was *quebracho* extract) represent a little over 3 per cent and, as indicated earlier, manufactured goods formed 1 per cent. An important shift in the composition of Argentina's exports did take place, however, within the agricultural sector. As pointed out earlier in this study, exports of field crops in the thirties represented about 57 per cent of total exports whereas livestock products represented 39 per cent. By the end of the period reviewed, the share of field crops had decreased and that of livestock products increased so that the latter was only 2 per cent less than the former.

Some notion of the great difference in composition of agricultural exports between Argentina and Australia may be obtained by comparing the almost equal distribution just observed in Argentina between the two major branches of activity and the fact that Australia's exports of livestock products are more than three times higher in value than its field crop exports. In fact, in the year

1960, the value of the former (1,124,480,000 dollars at the exchange rate of 2.24 dollars to 1 Australian pound) exceeded the value of Argentina's exports of all products. This major difference in the composition of exports is not a new phenomenon but existed throughout the entire period and indeed long before.

The difference in composition of exports from the agricultural and livestock sectors of the Argentine and Australian economies appears to have had a more favourable influence on prices of exports from Australia in the fifties than in earlier decades. This is undoubtedly related to the fact that world surpluses of field crops have deflated prices. The export price index for wool which, depending on the year, represents between 40 and 50 per cent of total exports from Australia was consistently below the index for all that country's export groups between the fiscal years 1936-37 and 1948-49, and it was consistently above the index for all groups from 1949-50 to 1958-59.<sup>10</sup>

<sup>10</sup> Commonwealth Bureau of Census and Statistics, *Yearbook of the Commonwealth of Australia, No. 49, 1963, part V, Canberra, p. 461.*

## B. FACTORS WHICH INFLUENCED TRADE DEVELOPMENTS IN ARGENTINA AND AUSTRALIA

Argentina and Australia both export — and are potentially greater exporters, in varying degrees — of products coming not just from one or two main types of economic activity but from the agricultural, livestock, forestry, mining and industrial sectors. Thus it becomes clear that any attempt to explain why one country has been a more successful international salesman than the other should be related to the over-all picture of what has happened in the economies as a whole. This task would be much easier if comprehensive, *parallel* statistical studies of the two economies over the last thirty years or so were available for reference, such as those currently under way in the Instituto di Tella in Argentina. Although this is not yet the case, still enough material is available in a wealth of unrelated publications on the two countries to support some tentative explanations of principal economic and trade developments and to point out important factors which appear to merit further study.

The main questions to be answered in this analysis are the following:

1. What important differences in the structure and evolution of the economies have been evident over the period studied, which might logically be related to trade developments?
2. What were the conditions existing at the beginning of the period which influenced the differences referred to above?
3. What events occurred during the period and what was the policy applied which might account for the differences?
4. How did the differences affect trade?

The answers to those questions have greater significance and clarity, however, when they are presented in a somewhat more chronological order. This will be done in the following text, starting with inherent differences in the economies existing at the beginning of the period

and subsequently dealing with the determinant events and policies during the thirty-year period reviewed.

### 1. RELATIVE POSITIONS OF THE TWO COUNTRIES AT THE START OF THE THIRTY-YEAR PERIOD

Although there were many similarities in the structure and development of the economies of Argentina and Australia prior to 1930, important differences existed and these became more sharply defined over the years. Some of the interesting similarities have been pointed out in the introduction to the present study. The most striking similarity is doubtless the fact that during the first thirty years of the twentieth century *per capita* income had been growing at the same rate. Important differences were the following:

#### (a) *Long-term population trend*

The long-term tendency for the population of Argentina to grow more rapidly than that of Australia was already apparent by 1900 (see table 11).

This table shows that the population of Argentina has grown twice as fast as that of Australia over the past hundred years. Whatever the reasons for the difference in the rate of population growth (ethnic, cultural, greater facility for emigration from Europe to Argentina, etc.) this factor must undoubtedly have had some bearing on important economic developments, such as the degree of mechanization of agriculture that appeared desirable at different stages, and the percentage of increase in agricultural production required to meet increasing domestic consumption.

#### (b) *Australia's head start in economic development*

At the beginning of the period under review, *per capita* income in Australia in terms of 1953 dollars, was already

Table 11

ARGENTINA AND AUSTRALIA: POPULATION, 1860-1959

(In millions)

| Country         | 1860 | 1880 | 1900 | 1913 | 1929 | 1952/54 | 1959 |
|-----------------|------|------|------|------|------|---------|------|
| Argentina ..... | 1.2  | 2.9  | 5.6  | 7.5  | 11.5 | 18.4    | 20.6 |
| Australia ..... | 1.1  | 2.3  | 3.7  | 5.9  | 6.4  | 8.8     | 10.1 |

Source: L. J. Zimmerman, "The Distribution of World Income 1860-1960", published in *Essays on Unbalanced Growth*, ed. by Egbert de Vries, Mouton and Co., S-Gravenhage 1962, pp. 48-49, 52-53.

65 per cent higher than in Argentina.<sup>11</sup> Some of the specific manifestations of this greater degree of development will be dealt with in subsequent points.

(c) *Variations in infrastructure*

There is evidence that the economic and social infrastructure provided by the Australian Government in the decades prior to those under review was superior to that provided by Argentina.

An interesting account of government and private capital formation between 1861 and 1939 is to be found in *The Economic Record*.<sup>12</sup> One of the outstanding characteristics revealed by the tables on pages 391 and 392 of the December 1959 issue giving annual breakdowns by source of such capital formation is that the private and public sectors contributed approximately equal shares of the total up to 1939. The author points out that "initially stimulated by the shortage of entrepreneurial ability and the difficulty of private access to the London capital market, the Colonial governments assumed substantially modern functions during the second half of the eighteen-fifties". The proportions of fixed government investment to private investment in Argentina during the years 1900-1955 is provided in a comprehensive study of the Argentine economy published by the United Nations in 1959.<sup>13</sup> The study reveals that during the period 1900-1930 the Government's contribution to the total capital formation never reached 20 per cent and in 1920-24 was as low as 10 per cent.

Whereas the Australian statistics in the source cited show that most of the Government's capital formation was of a *reproductive* nature, going for railways, roads, water and sewerage, electrification, education, housing, agricultural services and the like, it is doubtful that the same was true in the case of Argentina. In the first place, it is known that a very important proportion of infrastructure in Argentina was not only British-financed (as in the case of Australia), but was actually British-owned. Argentina bought back this portion of its infrastructure (railways and telephone company) after the Second World War. On the other hand, when Australia became a federated nation in 1901, it acquired the accumulated

capital of the former self-governing British colonies comprising the Federation, including the government-owned railways. It is also interesting to note that, due perhaps to the international political protection provided to the Australian colonies by the mother country, defence expenditures of the Government amounted to only 1 or 2 per cent of gross public capital formation (probably 0.25 to 0.50 per cent gross national product) until almost the beginning of the First World War.

Another element to be taken into consideration in relation to infrastructure is the fact that Australia began public support of residential housing at an unusually early date (prior to the Second World War) and during the period 1920 to 1930 it averaged 2.84 million Australian pounds *per annum*. This represented a total of 137.6 million dollars over the ten-year period, for a population of roughly 5.5 million. The corresponding average annual *per capita* figure for the same period is comparable in magnitude to government expenditure (including loans) for housing, in Argentina, in 1956-60.<sup>14</sup> Private investment in housing in Australia also shows an unusual pattern. Instead of representing a relatively small proportion of total capital formation in the early years of the country's development, rising subsequently and tapering off (as is the case in other developing countries) such investment represented between 1861 and 1939 the following averages of total private capital formation:

| Years           | Per cent |
|-----------------|----------|
| 1861-1870 ..... | 52.09    |
| 1871-1880 ..... | 36.43    |
| 1881-1890 ..... | 42.90    |
| 1891-1900 ..... | 38.69    |
| 1901-1910 ..... | 41.77    |
| 1911-1920 ..... | 41.75    |
| 1921-1930 ..... | 46.03    |
| 1931-1939 ..... | 40.80    |

A comparison of electric energy production and installed electric capacity in Argentina and Australia over the past thirty years tends to support the argument that Australia's infrastructure was built up more solidly over a longer period of time than that of Argentina (see table 12).

In the thirties and forties about 95 per cent of electric energy production in Australia was provided by public utilities. The percentages are considerably lower in Argentina.

<sup>11</sup> This statement is based on estimates by L. J. Zimmerman in "The Distribution of World Income 1860-1960". (See table 11.) The figures for Argentina are subject to reservations, owing to the unresolved controversy over the exchange rates applicable.

<sup>12</sup> N. G. Butlin, "Some Structural Features of Australian Capital Formation, 1861 to 1938-39", *The Economic Record*, Melbourne University Press, vol. XXXV, No. 72, December 1959.

<sup>13</sup> United Nations, *Análisis y Proyecciones del Desarrollo Económico*, V. *El Desarrollo Económico de la Argentina*, Sales No.: 59.II.G.3, August 1959, part I, p. 114.

<sup>14</sup> Inter-American Development Bank, *Reformas Institucionales y Desarrollo Social en América Latina*, Washington, D.C., March 1963, page 74.



Table 12

## ARGENTINA AND AUSTRALIA: ELECTRIC ENERGY PRODUCTION AND INSTALLED CAPACITY, 1931-61

| Year       | Electric installed capacity<br>(thousands of kW) |           | Electric energy production<br>(millions of kWh) |           | Population<br>(in thousands) |           |
|------------|--|-----------|---|-----------|------------------------------|-----------|
|            | Australia  | Argentina | Australia                                       | Argentina | Australia                    | Argentina |
| 1931 ..... |  |           | 2 446   |           | 6 526                        | 12 167    |
| 1934 ..... |  | 1 250     | 2 910   | 1 250     | 6 677                        | 12 834    |
| 1940 ..... | 1 719  | 1 338     | 5 143   | 1 338     | 7 039                        | 14 169    |
| 1946 ..... | 2 053  | 1 444     | 6 910   | 1 444     | 7 465                        | 15 654    |
| 1948 ..... | 2 235  | 1 699     | 8 360   | 4.566     | 7 709                        | 16 306    |
| 1954 ..... | 3 417  | 1 969     | 13 707  |           | 8 987                        | 18 756    |
| 1961 ..... | 6 665  | 3 723     | 24 814  | 11 607    | 10 508                       | 21 079    |

Source: United Nations, *Statistical Yearbook, 1951*, pp. 273, 276, 278 and 282 and *Statistical Yearbook, 1962*, pp. 305, 309, 313 and 318; *Demographic Yearbook, 1960*, table 4; 1961 figures taken from United Nations, *Statistical Yearbook, 1962*, table 10.

According to ECLA,<sup>15</sup> Argentina's public investment in roads between 1916 and 1932 averaged 70 million 1950 pesos *per annum* (11 million dollars of 1950 value). Over the same period, Australia's annual public investment in roads averaged 4.88 million Australian pounds. If the 1928 exchange rate of 4.84 dollars to one Australian pound is taken as representative of the period covered, this investment was equal to 23.6 million *current* dollars. In terms of 1950 dollars it would amount to much more.

Important differences between the two countries in number of students benefiting from secondary education and in illiteracy rates undoubtedly reflect different levels of government investment in education. The latest year for which an illiteracy rate is available for Australia is 1921, when it was 4.3 per cent. Argentina's rate was reported to be 13.6 per cent in 1947. It is relevant to note that the proportion of the population economically active in both countries was almost the same in 1947 (40-42 per cent).

The existence of a superior infrastructure in Australia at the beginning of the Depression must have facilitated the great drive to expand exports which took place in the thirties and thus contributed toward explaining the greater trade success of this country over Argentina in this period.

(d) *Australia's head start in diversified industrialization*

Any comparison of industrial development between countries is greatly handicapped by differences in definitions and classifications. For example, one official Argentine source<sup>16</sup> states: "It is worthy of note that a considerable part of the industrial production of Argentina has always been destined for exportation. We refer to refrigerated meats, dairy products, washed wool, raw cotton, quebracho extract, etc., all of which are classified as industrial products by our statisticians." If a distinction is made between industries involving relatively simple processing of raw materials on the one hand and manu-

facturing and heavy industry on the other (development of the latter group involving ever greater diversification of industries), it may be said that Australia had a head start over Argentina in "diversified industrial development". Australia's import substitution process received its main impulse in the twenties, under the most favourable auspices of the new and much more prohibitive tariff policy initiated at the beginning of that decade. On the other hand, it was only in the thirties that Argentina undertook, on a serious scale, a protectionist tariff policy designed to stimulate import substitution. Some of the evidence that Australia's industry was structurally more diversified than that of Argentina, even prior to the Depression, is presented below.

The United Nations report<sup>17</sup> on the economic development of Argentina points out that prior to the First World War the industry that existed was oriented more towards the processing of exportable agricultural products and was quite deficient from the standpoint of domestic demand for industrial products. It further states that Argentine industry began to discover its internal market during the First World War but lost ground when the War was over. The report of this discovery should not be interpreted to mean that any great import substitution took place in Argentina during the First World War. Although the import coefficient for manufactures given in the report was lower in the period 1915-19 than in the period 1910-14, apparently this decline was not due to an over-all increase in Argentine manufacturing for local consumption but merely to the fact that imports of manufactured goods into Argentina dropped during the war. According to table 1 on the same page of the above-mentioned report, manufacturing output declined (in absolute figures, expressed in terms of 1950 pesos) during the war. Actually the first significant advance in the absolute figures for manufacturing production (departing from the geometrically progressive trend started at the beginning of the century) is shown in the figure for the years 1935-39.

This general picture is substantiated by other sources. The report presented in 1944 by the Argentine Commission of Inter-American Development<sup>18</sup> states that "the manufacturing industry began to play a role of great

<sup>15</sup> United Nations, *Análisis y Proyecciones del Desarrollo Económico*, V, *El Desarrollo Económico de la Argentina*, Mexico, 1959, part 2, vol. III, p. 116.

<sup>16</sup> Inter-American Development Commission, *Reports presented to the Conference of Commissions of Inter-American Development by the Argentina Commission of Inter-American Development*, Washington, D.C., 1944, p. 5.

<sup>17</sup> United Nations, *op. cit.*, vol. II, p. 159.

<sup>18</sup> Inter-American Development Commission, *op. cit.*, pp. 5, 6, 27.

importance in the national economy only in the late 1930's. A greatly accelerated rate of progress has been noted in the last ten-year period". According to the report, the factors favouring this development were high customs duties on manufactured articles, the need to reduce foreign purchases due to the drop in export prices in the thirties, migration of capital from Europe and the United States, and the effects of the Second World War (rationing in the United States, the principal source of supply during the War, and lack of shipping). The report further indicates that as late as 1939 the value of production of industries processing materials of agricultural and livestock origin represented 53 per cent of the total value of industrial production, the corresponding figures for industries processing materials of forest origin being 5 per cent, of metallic origin 16 per cent, of non-metallic mineral origin 12 per cent and of mixed origin 12 per cent. With respect to import substitution, the report, written in 1944, stated that Argentina has been trying gradually to substitute articles of domestic manufacture for the *simplest* items of importation.

The report of the Argentine Commission states further that Argentine industries were employing about 1 million persons in 1944. According to a United Nations source<sup>19</sup> there were 448,400 wage earners engaged in manufacturing in Argentina seven years earlier (1937) as against 477,500 in Australia. Taking respective populations of 13.5 and 6.8 million into account, the percentage of total population made up of wage earners in industry was twice as high in Australia as in Argentina (the Argentine figure was checked against that included in the official 1935 *Industrial Census* and the difference was only about 5 per cent).

The Argentine *Industrial Census* of 1935<sup>20</sup> lists about 250 industries in existence at that time. These include mostly processed foodstuffs, consumer goods and construction materials, the exceptions being paper products (with 6,843 wage-earners), petroleum products (4,032) tires and tubes (803), mechanical and electrical workshops dedicated to assembly and repair and manufacture of some parts (46,734), metals foundries (11,233) and some miscellaneous activities such as metal containers, and stamping.

In contrast with this pre-war picture of Argentina's industry, we have the following description of Australia by the former Deputy Director General of the Department of War Organization of Industry:<sup>21</sup> "It is a mistake, however, to think of Australia as predominantly a rural economy, for only one fifth of Australian breadwinners were engaged in agricultural, pastoral, and dairying industries at the 1933 census, while as much as one-third were in factories and construction industries. From the occupational point of view, Australia's pre-war population was as industrialized as that of Germany."

An examination of the origins of import substitution and diversified industrialization in Australia leaves little doubt that the First World War represented its turning point and the basis for its major impulse. This process is described in a very informative article in *The Eco-*

*nomie Record*<sup>22</sup> which is of sufficient interest and importance to merit a few summary paragraphs in the present text.

The author states: "As well as directly affecting the pattern of production, the war created the situation which made necessary the Greene Tariff of 1920. The previous tariff introduced in 1914 had increased duties but almost wholly for revenue purposes and any slight protective effect was entirely swamped by the influence of the war. But the Greene Tariff substantially revised and raised tariffs and spread the protective net much wider, so that it included basic industries, such as steel. Such a tariff was a necessary condition for the emphasis in production to be moved from primary to secondary industry . . . The war was the priming charge which set off the chain of events which changed Australia into a mature industrial economy."

Thus the First World War had two effects: (a) diversification of production through import substitution brought about by the forced protection and stimulation of local industry through lack of shipping space for imports, and (b) creation of the climate (through nationalistic sentiments developed during the war and a realization of the industrial advantages of trade protection) propitious for the enactment of the very effective protective tariff of 1920.

With respect to the first aspect (diversification of production) the author shows that whereas in the early years of the war the Australian economy suffered some strong adjustment pangs due to its fall in trade, in the latter years the economy actually benefited from the internal adjustments to the situation. For example, the position of zinc was especially difficult since large quantities of concentrate could not be sold due to scarcity of refining capacity. As a result, the Electrolytic Zinc Co., of Australia was formed, and a plant set up at Risdon for processing with the aid of hydroelectric power. Similarly there were extensions to the silver-lead smelting plant and the production of refined copper greatly increased. A plant for producing copper sulphate was set up in 1918. By that year the production of refined lead, copper and zinc amounted to 210,778 tons, whereas in 1914 it was only 96,341 tons.

The war actually stimulated exports of jam and jellies. They rose from 29,000 Australian pounds in 1913 to 2 million pounds in 1918-19, almost half the total output. Exports of preserved fruits likewise increased from an insignificant amount in 1913 to almost 500,000 pounds by 1918. Although the food processing industries (wheat, meat, dairy products) suffered from the effects of a drought in the early years of the war, employment subsequently increased steadily to take advantage of assured markets resulting from the war. Beer production also rose during the war.

Other industries reported to have benefited from import difficulties during the First World War were glass, surgical, optical and other scientific instruments, chemicals, drugs and medicines, paints, varnishes and by-products, boots and shoes, cocoa, leather articles, toys, matches, brushes, glucose, toilet soap and musical instruments.

<sup>22</sup> Colin Forster, "Australian Manufacturing and the War of 1914-18", *The Economic Record*, Melbourne University Press, November 1953.

<sup>19</sup> United Nations, *Statistical Yearbook*, 1948, table 64.

<sup>20</sup> Ministerio de Hacienda, *Censo Industrial de 1935*, Buenos Aires, 1938, pp. 58-64.

<sup>21</sup> E. Ronald Walker, *The Australian Economy in War and Reconstruction*, Oxford University Press, 1947, p. 4.

The steel industry benefited in particular. In 1913 Australia had an infant iron and steel industry in the Hoskins Plant at Lithgow, New South Wales, which was scarcely able to survive. In March 1915 the first blast furnace started operating at Broken Hill Proprietary and the first steel was produced in April. The competitive position of the plant was very poor in 1916 but, as the war progressed the scarcity of shipping and increased overseas demand changed the position. With lack of competition guaranteeing easy profits, a great extension and diversification of products became possible.

The difficult import situation also aided the local production of manufactured metal products. The industry was described as "one of turmoil as individual firms, despite the shortage of raw materials and their lack of equipment and skill, endeavoured to take advantage of the changed situation".<sup>23</sup> One firm (Thompson & Co.) was able to branch into the production of large marine engines, semi-diesel crude oil engines, forged steel wheels, tires, engineers' studs, screws, nuts, bicycle spindles, sprockets and similar kinds of repetition work, all of which were formerly imported. For another firm the shortage of raw materials meant the stoppage of work in small boilers, but it was able to produce typewriter parts, extend its range of centrifugal pumps and even make three aircraft engines. These experiences are said to be typical of other metal-working firms. Due to the shortage of raw materials, the effect of the war on this industry was not so much to increase total output as to diversify the range of products made locally and provide experience in their manufacture which was valuable for the post-war period.

In addition to the opportunities provided to Australian manufactures by the shortage of shipping space, the Government created additional ones by placing prohibitions on numerous imports. The outstanding example of this was the "luxury ban" of 1917. Control of imports of motor bodies, proclaimed in August 1917, had the effect of substantially reducing imports and establishing the motor body construction industry. Until the ban was imposed only orders for the production of individual bodies had been taken.

It should be noted that the economic situation of Australia in the later years of the war was greatly sustained by the United Kingdom's purchase of the wool clip despite the fact that it could not be transported immediately. This undoubtedly made some capital available for investment in local industry which might otherwise have gone for imports.

Another author<sup>24</sup> confirms the great effects of the First World War and the ensuing tariff protection of the twenties on the industrial development of Australia. He writes: "In many ways the early 'twenties' mark the beginning of a new epoch in Australian history. Prior to 1914, Australia was still predominantly a primary producing country... In the twenties, secondary industry, fostered by the war and sheltered by increasing tariff protection, took an ever greater place in the national economy. The steel industry and its subsidiaries were firmly established. More and more the factory replaced the farm as the normal setting of Australian life.

<sup>23</sup> Colin Forster, *op. cit.*

<sup>24</sup> L. F. Fitzharding, "The Commonwealth, 1901-1939", published in *Australia*, edited by C. Hartley Gratton, Cambridge University Press, London, 1947, p. 77.

Even in the country the automobile and the telephone wrought a revolution... The number of cars increased from 136,848 to 656,314."<sup>25</sup>

The fact that Australia's import substitution programme was well under way in the twenties, whereas Argentina's in general lagged behind it,<sup>26</sup> must contribute, in some measure, toward explaining the gradually greater diversification of exports from Australia and the growing importance of manufactured goods found among them in more recent years. The slower diversification of industry in Argentina likewise must have had some negative influence on the mechanization of agriculture and consequently on agricultural exports. It is significant, too, that Australian import substitution had an opportunity to grow up in days of prosperity, as a force *complementing* agricultural and livestock activities whereas in Argentina the process took the form of *compensation* for unfavourable agricultural production and export conditions.

#### (e) *The mining sector*

During the period 1923-24 to 1932-33, the mining sector in Australia already accounted for 8.9 per cent of the country's total exports. In 1929-30 it accounted for 2.4 per cent<sup>27</sup> of the Gross Domestic Product. In Argentina it never accounted for even as much as 1 per cent of GDP until 1959 when it finally passed that mark.<sup>28</sup> The difference in mineral output of the two countries in the period after the Second World War is shown in table 14 below. For the most part, these differences did not originate in the three-decade period now under review but were inherited from previous periods. The extent to which they stem from differences in natural resources endowment or from differences in exploration effort and investment cannot be determined. There is no doubt, however, that the importance of the mining sector for Australian industrial development can hardly be over-estimated. The difference in iron and coal output alone between Australia and Argentina is of very great importance and is doubtless one of the main reasons why Australia's steel production as recently as 1957 was 10 times that of Argentina.

The existence of a fairly important mineral products sector among Australia's exports entails the advantages that come with diversification of exports, such as greater stability of export income and compensations for fluctuations in world prices of other primary export products. A higher level of mineral production also signifies greater ease of import substitution in lines where such minerals are elements of input. It means in most cases, a better competitive position in exporting metal products, due to local availability of the raw material.

#### (f) *Agricultural and forestry sectors*

Australia cannot be said to have had any natural advantages over Argentina in this respect. Intensely arable

<sup>25</sup> In 1929, there were 239,674 automobiles in Argentina (Francioni, Manuel J. and Lloréns, Emilio), *Ritmo de la Economía Argentina en los últimos 30 años*, Confederación Argentina del Comercio, de la Industria y de la Producción, Buenos Aires, 1941, p. 188.

<sup>26</sup> In important basic industries, such as steel, an even wider gap.

<sup>27</sup> N. G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing, 1861-1938-39*, p. 461.

<sup>28</sup> United Nations, *Statistical Bulletin for Latin America*, vol. 1, No. 2, p. 103.

land in the former is less than 3 per cent of the total area, due to dry climate, poor soils and topographical conditions. On the other hand such natural handicaps, combined with the higher cost of farm labour in Australia, have probably been factors leading to greater mechanization of agriculture and consequently a greater degree of elasticity of supply of agricultural products. Greater elasticity of supply would enable Australia to respond more rapidly to sudden changes in world demand for its products. Conversely, a country whose agricultural sector depends more heavily on manual labour cannot suddenly bring back to the farm the manpower which has migrated to the cities. Food and Agriculture Organization (FAO) sources show that Australia's agricultural

sector was much more highly mechanized than that of Argentina over the period under review.

Table 13 provides some figures on farm equipment available in Argentina and Australia in the fifties. The great disparity between the number of tractors in Argentina and Australia is not a recent phenomenon. Another FAO source<sup>29</sup> indicates that Argentina had only about 24,000 tractors in 1938-39, whereas Oceania had 57,000. It is estimated that about three quarters of these were in Australia (it must also be remembered that Argentina has twice as many mouths to feed as Australia).

<sup>29</sup> Food and Agriculture Organization, *The State of Food and Agriculture, 1955*, Rome, 1955, p. 61.

**Table 13**

ARGENTINA AND AUSTRALIA: COMPARISON OF FARM EQUIPMENT

| Country                       | 1949-52 | 1953    | 1955   | 1959    | 1960    |
|-------------------------------|---------|---------|--------|---------|---------|
| <b>A. Tractors</b>            |         |         |        |         |         |
| Argentina .....               | 50 029  |         |        | 90 358  | 110 643 |
| Australia .....               | 132 212 |         |        | 242 345 | —       |
| <b>B. Harvester-threshers</b> |         |         |        |         |         |
| Argentina .....               |         |         | 34 191 |         |         |
| Australia .....               |         |         | 65 706 |         |         |
| <b>C. Milking machines</b>    |         |         |        |         |         |
| Argentina .....               |         | 2 920   | —      |         |         |
| Australia .....               | —       | 156 213 |        |         |         |

Source: FAO, *Production Yearbook*, 1961, vol. 15, pp. 267, 268, 272, 273, 274.

There is evidence that Australia has long had a more positive programme for encouraging agricultural production and ensuring optimum size of holdings. The first land Act in Australia was passed in 1861, similar in design and objectives to the 1860 Homestead Act of the United States. Between 1910 and 1952, absentee land-owners were taxed at higher rates than residents and the latter were given special tax exemptions. Australia has followed a policy which involves the division of excessively large farms as well as the consolidation of unduly small ones, in order to obtain holdings of economic size. The predominant form of tenure (about 85 per cent) is long leaseholds on Crown land and lease contracts require land utilization. Land legislation has provided a high degree of security to the cultivator and the proportion of independent farmers is high. Tenancy conditions have been subject to governmental regulation in most of the States, tenants being compensated for improvements and increases in value of holdings traceable to their having adopted a higher standard of farming than that specified in the contract.<sup>30</sup>

On the other hand, deficiencies in the structure of land tenure in Argentina and some of its consequences are described in two reports, published in recent years but indicating a long-term condition. One of these comes from the United Nations<sup>31</sup> and the other from the Inter-

American Development Bank.<sup>32</sup> The IDB report refers to "various structural problems, deriving particularly from the large number of units developed by persons other than their owners (about 50 per cent in 1952). These temporary occupants have generally failed to invest in the land or to improve it, thus precluding any increase in agricultural productivity. Moreover, the income distribution process has been restricted by the concentration of large units in the hands of a very few owners". According to the ECLA report on Argentina, in the five provinces comprising the pampas, almost two thirds of existing properties are of insufficient size to support and absorb the work of a typical family unit. On the other hand almost half of the area covered by total agricultural holdings comprises very large individual properties of over 5,000 hectares each, which make up less than 8 per cent of the total number of properties. Over half the area of the pampas is reported by the United Nations document to be cultivated by tenants and share-croppers.

It is reasonable to suppose that greater incentives to improve the productivity of holdings which have long existed in Australia to a greater degree than in Argentina have had their reflection in the more satisfactory growth of agricultural production during the thirty-year period under examination. In this way the agricultural institutional framework existing at the beginning of the period must have contributed toward putting Australia in a better position to maintain the volume of agricultural exports, despite the needs of its own growing population.

<sup>32</sup> IDB, *Reformas Institucionales y Desarrollo Social en América Latina*, Washington, D.C., March 1963, p. 78.

<sup>30</sup> United Nations, *Progress in Land Reform*, N.Y., 1954.

<sup>31</sup> United Nations, *Análisis y Proyecciones del Desarrollo Económico*, V, *El Desarrollo Económico de la Argentina*, Mexico, 1959, vol. II, p. 155.

### (g) *Other factors*

There were, of course, other differences between Argentina and Australia in pre-Depression days, which likewise played their roles in influencing the future trends of exports, however indirectly. The great temptation to lay too much at the door of long-rooted social and political differences should be avoided. After all, these types of differences influence economic developments indirectly, through economic phenomena which can be analysed in economic terms. On the other hand, the importance of recognizing the influence of social and political phenomena on economic phenomena derives from the fact that it is not always possible to alter the latter merely through the use of economic policy instruments. It may be taken for granted that pervading all of the direct causes of differences in levels of development and trade of the two countries under comparison are the indirect influences resulting from Australia's position in the British Commonwealth and Argentina's politically, socially and culturally much more independent position.

Having examined the factors already present in the two countries prior to 1930 which might have directly or indirectly contributed to explaining differences in economic growth and trade development in the subsequent thirty years, it is now necessary to see which of the new events and policies originating subsequently reacted with the existing conditions in such a way as to influence trade.

## 2. CONTRASTS IN DEVELOPMENT TRENDS

It would be injudicious to attempt, within the limited scope of the present study, to describe or explain the precise ways in which the economies of Australia and Argentina developed over a thirty-year period. A great deal of time, technical advice and primary source material, at present unavailable, would be required for such a task. It is possible, however, to point to some interesting highlights of the countries' development which can shed some light on the question of why one country has been able to maintain its exports so much better than the other. It has already been seen in the first part of the study that the *per capita* growth rate of the economy was almost twice as high in Australia as in Argentina. However, since a larger Gross Domestic Product may reflect increases in the volume of economically undesirable activities, as well as those considered desirable, the global figures are not a sufficiently reliable indicator of the soundness of national economies. It is thus necessary to examine some of the qualities of growth. It would be a mistake, for example, to emphasize unduly the fact that the five-year periods which show the most rapid growth rates have, in both countries, been those characterized by energetic government programmes for expansion of employment.

The composition of the Gross Domestic Product by industrial sectors is available, in the case of Australia, only until the year 1938-39 (Butlin's estimates). Official publications by the Commonwealth Bureau of Census and Statistics of National Income series (which date back to 1938-39) have not been sub-divided in this way, and in speaking of the problems that would be involved in an exhaustive readjustment of his income and investment estimates for earlier years with the official estimates starting in 1938-39, Mr. Butlin has stated that there is not much point in attempting the readjustment "until

promised industrial sub-divisions of income and investment are available from the Bureau".<sup>33</sup> It is therefore not possible to attempt any comparison between Argentina and Australia based on industrial sub-divisions of the Gross Domestic Product. However, other data are available to show some of the more striking differences between the development of the two economies over all or portions of the period reviewed. These are set forth below.

(a) While the growth of agricultural production in Australia in the post-war period has not been spectacular, it has at least been satisfactory. The average index for 1957/58-1960/61 (base pre-war) was 133.2 for foods and 140.2 for all agricultural products, whereas in Argentina it was only 121.6 for foods and 117.6 for all agricultural products.<sup>34</sup> In the latter case this was not sufficient to keep pace with population growth.

(b) As indicated earlier, the mineral sector continued to be much more important to the Australian economy than to that of Argentina. Some notion of its growth and volume in each country may be obtained from table 14 which gives quantitative production figures for 23 minerals for 1948 and 1961. Special attention is called to the figures for coal and iron. Whereas Australia's steel industry (The Broken Hill Proprietary Co. — developed in the First World War — uses South Australian high-grade ores, two-thirds iron) which are available in very great quantities,<sup>35</sup> Argentina's incipient steel industry is handicapped by the lack of both good grade iron and coal. Whereas exports of mineral products retained their percentage share of Australia's exports over the period reviewed, Argentina has not developed exports of such products on any significant scale.

(c) Whereas Argentina's import substitution process (which received its main impulse in the thirties) was for quite some time oriented principally toward the local manufacture of consumer goods previously imported, the substitution process in Australia shows a somewhat different structure. Data provided on structural trends of Australian imports<sup>36</sup> show that the proportion of total imports represented by consumer goods in 1913 was 28 per cent as compared with 18 per cent in 1954-58 (24 per cent and 14 per cent respectively for elaborately transformed consumer goods, 3 per cent in both periods for simply transformed and 1 per cent in both periods for crude consumer goods). The percentage for "elaborately transformed producers' materials" dropped from 37 per cent in the early thirties to 29 per cent in the late thirties, 27 per cent in the late forties, 26 per cent in the early fifties and 24 per cent in 1954-55. Figures available for Argentina<sup>37</sup> relate imports of consumer goods to total imports of industrial goods (including raw materials) rather than to total imports. However, since industrial goods make up the bulk of imports in both countries, comparisons between the two countries are valid, with some reservations. In Argentina imports of finished con-

<sup>33</sup> N. G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing, 1861-1938-39*, Cambridge University Press, London, 1962, p. 467.

<sup>34</sup> United Nations, *Statistical Yearbook, 1962*, New York, 1963, p. 91.

<sup>35</sup> One estimate of reserves is 600 million tons.

<sup>36</sup> R. S. Gilbert, "Structural Trends in Australian Imports", *The Economic Record*, Melbourne University Press, April 1959, pp. 130-32.

<sup>37</sup> United Nations, *El Desarrollo Económico de la Argentina*, part 2B, Mexico, 1959, derived from table 1, p. 159.

Table 14

## MINERAL PRODUCTION OF AUSTRALIA AND ARGENTINA, 1948 AND 1961

| Product                      | Unit of measurement   | Australia         |                   | Argentina         |                   |
|------------------------------|-----------------------|-------------------|-------------------|-------------------|-------------------|
|                              |                       | 1948 <sup>a</sup> | 1961 <sup>b</sup> | 1948 <sup>a</sup> | 1961 <sup>b</sup> |
| Coal .....                   | Thous. ton .....      | 15 020            | 24 455            | 18                | 344               |
| Lignite .....                | Thous. ton .....      | 6 800             | 16 539            | 0                 | 0                 |
| Natural gas .....            | Mil. cub. metres..... | 0                 | 0                 | 477               | 2 357             |
| Petroleum <sup>c</sup> ..... | Thous. ton .....      | 0                 | 0                 | 3 323             | 12 085            |
| Manganese .....              | Thous. ton .....      | 1.6               | 39.8              | 0.5               | 7.0               |
| Iron ore .....               | Thous. ton .....      | 1 356             | 3 494             | 17                | 58 (1960)         |
| Copper .....                 | Thous. ton .....      | 12.5              | 96.1              | 0                 | 0                 |
| Lead .....                   | Thous. ton .....      | 220.4             | 274.1             | 17.8              | 27.7              |
| Zinc .....                   | Thous. ton .....      | 193.5             | 292.8             | 12.0              | 30.2              |
| Tin .....                    | Ton .....             | 1 917             | 2 635             | 284               | 532               |
| Bauxite .....                | Thous. ton .....      | 6                 | 26                | 0                 | 0                 |
| Chrome ore .....             | Thous. ton .....      | 1.1 (1953)        | 0.3 (1960)        | 0                 | 0                 |
| Molybdenum and vanadium      | Ton .....             | 2                 | 1                 | 0                 | 0                 |
| Tungsten .....               | Ton .....             | 749               | 1 567             | 101               |                   |
| Cobalt .....                 | Ton .....             | 10                | 65                |                   |                   |
| Antimony .....               | Ton .....             | 238               | 690               | 4                 | 4 (1959)          |
| Gold .....                   | Kg .....              | 27 542            | 33 296            | 269               | 58 (1959)         |
| Silver .....                 | Ton .....             | 312.8             | 472.7 (1960)      | 212               | 44                |
| Asbestos .....               | Thous. ton .....      | 1.3               | 15.2              | 0.2 (1954)        | 0.3               |
| Salt .....                   | Thous. ton .....      | 249               | 501               | 288               | 580               |
| Sulphur .....                | Thous. ton .....      | 152               | 351               | 45 (1957)         | 218 (1960)        |
| Phosphate rock .....         | Thous. ton .....      | 2                 | 5                 | 0                 | 0                 |
| Magnesite .....              | Thous. ton .....      | 33                | 96.6              | 0                 | 0                 |

Source: United Nations, *Statistical Yearbook, 1962*.

<sup>a</sup> Or earliest year data available.

<sup>b</sup> Or latest year data available.

<sup>c</sup> Petroleum was subsequently discovered in Australia.

sumer goods represented 36 per cent of total imports of industrial products in the period 1910-14 and only 9 per cent in 1955. A comparison of percentages for the two countries indicates that Argentina has concentrated more heavily than Australia on the process of substituting imports of manufactured consumer goods through local production.

There are a number of signs which indicate that the development of Argentina's industry has been less evenly distributed than that of Australia. In Argentina producer goods industries have not grown in proportion with consumer goods industries. The most striking difference in this respect is of course the enormous gap between the two countries in the production of steel. Toward the end of the fifties Australia's production *per capita* was twenty times that of Argentina.<sup>38</sup>

A glance of production figures (1948 to 1961) for manufactured goods in Australia and Argentina in the United Nations *Statistical Yearbook* gives the very strong impression that Australia is advancing more rapidly than Argentina in the production of basic industrial materials in general (e.g., pulp, paper, sulphuric and nitric acid, caustic soda, pig-iron, steel, copper, tin, coke, rub-

<sup>38</sup> It is also interesting to note that the only countries in the world with a higher *per capita* consumption of crude steel than that of Australia in 1957-59 were the United States of America, the Federal Republic of Germany, Czechoslovakia, Sweden, Canada and the United Kingdom. (See N. R. Wills, "The Basic Iron and Steel Industry" included in *The Economics of Australian Industry*, ed. by Alex Hunter, Melbourne University Press, 1963, p. 216.

ber). Even in the activities where progress has been marked in Argentina (petro-chemicals and cement for example) Australian production had been growing at a faster rate.

The United Nations report on the economic development of Argentina, which has been cited frequently in this text, found that the so-called "dynamic industries" or providers of producer goods, were not growing as satisfactorily as the "vegetative" or consumer goods industries. While some of the data for the fifties may be subject to revision, now that a revised set of national accounts for that decade is available, figures for earlier years are still accepted as valid. One of the tables<sup>39</sup> in the report presents figures which show that while the percentage increase in the production of capital goods is much greater than that for consumer goods, this is due to the fact that production of the latter was very low at the beginning of the period covered.

The value of industrial production is classified in four columns (in addition to that showing the total) as follows: (1) changes in stocks of industrial products in the possession of the industrial sector; (2) the portion of final demand represented by consumption; (3) the portion of final demand represented by capital goods; and (4) the portion represented by exports. The figures for the columns on consumption and capital goods are the following (expressed in millions of 1950 pesos):

<sup>39</sup> *El Desarrollo Económico de la Argentina*, op. cit., part 2B, p. 165 (table 9).

|            | Consumption | Capital goods |
|------------|-------------|---------------|
| 1937 ..... | 21 430      | 1 221         |
| 1943 ..... | 19 900      | 1 011         |
| 1946 ..... | 21 036      | 2 931         |
| 1950 ..... | 26 345      | 2 440         |
| 1955 ..... | 28 480      | 3 441         |

From the above figures it may be seen that the absolute value increase for the production of capital goods had been less than a third of the increase for the production of consumer goods over a period of almost twenty years.

Another table in the same report<sup>40</sup> shows the value of industrial production by branches of industry from 1900 to 1955 for some branches and from 1935-39 to 1955 for all main branches. Foods and beverages, which made up 36.7 per cent of the total value of industrial production in the period 1925 to 1929, constituted 35.2 per cent on the average from 1940 to 1944, and still made up as much as 30 per cent in 1950-54. Textiles, tobacco and clothing combined constituted 20.6 per cent in the period 1935-39 and 22 per cent in 1950-54.

The same report attributes the lack of balance between the growth of producer goods and that of consumer goods to insufficient capitalization of industry in general and to the defective distribution of capital in the Argentine economy. It is pointed out that the textile industry, for example, has been over-capitalized and that investments in the metal-transforming industries have been directed toward production of durable consumer goods rather than that of producer goods. The proportion of investment going into "non-productive activities" is also criticized.

A comparison of industrial production indices for the two countries cannot be made because of a number of statistical difficulties. One of these is constituted by the fact that the industrial statistics published by Argentina for the decade of the fifties were found to have been based on an inadequate sample and have only recently been revised and published. The over-all results of the revision and its effect on the new estimates of national income for the period are known. However, it has not been possible to get information on important components of the new figures or to solve some problems of their reconciliation with those for previous decades. Even if this handicap did not exist, there would be other well-known difficulties which make precise international comparisons of industrial development almost impossible (such as different definitions of industrial units, according to number employed, or other criteria, different determinations of which economic activities should be considered "industrial", etc.).

(d) Figures on the distribution of the employed population may be somewhat misleading, due to different methods of statistical classification. Nevertheless, in the case of a clearly defined and striking contrast, it is worth while to present the evidence despite this reservation. It has been estimated that employment in manufacture in Australia accounts for about 30 per cent of total employment, compared with 13 per cent in primary production, but that only about 25 to 26 per cent of the Gross National Product is accounted for by manufactures.<sup>41</sup> In Argentina manufacturing represents one third of the country's Gross National Product but covers only 25 per

cent of total employment. Primary production (agriculture and mining) account for 20 per cent of total employment.<sup>42</sup> Explanations of the discrepancies between these percentages in the two countries probably derive from the much greater output per worker in the primary sector in Australia, and the different internal price relationships between primary products and manufactured goods prevailing in one country in contrast with the other.

(e) A difference of paramount importance between the development of Argentina and Australia has been the increasing economic isolation of the former as contrasted with the very strong economic ties which Australia has maintained with other more industrialized countries. The introduction to *The Economics of Australian Industry*<sup>43</sup> states: "Despite the new relative maturity of Australian manufacturing industry, the most outstanding feature that emerges . . . is that it remains, to a large extent, a derivative industrial structure . . . Surprisingly few major or minor industries can be said to be indigenous to Australian conditions in the sense that they have grown up based mainly on Australian finance, ownership, natural advantage and active technological ability. A large part of manufacture, particularly the rapidly growing part, remains substantially an off-shoot of British, American and European industry."

A subsequent chapter in the same volume<sup>44</sup> presents evidence that one third of manufacturing industry is owned abroad (almost two thirds being British and 27 per cent American). The proportion of these industries actually *controlled* by foreign interests is much greater. Another Australian author writing towards the end of the Second World War refers also to foreign ownership of industry, extending his comments beyond the manufacturing field, pointing out that the great livestock-breeding companies were still predominantly British enterprises, as well as some of the major banks, the shipping combine and the principal coal mines.<sup>45</sup>

According to an article in *The Economic Record*<sup>46</sup> foreign capital inflow into Australia in the post-war period averaged 20 per cent of annual imports. The foreign long-term capital inflow into Argentina fell from an annual average of 231 million 1950 dollars in 1930-34 to 32 million in 1955, or only about 3 per cent of the value of imports<sup>47</sup> (the average for 1945-49 was only 11 million, rising in 1950-54 to 67 and subsequently falling). The average for the eleven-year period from 1945-1955 was 38 million 1950 dollars. This is less than 4 per cent of imports and if the great difference in imports *per capita* between Argentina and Australia is taken into account the difference between the rates of capital inflow becomes much more significant. Going still further, it should be pointed out that annual average *net* long-term foreign capital flow to Argentina in the same eleven post-war years was a negative quantity (minus 99 million

<sup>42</sup> United Nations, *Statistical Bulletin for Latin America*, vol. I, Nos. 1 and 2.

<sup>43</sup> *The Economics of Australian Industry*, ed. by Alex Hunter, Melbourne University Press, 1963, p. 2.

<sup>44</sup> See article by E. L. Wheelwright, "Overseas Investment in Australia", *op. cit.*, pp. 141-173.

<sup>45</sup> Brian Fitzpatrick, "Secondary Industries in the Economy", included in *Australia*, ed. by C. Hartley Gratton, Cambridge University Press, London 1947, p. 211.

<sup>46</sup> Arthur Smithies, "Australian Economic Strategy", *The Economic Record*, March, 1963.

<sup>47</sup> *El Desarrollo Económico de la Argentina*, *op. cit.*, p. 29, table 28.

<sup>40</sup> *Ibid.*, vol. II, annex B, p. 258 (table 2).

<sup>41</sup> *The Economics of Australian Industry*, ed. by Alex Hunter, Melbourne University Press, 1963, p. 1.

1950 dollars, or almost 10 per cent of the value of imports). About two thirds of the outflow of long-term capital over the period corresponds to the purchase of the railways, and other public services and to repatriation of the public debt.

The fact that the greater part of foreign investment in Australia in the post-war period has been direct, with a high ratio of reinvestment of profits, has enabled that country to compensate for its persistent balance of payments deficit on current account. Had it been faced with the necessity of amortizing loans of a magnitude similar to the value of capital inflow for direct investment, imports would have had to be drastically reduced.

Needless to say the very shrinkage of Argentina's foreign trade is the principal indicator of its growing economic isolation. This theme need not be elaborated on here, since it is part of the main subject of the present study and has been described in detail in earlier sections.

(f) Still another striking difference between the Argentine and Australian economies has been the different rates of inflation experienced in the post-war period (between 1937 and 1944 consumer prices had risen almost 20 per cent more in Australia). Two cost-of-living series are available for 1945 to 1960, the first covering 1945-51 with the base year 1948 and the other covering the remaining years, with the base year 1953. It was not necessary to convert these to a single base year in order to prove that the problem of inflation in Australia, which has so preoccupied its economists and the Government in the post-war period, suddenly becomes insignificant alongside the astronomical rise in the cost of living in Argentina over the same period. The index figures published by the International Monetary Fund<sup>48</sup> are shown in the table below.

<sup>48</sup> International Monetary Fund, *International Financial Statistics*, vol. V, No. 7, pp. 2, 4; vol. XIV, No. 12, pp. 44, 48.

|            | 1945-1951 |           |            | 1952-1960 |           |
|------------|-----------|-----------|------------|-----------|-----------|
|            | Argentina | Australia |            | Argentina | Australia |
| 1945 ..... | 66        | 87        | 1952 ..... | 96        | 96        |
| 1946 ..... | 78        | 88        | 1953 ..... | 100       | 100       |
| 1947 ..... | 88        | 92        | 1954 ..... | 116       | 101       |
| 1948 ..... | 100       | 100       | 1955 ..... | 130       | 103       |
| 1949 ..... | 131       | 109       | 1956 ..... | 148       | 109       |
| 1950 ..... | 165       | 120       | 1957 ..... | 196       | 112       |
| 1951 ..... | 225       | 146       | 1958 ..... | 277       | 113       |
|            |           |           | 1959 ..... | 435       | 116       |
|            |           |           | 1960 ..... | 608       | 120       |



# THE PROGRAMMING OF SHORT-TERM FINANCING

by *Angel Monti*<sup>®</sup>

The problem of designing effective methods for formulating operative short-term plans has not yet been satisfactorily solved in Latin America. This is important because, although medium and long-term projections are being formulated, real economic and financial policy, which is made up of measures adopted from day to day, is not necessarily operating according to its goals.

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Such programmes should be soundly based on "principles" in so far as their general outline is concerned and both machinery and content should be "operative".

This paper is an attempt to contribute towards the establishment of bases for an over-all methodology which it is believed will be useful in Latin American countries in drawing up short-term — mainly one year — financing plans.<sup>1</sup>

<sup>1</sup>There is a precedent to this paper in the methodology drawn up in Venezuela for short-term programming which was applied in a first annual over-all projection in 1962. The Venezuelan Central Coordination and Planning Office (CORDIPLAN) published at that time a leaflet entitled "Methodology and models formulated for the programme". This paper contains a generalization of part of those schemes with the addition of other items that were not covered.

## I. THE PROBLEM

### 1. PURPOSE AND PLACE OF THE ANNUAL PLAN

(a) An annual plan may be formulated as an instrument for the implementation of a longer-term plan or for other purposes, either joint or specific. In any case, it will provide a consistent frame of reference for policy.

All countries, and more particularly all developing countries, need to establish long-term objectives, and definite goals for the intervening period. On this basis, the annual plan is dealt with here as an *instrument for achieving definite stages in a longer-term development plan*. Of course, certain specific objectives may be added.

(b) Long-term plans are conceived as "mainly those laying down objectives". Medium-term plans are considered to be designed basically to attain certain targets and to put into practice required changes in substance and form in economic, financial and institutional fields. Annual plans, apart from their principles, should be *strictly operative* and should function within the conditions imposed by the over-all objectives, the nature of the specific targets established for the intermediate period, and the speed with which they are attained.<sup>2</sup>

(c) In formulating operative plans, emphasis may be placed on regional or sectoral objectives. For the present purpose the case of a plan drawn up by *sectors of economic activity* is considered for which a horizontal "regional expression" can be formulated to achieve consistency, either through detailed regional balances or groups of regional development "projects".

<sup>2</sup>This concept does not necessarily imply that the variables optimized over the long term will be the same as those it is sought to optimize over the short term. Further reference will be made to this later.

Thus, the programme will be effective at three levels: The country as a whole (macro-general), macro-sectoral and micro-sectoral.

(d) From a combination of the three chronological periods (long, medium and short) with the sectoral levels (macro-general, macro-sectoral and micro-sectoral) emerge nine possible fields for action. This paper refers to the formulation of a short-term plan on the macro-general level. But this level, in turn, varies according to the country and the ambition and possibilities of the person responsible for drawing up the programme. This calls for some additional remarks:

(i) What is sought is social development, using the term "social" in its broadest sense. It is conceivable that the term "social" in its general sense is a result of the concourse of the activities of man as a member of society in certain fields, which are, at least, political, economic, institutional and social *per se*.

These fields are interacting and a programme will be completely efficient to the extent that it covers all of them and that the programme for each field is consistent with the others.

Moreover, for the plan to be operative and to be of real service to the political bodies responsible for it, it will also be necessary to assure the *intra-annual consistency of the plan*, since all the "actions" established by the plan in a certain order are only effected due to their viability within the time period.

(ii) Therefore, the *virtual content* of a short-term plan might be as broad as the example given below:

| Content           | Specific content                 | Sectors of economic activity |          |     |                        |
|-------------------|----------------------------------|------------------------------|----------|-----|------------------------|
|                   |                                  | Agriculture                  | Industry | ... | The country as a whole |
| Fields            |                                  |                              |          |     |                        |
| Political         | ...                              |                              |          |     |                        |
| Social (specific) | ...                              |                              |          |     |                        |
| Economic          | Over-all goals and balances      |                              |          |     |                        |
|                   | Requirements and policy          |                              |          |     |                        |
|                   | Agencies                         |                              |          |     |                        |
|                   | Regions                          |                              |          |     |                        |
| Institutional     | Distribution of responsibilities |                              |          |     |                        |
|                   | Legislation                      |                              |          |     |                        |
|                   | Organization                     |                              |          |     |                        |
|                   | Training                         |                              |          |     |                        |

(iii) This chart suggests among others the following observations:

*The variable to be optimized in a social development process is not necessarily an economic variable.* Although this is obvious, it is well to remember it. Since the decision regarding its choice is a high level political one, it is possible that the economist may not always choose the variable to be optimized. Nevertheless, he must always make estimates of certain economic variables of physical trends (for example, the rate of investment, or *per capita* consumption for the low-income strata) or others, such as price levels, within which the broader objectives should be restricted;

*The economic content* is made up of over-all goals and balances (general equilibrium, supply and demand, intersectoral equilibrium, over-all financing, etc.); requirements and policies: investment, labour, financing, etc.; agencies responsible for action (public, foreign, banking sectors, etc.), and regions—a secondary feature for the purposes of this paper, as mentioned earlier;

*The institutional content* requires that the country concerned shall have “efficient” institutions. Efficiency is the result of the convergence of at least four items: the correct distribution of responsibilities for what has to be done; the legal capacity of the agencies to do what is required, particularly in the public sector; and adequate organization, both in structure and operation, and qualified men within it. If these are right, annual plans should provide for specific action in these respects;

*With regard to its place within the plan*, certain requirements in the political, institutional and specific social fields may have to be expressed in economic terms;

*In operation within the machinery of the economic plan*, these requirements may operate as restrictions having a direct influence on certain variables, or else as “examinations” or screens which the economic plan must pass to ensure its full viability.

(iv) From this broad range of possibilities, this paper deals only with those pertaining to part of the economic content at the macro-general level covered by the shaded area in the foregoing chart.

In short, the *general macro-economic level* is dealt with and reference is made to macro-sectoral levels of the sectors of economic activity—including the “social” sectors of housing, public health, etc.—when certain consistency requirements need to be checked. Therefore, the short-term plan must include *over-all targets and balances, requirements, policies and agencies* that form part of the process. Inclusion of the agencies is obviously an indispensable requirement if the plan is to be truly operative.

## 2. QUALITIES OF THE PLAN, SUPPORTING ELEMENTS AND CONCEPTUAL DESIGN

(a) From the standpoint of its ultimate use, the plan should be feasible and operative. Feasibility has already been considered at the most comprehensive level. In regard to its operativeness, it is essential that each integral part shall constitute a veritable *work order* for the public agencies and an *indication* of the lines of the plan for the private sector, in mixed economies of the type found in Latin American countries.

For instance, export projections should not be mere indicators showing the intentions of those responsible for drawing up the programme, but actual goals implying

the responsibility of the agencies entrusted with the task of promoting or attaining them in the public and private sectors. The same is true of the fiscal budget. The cash budget, inter-linked with all the rest, should, in accordance with this concept, cause the monetary variables to fluctuate quantitatively and selectively within the estimated figures established for attaining the goals and should constitute a precise indication or a definite order—depending on the degree of independence of banking activities—which also implies responsibility for its performance.

(b) It is usually accepted that every well-oriented and lasting economic “action” should have three phases: *design, implementation and control*. A well-conceived operative programme should place design at the top level—that of the central authorities, and implementation in the hands of the agencies which would then be truly “executive” agencies in the public sector. At present it is frequently found that the lack of central planning agencies—or the inadequacy of their staff, experience and/or authority; the technical inadequacy at the ministerial level, and the improperly conditioned self-sufficiency—sometimes real autonomy—enjoyed by decentralized agencies in the public sector, cause them each to design and implement their own individual policies. Often there is no control other than the accounting and auditing controls and the control *a posteriori*—inefficient in practice—available in over-all figures for income growth, cost structure and the efficiency of distribution.

*It is therefore conceivable that a short-term plan of “action” might eventually be expressed conceptually in the form of a double-entry table where specific “actions” are assigned to specific “agencies”.*

Certain actions involve expenditure or income, depending on the agencies, and the programme should also be expressed in terms of sources and uses of funds.

These “actions” are performed as a result of functions, programmes, sub-programmes, etc.; and the part for which the public sector is responsible calls for a programme budget, as the expression of such “work orders” in budgetary form. Hence, if the programme budget is to be the instrument for implementing the plan in the public sector, it should be interpreted as an order to spend *exactly* the amount allocated, at or above the estimated level of productivity and not as authority to spend *up to* the indicated amount as occurs with classical budgets.

(c) The foregoing clearly shows that *an annual plan can only be operative when there is a planning “process” under way* which it is intended to serve. A planning process is the result of the convergence of at least the following factors: *a system of institutional planning* with agencies operating at different institutional levels; *a plan* subject to periodic improvement, and the existence of an elementary *decision* to use all these, adopted at the higher political levels.

A document bearing the title of a “plan”, unless there is a system of agencies to assure its performance, is only useful to create awareness of what must be done, to the extent of the publicity it receives, and to enrich library shelves.

Likewise, a plan and a system lacking sincere and lasting political support can only be a source of frustra-

tion to technicians and, perhaps, to a large mass of citizens who gauge the uselessness of spectacular measures and realize that only through the constant pooling of serious efforts is it possible for a country’s economic structure to be built up and for man to become a social being.

(d) Turning to the conceptual design of the plan, the first task is to draw up a comprehensive scheme with the necessary elements for the purpose. For the present we may include three such elements:

(i) The *long-term objectives*, for reference purposes;

(ii) Identification of the short-term *variable to be optimized* and the *restrictions* to be observed in order to attain those objectives;

(iii) The establishment of a *model or chart* to make it at least possible to test whether the election of the variables to be optimized and the restrictions in the short-term plan are consistent with the long-term objectives.

For instance, under structural unemployment conditions, if it is desired to maximize *per capita* income in the long term, it might perhaps be possible to consider the necessity of minimizing unemployment in an annual plan, under certain conditions, as a prerequisite to accelerating demand.<sup>3</sup>

(e) An essential element should now be considered, i.e. whether to solve the problem *by stages* or to include all the required variables in *a single model*.

The latter, used by some countries, is very attractive, the more so in view of the possibility of formulating simulation or “numerical testing” models which can be processed in a number of different ways with the aid of electronic equipment and permit areas of solution to be narrowed down with relative ease and the plan to be expressed in monthly or other intra-annual terms.<sup>4</sup>

It is felt that *the use of such models should be the aim*. However, in Latin American countries their use right from the start is considered impracticable, since plans have to be really operative and the values obtained from processing must be standards of economic policy, with reasonably low deviations in respect to the most favourable real prospects for the country. This calls for a laborious preliminary process wherein the relationships between variables and the nature and pattern of their behaviour are identified by stages. In effect, little or nothing is known about certain reactions of producers, consumers and some financial institutions. This analysis should be made and, with the results obtained, it will be possible to formulate a model of simultaneous equations. In the meantime, it is believed that in the countries of Latin America work should proceed by stages.

This paper contains a scheme for planning “by stages”. *Each stage of the process bases its consistency*

<sup>3</sup> A dynamic model, for instance, might produce solutions in this respect.

<sup>4</sup> For instance, see their application to long-term projects in: E. Holland, B. Tencer and R. Gillespie, *A Model for Simulating Dynamic Problems of Economic Development* (mimeographed version) later developed in *Experiments on a Simulated Underdeveloped Economy; Development Plans and Balance of Payments Policies* (MIT Press) and O. Varsavsky, A. O’Connell *et al.*, *An economic model for the Republic of Argentina*. The Holland-Gillespie model divides the year into twentieths, and the Varsavsky-O’Connell model into eighteenthths, i.e. into 18 and 20 days respectively.

on that of the preceding stages. Consequently, wherever inconsistencies appear, it will be necessary to reprocess the system upwards.

The choice of this type of formulation is based on the over-all reasonings mentioned earlier and on certain specific arguments, arising from a comparison between real conditions in the less developed countries and those in countries using over-all models of simultaneous equations, naturally supported by an "extra-model" series of approximations and a very good statistical base.

It may be observed from this comparison that:

The variation in the general price level and the changes in its structure are much greater — and therefore only possible to estimate less precisely — in the less developed countries;

The performance coefficients of the so-called "institutional" relationships are much lower and, in general,

little known. For example, an equation recording social security contributions in the less developed countries would have to compute a coefficient for performance of legal responsibility, the value of which is partly a matter of guesswork;

Variability in a series of variables between maximum and minimum is greater in less developed countries;

In such countries the response periods are not satisfactorily measured.

Thus, it is conceivable that after a process of planning by stages wherein instruments, actions and interactions are strictly identified, it is possible to find a comprehensive model of simultaneous equations.

(f) In view of the necessity of working by stages, the problem is now to establish what the stages required for the formulation of an annual plan at the general macro-economic level should be in order to obtain operative results.

## II. THE STAGES OF THE PROCESS<sup>5</sup>

1. Conceivably, economic movements may be seen in the transactions of both physical and financial flows; the former measured at constant prices of a given base-year as close as possible to the programme year, and the latter at current prices extrapolated for the year for which the plan is drawn up.

A short-term plan, since it is the instrument for implementing a long-term programme within the planning process, should choose a variable to be optimized within the field of physical movements, unless there are non-physical restrictions which should be solved first (for instance, an inflationary process of such intensity that the optimization achieved in a variable for physical movements might give impracticable values, even though technically speaking they are the best. Should this be the case, thought might be given to choosing, for example, the minimization of the rise in prices as the variable to be optimized). Further reference to this point is made in a later part of this paper, showing optional optimizations of the price levels and the variables for physical movements, with certain restrictions.

2. This paper deals with the programming of financing. The purpose of a financing programme is to attain preset physical targets.

In order to establish these short-term physical targets and attain them within the year it is necessary to work with programming models, the results of which are only practicable to the extent that certain restrictions are taken into account. Such restrictions may be explicitly contained in the models, or solutions giving unacceptable values for certain variables can simply be disregarded.

Among the most important restrictions, present conditions in most Latin American countries — with few exceptions — point to external savings as a "key" element.

Thus it is conceivable that at a certain stage of the work in the field of physical movements the level of total gross investment and of consumption that the country as a whole is able to "finance" must be established. In order to do so it is useful to formulate a model of general equilibrium, in the form of simultaneous equations for the level of the economy as a whole.

However, as investment capable of being financed and consumption occur at a certain level of gross domestic product, it will be necessary to establish the level of gross domestic product for the year covered by the programme, which is compatible with two things at least: the actual possibilities of growth of the different sectors of economic activity, and a certain dimension required for the variable to be optimized.

If the variable to be optimized were the gross domestic product itself the problem would be simple. On the other hand, if it were some other variable, it will be necessary to establish a standard for the value of the gross domestic product that is satisfactory for the value of the variable to be optimized. One example might be a case where employment is to be optimized in the short-term plan, as a means of accelerating demand in such a way that income may be optimized in the long term, apart from other social objectives.

3. This paper therefore proposes a methodology which operates on the following bases:

(a) The first step is to establish the conditions for the *financing of the economy as a whole*. In order to do so, a model of general equilibrium is designed, which will be useful to make projections at constant prices. *This is not a model for programming physical movements*, that being beyond the scope of this paper which deals with the problem of financing.<sup>6</sup> In working with constant prices, this model only serves to establish static conditions

<sup>6</sup> It does, however, deal with certain aspects of the programming of physical transactions in order to explain the methodology.

<sup>5</sup> Following Tinbergen's proposition in the prologue of his book *Economic Policy*, the author believes that to his knowledge the points of new interest in this paper are: the manner of treating monetary programming and in this its use of horizontal entry in a single body of transactions in the matrix for the flow of funds, means of payment and their connection with the monetary problem; and the fact that the approach used has been to work only on the skeleton of a system which leaves room for expansion of all points. In view of the present proliferation of ideas, which makes it impossible to follow them to their full extent, it may well be that these points are not really new; it is better, therefore, to say that they are points of *new interest for Latin American countries*, for which this paper is intended.

of general equilibrium as contained in alternative hypotheses of financing the economy as a whole.

(i) To accept one of the many solutions that emerge from this model, it is necessary to have some *previous idea of the degree of "sufficiency" of some of the variables*, particularly in reference to the product, private consumption and external savings. Thus:

For private consumption, some prior idea of its total magnitude and distribution by strata is required, as a social reference level;

For external savings, the amount assigned in the annual plan (positive or negative) changes pre-existing levels of indebtedness and/or gold and foreign currency reserves, which should be fixed in terms of a medium — or long-term policy. Here there arises a restriction that will also influence the degree of acceptability of some of the solutions of the model;

For the gross domestic product it is necessary to establish previously a certain over-all magnitude satisfactory for the variable to be optimized. Supposing employment is to be optimized in the short-term plan, the results of the over-all hypotheses on employment and productivity will be a preliminary acceptable level of the gross domestic product.

(ii) Once a solution for financing at the level of the economy as a whole is accepted, *its real practicability must be proved* before taking it as a "fact" in programming the operation of the detailed financing mechanisms. Here two criteria are taken into account in formulating the tests, one theoretical and the other pragmatic:

Having chosen a variable to be optimized (e.g. employment) and established the values of the over-all variables at the level of the economy as a whole, the sectoral compatibility of the aggregates must be verified. The optimization will be effectively verified to the extent that the sectoral structure of production is such that the estimated levels of gross domestic product in the over-all financing model are attained and all the investment capable of being financed is used. Eventually, it will be possible to add at this stage the requirement that imports shall not exceed the level estimated in the over-all financing model. This is a typical case of linear programming;

The practicability test might be made for each of the variables. It is believed that the programmer must be mainly interested in reproducible fixed gross investment; and the present discussion refers to this variable.

(b) The next step is to work specifically on the detailed programming of financing. The first problem to be considered is *price programming*. Theoretically, prices should be programmed together with the rest of the financial transactions. Indeed, changes in the price structure generate inter-sectoral and inter-factoral transfers of income and in certain assumptions, may be used as tax instruments.

In practice, however, the possibility of doing so depends basically on the estimated rise in the general price level. In many cases, if the estimated rise is large, it will be necessary to start by projecting prices and factor remuneration before the other financial transactions, checking their consistency later.

In view of the close link, and existing controversy, between price levels and policy, on the one hand, and

monetary policy in general on the other, the problem is discussed in this paper in a chapter preceding the one on adoption of financial programming decisions.

The following step is *detailed programming of financing*, covering agencies (foreign sector, public sector, etc.) and transactions (those that do and those that do not generate means of payment, taken separately). The final chapter refers to the programming of the generation of means of payment in the intra-banking mechanism, for which this paper does not propose detailed models.

(c) *A flow-of-funds matrix is used as a frame of reference* to close the interplay of projected transactions "with a double entry". This matrix is so designed as to make it particularly useful for programming.

(d) At the level of each agency, sources and uses of funds are strictly equal, from the accounting standpoint. These are computed by double entry in the programme.<sup>7</sup> This computation contains an *assignment of responsibilities* for each of the projected transactions (e.g. investment) which are assigned to certain agencies. Once all the transactions recording the desired distribution of responsibilities have been computed and the various financial alternatives have been played with, the sources and uses account of each agency should balance. If it does not, changes should be made in the sources of finance (e.g. by resorting to bank credits, changing taxes, etc.) the price structure, the distribution of responsibilities, or, finally, if there is no other solution, part of the aims of the programme will have to be abandoned.

In order to evaluate these alternatives realistically, separate accounts will have to be drawn up for each of the agencies; these accounts should be reconciled within a matrix, and the transactions which generate means of payment should be computed with this matrix.

(e) Thus, the first stages of the process operate only in the area of physical flows in terms of over-all equilibria. Once acceptable solutions have been found in that area, the results provide the data for the programming of financial flows, which in this project includes the programming of price structure and factor remuneration. The question here is to specify how the instruments should be handled in order to attain the previously established physical targets.

4. *The schemes outlined below constitute merely the skeleton of the system.* It is not intended, for example, to go deeply into the question of devising a policy, nor into other matters, such as the establishment or estimates of the exchange rate; rather, a number of general approaches are formulated, varying in depth as appropriate. The important point is that, if the conceptual content and schedule were to prove really useful in formulating an operational plan, a frame of reference would be established for its design, which should comprise a searching study of each item of the model, adapted to the particular circumstances of each country at a given moment.<sup>8</sup>

<sup>7</sup> With certain exceptions, explained later.

<sup>8</sup> This point is heavily stressed. In fact, at each stage in the chain it is necessary to give far more detailed consideration to each specific programme than is shown in the present study. This article is intended to provide some order for the links in the chain, rather than to make a searching analysis of the individual links.

### III. A FLOW-OF-FUNDS MATRIX

1. Such "actions" under the plan as give rise to the movement of funds should be registered in a closed scheme. To that end a matrix has been prepared with the following general characteristics which, in the author's opinion, make it a particularly valuable programming instrument.<sup>9</sup>

(a) It includes all the relevant variables, in particular the "instrument-variables".

(b) It contains, in a horizontal consolidation of all entries, every transaction that gives rise to an increase (positive or negative) in the means of payment. This is considered the point of principal methodological importance in the matrix.

(c) In manipulating the two entries for agencies and transactions, it constitutes an instrument for the apportioning of responsibilities, whose usefulness is directly proportional to the degree of detail given for the agencies.

2. The following are the most important distinguishing features of the matrix as a programming instrument:

(a) In over-all design it belongs to the classical type with a separate current account and capital account. The former records, the major product, consumption and foreign trade aggregates as unilateral entries,<sup>10</sup> other current transactions being computed by double entry. If no specific estimates are formulated for depreciation of reproducible fixed assets, the savings computed will be gross.

(b) At the level of the economy as a whole gross savings are equalled by total gross investment; but the same obviously does not apply at the level of each agency.

The capital account has been opened in two large groups of transactions. In the first place, savings and investment reflect a balance to be financed at the level of each individual agency, which is zero for the economy

<sup>9</sup>The matrix for Venezuela was "closed" for 1960 in cooperation with Mr. Jorge Trebino, and a joint detailed study is now being drafted. See below the scheme for this matrix.

<sup>10</sup>The equation of equilibrium between over-all supply and demand is thus recorded, with the exception of the computation of total gross investment. Accordingly, at the level of the economy as a whole the balance on current account (gross savings) is equal to the total gross investment.

as a whole. The net balance of other financial transactions also equals zero and in the soundness of content of the area of the matrix recording these transactions lies a good deal of its value as a short-term programming instrument.

(c) Financial transactions are effected through banking and non-banking agencies. All capital account transactions through the banking system give rise, by their very effect, to variations in the volume of the means of payment.

(d) With respect to the programming of financing, the opening of transactions conducive to an increment in the bank means of payment is particularly important. Double-entry records require the computation of both destination and origin of  $\Delta MP$ . In the example, the origin is classified by effect (fiscal, credit, exchange and "non-specified" effects) and, within each effect, by transactions.

(e) This matrix admits of new additional classifications under agency (for instance, "enterprises" for sectors of economic activity and "families" for strata).

3. It goes without saying that the scheme which serves for the computation of the transactions in the base year of the plan is equally useful for containing the value of the variables in the year covered by the programme, provided that it is possible to formulate a coherent programming process which would include physical flow aggregates, the instruments and other variables of financial flows. This programme should be expressed in current prices and should record transactions in detail by agency.<sup>11</sup>

<sup>11</sup>*The Flow-of-Funds Approach to Social Accounting*, a report of the National Bureau of Economic Research, New York, in "Comment" by John S. Atlee, refers to the absence of an over-all theoretical framework or analytical system which will do for the flow-of-funds accounts what Keynes's *General Theory* did for the national income accounts. On the contrary, it is believed that short-term programming constitutes this frame of reference and that the over-all relationship between the theory and programming of development and the national accounts finds specific expression in the link between short-term financial theory and programming and the flow of funds. The annual plans of European countries and the methodology described later on for use by the Latin American countries operate precisely on flow-of-funds plans (for example, the studies of the Netherlands Central Planning Bureau, such as the *Central Economic Plan, 1961*).

### IV. PROGRAMMING OF FINANCING AT THE LEVEL OF THE ECONOMY AS A WHOLE

#### 1. THE ESTABLISHMENT OF CRITERIA ON THE MAGNITUDE OF CERTAIN RELEVANT VARIABLES

(a) Just as has been explained, the first phase proposed for the formulation of an annual programme which is to be the instrument of a longer-term programme, lies in projecting the equilibrium of the economy as a whole, at constant prices.

(b) If the longer medium-term programme has not been limited to only projecting values for the objectives or targets of the final year of the period, there will exist numerical values for each of the important aggregates of the economy expressed in constant prices which correspond to the first year of the plan. Apparently, there-

fore, it would be enough to adopt these values as basic working hypotheses. However, it is not sufficient unless the long-term model was dynamic and built on very realistic conditions which reveal the level and degree of the utilization of capacity immediately before the programme came into effect. If, as usually happens, long-term plans are made with static models whose parameters change in value only with the passage of time, this solution for a short-term plan would be inadequate.

(c) Whether or not there is a long-term model, a dynamic short-term model of physical transactions is conceivable, the processing of which might explicitly show the effect of variable from the beginning of the year. Likewise, this model ought to compute certain

transactions (for example, fixed gross investment) which are necessary to prepare the production apparatus of future years, in order to avoid the generation of disagreements by the interplay of a series of annual juxtaposed plans.

In a model of this type, it is essential that demand be projected on the basis that it determines the level of short-term activity. Only a part of demand is autonomous. And, in its turn, a part of this autonomous demand is "governable".<sup>12</sup> A good analysis of fixed gross investment and its delays ought, therefore, to be an integral part of such a type of programming model.

(d) This paper does not include a programming model of the physical short-term flows and it is limited to the problem of financing. From the point of view of financing, its main interest lies in establishing—given a certain variable to optimize over the short term—the compatibility of magnitudes among the over-all aggregates, in order to know at what dimension and under what conditions a certain investment can be financed, apart from the other requirements that have already been partly discussed. This is a model of equilibrium, that gives dimension to the variables determining financing at the level of the economy as a whole.<sup>13</sup>

(e) The need has been established of having previous information on the magnitude of some variables which render acceptable only certain results of the processing. Private consumption, external savings and the total domestic gross product have been selected from these.

(i) With reference to *private consumption*, certain goals can be established requiring it to increase at a rate lower, equal, or higher than that of the product. If there are balance of payments problems, it will necessarily have to increase at a lower rate if, as happens in less developed countries, the rate of investment must be expanded at the same time. A very different thing, of course, from establishing that it neither increases nor diminishes. Apart from theories and the play of over-all elasticities, it is thought that serious social and political evaluation by income strata, of the short-term requirements for increased consumption, should be made as part of a longer-term strategy.

(ii) For *external savings*, quotas must be established for various elements. In principle, there are estimates, based on common sense and practical experience, by international financing organizations which must be taken into account if recourse is to be had to these organizations.<sup>14</sup> In general, ceilings can be set in terms of:

A proportion between the annual service of capital and the interest on the long-term (or total) debt of the public sector (or of the whole country) and the exports of goods and services;

A number of months of exports, which the total debt should not exceed.

<sup>12</sup> In its induced section, part will respond to exogenous flows and decisions taken in previous periods and part to variables of the period covered by the programme.

<sup>13</sup> In the processing made in 1961 for Venezuela from an over-all model similar to the one included here, and in the analysis of its sensibility, we have worked with Mr. Oscar Varsavsky.

<sup>14</sup> When recourse is had to external savings, as is now happening in Latin America, it is essential that short-term decisions should not be taken except within the frame of reference of a longer-term projection.

Moreover, the other ceiling—or the adjustment to the previous upper limit—is determined by the country's policy on gold and foreign exchange. According to circumstances, for example, a country may prefer to pay interest on its external debt so as to maintain sufficient manoeuvrability to enable it to operate with some freedom in its exchange market.

Whatever the criteria may be there will, therefore, exist a quota to the degree in which external savings are used to finance the economy as a whole in the year covered by the programme.

(iii) With reference to the *gross domestic product*, an order of magnitude will have to be established compatible with certain elements which will now be discussed.

(f) (i) The selection of a growth rate for the product, taken as a goal, can be the result of various elements, not merely economic. For example, in a country where various forces are co-operating to design the plan, it is conceivable that some of them may condition their specific co-operation according to a growth rate of the PBI (gross domestic product) which is not below a given level.<sup>15</sup> Therefore the economic, political and other elements which bring about the establishment of minimum levels for the variables must be listed and the levels themselves fixed. This is believed to be necessary for the short-term plan even though the annual plan may be the instrument of implementation of a longer-term plan.

(ii) Economically speaking, therefore, the first step in the task must consist of choosing the variable which is to be optimized in the short-term plan which, has already been said, does not necessarily have to be the same as the variable optimized over the long-term.

In the field of physical flows, selection possibilities are usually contained within the well-known list which includes, as alternatives: employment; the annual working day expressed in hours; real national income or rather the real *per capita* gross domestic product; *per capita* consumption; total *per capita* expenditure; the maximum reduction of inequalities in income distribution by strata or by region; and, as side conditions, a certain level of price increase and of external savings—positive or negative. This list is not, of course, final, and it might not even be clear whether a given component is in fact an objective or an instrument.

With reference to the indicated side conditions "a certain level" is preferred to stability, since it is believed that the concepts of "stability" of prices or of the balance of payments respond to conditions that are not usually found in the relatively less developed countries,<sup>16</sup> particularly in the case of the Latin American countries.

Take, for example, the selection of employment as the variable to be optimized. In such a case the following sequence can be developed. At the level of the greatest aggregation, the volume of employment depends on the level of the PBI—or *vice versa*—and on average

<sup>15</sup> This is particularly important for the labour unions who, being aware that private consumption of the lower income groups and some wide reforms increase their magnitude or their depth according to the growth rate of income, could support the plan provided that nothing below a certain rate is achieved.

<sup>16</sup> If there were structural stability of the balance of payments, the developing country would have exceptional conditions for exports, or rather it would be planning a programme with a modest rate of growth.

productivity of the whole economy, expressed in terms of the labour force. In its turn, this average productivity depends on the sectoral levels of productivity and on the sectoral structure of the product.<sup>17</sup> Thus, if:

$\Delta PBI$  = value of the increase, between the base year and the year of the plan, of the gross domestic product measured at constant market prices of the base year.

$\Delta W$  = employment-effect and

$\Delta Pd$  = productivity-effect,

Then:  $\Delta PBI = \Delta W + \Delta Pd$ .

That is to say, the increases in the gross domestic product can be "explained" according to the two indicated effects. For the sake of convenience the value of each of these effects can be estimated in the following way, similar to the definition of physical volume in the national accounts.

$$\Delta W = (W_n - W_o) P_d \quad \Delta Pd = (P_D - P_o) W_n$$

Strictly speaking, this manner of treating the problem would tend to slightly over-estimate the productivity-effect, although at this level of discussion that is irrelevant.<sup>18</sup>

In a short-term plan,  $\Delta PBI$  could be a function of  $\Delta W$  or vice versa, *ceteris paribus*, according to the way the mechanisms of demand operate. Normally, the cumulative effects of variations in demand in periods immediately preceding have to affect the PBI and employment in the period covered by the programme. These effects must be estimated for the purpose of establishing basic goals for the variables, and of adding the necessary movements to achieve specific objectives.

On the basis of the product structure ruling in the base year—that is to say without introducing yet the analysis of the variations through changes in the sectoral composition of production—and of alternative hypotheses on the productivity-effect, a first estimate can be made leading to the determination of the rate of unemployment in the year covered by the programme in each case.

This task must be carried out at the over-all level and also in the greatest detail possible. Over the short term, production variations per occupied person will not necessarily be large. However, statistically, significant changes can appear—although over the short term they do not change technology or training very much—because of modifications in the levels of utilization of installed capacity and in the annual working day in hours per occupied person.

Although unemployment constitutes a variable which has a strong effect on the design of short-term policies, it is important not to lose sight of the structural content

<sup>17</sup> Changes in the sectoral structure of the product would be enough then to provoke changes in the average productivity of the economy, without the level of productivity varying in any of the sectors in particular. This type of analysis, in which productivity is "expressed in terms" of the labour force, should also take into account the available knowledge on idle capacity in order to be able to fix corresponding values in specific cases.

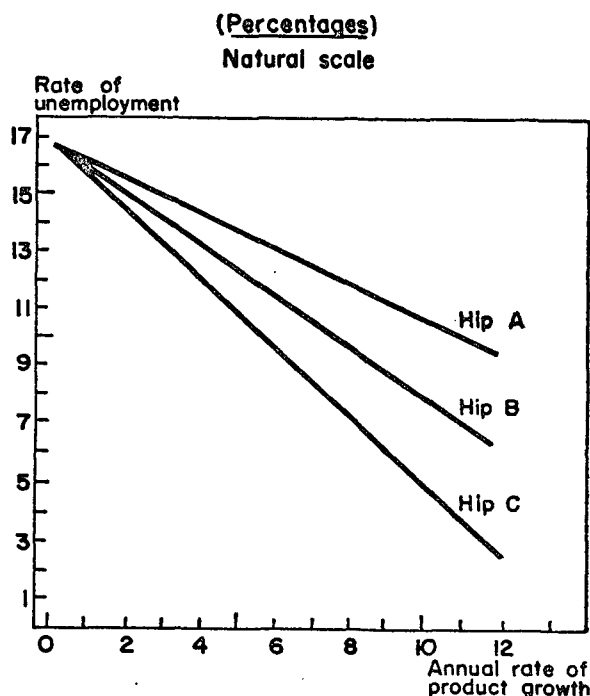
<sup>18</sup> This under-estimation of the employment-effect or, conversely the over-estimation of the productivity-effect results from assigning the term of secondary order to the productivity-effect:  $(W_n - W_o) \cdot (P_D - P_o)$ .

of the problem, a factor which should be included in these policies.

Referring to the example of Venezuela in 1962, the results of an over-all approximation are shown in Figure I. Hypothesis A of productivity assumes that two thirds of the product increase between the base year and the year covered by the programme would be achieved as a result of productivity growth; hypothesis B assumes that this effect would be 50 per cent and hypothesis C limits it to 33 per cent. Consequently, the lower the productivity-effect, the greater must be the employment-effect and the lower the rate of inherent unemployment.

Figure I

VENEZUELA : RATE OF UNEMPLOYMENT IN 1962 FOR ALTERNATIVE HYPOTHESES OF ANNUAL PRODUCT GROWTH AND PRODUCTIVITY-EFFECT



The first hypothesis is closest to the values observed in the experience of countries going through periods of expansion, with a high level of manpower employment. This means that when there is rapid expansion, and a high level of manpower employment when such expansion gets under way, product growth can obviously only be achieved with high values in the productivity-effect. Other experiences in some countries indicate that in periods of low product growth there is a low productivity-effect.

In 1952-1959 for example, the productivity-effect "explained" between 60 per cent and 80 per cent of gross domestic product growth in countries with a high level of development.

In the case of Venezuela, and in order to obtain the first over-all point of reference, it was estimated, taking into account the known process of events of 1961—that hypothesis B could be the most probable, at a level of growth of PBI to the order of an annual cumulative



7 per cent. In such a case, to return to the same rate of unemployment existing in 1960, the product would have to grow at about that rate, without yet computing structural changes.<sup>19</sup>

The fixing of these goals for the short-term plan must, of course, take into account the cumulative effects of the economic process immediately previous to the period covered by the programme. The hypotheses which for the short-term plan, can be formulated, on productivity variations, need sufficient depth for the "macro" values to be consistent with the most disaggregated levels possible. And in this an important part is played by the intentions of the entrepreneurs, the restrictions imposed by agreements on working conditions, the recent rate of demand and the prospects of immediate activity in the economic "environment".

Nevertheless, as these are factual data and since the aim of the plan is to modify the factual position, the overall measures indicated earlier are useful to the extent that they provide a framework for the problem and that they require the purely short-term elements to be reconciled with the short-term movements needed for the fulfilment of a longer-term programme.

Obviously, in every step taken in the design of the programme—as much in this field as in the next one—the political measures essential to the achievement of the goals must be defined.

In this way, it is possible to have as indication of the magnitude of the *BPI*, as a function of its value, which meets a certain level of a variable to be optimized. Thus is completed the set of previous criteria which were conceded as being necessary before tackling the problem of financing at the level of the economy as a whole.<sup>20</sup>

## 2. AN OVER-ALL MODEL OF EQUILIBRIUM

(a) At the level of the economy as a whole a certain volume of investment will be required and, within the social concept of development for countries with a reduced or medium income level, a certain minimum expansion of private consumption in the lower income groups.

Investment should also be consistent at the general macro-economic level with established levels for government consumption and for exports; with the substitution effort which the country can make according to the sectoral plans in effect; with the level of net transfers abroad for factor income and the terms of trade effect, which will result from the general economic prospects and the values of certain data on the problem, and, finally, with the level of savings that the country receives from or sends abroad.

(b) An over-all model can be planned, therefore, which establishes consistent values of the variables, at constant prices of the base year<sup>21</sup> and with the single aim of projecting the important aggregates in statistical form.

<sup>19</sup> The numerical values of the problem have changed.

<sup>20</sup> Consumption, external savings and product are only examples, because some idea must be given of the size of all the variables in the model. In all, it is believed that these are relevant.

<sup>21</sup> The model for Venezuela, similar to the one formulated here, was restricted in its design to those elements on which acceptable basic information was available.

$$\begin{aligned} (1) \quad & YNB = PBI + TNE + \Delta TI \\ (2) \quad & PBI = C_p + C_g + IB + X - M \\ (3) \quad & TNE = \sum T_i Y_i - K_1 + K_2 \\ (4) \quad & \Delta TI = Q_x \left( \frac{\pi_x}{\pi_m} - 1 \right) + K_3 \\ (5) \quad & C_p = \sum C_{pe} \\ (6) \quad & IB = \alpha PBI + \Delta S \\ (7) \quad & X = \sum Q_{x_j} \pi_{x_j} + K_4 \\ (8) \quad & M = \sum (\beta_1 C_{pe} + \beta_2 \gamma \cdot IB) + \beta_3 \gamma \gamma + K_5 \\ (9) \quad & A_e = M - X - TNE - \Delta TI + \Delta E \end{aligned}$$

The significance of the variables is as follows:

| <i>Variables</i>     | <i>Significance</i>   |
|----------------------|---|
| YMB                  | National gross income at constant market prices   |
| PBI                  | National domestic product at constant market prices   |
| TNE                  | Net transfers abroad for factor income  |
| $\Delta TI$          | Terms of trade effect with respect to the base year, expressed in national currency   |
| $C_p$                | Private consumption (total)   |
| $C_g$                | Government consumption (total)  |
| IB                   | Total gross domestic investment   |
| X                    | Total exports of goods and services at f.o.b. prices  |
| M                    | Total imports of goods and services at c.i.f. prices, measured at the average buyer's rate of exchange for exports  |
| $\tau_i$             | Proportion of profits sent abroad by sector <i>i</i> per unit of the value of a determined variable or datum  |
| Y                    | Variable or datum taken as a reference for the calculation of the remittances of profits. (In the case of Venezuela exports of petroleum at constant prices)  |
| $K_1$                | Gross transfers abroad for royalties and interests  |
| $K_2$                | Gross transfers received for factor remuneration  |
| $W_x$                | Physical volume of total export of goods  |
| $\pi_x$              | Price index, in dollars, of exports of goods, base year = 1.00  |
| $\pi_m$              | Price index, in dollars, of imports of goods, base year = 1.00  |
| $K_3$                | Effect of terms of trade in services  |
| $C_{pe}$             | Private consumption of income strata "e"  |
| $\alpha$             | Total fixed gross domestic investment per unit of product at constant prices  |
| $\Delta S$           | Variation in stocks   |
| $Q_{x_j}, \pi_{x_j}$ | Physical volumes and prices of the exports of goods or groups of goods  |
| $K_4$                | Export of services f.o.b.   |
| $\beta_1$            | Imports of consumer goods c.i.f. per unit of private consumption of strata "e"  |
| $\beta_2$            | Imports of capital goods c.i.f. per unit of fixed gross domestic investment in machinery and equipment  |
| $\gamma$             | Proportion of machinery and equipment in domestic investment  |
| $\beta_3$            | Imports of intermediate goods c.i.f. per unit of value of a determined variable or datum  |
| YY                   | Variable or datum taken as a point of reference for the calculation of imports of raw materials. (PBI, industrial production, etc.; eventually services applied to goods can be included in the coefficients) |
| $K_5$                | Imports of non-factorial services   |
| $A_e$                | Savings from abroad <sup>22</sup>   |
| $\Delta E$           | Variation of net stock of gold and foreign exchange   |

<sup>22</sup> For the purposes of the model, by this is understood the total of external savings which the country receives as a result of a favourable payments situation in the balance of payments on current account, plus the variations in stocks of gold and foreign exchange. This saving is gross from the standpoint of national

(c) With reference to this model a number of observations can be made:

(i) The main objectives are the product level and the size of savings from abroad, required by the country. The income level is also an ultimate aim and only certain product levels make it possible to attain income levels the rates of growth of which satisfy the aims of economic policy.<sup>23</sup>

(ii) It operates at constant prices of the base year, no provision being made for changes in the internal price structure. The variations in the terms of foreign trade are computed.

(iii) Income distribution is incorporated into the model by means of  $C_p$ .

Later in the paper the programming of savings by income strata at constant prices is incorporated into the process. At the present time the consistency between income, consumption and savings at the level of each strata can be verified and if consistency is not achieved, the model will have to be reprocessed and based on other assumptions. Also in the model the impact of distribution changes on the balance of payments is measured by means of the coefficients,  $\beta_{1e}$ , weighted arithmetic average of which gives a  $\beta_1$ , which is analysed in detail later in the paper.

In fact, the problem of income distribution by strata should be looked at from both sides: the income flow and the physical supply of goods. Both approximations should be made consistent—estimating—if it is possible—the effect of partial dislocations on the prices of goods or of groups of particular goods. In the same way, at a further stage, the planned levels of  $C_p$  should be made consistent with the physical supply from certain sectors destined for the different strata.<sup>24</sup>

(iv) The net transfers abroad for factor remuneration are included, and given full weight, although they are not properly measured in the national accounts available today.

In fact, the importance of these transfers has generally been given very little consideration in development theory. Nevertheless it is thought that they are of considerable significance. At least in Latin America, an important part of the additional income which the countries obtain through the favourable terms of trade effect are merely recorded as an entry in the ledger, since they flow out again in the form of transfers. Moreover, the more intensive recourse to foreign technicians, and the increases in the interest on the foreign debt,

accounts, not being affected by depreciation; and it is net from the point of view of the balance of payments, since it is equal to the total inflow of external savings less amortization of the foreign debt. Therefore, for the purposes of the balance of payments, the country will require an inflow of gross capital equal to  $A_e$ . Plus the sums necessary for the payment of the amortization of the debt.

<sup>23</sup> In the case of Venezuela the PBI was an essential objective because the  $\Delta$ PBI is the vehicle for optimizing employment, which was the basic short-term goal.

<sup>24</sup> Both income-elasticity equations of  $C_p$  could be included in the model. If so  $A_e$  would no longer be data. If they are not included there will be an income-elasticity resulting from the value processed for  $C_p$  which is consistent with the datum given for  $A_e$ .

tend structurally to aggravate the weight of TNE. *The problem does not appear to have a solution at the level of each country*, not even for the remittances of profits which are practically uncontrolled, and partially surreptitious through the prices of foreign supplies. It is believed that thorough research is required in this field at the area and country levels.

Royalties and interests, measured by  $K_1$ , can be used as explicit functions, if it is wished, keeping the linear structure of the model.

(v) The definition of  $\Delta$ TI is consistent with that of the national accounts, if the favourable balance of payments is deflated by the import prices. If another deflation criterion is adopted, the form of the equation will have to be changed.

(vi) The rate of investment ( $\alpha$ ) is only exogenous in part. The product/capital ratio is of little use in short-term programming and as a result the size of IBF registered is not adequate “in order to” achieve a given increase in PBI. This equilibrium model only aspires to establishing “how much” investment can be financed; apportioning this investment is another problem.<sup>25</sup>

The value of  $\alpha$  may be calculated as a conceptual equivalent of the product-capital marginal coefficient, which avoids the necessity of computing the stock of fixed reproducible capital at the beginning of the period. Another way is to correlate the levels of IBF and PBI in the experience of the country under comparison. Both solutions are useful for short-term programming and are also adequate in the long term.

In the short term a considerable part of investment is committed by decisions already taken, and the value of  $\alpha$  will be acceptable over and above a minimum established, in part, in terms of the degree of freedom required for such investment.

(vii) There is a relationship between  $\beta_1$  and  $\beta_3$  of such a nature that to the extent that  $\beta_1$  diminishes with the acceleration of the process of substitution of imports of consumer goods,  $\beta_3$  ought to increase on a parallel with  $\beta_1$  because the needs for imports of intermediate goods to produce them are increasing.

However, the not always regular behaviour of real imports of countries in a lower stage of development; the fact that they register the effect of changes in the use of adjusting instruments of the balance of payments; and the inadequacy of the registers in many import transactions, do not favour the possibilities of establishing a dependent relationship—linear or not—between  $\beta_3$  and  $\beta_1$ , the parameters of which are reasonably representative.

(viii) The variations of  $\beta$  in each case operate as substitution indices (positive or negative), provided that their values in the base period are really significant.

(ix) Attempting to work at the level of the economy as a whole, this model is not sectoralized, except in the minimum amount necessary to identify the remittances of foreign capital.

(x) It is possible to fix the level of foreign savings, according to separate long-term projections on the capacity of the foreign debt of the country which were considered earlier; and to establish the levels of increase

<sup>25</sup> The model which optimizes employment will be dealt with later in the paper.

of exports and of the intensity of the "substitution-effect" on imports which will be necessary to satisfy such estimates, obtaining thus an area of solutions.<sup>26</sup>

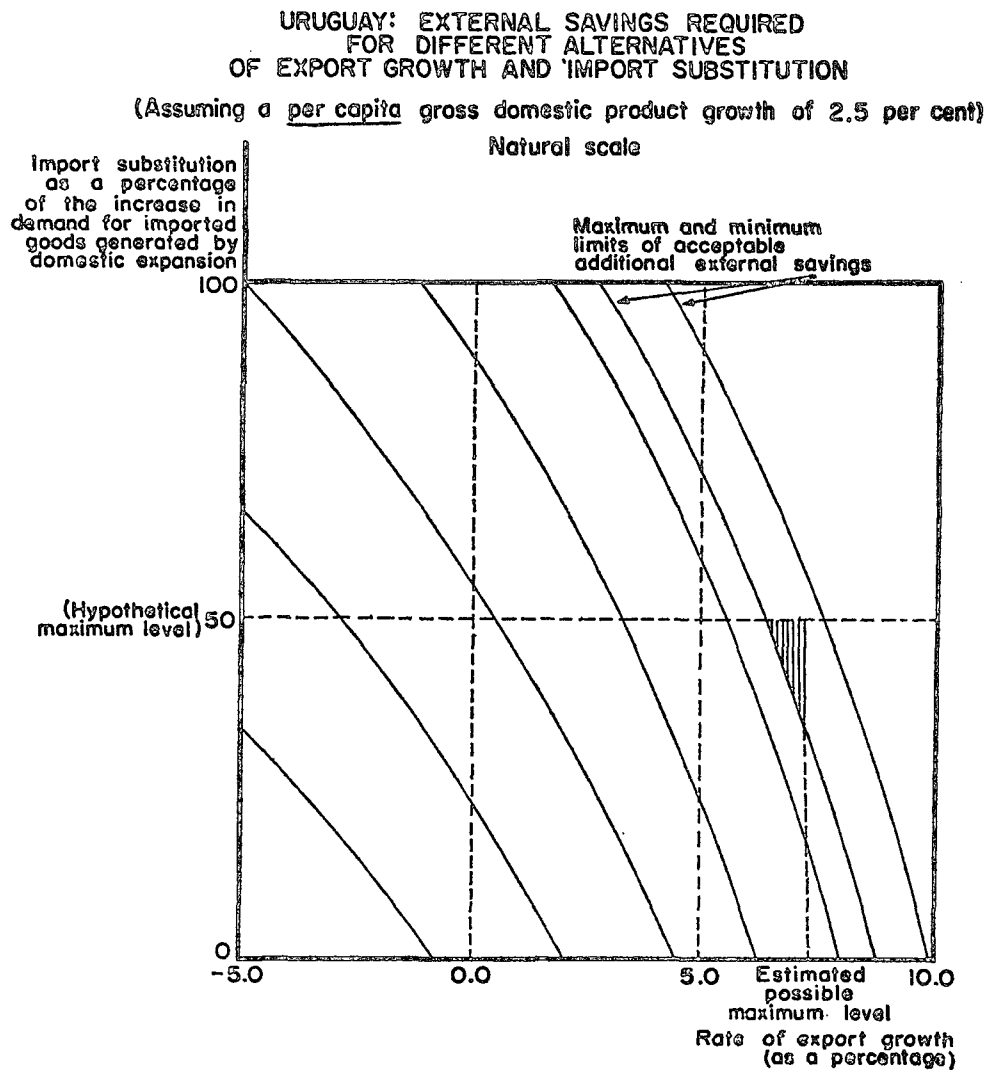
(d) In general terms, great assistance in the selection of alternatives is given by the possibility of narrowing down areas of solutions for some variables, before selecting "one" solution. Their establishment is very useful and can be used generally for the analysis stage of the over-all practicability of the programme, and of the requirements necessary for achieving certain specific goals (even at the level of certain products, when ex-

<sup>26</sup> The so-called "substitution-effect" will in such a case include the interplay of other important variables in a short-term plan (stocks, devaluation, direct restrictions, previous deposits, etc.).

ports are very concentrated, as happens in most Latin American countries). For example, in the case of Uruguay, in a preliminary projection made for a certain hypothesis of the growth of PBI, the growth rate of exports and the proportion of increased demand for imports caused by the expansion, which substitution of imports should absorb, were established as the most relevant instrument-variables (at this level).<sup>27</sup> External savings was the objective-variable here and the problem centred on the limits set to such savings (see figure II).

<sup>27</sup> To be more precise  $\Delta M = f(\Delta PBI, K - \Delta S)$ ; that is to say: it can be a direct function of the growth of the product and of a certain inverse constant of the "substitution-effect". The figure registers the quotient between  $\Delta S$  (absorption factor) and  $\Delta M$  before substitution.

Figure II



A first area of solutions is found in the range between the maximum and minimum limits given to external savings (in figure II: 0 and 30 million dollars).

The maximum possible level of the "substitution-effect" is then established in the light of past experience and the known possibilities of "substitution". A further narrowing-down of the area of solutions is made from an

estimate of the maximum possible increase in exports consistent with sectoral possibilities. The shaded area is the area of solutions resulting from these calculations.

It is important to point out that the minimum points of expansion of one of the two variables which correspond to the maximum increases of the other, are identified in this way. Thus, in the example in question, exports

must increase by at least 6 per cent and the substitution-effect should absorb at least 37 per cent of the increased demand for imports originating in the expansion. It is certain that these two levels of the variables, obtained at the same time, will be inadequate. Nevertheless, it is clear that by merely establishing the minimum levels, precise guidelines are obtained for economic policy.

(e) In the first experiments made using abridged versions of the model, the latter was processed in various ways. In all the processes the values corresponding to the following elements were taken as constants — varying their numerical values in certain cases: gross domestic product, government consumption, exports, import prices, coefficient of net transfers abroad and imports of services. For the remaining elements different alternatives were used by means of successive approximations which gave to the same element, according to the particular case, the nature of a dependent or independent variable.

(f) In the case of Venezuela a “basic” solution was reached from the use of import coefficients as independent parameters. Such a solution is “basic” in the sense that the element of uncertainty existing in some parameters is reduced practically to zero.

In fact, as much in the economy of the example as in that of most developed countries, the field of variation of some elements within the model is very wide and the basic statistics which have to be worked with are not always satisfactory. This introduces an element of uncertainty into some parameters of the problem. It is estimated that these elements would theoretically have a value equal to zero in the solution which, in such a case, could be called “basic”.

(g) It is precisely this element of relative uncertainty that demands extreme care in the interpretation of the results. In principle it is conceivable that an area of solutions, rather than a single solution, should be considered.

But the politician who makes the decision must select a plan — the most reasonable one within the expansion limits set. And the economist, in practice, also must work with one or two alternatives — perhaps — in later processes. In this case, a satisfactory safeguard is provided by an analysis of the sensibility of certain dependent variables with respect to the movement of the variables whose weight is decisive in the behaviour of the model, and whose probability of effective variation in the year, covered by the programme, is more or less wide.

Among these the coefficients  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are particularly important.<sup>28</sup>

These define the proportion of imported consumer goods in total consumption, of investment goods in total investment and of intermediate goods in the gross domestic product of the whole economy, respectively. Likewise, the index of physical volume of exports has a prevailing weight over the other elements of the model.

An *analysis of sensitivity* was therefore made. Taking as absolute constant factors the gross domestic product;

<sup>28</sup> Although  $\beta_3$  is not strictly speaking an instrument, variations may occur in its level as a result of the changes in the coefficient of use of installed capacity and of modifications in the internal composition of fixed gross investment, in construction and machines, installations, etc., which are very important in countries at a lesser stage of development.

government consumption, variations in the stocks of gold and foreign exchange; import prices; the investment coefficient; constants of the model and export prices, this analysis established the effect of unit changes in the import coefficients of each type of good and in the physical volume of exports, on the value of certain dependent variables which are necessary for the equilibrium of the economy. These dependent variables are: total imports, total exports, net transfers abroad, the level of private consumption and the amount of savings coming from abroad.

In its operating mechanism, it commenced with the basic values of the parameters arising from the over-all model, and general formulas of sensitivity were established for  $\Delta C_P$ ,  $\Delta M$ ,  $\Delta A_e$ ,  $\Delta X$  and  $\Delta INE$ .

With these basic formulas, the variations which would occur in the said dependent variables were calculated for a series of alternatives of unit changes in the variables which are “strategic” to the sensitivity effect, taking as the most interesting examples in the particular case of the Venezuelan economy of 1962, those factors indicated with (X) in the following table:

Venezuela: analysis of sensitivity of the “basic” solution

| A. “Basic” values of the strategic variables |                   |  |                   |        |
|--|-------------------|--|-------------------|--------|
|  | $\beta_1 = 0.097$ |  | $\beta_3 = 0.068$ |        |
|  | $\beta_2 = 0.193$ |  | $Q\alpha = 1.04$  |        |
| B. Processed cases of sensitivity            |                   |  |                   |        |
| $\Delta\beta_1$                              | $\Delta\beta_2$   | $\frac{\Delta Q\alpha}{\Delta\beta_3}$ | 0                 | + 0.01 |
| $\pm 0.001$                                  | 0                 | 0                                      | (X)               | (X)    |
| 0  | $\pm 0.01$        | 0                                      | (X)               | (X)    |
| 0  | 0                 | $\pm 0.001$                            | (X)               | (X)    |
| 0  | 0                 | $\pm 0$                                |                   | (X)    |

For each specific case a table of multiple entry can be drawn up which combines unit variations of different strategic variables. It is to be noted that the cases so far offered as examples are the “keys” to the balance of payments.

(h) It can be seen, therefore, that the essence of the solution, with reference to the need for external savings, is that the  $\beta$  coefficients should attain the levels indicated *within certain probable export levels*; that is to say, external equilibrium depends on the degree in which the substitution effort contained in the numerical values of these variables is achieved.<sup>29</sup>

This requires, of course, an “extra-model” confirmation of the level of substitution resulting from the over-all model in the results given within certain limits by the sectoral calculations.

(i) It is to be noted, as a point of methodological interest, that the coefficients can be regarded as a function of three principal variables: the coefficient of the base year; the substitution effort made in the year covered by the programme; and an additional variable — or group of variables — which measure the effect of changes in stocks, devaluations, direct restrictions and other short-term measures and even deviations in the

<sup>29</sup> This calculation assumes that substitution is defined according to the structure of the origin supply — imported or national — and that there is zero degree of substitution provided that the imported percentage does not vary.

figures of the base year. If imports in the base year of the country under consideration were normal in total size and structure, it would be possible to say that variations in the coefficients are due to different levels of substitution, *ceteris paribus*. But in actual fact, imports do not usually behave in this way and in the short-term plan, the time lag between the base year and the year covered by the programme does not in most cases allow  $\Delta\beta$  to be taken as results of a "substitute-effect".

(j) On such bases and with these explanations, the important aggregates of the economy can be projected, as it has been said, in statistical form to serve as a frame of reference for a detailed projections of financing which is the main objective of this paper.

### 3. VIABILITY OF THE ADOPTED SOLUTION FOR THE OVER-ALL FINANCING OF THE ECONOMY

The viability of the adopted solution, as established, must also be proved. There must be various viability tests—economic, political and social. Even in the economic field, the viability of an over-all aggregate must go as far as micro-sectoral levels to confirm its consistency.<sup>30</sup> The number of tests can, therefore, be considerable.

The first stage can consist of confirming the sectoral consistency of PBI, and the degree in which, from the production side, the achievement of an over-all level is possible from the PBI of the model. This was contained in previous ideas to give orders of magnitude.

The physical balances of production, product, investment and employment, taking into account which of these variables must be optimized, should now be completed. Thus, the first test proposed at the macro-economic level requires the formulation of a model which makes it possible to give a size to the variable to be optimized, taking into account the restrictions to over-all financing of investment set by the over-all model, and which identifies the structure of sectoral production necessary to obtain the established goals. All this is still at the macro-economic level.

Then, if fixed reproducible gross investment is considered to be the "key" variable, it will be necessary to identify in detail the real conditions for its realization, going as far as the level of the real plans.

These two tests are dealt with below.

#### A. Structure of production which optimizes the chosen variable

(a) Up to this point in the formulation of the programme, we have, therefore, three elemental measurements obtained by reasonable approximations:

The annual level of the product consistent with certain values of a variable chosen to be optimized, without as yet computing changes in the structure of said product;

A level of private consumption and domestic investment compatible with the level of the established product and satisfactory from the social and economic points of view, respectively;

<sup>30</sup> To take an isolated example, in programming the labour force, the adequacy of some "key" professions would have to be established.

The export and import substitution levels which make it possible to "finance" the programme at the over-all level, making use of foreign savings to a certain extent and also mobilizing the country's gold reserves and foreign exchange.

(b) The production structure which will optimize the chosen variable using precisely *all* the investment established in the over-all model, and which achieves *at least* the estimated level of PBI, can now be determined.

If the chosen variable is the product, at the same time all significant and measurable requirements, in a model of linear programming, can be identified. If the variable to be optimized is some other variable, the shape of the model will change, of course, but not necessarily its structure.

(c) If—as in the Venezuelan case—employment is optimized, the problem would be outlined in the following way, using the basic data of the over-all model:

Variable to be optimized: total employment (there would be a minimum acceptable value established in the first approximation, in accordance with the higher objectives of short-term social and economic policy);

Fixed reproducible gross domestic investment: exactly that which, it is decided, can be financed on an over-all basis,<sup>31</sup> the present model ought to indicate its structure;

Total gross domestic product at constant market prices: equal at least to that established in previous approximations;<sup>32</sup>

Production: its structure which optimizes the chosen variable must be identified. Production can be defined at the level of sectors of economic activity, of groups or relevant branches. *Every* branch or sector requires minimum and maximum limits within which it can move.

(d) This model was made and processed as a first attempt at an annual plan for Venezuela.<sup>33</sup>

(e) It is also possible, as has been stated, to optimize the function of the product, placing a minimum on the total level of employment. The two solutions, in such a case, would give two alternatives from which the politician could finally choose, and here the choice will depend on the degree to which the Government is prepared to sacrifice product to gain employment or *vice versa*. It is thought that this type of presentation may enable the planner to submit a choice of decisions to the politician, each with its relative "social costs", once the quantitative bases are duly consistent.<sup>34</sup>

(f) The optimums arising from such a kind of model are production values which should be "aimed at" as general macro-economic targets. Real production plan, already more disaggregate and at the sectoral level, will not necessarily coincide with these. It is estimated that the required sectoral investment, with all the noted limita-

<sup>31</sup> In fact, on varying the level of PBI as a result of the application of the model dealt with in this chapter, the total level of investment *can* change, as a result of modification of the values of the over-all model of the previous chapter.

<sup>32</sup> It is to be remembered that in the over-all model the maintenance of the structure of PBI in the base year was implied.

<sup>33</sup> See CORDIPLAN, Venezuela, 1961.

<sup>34</sup> Later in the paper, on dealing with the monetary programming and with a similar line of thought, the social cost of stabilization can be established, to present alternative choices which can be analysed together with the existing ones.

tions, should be oriented, based on the structure arising from the model provided that it can lead to specific projects. If it does not, the country concerned will pay a price, which can be measured, for not having any plans.

(g) The directives resulting from these processes already provide certain bases for the design of the economic policy of the physical flows, for the promotion of production, the expansion of employment and the orientation of investment and foreign trade. Later in the paper the picture will be completed with the design of the economic policy of the financial flows.

(h) At the present stage, the projections of the product, foreign trade, investment, government consumption and private consumption by income groups must be made compatible with production of the sectoral level, of branches and even of particularly relevant goods.

#### B. *Real possibility of achieving the programmed investment level*

(a) The investment values resulting from the application of these models and tests of internal consistency must be checked, in order to determine whether there is a real possibility of their being achieved.

The main points to be checked are believed to reside in:

- (i) The availability of real investment projects;
- (ii) The availability of human and physical resources that can be mobilized to make gross investment possible;
- (iii) A specific distribution of responsibilities for investment at the level of each project, made according to the test of its political viability and to the practical factors which define the capacity of the agencies to mobilize effectively the human and physical resources available;
- (iv) The over-all availability of funds for financing;
- (v) Consistency between the foreign exchange requirements of the plans and those which arise from the over-all model for the economy as a whole;
- (vi) The existence of a channelling system—partly of intermediation—capable of mobilizing the financial resources among *the agencies*, for *the ends* and along *the lines* which concern the programme.

(b) The existence of real investment projects is the first essential requirement. The projects may be in various stages from the "idea" to the "project in execution"; and a tabulation will be required consisting of lists of implementation and payments, which will identify the values corresponding to the programmed period for all the projects of the public sector and for the known and relevant projects of the private sector. In the short-term a good part of investment is compromised and it will be necessary to assure the intra-annual rate of its implementation.

(c) The confirmation of the availability of resources will, in the optimum case, have to be made in detail. In such a case, the availability of the technicians necessary for the process, in all sectors of manpower, should be ensured. Moreover, if technology is also regarded as a resource or as a combination of resources, it should be confirmed that there actually is the technical capacity needed to carry out the aims. Theoretically these confirmations should be made at the micro-sectoral level which, depending on the country, could be practicable,

since a broad annual plan can be expected to provide for such levels. Moreover, in practice it will be possible in the early stages to formulate balances of materials for a precise list of products; certain labour force balances by sectors, and perhaps, for certain scarce skills; and certain confirmations of natural resources, which vary according to the information available.

Since the economic structure of the Latin American countries is such that the plan is only a guideline for the private sector, these confirmations will not necessarily be detailed in respect of that sector.

(d) The capacity of the public sector to mobilize the physical resources required, should be carefully analysed and, of course, adapted to each organization. For example, in the case of Venezuela in 1962, it was precisely because of the restrictions which the lack of executive capacity of some organizations imposes on the work of the public sector, that in a second presentation the level of government responsibility for certain sectors was established as lower than that fixed in the first approximation.<sup>35</sup>

The public investment of the Central Government and of the autonomous institutions should be individualized at the level of each project. These should be analysed by agencies according to their nature, location, sector of economic activity, types of goods, sources of finance, and the demands for action and administration made upon the responsible agency.

In practice, a good part of the investment programmed within the annual plan is already committed. The degree of freedom in the selection of new projects increases to the extent that the plan covers a longer period.

(e) As a result of the foregoing analysis, it is possible to prepare a table of the planned value of fixed reproducible gross investment by sectors of economic activity (agricultural, industrial, etc.) agencies (discriminate public sector and private sector), types of goods (construction and improvements, and separately, machinery, installations, equipment, etc.) and its national and imported content.<sup>36</sup>

This table is already closed at certain over-all levels, and the problem is to "fill it" adequately, as a proof of verisimilitude. Thus:

- (i) The general total of IBF (1), is already given by the over-all model;
- (ii) The total of IBF in construction and improvements (2) should be checked with the production projections of the "construction" sector;<sup>37</sup>
- (iii) The origin (3) of the goods is registered in the over-all model. As there are identified projects with data as to the direct imported content, the values will have to be made consistent;
- (iv) The IBF of the public sector (4) is a result of the scheme of distribution of responsibilities for invest-

<sup>35</sup> "Perspectivas de actividad económica y de empleo" (Documents Nos. 1 and 2). These documents constituted the first summarized version of the projections for 1962 and were presented to the Venezuelan Executive Cabinet between July and September of 1961. In this document a level of responsibility was assigned to the public sector which was reduced by this fact in the final document.

<sup>36</sup> This already provides a first analysis of the possibilities of sectoral financing, which must be made in an over-all form in this stage.

<sup>37</sup> If use is made of a model like the one above, IV 3 A, it will have in its solution a value "which should be aimed at".

STRUCTURE OF FIXED REPRODUCIBLE GROSS INVESTMENT

| SECTORS            | AGENCIES      | PUBLIC SECTOR                |                 |                    | PRIVATE SECTOR               |                 |                    | $\Sigma$                     |                 |                    |
|--------------------|---------------|------------------------------|-----------------|--------------------|------------------------------|-----------------|--------------------|------------------------------|-----------------|--------------------|
|                    |               | ...                          |                 |                    | ...                          |                 |                    |                              |                 |                    |
|                    | Type of goods | Construction and improvement | Machinery, etc. | $\curvearrowright$ | Construction and improvement | Machinery, etc. | $\curvearrowright$ | Construction and improvement | Machinery, etc. | $\curvearrowright$ |
| Content            |               |                              |                 |                    |                              |                 |                    |                              |                 |                    |
| AGRICULTURE        | Domestic      |                              |                 |                    |                              |                 |                    |                              |                 |                    |
|                    | Imported      |                              |                 |                    |                              |                 |                    |                              |                 |                    |
|                    | $\Sigma$      |                              |                 | (6)                |                              |                 | (7)                |                              |                 | (5)                |
| INDUSTRY           | Domestic      |                              |                 |                    |                              |                 |                    |                              |                 |                    |
|                    | Imported      |                              |                 |                    |                              |                 |                    |                              |                 |                    |
|                    | $\Sigma$      |                              |                 | (6)                |                              |                 | (7)                |                              |                 | (5)                |
| ...                |               |                              |                 |                    |                              |                 |                    |                              |                 |                    |
| $\curvearrowright$ | Domestic      |                              |                 |                    |                              |                 |                    |                              |                 | (3)                |
|                    | Imported      |                              |                 |                    |                              |                 |                    |                              |                 |                    |
|                    | $\Sigma$      |                              |                 | (4)                |                              |                 |                    | (2)                          |                 | (1)                |

ment. It will be necessary, therefore, to achieve its necessary financing if we wish to maintain the responsibility structure outlined;

(v) Total investment by sectors (5) should also be consistent with the sectoral projections;<sup>37</sup>

(vi) Every line of the table at the sectoral level should contain the result of the total of individual projects for the public sector (6) and identify the relevant projects of the private sector, estimating the irrelevant ones (7);

(vii) Each heading by agencies can be expanded with more detail and here a column for the foreign sector can be included.

(f) For the consolidated private sector there should already be prepared an over-all test of probability, according to certain patterns of financing. Among other approximations it is necessary, at this stage, to evaluate the mechanism of sources and uses of funds of the relevant identified projects.

(g) It is possible to connect schemes of regional development, operative at the level of "groups" of real projects for the region. Or moreover, in a more empirical

form, on making the level of over-all investment consistent with investment at the level of the projects, it is possible to cause a regional distribution of investment which has its influence on the formation of certain nuclei, on the retention capacity of the labour force in the rural zones,<sup>38</sup> or on any other objective of regional development, with a long-term strategy which the annual plan should implement.

(h) The delay between investment and production has a pragmatic solution in this approximation. Working

<sup>38</sup> This happens in more than one country. In fact, any increase in the speed of agricultural mechanization parallel to a relative increase in the level of activity in manufacturing and construction in the cities, will increase the stimulus accelerating the process of migration towards the urban centres. This is not desirable as a mass movement, since urban unemployment carries with it a higher social cost than rural under-employment and this would be the result if industry grows with a high technological level and prevents employment opportunities. As a methodological problem, it would be necessary to identify the prevailing and non-prevailing projects by particular locations and evaluate the best location of the latter; to establish regional groups of projects and other costs which constitute independent variables in the problem (for example, government costs); and to project local investment derived from them to complete the regional "group", providing the corresponding financing.

at the level of projects, a short-term plan will have to compute the foreseeable real investment to be provided for at each stage of the project (from the project as an "idea" going through the project in preparation, in decision, in legislation for projects for the public sector, and in execution). And the process of investment in endowment (for example, in hospitals), and the costs of achieving it still remain to be clearly identified. The time when production begins can thus be estimated. Moreover, it can thus include a precise and probable list of projects, carry out each one of them in the shortest time possible, and grade the priorities—even at the initial stage of designing the projects—taking into account certain specific criteria and even their complementarity with respect to each other and to already existing investment.<sup>39</sup>

### C. Identification of instruments

The goals so far established for production, investment, employment and over-all transactions—all in terms of physical volume—are used as data for the following stages.

To achieve these there are instruments based on physical and financial flows. The latter will be dealt with later in the paper. The former must be sketched by

<sup>39</sup> With respect to priority of the projects over time, see Ricardo Cibotti "Programación de la ejecución de obras públicas", Latin American Institute for Economic and Social Planning (mimeographed version), where a methodology is presented for optimizing certain variables.

the different sectoral planners according to the objectives of the sector and they should be made consistent in the general plan. The problem is important in itself and it is mentioned here because *the use of these instruments can establish restrictions in the utilization of other instruments in the financial flows.*

Here systematic work is required for each one of the sectors of economic activity. In the first stage, the "set" of variables which brings about the success of certain objectives of the sector should be examined. In the second stage it is necessary to establish the possibilities of using these variables over the short-term.<sup>40</sup>

On carrying out this systematic work, the sectoral planner must identify the need for the use of certain instruments on the field of physical and financial flows. These variables (a measure of credit support, certain level of subsidies, etc.) should be taken into consideration by the financial planner, who must evaluate what the actual prospects are of their being used.

Thus, to the extent that transactions of the physical flows are treated separately for the objectives of analysis and planning, the values arising from the previous plans contain policy requirements which can already be identified with reasonable precision.

<sup>40</sup> Thus, to give an isolated example, some physical goals in the housing field will be dependent on certain technological advances being achieved. These advances will, in turn, depend upon the securing of a minimum series of constructions in order to justify the initial investment. All this will have to be done by the sectoral planner. These investments introduce restrictions in financing.

## V. PROGRAMMING OF FINANCING BY AGENCIES AT VARYING PRICES

### I. THE PROBLEM

(a) Up to now schemes have been formulated for the *programming of financing at the level of the economy as a whole* at constant prices in a given year, and at the general macro-economic level and the macro-sectoral level to the extent necessary to assure consistency. Reference has been made in certain cases to micro-sectoral levels with the same intention.

(b) What must be dealt with now is the *programming of financing by agencies at varying prices*, which covers the whole field of the generation and transfer of funds as a result of changes in the levels, and or structure of prices and factor remuneration; and by virtue of transfers carried out through bilateral mechanisms from agency to agency (taxes, for example), or through intermediary channels (banks and social security, for example).

(c) The programming of financing implies the definition of certain basic policy aims. These must be fixed before the plans are formulated, in order that the plans may become the instrument through which these aims may be achieved.

To this effect, financing policy, *lato sensu*, can be conceived as the result of the convergence of certain fields of policy with regard to: prices and factor remuneration,<sup>41</sup> fiscal and public expenditure, money and banking, exchange and balance of payments.<sup>42</sup>

(d) The value of the physical flows are goals in the financing plan and the new problem lies in establishing the direction and dimensions of the use of financing instruments to achieve these goals. If the solution deviates from certain values acceptable for the instruments, the stages of the physical flows will have to be reprocessed.

(e) The first problem lies in the treatment of *prices*. Without exception, there is inflation in practically all Latin America. It also exists in the northern hemisphere and analyses made for the OECD countries conclude that "strong pressure on prices tends to develop with the desire to achieve high levels of activity".<sup>43</sup>

Policy with regard to prices, salaries and remuneration of the entrepreneur and capital factor (including

<sup>41</sup> This branch is usually misnamed "prices and salaries" omitting the need for a policy for the remuneration of the entrepreneur and capital factor.

<sup>42</sup> Income and property distribution policies will fix objectives or set limits to the problem.

<sup>43</sup> "Policies for price stability", report to the Economic Policy Committee of the Organization for Economic Co-operation and Development, by a "Working Party on Costs of Production and Prices" (November, 1962). When there is a recession, inflationary pressure is not necessarily weaker. When there is stagnation, it is conceivable that inflationary pressure will not make itself felt until society marshals its forces in an attempt to achieve its aspirations.



the firm's profit distribution policy), needs in practice a certain amount of previous and independent treatment even though from a methodological standpoint transfers of earning deriving from that policy should be reconciled with the transfers effected through the other instruments of financing policy. And this is particularly important when annual financing programmes are instruments of extremely broad development programmes which will increase inflationary pressure *per se*.

(f) There is also a serious previous methodological problem lying in the play of interactions between instruments and financial and physical flows and between the instruments themselves. For example:

(i) Certain transactions of the physical flows are a function of price variations;

(ii) The dependent relationship between the monetary and non-monetary instruments motivating price increases should be made clear.

The first case would be resolved by identifying the price structure which allows or encourages the carrying out of the physical transactions needed. This is a difficult problem to solve and will be dealt with again later.

The second requires a decision on a previous question—the degree in which the monetary instruments are considered really capable of influencing price movements. This will be taken up first. Apart from these examples, and generally speaking, the dependent relationships must be realistically identified in each country for the plan to be of real operative value.

## 2. MONETARY VARIABLES AND PRICE CHANGES

(a) The economies of the relatively less developed countries show the most extreme variations in the general level of prices and the greatest changes in their price structure. In other words, they have a higher rate of inflation and the most abrupt inter-sectoral transfers of income over the short-term as a result of changes in the price structure.

The two known approximations which attempt to explain inflation place the main emphasis on structural factors and the handling of monetary policy. The acceptance of one of these approaches has important implications for the use of certain instruments in the campaign against inflation.

In both approximations it is understood that if the rise in prices is high, income distribution patterns cannot grow steadily over the long term nor continue to improve. *Inflation as a permanent instrument of development is, therefore, rejected from the outset.* Nevertheless, prices must rise to some extent as world experience has shown.

(b) The monetary approximations—or “monetary theories” of inflation as it is called—is taken to be based on quantitative theory. In its formal and most over-all expression, the known equation gives prices as a direct function of the means of payment, *ceteris paribus*.

If this criterion is used, it is possible to make various observations.<sup>44</sup>

<sup>44</sup> Among recent critics of the theory: G. Manoussos, “Inflation, croissance et planification” (p. 108), says that “the quantitative theory in its most simple form, is always used because of the mistaken concept of inflation”. This author developed a scheme with the principal meanings of the term “inflation”, the significant

(i) Quantitative theory, as has already been stated, has no dependent relationships. Some elemental algebraic equalities operate as functions in a sense, but not necessarily in any of the two senses of the equality and with any transposition of variables.<sup>45</sup>

(ii) Prices increase through the direct effect of variables of a non-monetary nature. The effect of variables of a monetary nature must be exercised through real variables of a non-monetary nature.

(iii) Some of the so-called “structural” causes are real and are perfectly obtainable (as for example the inflationary pressure arising from devaluations caused by a negative balance of payments owing to a lack of exports, in countries which are predominantly agricultural, where income distribution is inequitable and no agrarian reform has been undertaken). These have worked in the past as fuel with which to fan the flames of inflation and it is reasonable to say that *they will continue to operate in the future, whatever may be the monetary policy followed within probable limits.*

(iv) Practical experience in the application of anti-inflationary policies based on monetary approximation has not been successful in Latin America; whether through lack of perseverance in its application, or through the absence of other measures which were necessary—as it is already recognized that monetary and fiscal policies by themselves alone are insufficient; or because of not having brought about structural changes at the same time as the monetary adjustments; or through having generated social costs in excess of the supporting capacity of the masses or the political power of the governments or for various other causes. Moreover, as they were persistently applied, these policies have so far been medium-term rather than short-term policies.

(c) “Price stability” does not mean the absolute maintenance of a given level or structure. There will always be price increases, even small ones, in view of the well-known problems deriving from: the lack of growth in the productivity of certain services, which causes the rise of their prices as an instrument of growth in the real income of their factors; the inelasticity of salaries in the event of lower prices; the importing of inflation by less developed countries when they buy in inflationary countries which do not devalue; and the effect of multiple rates of exchange, which are usually given in countries which export a good produced at a high productivity rate—which requires a low rate of exchange to export—and whose balance of payments is negative—which requires a high rate of exchange for imports. This list is merely an indication. Experience in Europe and America illustrates several of these assumptions.

(d) *A monetary injection into the economy neutral with respect to a price increase is conceivable.*

(i) By “neutral” is understood a level of liquidity which, in the absence of inflationary pressure, does not

error of which he declares is caused a great deal by the survival of the theory in its most simple form. See also definitions given by M. Brofenbrenner and F. D. Holzman in “Survey of Inflation Theory”, *American Economic Review* (September, 1963).

<sup>45</sup> Thus, in the quantitative equation, it cannot, at the same time and with equal validity, be established that the means of payment are a function of prices, and by transferring variables from one side to the other, that prices are a direct function of the means of payment.

create such pressure; and if there is a price increase, it is limited to providing funds to the extent necessary for the implementation of the physical transactions of the economy at the new price level.

(ii) This theoretical proposition — which will be discussed immediately — can be of practical use by programming liquidity increases within given limits. The problem of liquidity must be treated both at the over-all level and that of given agencies and branches.

(iii) It is advisable to separate the theoretical problem from that of statistical measurement. The latter is dealt with later, in the section of programming of the means of payment.

With regard to the theoretical problem, it is believed that the monetary plan cannot reach “one” optimum solution but only an “area of solutions”, at least at the present level of knowledge of monetary mechanisms and the behaviour of money demand and supply.

This area ought to operate between minimum and maximum liquidity limits.

The concept of a minimum limit to the liquidity coefficient relates to a level below which it is estimated monetary restriction will prevent the implementation of certain useful transactions, principally fixed gross investment; and it is believed that above the maximum limit a surplus of liquidity will be created which, for the structure of transactions and the financial markets of the country in question, would result in redundant funds that would generate an excess of demand or could be applied to unsuitable ends, mainly of a speculative nature, including flight of capital, according to the particular case.<sup>46</sup> *Financial maladjustment could therefore, lead to inflationary pressure above and below certain values.*

In fact, if the increase in the means of payments falls below the minimum limit, the effect will be felt in connexion with the use of some of the funds. Frequently, contract deadlines are shortened, a more intensive use of current bank accounts is made and interest rates necessarily rise.

When banking restrictions are severe, interest rates in the financial market (other than banks) rise considerably and a transfer of operation funds outside the banking system is encouraged. The consolidated bank and the central bank, in particular, gradually lose their control of the means of payments over the medium term; the rate of increase of savings and deposit accounts as a genuine source of support of the increase in bank credit, is weakened, and certain development projects whose rate of yield is inferior or close to the interest rate of the extra-banking market,<sup>47</sup> will not be carried out.

From another point of view the problem is analysed from the aspect of sources and uses of total funds (in current and capital account) of the entity called “enter-

<sup>46</sup> In more than one Latin American country there is a combination of: scarce opportunities for domestic investment, bad income distribution and a banking system which always lends to the more solvent instead of mainly to development projects. Under such conditions, an excess of monetary liquidity constitutes the most fluid mechanism for financing the flight of capital.

<sup>47</sup> In fact, there conceivably exists a set of curves, for each country and each moment, which measure the decrease in the absolute level of gross investment according to the increasing interest rates, assuming a certain interdependence between the variables. These curves are not studied empirically. Perhaps certain surveys made among investors could give broad indication as to their behaviour.

prises”. The items of fund uses, for a certain production level, are rigid with respect to inputs, salaries, and payment of all kinds of debts. It is only possible to postpone or avoid profit distribution, tax payments (when financial administration is inefficient), accumulation of stocks and fixed gross investment. A cut in the sources of funds will always weaken investment, to a smaller or greater extent, since the enterprise does not enjoy much room for manoeuvre. Short-term changes in the rotation of funds and any fluidity of initial liquidity, may make it possible for investment not to be adversely affected. *Over the medium term it is inconceivable that investment would not weaken.*

It is through these mechanisms — at least — that *persistent monetary restrictions become as harmful in effect as inflation* and constitute, in their turn, a structural source of inflationary pressure over the medium term on the side of supply, by preventing the financing of productive investment.

It is possible that these results will not occur if the restrictions are of short duration, but it is certain that they will come about if the restrictive policy becomes endemic.<sup>48</sup>

Conversely, the liquidity surplus above reasonable well-studied limits generates well-known increases in demand which, according to phases of the cycle and the degree of unused capacity existing at the beginning of the process, could or could not result in inflation, although it usually does.

Above or below certain limits, therefore,  $\Delta MP$  is inflationary. Within these limits it is not considered so.

(iv) This theoretical proposition is supported by the analysis of the inter-annual variations of the general price level and the over-all liquidity of the economies in the 1950's — the latter being measured by the ratio between means of payment and gross national product — for industrial countries of the northern hemisphere and Latin American countries.

In the industrial countries the inter-annual price rises have been minimal, regardless of variations in the rise of the liquidity coefficient of the economy as a whole. In the Latin American countries there have been considerable price increases, whether the liquidity coefficients have remained stable or have decreased.

Correlation, of course, is not causality. Moreover, the previous correlation, being established on values which reflect past experience in the application of various monetary policies and in different economic circumstances, could be criticized. However, this calls for serious reflection with respect to two points: the weak anti-inflationary effect of monetary restrictions in countries which have structural problems, and the weak inflationary effect of greater monetary liquidity, in countries which have already solved these problems.

(v) In the initial proposition the dimension of liquidity which is limited to providing the necessary funds for the implementation of projected physical transactions at the new price level is considered neutral. This would seem to infer that a monetary injection which “finances” inflation is also considered neutral.<sup>49</sup> This is not so. On the

<sup>48</sup> This does not mean, of course, that the monetary instruments should not be consistent with policy, along set lines.

<sup>49</sup> Which would be the opposite of the experience of uncontrolled inflation of European economies, which was ended when they ceased putting new money into circulation.

contrary, in periods of inflation selectivity in credit policy should be increased considerably and the necessity for creating means of payment in detailed form "from top to bottom" should be planned.<sup>50</sup> For example, assumptions could be made that it is anti-inflationary to give credit to firms to pay tax arrears. And in any case the means of payment will have to be increased to the required amount for the financing of investment, together with the necessary savings.<sup>51</sup>

(vi) The adoption of this theoretical position has an immediate methodological result. In fact, reaching the conclusion that, between the limits, a level of liquidity may be found which is neutral with respect to the rise in prices, the first deduction from this is that it is necessary to identify the variables of a non-monetary nature, listing them for each country and moment, which generate a rise in prices in order to act on them before initiating the monetary plan proper.

(e) As the opposition between the monetary and structural approach underlies this problem, the consideration of certain additional factors may be of assistance.

It is felt that the two types are not strictly separate. On the one hand, the monetarists point out that there is no dilemma between stability and development because, over the long term, the only alternatives are development without inflation or stability without development. The structuralists, on the other hand, contend that pressure on the rise in prices goes hand in hand with development and that this lateral effect cannot be eliminated unless the rate of growth is reduced to that of the sectors which constitute "bottlenecks". Therefore the pursuit of price stability would condemn the economies to grow at a low rate and, in most cases, at the rate of growth of the exporting sector.<sup>52</sup>

If this discussion is pursued at a high theoretical level there is no conciliation possible, because the philosophy rests on different bases. If, on the contrary, the discussion is centred on pragmatic aspects which will inevitably lead to the methodology of planning the means of payment, it may be possible to bring the viewpoints closer together.

In fact, in this field perhaps more than in any other is to be seen the necessity of "measuring first and arguing later". For this measurement a watertight scheme or frame of reference is needed. It is thought that this framework could be the scheme of a matrix of the flow of funds which includes *all* the transactions of the economy, including the effect of *given* monetary instruments on *given* variables of a non-monetary nature which cause price rises, expressing the connection in schemes or equations with a reaction period, depending upon the conditions in each country.

Under these conditions, the programming of price increases and their effects on the value of transactions will have to constitute a point of contact for both approximations, and this leads to the programming of the increase in the means of payments as a pragmatical problem.

(f) It is thought, therefore, that there is an integral problem of group programming of prices and means of payment, which is essentially quantitative and demands

<sup>50</sup> Some authors doubt the efficiency of selectivity.

<sup>51</sup> So much for theory. It is difficult to measure the problem statistically.

<sup>52</sup> See "Conference on Inflation and Growth in Latin America", Summary of Sessions, by Richard Ruggles (1963).

real values from the general theoretical approximations, although nourished on theory and stemming from it.

It is held, moreover, that it is possible to programme price increases originating in variables of a non-monetary nature; and to design the play of the monetary instruments in such a way that they have no inflationary effect over the short term and promote development over the long term. This will now be attempted.

### 3. NON-MONETARY VARIABLES WHICH CAUSE PRICE INCREASES

(a) It is possible to list the non-monetary variables which generate price increases by working systematically through an analysis of the foreign sector; government action; factor remuneration and the transfer system; market mechanisms; technology; the institutional elements in a general sense, including certain basic attitudes of the community, the structure and systems of ownership and tenure, etc.

In this way, the non-monetary variables which generate price increases can be identified as: changes in import prices in international currency; changes in export prices in international currency (for example when a drop forces devaluation in order to continue exports); modifications in the rate or rates of exchange; the establishment of direct regulations applied to foreign trade and their elimination; the fixing of prices and tariffs on the goods and services of public and private firms, and their elimination; the fixing or elimination of transferable taxes, and subsidies and the form of operation of the tax structure; variations in the salary rate; variations in the remuneration of the entrepreneurial factor and capital; differences between demand and supply at the overall level, or at the level of certain goods, or in certain localities, either because of sudden increases in demand or because of the permanent or transitory inflexibility of supply; the "contagious-effect" which some prices exercise over similar goods; the degree of monopoly in production and the operation of the distribution channels; the substitution process; the sudden increase in the proportion of long-term investments; the factors which cause structural tightness in supply (for example, bad distribution of land, particularly agricultural land, to the extent that land is precluded from the benefits of technological progress; the inadequate systems of uncertain tenure of land — both agricultural and urban — to the extent that they prevent the use of technology or the increase of production, etc.); certain factors which affect the direct cost of industrial production (for example, the degree to which installed capacity is used per hour, the efficiency with which equipment is used per hour, the existence or absence of standards, research into processes and other activities bringing increased productivity, etc.).

This list is descriptive and technically flexible; it includes the primary and secondary causes of price increases. It will certainly be necessary to add to the secondary sources of a non-monetary nature which cause price increases and which find expression through given variables, the expansion of social expectations at a speed greater than that of economic development; the consequent changes in saving habits; and, in a general way, the difference between the institutions which the country has and those which it needs, which causes rigidities whose forms of "escape" often affect prices.

A longer and more precise list should be drawn up for each country, for each programme, with the aim of giving each variable the corresponding value and attention. This is the first stage in the sequence suggested.

(b) The monetary and non-monetary variables operating in an economy interact among themselves, in the time-period of the annual plan, whether they bring about price increases or not. They generate a play of four overall kinds of influencing and influenced variables for which the following treatment is thought to be useful:

(i) In the interactions among non-monetary variables (for example, salary increases which affect the prices of certain goods), the form of reaction and its delay will have to be determined for the purposes of quantification;

(ii) In the interactions among monetary variables (for example, the rediscount rate which has an influence on the credit effect of the private bank) the problem will be similar, its treatment corresponding to the monetary programme, the final stage in the proposed process;

(iii) In the effect of non-monetary variables on monetary variables (for example, tax increases financed by bank credit) identification will make it possible to establish magnitudes which will be used as quantitative restrictions in the monetary programme. It will have to be determined in due course whether this restriction can be observed.

(iv) The effect of monetary variables on non-monetary variables is taken to be neutral, according to what has already been established.

#### 4. ALTERNATIVE COURSES FOR PRICE PROGRAMMING

(a) In the operative sequence, therefore, the non-monetary variables and their interactions with the other outlined variables will have to be listed; the functions defined and the effect of their variations on the general price level and structure established.

(b) Here the previous plan is reverted to in the sense that for prices it is possible to make:

(i) A projection of the *expected* variations in the price level and structure, taking as exogenous variables the non-monetary variables, referred to earlier (as a "passive" register of  $\Delta p$ ): or

(ii) A programme for the price structure and level which is desired, seeking the structure which "allows or stimulates" the success of the physical transactions aimed at. This, in a certain sense, would mean "optimizing" a price structure and giving the programmer an "active" attitude in the search for such a structure, or

(iii) A projection containing the most advanced degree of pragmatic content possible, considering the need for results of practical value.

(c) The choice between a "passive" or an "active" plan of the price level and structure over the short term must depend on a series of elements, the following being considered basic:

(i) The result of the diagnosis of the adequacy of the present price structure with regard to development aims. Here there are certain strategic variables, including: the level of the purchasing power of savings in terms of investment goods; the relative prices of popular consumption goods; and the level of the exchange rate;

(ii) The existence of a long and medium-term projection of the changes necessary in the said price structure;

(iii) The size of the average increase to be expected in the coming year.

Particularly with reference to this last element there must be a clear distinction between the problem of programming prices in a country in which the average increase is from 4 to 5 per cent and the problem in a country where inflation is over 15 or more per cent. The need for an "active" plan is obviously more relevant in this last instance.

(d) In the implementation of an annual plan, what may be called the "passive" projection of the price level and structure can be made by utilizing a series of well-known theoretical *converging* tools:

(i) *With an input-product matrix*, taking the variations in salary rates and import prices (in national currency) as exogenous variables, the change in the prices of each category of goods can be estimated. The same can be done if production prices of certain sectors or the price which is implicit in the remuneration of the entrepreneur and capital factor are taken as exogenous variables.<sup>53</sup>

(ii) Working with "effects" which make it possible to measure increases in the past and project them for the future by "price-effect" and "volume-effect" in each variable, and likewise, *inter-sectoral and inter-factorial transfers through changes in the price structure and factor remuneration*.<sup>54</sup> Thus if the general price level which is implicit in the PNB is projected over the medium term, it will be possible to project the transfers necessary in the annual plan, in order to give to each sector adequate funds for the financing of its *future* investment and the remuneration of its factors.

This is particularly important for the energy, transport and housing sectors, and, in general, those in which governments traditionally intervene in price fixing, and particularly when production is in the hands of State concerns. To obtain this approximation, the accounts of sources and uses of funds by sectors are required.

In this respect, it has been found useful in real analysis to measure the transfer by working from an outline which is wider than that of prices, in the following form:

Between the base-year (0) and the year of the programme (n) there is an increase in the value of PBI at the current factor cost of the economy as a whole  $\Delta PBI$  and in that of each one of the sectors in particular.

(i) For each sector it is advisable to analyse the source and end of  $\Delta PBI_i$ .

Its source is a function of a price-effect ( $\Delta P_i$ ) and a volume-effect ( $\Delta Q_i$ ),

Its end is a function of the increase of the value of the remuneration of the labour factor ( $\Delta R_{t_i}$ ) and the increase of the value of the remuneration of the entrepreneur and capital factor ( $\Delta Rec_i$ ).

The price-effect in its turn becomes a function of an inflation-effect, measured according to the general

<sup>53</sup> With respect to this see, for example, *Input-Output tables—Akadémiai Kiadó* (Budapest, 1962), especially the work of M. Morva included in the publication and the classical work of Leontief.

<sup>54</sup> See, for example, P. Norregaard Rasmussen, *Studies in Inter-sectoral relations* (North Holland Publishing Co., 1957) and *The structural interdependence of the economy*, edited by Tibor Barna (J. Wiley & Sons) especially the work of Rasmussen included therein.

price level which is implicit in the PBI at factor cost ( $\Delta P\Sigma$ ) and of an inter-sectoral *transfer* of income through changes in the price structure ( $\Delta\pi_1$ ).

The *volume-effect* in its turn becomes a function of the increase in the utilization of resources ( $\Delta R_1$ ) and of *changes in productivity*, measured in terms of the resources used ( $\Delta P d_1$ ).

The increase in the value of the *remuneration* of labour factor becomes a function of a *price-effect* ( $\Delta P r_1$ ) and a *volume-effect* ( $\Delta Q r_1$ ).

The *price-effect* is once more a function of an inflation effect ( $\Delta P\Sigma$ ) and a *transfer-effect* ( $\Delta\pi r_1$ ).

The *volume-effect* is a function of a labour force-effect ( $\Delta O_1$ ) and a productivity-effect of the labour force ( $\Delta P d r_1$ ).

The increase in the value of the *remuneration of the entrepreneur and capital factor* becomes a function of a *price-effect* ( $\Delta P r e c_1$ ) and a *volume-effect* ( $\Delta Q r e c_1$ ).

The *price-effect* is once more a function of an inflation-effect ( $\Delta P\Sigma$ ) and a transfer-effect ( $\Delta\pi R e c_1$ ).

The *volume-effect* is a function of an entrepreneur and capital factor-effect ( $\Delta K_1$ ) and a productivity-effect of the entrepreneur and capital factor ( $\Delta P D K_1$ ).

In this approximation, if it is desired to respect the conventions of the national accounts:

$$\Delta Q = (Q_n - Q_0) P_0,$$

for which it is necessary to define:

$$\Delta P = (P_n - P_0) Q_n,$$

in order that the algebraic total of effects shows the increase in value, with a small over-estimation of  $\Delta p$  because of the method used.<sup>55</sup>

This statistical approximation shows:<sup>56</sup>

$$\Sigma \Delta \pi_1 \Sigma \Delta \pi r t_i + \Sigma \Delta \pi r e c_i = 0$$

and makes it possible to estimate the end of  $\Delta\pi_1$  by factors in each sector. Thus it is possible in a short-term analysis to consider the consistency of policies of income transfers to given factors with policies of capitalization of given sectors.

Finally, a group analysis can be made of transfers with taxation and subsidies, variations in which should be consistent.

When there is no central line of financing, cases are often found of variations in taxation and in subsidies which assist transfers to a sector, which are then rendered unproductive by the policy of salaries or of profit distribution or even more by the lack of "a single" policy

<sup>55</sup> See the similar reasoning in dealing with resource and productivity effects, at the beginning of this paper.

<sup>56</sup> There are problems which demand the application of certain *conventions* to  $\Delta P D_k$  and its related variables, given that  $\Delta P D_{Rt}$  is defectively calculated and corresponds to productivity "expressed in terms" of the labour force.

which utilizes in a converging form all these mechanisms.<sup>57</sup>

(iii) Projecting the real experience of the country with very pragmatical criteria. Thus "passive" projection tools are provided by:

The identification of the real dates when the different salary contracts expire, the expected increases and the reaction in the remuneration of the entrepreneur and capital factor.

The modifications which must be introduced by public concerns in their prices or tariffs.

The projected variations in the rates of exchange and import prices.

The variations in indirect taxation and in subsidies, which will be necessary for the objectives and/or specific objectives of the different sectors of economic activity, etc.

The effect on prices of identified technological changes.

(iv) Another of the converging entries in the passive projection lies in estimating the expected price increase in each of the categories of goods which make up the final equation of demand and supply. This can possibly be carried out for exports and imports (according to prices in dollars and the exchange rate); fixed gross investment (opening its components); and government consumption, given the high participation of salaries in their composition and the existence of a policy for them. But the price increase in private consumption, which usually represents about 80 per cent of PBI, needs a different treatment. The diagram on page 92 can be used for this. Within this diagram of relationships, insufficient *per se*, but useful as a converging element, the following goods can be identified:

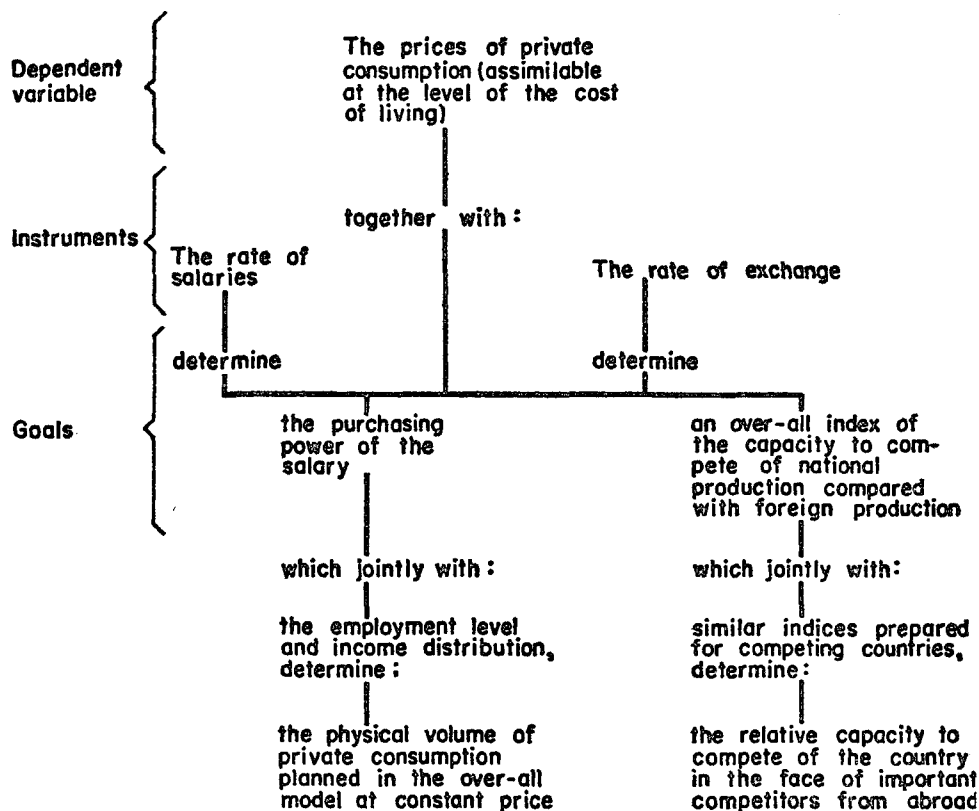
The purchasing power of salary, which must be consistent with the physical volume of private consumption per head arising from the over-all model. The difference must be explained according to the variations in employment and the changes in the income distribution pattern, which will be reverted to later.

The over-all level of the capacity to compete of the country facing foreign competition. Depending upon the country, the system of exchange rates and the possibility of their having an effect on contraband, this index could relate to exports or to the capacity of the national industries to compete with imports, whether registered or not.

To achieve these goals (at this level of the study) the *instruments* of the diagram are: the salary rate and the exchange rate.

Finally, the level of the cost of living — conceptually assimilable with the prices of private consumption — albeit with a margin of discretion — is an endogenous variable. Therefore, it will be possible to make, for *different dates within the year of the programme*, separate diagrams with the two goals and the two instruments, the numerical alternative values of which will provide an *area of solutions* for the price level sought.

<sup>57</sup> Certain over-all analyses of these factors in group form can be found in *An Economic Study of Uruguay: Evolution and Prospects*, published by the Investment and Economic Development Committee (CIDE) of that country in 1963.



(v) Using the inter-play of tools it is possible to plan the price level and structure which would be given in the country for the year of the programme, in terms of non-monetary variables.

It would still be possible to include certain "intentions" of the programmers, for example in the matter of transfers, for changes which are deemed necessary in the price structure.

(e) The "optimization" of a price structure, planned in the terms explained earlier, does not — to the author's knowledge — have a satisfactory theoretical solution for *an operative programme* in which the prices programmed *should be* those which, it must be seen to it, are really applied and to which the country commits its policy.

There is no point in proposing here a solution that has not been sufficiently thought out or attempted. Nevertheless, the necessary model will conceivably have certain characteristics, some of which are noted here only because it is felt that they ought to be discussed:

In an anti-inflationary plan, the criterion equation would minimize the algebraic sum of the "price-effects" of each sector of economic activity:

In the area of final demand, certain "volume-effects" (that is to say, changes in the physical volume of transactions) could become a function of the "price-effects":

Certain exogenous variables (for example import prices) should operate; and perhaps it would be necessary to fix some data (for example, supporting agricultural prices):

All price-effects ought to be limited according to the maximum transfers allowed:

Given certain interactions, the model would not be linear.<sup>58</sup>

(f) An intermediate solution is considered the most viable, utilizing every kind of converging tool. This will make it possible to "programme" the price structure up to a certain size, and to "project" the effect of certain exogenous variables, in a study carried out in successive stages. This solution is considered the most useful for Latin American countries in the process of development, especially those which are already suffering accelerated inflationary processes. In this respect:

(i) A high rate of annual increase in prices does not decrease in a year. Therefore, at the beginning an estimate should be made of the rate of increase of the general price level implicit in the PBI which would be consistent with longer term plans. The first stage, therefore, consists in fixing the maximum rate of increase in the general price level which is to be achieved in the final year of the programme. It is reasonable to think that in a country with a high rate of inflation, the permanent lowering of the rates of growth of prices to minimum levels will take no less than three or four years;

(ii) Next *the means of reducing the inter-annual rates of growth* must be established. A minimum level of increase, which must be taken into account to determine these means will be given by the salary increases (and by the remuneration of the entrepreneur and capital factor, if it is known), import prices and prices and tariffs of goods and services of public concerns, the incidence

<sup>58</sup> This condition of not being linear would also be given in the model of the allotment of savings by agencies which is included later in the paper, also due to the interaction between the instruments.

of which is particularly strong in the first year of a medium-term plan.

(iii) Another stage will consist of the *estimate of the expected increase in prices, according to the interaction of the non-monetary variables*, utilizing a matrix of input-product and establishing limits for inter-sectoral and inter-factoral transfers. Here, just as much as in work at the over-all annual level, a high degree of penetration will be necessary in the research into the machinery through which the different variables operate.<sup>59</sup>

(iv) Finally, another of the elements required in this stage is the establishment of the *price structure, indirect taxation and subsidies, which serve the specific objectives of each sector*.<sup>60</sup>

The required behaviour can be summed up as follows: there is a factor remuneration which is not necessarily equal to the market price of the products. When in the national accounts the PBI is computed "at factor cost" apart from PBI "at market prices" this fact is registered "ex post". The difference between both elements is caused by the interplay of indirect taxes and subsidies.

There will be, therefore, two price structures: one for remunerating production, encouraging investment and technological advance in the sector with which it deals, and also for spreading the results of technological advance from the sectors where productivity is increasing most towards those where productivity is increasing least and the other for orientating final demand and particularly consumption.

At the level of the producer, therefore, the price constitutes a further instrument of sectoral promotion, and in determining policy the operation mechanisms of the remaining instruments should be taken into consideration. At the level of the final user, the price should be determined by trying to orientate demand towards the optimums which are identified in the programme of physical transactions. The structure of indirect taxation and subsidies will result and this task must—when possible—be done sector by sector and harmonized at the over-all level.

In order to clarify the proposed methodology, let us take the case of the energy sector, all the more interesting because in Latin American countries it is usually in the hands of the public sector. The tariff and price structure for the different uses of energy (electric and other fuels) is one of the elements included in the process.

The course of financial programming at the level of the energy sector should begin by determining long-term investment needs in order to make the service available. Therefore, the proportion in which the sector—sometimes identified with a State agency—should finance this investment must be established. Then the other uses of the funds in the capital account are determined in such a way that the gross savings which the sector must generate arises from the difference in the capital account, from the diagram of sources and uses of funds, projected over the long term, expressed annually. The saving of any given period ( $n$ ) is a function of the saving in the

<sup>59</sup> One of the many reasons why the cost-price-salary spiral is estimated in some countries seems to be that salary contracts change throughout the year instead of at a single given date. Thus there are "contagious-effects" between unions, which tend to exaggerate the increases, that is to say, a salary/salary spiral.

<sup>60</sup> In this respect, all sectors of economic activity as well as the fields in which final demand is usually divided should be called "sectors".

base-year (which is a fact) and of a savings index, which in turn, is a function of productivity and the terms of trade of the sector.<sup>61</sup>

$$(AB_n = f(\overline{AB}_0, TI, Pd)$$

Considering that there are limits to productivity growth and taking into account the fact that the prices of inputs and salaries of the sector also constitute data, *variations in the rate or price at the level of the producer in the year of the programme will result from long-term investment and financial policy and they should be adjusted to serve this policy*.

At the consumer level it is possible to design a price structure for the different uses of energy, which would direct consumption towards definable optimums, for example, on the basis of the minimizing of imports or the minimizing of the consumption of fuel, etc. This structure will give an average weighted price per energy unit not necessarily equal to the average price of the same energy unit which was sufficient to remunerate production. The difference will be over-all indirect taxation—positive or negative.

Such a dual price structure is, therefore, an instrument of the specific sectoral objectives directed towards long-term development. If the annual plan desires, in its turn, to be an instrument for achieving the physical objectives of development and distribution, these price levels and structures ought to be practical price data for the general programme to the extent that within the physical objectives of each sector they are accepted as objectives of the over-all plan.

This work must be carried out for all the "key" sectors, and chiefly for those which, like housing, transport and energy, use a good part of basic social capital and public investment. No less important are the objectives of the agricultural sector and the degree in which a given price structure should converge to bring them about accompanied by given structures: taxation, régimes governing the size and tenure of land, and of factor remuneration which are necessary to ensure that any increase or transfer of income really serves the sector, and does not merely bypass it in favour of luxury or low priority consumer goods.

Through the convergence of over-all objectives of increase in the general price level, levels of expected increase for sectors and factors according to non-monetary variables, and price levels and structures which fulfil specific sectoral objectives, within limits set to allowed transfers it is possible to project and in part to programme the price increase and its effect on the relevant transactions of the annual plan.

(g) These schemes are first approximations at the over-all level, which is the purpose of this paper. A detailed study is obviously required to implement the policy, with a view to reducing the price increase as much as possible and using the movement of prices to guide the price structure towards more desirable patterns of behaviour.

This is one of the more difficult and least explored problems. In general it could be described as that of

<sup>61</sup> This is a generic way of expressing the relationship. There is a detailed system of equations which overcomes the algebraic difficulty which occurs when saving in the base-year is negative (as often happens in the sector of the example) and which includes other variables.

seeking a structure which operates efficiently as an incentive to production and technological adjustment and which reduces the over-all price increase to a minimum, attempting through such a structure to obtain the transfer of income from some sectors to others in order to spread the low costs obtained through the "productivity-effect".<sup>62</sup>

(h) The preceding treatment would seem to suggest that the market mechanism should be replaced by a rigid price plan. This is not at all the intention of the proposals.

But what the governments now really "govern" in the price structures and levels of the countries, whether by action or by omission, should be clearly recognized.

Provisionally, the governments: fix exchange rates, taxes — all transferable to a certain degree — and subsidies: frequently intervene in the question of salaries for the private sector (although they sometimes do so without a policy); fix by authority the salaries of their employees and the prices of the goods and services produced by their concerns, usually set supporting prices for agricultural products and regulate rents; and, through laws granting franchises, establish the rates of private transport. When they do not enter into the direct fixing of prices of articles produced by the private sector (mainly popular consumer goods) they tend to fix profit margins or gross marketing margins. And, through the indirect tax structure and subsidies they are responsible for shaping the structure of market prices, distinct from that of factor remuneration.

However much the Latin American countries — to none of which this example fully applies — adopt the theory of the full capacity of the market to fix prices in agreement with the consumers' preferences, reality is something else again. And even anti-monopolistic legislation usually has little application in practice, perhaps because actual conditions — the size of the national markets, among others — establish patterns or attenuated forms thereof.

It seems reasonable, therefore, to believe that the alternatives in connexion with price policy and factor remuneration are not those of orienting the price structure and level or of not doing so. Orientation by the government is a fact in the problem. There remain only the alternatives of how to orientate well or badly.

In the last instance, the projection of the price level and structure determines what is best for the country, but not who will implement it, which calls for a policy definition.

And in this respect, it is extremely important to note a highly illustrative example of the concept which rules in European countries, which have already passed this discussion stage relating to the action of the government

<sup>62</sup> This last step is essential. In fact, as much as maximum limits are established for the increase of factor remuneration according to productivity, there are sectors in which productivity does not increase, but where the factors normally increase their remuneration according to the salary/salary "contagion", and to the resistance of the entrepreneurs and capital factor to losing its aliquot. A minimum price increase must occur, therefore, at least through this effect. And it will be that much less to the extent that the prices of the inputs and the purchasing power of the income feel the benefit of the mentioned transfer.

in the matter of salaries. There it has been understood<sup>63</sup> that "the stabilization authorities must have a wages policy for dealing with the problem of wages — just as they must have monetary and fiscal policies for dealing with the problem of demand".

(i) This is a first approximation, which *ought to be made consistent in programming at the level of each agency*, at which point the results of the present processes and their implications should be revised.

## 5. THE PROGRAMMING OF FINANCING, EXCLUDING THE MEANS OF PAYMENT

(a) In the annual plan, the programming of financing must be expressed in the form of *accounts for each of the agencies*<sup>64</sup> in which the necessary transactions for making operative the policy contained within the figures may be determined.

These transactions will be expressed in values at current prices, projected for the year of the programme, and should contain volume variations consistent with the attainment of physical goals. Therefore, it will be necessary to identify for each transaction the values corresponding to the base-year ( $\Delta V_0$ ) and the "price-effects" ( $\Delta p$ ) and "volume-effects" ( $\Delta q$ ) which will motivate their changes at the level of each agency.

The accounts of agencies ought to be made fully consistent. For this it is advisable to include them in a *matrix of the flow of funds*, which includes all the transactions in current and capital account, through which a balance is achieved between sources and uses of funds of each agency. The diagram of such a matrix follows:

(b) An operative programme could be formulated by *working in stages on the different zones of the matrix*, it being understood that to formulate a plan is not to fill a matrix but to use it as an instrument of consistency.

At this stage in the programming, when a series of volume-effects are facts it would be possible to conceive a model of financing that may be over-all. While such models are the final aim, for the initial period of pragmatic formulation it is thought best to proceed in stages. This could include every transaction and agency, according to a logical order, supported by "extra-diagram" presentations.

(c) In principle, all the  $V_0$  are facts. In practice, as work is done during year 1 to formulate the programme for year 2, year 1 will have to be projected, especially in a period of intense price change.

(d) As a first step, elements are already available to cover certain transactions at the levels of the economy as a whole and of the foreign sector. In fact, the over-all model at constant prices shows the  $\Delta Q$  for the PBI, consumption, foreign trade, internal savings and gross investment. The following values (some of them already available), will therefore have to be established:

(i) The rate of exchange (or rates, as the case may be) to which it was foreseen that the commercial and

<sup>63</sup> *The Problem of Rising Prices* (Organisation for European Economic Co-operation), p. 56. This is a useful example although the context of European experience is obviously not applicable without adjustment to Latin America.

<sup>64</sup> See, for example, the annual plans in Holland, already mentioned, and in France, *Rapport introductif aux travaux du groupe de l'équilibre de la Commission de l'économie générale et du financement du plan*.



DIAGRAM OF A MATRIX OF THE FLOW OF FUNDS FOR THE PROGRAMMING OF FINANCING BY AGENCIES AT VARIABLE PRICES

| AGENCIES              | Central Government   |                |         |    |    |       | Government departments | State enterprises | Social security | Private concerns (by principal sectors) | Families (by income strata) | Banking system (including central bank and private bank) | Insurance and financial companies | Foreign sector | TOTAL          |         |    |    |       |  |
|-----------------------|--|----------------|---------|----|----|-------|------------------------|-------------------|-----------------|---|-----------------------------|--|-----------------------------------|----------------|----------------|---------|----|----|-------|--|
|                       | Concepts<br>Transactions<br>(detailed)   | Y <sub>0</sub> |         | ΔP | Δq | Value |                        | Id.               | Id.             | Id.                                     | Id.                         | Id.  | Id.                               | Id.            | Y <sub>0</sub> |         | ΔP | Δq | Value |  |
|                       |  | Uses           | Sources |    |    | Uses  | Sources                |                   |                 |   |                             |  |                                   |                | Uses           | Sources |    |    |       |  |
| I<br>Current account  | (a) FBI, consumption and foreign trade   |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |
|                       | (b) Wages and salaries; distributed utilities; ownership income; transfers and interests; taxation and subsidies |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |
|                       | (c) Gross savings  |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |
| II<br>Capital account | (a) Gross investment*  |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |
|                       | (b) Increase in the means of payment   |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |
|                       | (c) Other financial transactions   |                |         |    |    |       |                        |                   |                 |   |                             |  |                                   |                |                |         |    |    |       |  |

\* By transferring gross savings to the capital account there is identified here a "balance to be financed" by agencies, the total of which is zero at the level of the economy as a whole.

financial transactions with abroad would have to be effected.

The rate of exchange will, therefore, be an instrument the size and nature of which will have to be measured according to: the physical goals of the programme, the limits imposed on prices, and the conditions obtaining in each country;

(ii) The specific financial transactions (part of the transactions of group II) thanks to which the required amount of foreign savings must be returned to the country, computed at the level of each one of their specific ends (investment projects or lines of credit);

(iii) The allocation of responsibilities in respect of each proposed external transaction and the analysis of its feasibility. A feasibility study already had to be made in order to establish physical limits to the expansion of exports and the effect of substitution. Moreover, when working on the basis of current prices, other data could be added to provide a more detailed analysis.

In this case — in particular referring to the general problem — the  $\Delta p$  and  $\Delta q$  could definitely find a place in the matrix, once there had been formulated a real “plan for the foreign sector” which must be prepared in full detail, so as to ensure the feasibility of the proposed transactions and mobilize the agencies responsible.

(e) The product, consumption and foreign trade must be imputed to each one of the agencies (line I-a).

It will be necessary to programme a distribution of responsibilities for production — already known by sector of economic activity — charging it to certain agencies. This point must be consistent with the sectoral programme; and it will be important to identify “who is who” in the processes where this is necessary.

Family and government consumption have already been identified in the over-all model in physical volume by strata. Allocation of responsibilities through the transactions of foreign trade has already been given. And with it, the transaction of line I-a can be planned in physical volume, and levels for the  $\Delta p$  can be established.

(f) A responsibility ought to be allocated in the same way for fixed reproducible gross investment and for inventory changes. In dealing with the feasibility of fixed gross investment, the advisability of working with diagrams which compute investment by sector of economic activity, types of goods, national and imported content and agencies was already established. Every section of such a diagram being the result of the sum of values at the level of projects — for the whole public sector and for relevant projects of the private sector — the investment which in each section corresponds to the year of the programme, ought to derive from a diagram formulated for each plan in particular, computing separately the dates of execution and payment of each.

The estimate of inventory charges can be made with a degree of detail which depends on the size of certain stocks (for example, livestock and export products) and on the statistical coverage. This covers the line II-a of the matrix.

(g) At this stage in the process it is possible to include in the diagram the projection of the government accounts (central, departmental or provincial, State concerns and social security organizations), in a first over-all approximation intended to establish limits to

certain strategic variables (for example, taxation and transfers to families for retirement and pensions).

In fact, an endemic fault of countries in the process of development — particularly in Latin America with rare exceptions — lies in the absence of financing of the consolidated public sector. To remedy this, it is considered that among other things, a proper centralization must be effected whereby over-all financial policy is determined in a uniform way, including the policies of: taxation, current expenditure, investment, foreign and national debt, subsidies, inter-governmental transfers, productivity in State concerns, rates for such concerns, social security loans, aid to the banking system, and of the other transactions which are included in the financial framework of the consolidated government. In many countries of the area there has been realized a considerable effort to compute consolidated accounts of the public sector. The author does not know if in Latin American countries, these accounts are currently projected and systematically used as an instrument of policy determination.

For the purposes of the annual plan various observations can be made:

(i) The annual plan is an operative plan; it is, therefore, necessary for the government to discharge in full the responsibility assigned to it by the programme. This physical task, which makes the government a real manufacturer of services, is achieved with resources which are utilized at a certain productivity level. The budget naturally in the form of a programme budget for this purpose, provides the funds which, in such a case, should be fully invested at the estimated efficiency level. If, in such a hypothesis, the ideal is reached — and this has not yet been achieved in Latin America — in which the budget is formulated after the annual plan, it should then be considered as the order to spend *all* and not only an authorization to spend *up to* the amount provided for in the budget.

(ii) A first projection of the account of the central government must necessarily be very pragmatic, apart from the alternative that may be processed with *ad hoc* models or included in much more general models. Thus, at the level of each tax in the preliminary projection it will be necessary to identify and evaluate various alternatives related to real instruments in: the methods of taxation; the forms of payment, loans and instalments; the delays in collection; the formulas of liquidation of taxes; the case of taxes applied only once; the opposition of the taxpayers; the level of their liquidity and real capacity to pay, etc. All this constitutes a real annual tax programme which, in the optimum case, should be an *instrument of implementation of a much broader tax plan*.

In fact, the tax structures of the Latin American countries require improvements even if only to fulfil the classic requirements, fair distribution, fiscal adequacy, volume-elasticity and price-elasticity, this last attribute being particularly important in countries with a high rate of inflation.<sup>65</sup>

Their inadequacy has tended to be remedied by the usual expedient of increasing the bases or the rates of

<sup>65</sup> The existence of the ALALC perhaps calls for an additional requisite: “as few transfers as possible”, in order to have the minimum effect in national expenditure.

taxation provided by law, thus in practice making tax evasion or fraud an even more rewarding pursuit.

Moreover, three capacity requirements should be added in order to fulfil the ever more specific objectives of development:

Since taxation is one of the instruments upon which the achievement of sectoral objectives is made to depend, it should have the capacity to contribute to the securing of said objectives. Hence in designing a long-term tax structure, the projects designed by the various sectors will have to be considered and harmonized at the macro-taxation level;<sup>66</sup>

Indirect taxation and the system of subsidies should be such as to "open" the price structure at the producer and consumer levels, in order that both should function efficiently in the role assigned to them;

There should be flexibility in the application of the taxes, in order that they may be used as short-term instruments, in the anti-cyclical and, more particularly, the anti-inflationary policy. Since taxes are normally fixed by law, they are firmly set and not subject to short-term manipulation within certain limits which the legislator could establish.

In virtue of these considerations it is thought that a tax programme could be formulated for one year, as soon as the basic tax structure is satisfactory. If it is not, as often happens in Latin America, a tax programme over the medium and long term will have to be formulated and the revenue from the taxes proposed for the year of the programme should be determined.

(iii) For the State concerns, it will be necessary to *design a long-term financial policy, and the yearly tariff will be an instrument of long-term financing*, as was mentioned earlier.

The emphasis placed on this point reflects the current situation in the Latin American countries. The economy of the State concerns — particularly the public utilities — tends to generate insufficient savings for the financing of their long-term investment and financial commitments. The gap is covered by borrowing and by transfers from the central government. When financing is not centrally directed, the resulting policy is usually one of high investment coupled with low rates and productivity, which is completely inconsistent. If the annual plan should, in this connexion, be confined to registering the intentions of the State concerns, it will probably also be limited to giving numerical expression to the lack of long-term policies, one immediate result being an increase in the central government deficit.

Hence the need to formulate, in respect of each State concern, a long-term plan which specifically covers the aforementioned variables, as well as the other necessary components. A preliminary formulation will be based on the annual plan in order to include the consolidated accounts of the public sector and to measure the effect of such policies on the other agencies which are part of the economy.

<sup>66</sup> This harmonization will not always be easy. In fact, and as an example, in the case of the income tax, which tends to be the "pivot" of all current tax reforms, the sectoralists are logically inclined to generate tax "Schedules" applied to their sector. This is at variance with the tendency of those in favour of global taxation, who prefer the industrial and global tax.

(iv) The above arguments also apply in the case of social security which, in Latin America, has grown by "aggregation". What has to be done here is to bring benefits into line with the growing life expectancy rate, to harmonize, as part of tax policy, the contributions which supply the system and all things considered, to make it the instrument through which a single policy is carried out. As the social security system is a channel of distribution of goods to the lower income brackets, and as the amount that can be distributed is a function of the *per capita* real income, there is usually a contrast between excessive legislative generosity and hard practical reality, which is more marked in periods of inflation. Otherwise, the annual plan will have the option of: limiting itself to projecting maladjustments, in which case the strategic variable will be the coefficient reflecting the extent to which the system meets its commitments to the beneficiaries; or of becoming the instrument of implementation of a longer-term plan, resting on proper legal, statistical and actuarial bases. The actuarial basis is, of course, the most logical.

(v) Once the transfers between the State concerns, the provincial governments or departments and the social security system, on the one hand, and the central government, on the other, have been computed, the government's preliminary account can be "closed". The annual plan can then determine the size of the funds which will compel the government to turn to the other financial transactions of line II-c and the banking system (line II-b).<sup>67</sup>

(h) With the intention of centring the problem in the enterprise and family sectors projections for the agency "financial and insurance companies" should be formulated. In less developed countries the participation of these agencies in the formation of gross domestic savings must be small especially if the social security system is computed separately.

(i) Total domestic savings is already known by difference. The problem now arises of *programming domestic savings by agencies, the total of which may be more than or equal to that required for total investment of the economy as a whole, once the identified foreign savings have been deducted*. If it is the same, a sum of savings will be arrived at which will allow the programmed investment to be financed exactly. If it be greater, the previously formulated approximation could be reprocessed with regard to physical flows, increasing the level of the rate of investment unless it is preferred to reduce the use of foreign savings. Therefore, the composition of domestic savings should be programmed by agencies.

(j) The new problem could be solved by successive approximations, or by formulating a system of simultaneous equations for an already given price structure. It is possible to have a *model with the following main characteristics* the processing of which offers an area of solutions:

<sup>67</sup> It must be borne in mind that these are preliminary steps because, since taxes, the prices of goods and services produced by public enterprises, and social security contributions are instruments for dealing with the generation and transfer of private sector savings, their final magnitude in the programme cannot be established until the whole system has been closed by pairs of elements. This first elaboration of the public sector account will be a means of placing limits on possible variations of these instruments, which are useful for the subsequent stages.

(i) An equation of definition which makes domestic savings the sum of the savings of the family (open by income strata at as many levels as covered by the policy of income and property distribution); of the concern (open in the sectors which economic policy identifies as being of separate activity) and of the government (open by agencies, or rather in a single total if a mechanism of financial transfers operates with fluidity). The saving of the financial intermediaries could enter as a constant and will be of an irrelevant size.

(ii) Separate equations of definition by agencies;

(iii) Separate equations of behaviour for strategic variables of each agency, in which the instruments and their behaviour must be analysed separately. For this, it is possible to start from an analysis which relates the model or partly "extra model" to instruments with endogenous variables, in interrelations in the reaction of the instruments among themselves; which identifies the specific cases of relationship and establishes its form in equations, with its period of reaction. This requires methodical work for each country at each moment.<sup>68</sup>

(iv) Limits to the use of the instruments, based on the preliminary projections of the public sector, the balance of payments and the price structure.

(v) Minimum and maximum limits to the savings of each agency, according to an estimate combining at least:

The social and political objectives of economic policy;  
The estimate of the prospective behaviour of savings by agencies, if the prevailing forms of action of the instruments remain stable;

The limits established to the use of these instruments;  
The capacity of each agency to resist changes induced by such exogenous variables; and

An estimate of the possibilities of covering the difference between savings and investment through transactions on capital account.

The establishment of the reaction equations and those of the relations of reciprocal influence between instruments, and the calculation of the parameters, are tasks which require separate analysis for each case.

Here the problems are to a great extent practical and of the research kind; but the establishment of limits to savings for each agency must, moreover, have a profound political implication. Let it be considered for instance, that the savings of the "families" group in the higher income strata is as much a political as an economic variable. And if he has to plan with social objectives, the programmer ought to give to this variable alternate dimensions, leaving the politician a choice. Whatever may be, then, the difficulties of choice, there will be at last a *clear* policy under these conditions.

The problem is complex, to the extent that the projection at current prices would require the use of certain price-elasticities, the use of which in pro-

gramming does not, in practice, seem to have had much support in the past. Moreover, salary being an instrument and in view of the need for reconciling the physical volume of private consumptions by strata deriving from the over-all model with the demand of the strata, it will be necessary to have recourse to family budgets and to make broad simplifications even if the regional differences in the level and structure of prices prevailing in most of our countries and not in ours alone are taken into account.<sup>69</sup>

Whether working with a model or through more pragmatic approximation—but always focused on the operativeness of the projection—there should be a current account covering the fields I-a and I-b of the matrix, obtaining the structure of gross saving at current prices by the difference (I-c).<sup>70</sup>

(k) Since the distribution of responsibilities for investment (II-a) is known it is advisable to programme the financial transfers (II-c) in order to set the problem of the programming of the means of payment within certain limits. For the calculation of the other financial transfers some already imputed transactions may be taken as points of reference. Thus, the calculation by double entry has meant that many of these transactions already have estimated figures (for example those in connexion with the foreign sector). The most important of these are: increase of the credit balances granted by concerns to consumers, placing of public securities by the government directly in the domestic market and abroad, increase in the borrowing by enterprise with the foreign sector; increase of the floating domestic debt of the public sector, placing of shares by enterprises in the market and other larger transactions.

## 6. PROGRAMMING OF THE MEANS OF PAYMENT

(a) At this level of the processing, the accounts of the agencies, in the vertical sense, are practically projected in all the transactions except those corresponding to the increase in the means of payment. This is the next step, which assumes that an increase in the means of payment must be programmed which would be necessary to "finance" the transactions projected at current prices.

This operative assumption is the result of having up to now considered the increase in the means of payments as "neutral" with respect to the inflationary process. It has already been emphasized that liquidity dislocations are considered inflationary, as much above as below certain fixed limits at the level of the economy as a whole and at the levels of the different sectors or branches, and of the agencies operating within the economy. These limits arise from the operative necessity of searching for an area of solutions and their value

<sup>69</sup> The problem is very important in agricultural countries, since the salaried agricultural worker is among the low strata of monetary income, which is spent in regions which generally have a lower level of relative prices for certain goods.

<sup>70</sup> The treatment given in the French model (already mentioned) is interesting, where the allocation of savings is a function of a rate of saving of the families, certain debt coefficients of enterprises and the value of the "impasse" in the financing of the government. Alternative projections are formulated for all these variables, and limits are established for each one according to past experience, prospects, and the proposals of the programme, achieving an "area of solutions", within which it is possible to choose the most likely points.

<sup>68</sup> Just as this paper was ready for publication there became available a very interesting work, *Economic Policy in Our Time* (North Holland Publishing Co., 1964), which gives qualitative relations of behaviour for various countries of the northern hemisphere, between certain instruments and given variables—general objectives of economic policy (full employment, price stability, improvement in the balance of payments, improvement in income distribution in consumption patterns, etc.).

will always be arbitrary, although they follow historical patterns.

If the total of sources and uses of funds programmed for the various agencies is calculated, seeking an adjustment by an algebraic difference through the quantity of the means of payment, it is possible that a high rate of growth in prices will give unreasonable results for monetary expansion. Thus it would be "financing inflation". This stage, precisely because it is the last one, shows the possibility of realizing adjustments which could require certain reprocessing in previous stages of the indicated sequence.<sup>71</sup>

(b) In this field it is possible to work at the macro level and at the level of detail. The elements which follow correspond—as in all previous contexts—to the macro-monetary level.

The first problem at this level is that of setting limits to the over-all increase in the means of payment.

To this end various converging approximations, aimed at determining the demand and supply of the means of payment can be followed.

(c) The variations in the demand for the means of payment signify changes in *the over-all liquidity of the economy as a whole*. This liquidity can be measured as a function of the relation between the means of payment and PNB.<sup>72</sup>

Over the long term, the liquidity coefficient thus determined for the economy as a whole ought to increase in the Latin American countries. Whether because of the recovery of the economy from auto-consumption; the growing specific nature of the different stages of production and the consequent increase in their number; the greater relative expansion of the financial markets, or for other reasons, the necessity for liquidity must increase more than the PNB as a result of the increase in the transactions per unit of the PNB which such changes imply. Accordingly, the limits placed on  $\Delta MP$  in an annual plan should be stages in an itinerary programmed over the long term, in which the expressed elements of the field of the physical flows and the improvements in the financial markets are data.

(d) Over the short term, the *demand for money* is influenced by a series of variables, which are different according to the agencies. In this, monetary theory abounds, and, depending upon the theoretical approximation made, the independent variables in terms of which  $\Delta MP$  can be estimated are different. In general, money is kept in cash as a bearer of value or as a cover for a given number of days of payment. It will therefore be necessary to establish community behaviour in this sense, and to extend the analysis to the agencies which

compose it, quantifying the attribute to objectives of diagnosis and programming.<sup>73</sup>

In certain cases, it will be possible theoretically to work with models in detail, which take into account a series of monetary and credit variables, particularly when a certain preference for liquidity is in operation as a bearer of value.<sup>74</sup>

For the Latin American countries, it is considered that a good first step can be taken on the basis of establishing the demand for means of payment as a function of the payments which each agency ought to realize, on current and capital accounts. This concept corresponds to that of  $\Delta MP$  as a function of transactions.

Given that  $\Delta MP$  in the hands of each agency corresponds to the increase of monetary balances and current banking accounts, a simple model could be formulated for the various agencies—dividing the "enterprises" by sector of economic activity—by adapting known schemes in entrepreneurial economy, in the following form:

$$(1) P_{\epsilon} = f(C, I, S, \dots)$$

$$(2) \lambda = \frac{P_{\epsilon}}{MP_j}$$

$$(3) \frac{365}{\lambda} = d$$

$$(4) d_2 \geq d \geq d_1$$

$$(5) AMP_j = MP_j^1 - MP_j^0$$

Where:

$P_{\epsilon}$  : total payments realized for the agency in the period;

$C, I, S$  : consumption, investment, salary, etc. (transactions already projected in the uses of funds of the agency)

$MP_j$  : means of payment in the hands of the agency, measured as an average for the period, approximately equal to the semi-sum of  $MP_j^0$  and  $MP_j^1$

$\lambda$  : coefficient of rotation of the means of payment at the level of the agency;

$d$  : number of days of payment covered by the average stock of  $\Delta MP$ .

The "key" variable of this model is  $d$ . The number of days of payment covered by the average holdings in cash and in banks is a variable which, duly adjusted at the level of each agency by seasonal holdings should change very little over the short term in an economy with fluid financing. Over the medium and long terms, the movement should follow a trend registering the effect of formal changes in the mechanism of payments, and the effect of changes in the economic structure, already described.

The former include: the effect of changes in the share of credit and, in particular, of the use of non-banking documents (promissory notes, etc.) in the composition of the total instruments which constitute means of

<sup>71</sup> And, eventually, to indicate the need of modifying the physical programmes or the use of certain instruments.

<sup>72</sup> Latin America would like this to be PNB and not PBI, in order to exclude net external transfers since these do not usually go through the domestic money market. The coefficient of over-all liquidity—the inverse of income or product velocity—is used by Professor Triffin in a paper presented to the Fourth Conference of the Central Bank Experts of the American Continent and in *Statistics of Sources and Uses of Finance* for European countries. The methodology of analysis which he gives has also been used by CEMLA in its *Latin American Monetary Studies*. This methodology was tried as a technique of programming for the Venezuelan Plan of 1962 by Mr. Juan Bracich jointly with the author as an approximation converging with others, which are shown here in part.

<sup>73</sup> See for example, Boris Pesek, "Determinants of the Demand for Money", *The Review of Economics and Statistics* (November, 1963).

<sup>74</sup> See for example, the model of Don Patinku, "Money, Interest and Prices".

payment; the variation in the average periods to changes in the commercial methods, and the changes in the composition of the total payments, according to the different types of transactions.

Since small numerical variations of  $d$  weigh quite heavily in  $\Delta MP$  it is advisable to operate the "enterprises" agency as sectorally open as possible using the analysis of sources and uses of funds as disaggregated as possible in a converging form, in order to approximate solutions.

In this diagram the essence of the formulation resides in first establishing limits of the variable  $d$  in each sector or branch, choosing from various alternative solutions a value of the increase in the means of payment which can be taken as a "basic" solution, and establishing an "area of sensitivity" in the form of new limits which are more precise and constitute data in the programming of the supply of the means of payment, which is the next stage.

On establishing limits to  $d$  by sectors or branches or agencies, it will be possible to begin the design of a selective credit policy. And precisely, the taking of a uniform variable as a point of reference must allow, at least, for the revolving credit to give the selective policy a reasonable quantitative framework.

This is an instance when recourse must be had to the micro-monetary levels and the projection must be based on detailed fund source and use accounts by branches of industry.<sup>75</sup>

The fixing of selective limits to  $d$  by agencies and branches entails the adoption of a policy. In fact, it is obvious that, for example, these limits should be reduced for branches importing luxury, non-essential goods when balance of payments problems arise. Likewise, they could be raised or lowered for the export sector, according to whether the aim is to assist in the financing of exports or to compel exporters to settle their foreign exchange positions, when there is no provision for compulsory sale to the banking system.

Reasonably specific limits will thus be established for increasing the means of payment as a function of demand. The subsequent stage will be to programme the origin of the means of payment by effects and transactions, that is to say, its supply.

(e) By establishing tentative limits to  $\Delta MP$  limits were also set to the programmed variations of the coefficient of liquidity ( $\rho$ ) at the level of the economy as a whole, being:

$$\rho = \frac{MP}{PNB}$$

In this scheme since the programmed value of PNB is already established at current prices, the values of fixed MP also give fixed value for  $\Delta\rho$ . Over the short

<sup>75</sup> One of the transformations in the banking policy implicit in this approximation resides in the fact that the departments which analyse the sources and uses of entrepreneurial funds are not mere statistical research offices, but directly serve the operating departments of the central bank and the development bank. This is extremely important since it constitutes a necessary requisite for lending "to investment projects" with their requirements of revolving capital, and not only to "enterprises". The implication of this fact on the structure of property is essential, especially to the extent that this change allows the elimination of "present solvency" as an attribute of first order for the agreement, without, of course, completely disregarding it.

term this variable cannot fluctuate much and it will be necessary to formulate a programme for its future course, making the annual plan a stage towards its achievement.

From these bases, which frame the problem, it is possible to develop certain approximations by "effects" at the over-all level and also at the intra-banking level.

(f) The increases in the total means of payment result from the algebraic sum of increases originating in the four effects which explain their variation, i.e: fiscal ( $\Delta F$ ); exchange ( $\Delta C$ ); credit ( $\Delta Cr$ ); and non-specific effects ( $\Delta NE$ ).<sup>76</sup> The exchange effect is a result of the form of financing of the economy as a whole and with respect to the foreign sector; and the fiscal effect is that of the method of financing of the public sector. These elements become, then, data in the present problem and their dimensions are registered in the balance of payments and in the account of the public sector respectively.<sup>77</sup>

The credit effect is generated in the public and private banks. The first of these must be projected together with the consolidated account of the public sector. Therefore, there only remains the consideration of the credit effect in the private bank and those non-specific factors which operate as absorption elements in the case of the normal behaviour of the monetary economy, since they contain the variations of the savings deposits accounts and other factors of lesser importance.

(g) In such conditions and for limits given to  $\Delta\rho$ , there will be an area of solutions within the variations given by the movement of the savings and deposit accounts ( $\Delta DAP$ ) and by the increased credit of the private bank ( $\Delta C_{bp}$ ).

Figure III contains two indications of the means of payment for Venezuela in 1962, where the first (line A) corresponds to the minimum liquidity limit ( $\rho = 0.132$ ) and the second (line B) to the maximum limit ( $\rho = 0.145$ ). Both constitute the framework for a first area of solutions.

The hypotheses formulated for minimum and maximum increases of savings deposits add restrictions which reduce the area of solutions. Because of these, the new area of solutions is in the space between the two verticals of the previous figure ( $DAP_1$  and  $DAP_2$ ).

In the determination of these limits there is an interplay of factors which could be called of the "structural" type (income distribution pattern by strata, savings habits of the community, possibility of other competing savings deposit outlets, etc.); of the "marginal" type for the programmed year (variations in interest rates; and the size of the credit increase, which in its turn generates new deposits following the well-known pattern); and of the "circumstantial" type (the tendency to place capital abroad, variations of the exchange rate and of the level of internal prices expressed in US dollars, the seasonal variations and notably the degree of capacity of the income tax administration, when it compels

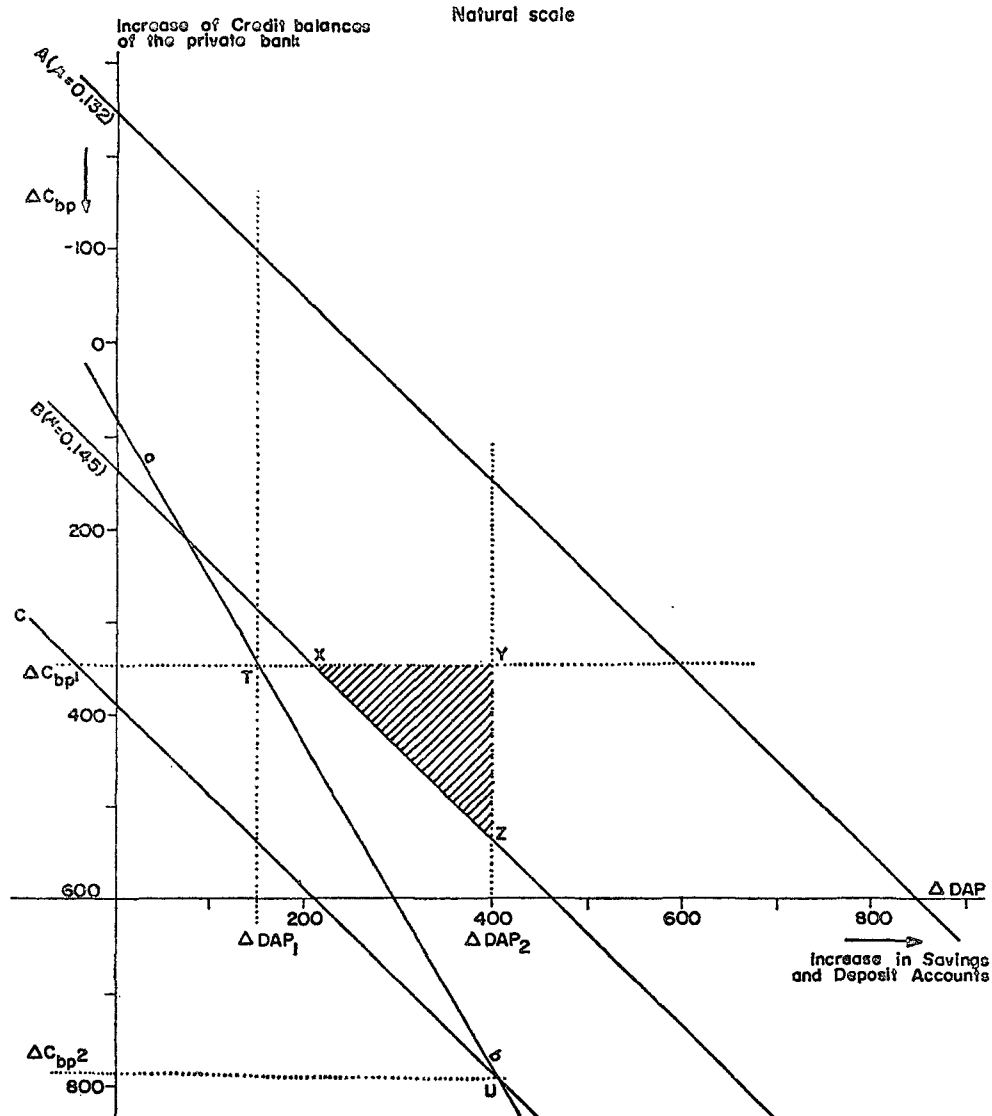
<sup>76</sup> This approximation of opening in effects has been suggested by Bruno Bovedani in "Analytical Bases of Monetary Policy".

<sup>77</sup> The fiscal effect should be estimated before this stage, establishing the degree to which the government must have recourse to the bank, and taking into account the fact that on measuring the movement of public papers held by the bank, a "fiscal effect" can be calculated which does not necessarily correspond to a source of funds of the government, but to the bank's open market operations with public securities.

Figure III

VENEZUELA : AREA OF THE PROBABLE CREATION OF THE MEANS OF PAYMENT IN 1962

(Millions of bolivars)



maintenance of "black market capital" in order to conceal evasion). The merely illustrative list is intended to indicate types of problems which must be solved in each country and period, for the purpose of fixing more or less specific limits. Of some help here is the fact that the deposit trend curves are usually regular, when actual situations are compared.<sup>78</sup>

<sup>78</sup> Save in exceptional cases, as in Venezuela in 1960, when savings deposits diminished. In this country, as can be seen in figure III, the limits to  $\Delta D_{bp}$  were set widely apart by the existence of a most unequal behaviour pattern of the monetary economy in the years immediately preceding the programmed year: by the great flexibility of the banking system as a whole, and by the restrictions which the existence of a high degree of freezing of the portfolio of the various banks imposed on the handling of certain over-all tools of policy. As a wide range of variation is usually frequent in some Latin American countries, it is thought that the need to work within an area of solutions rather than with a single solution provides a particular advantage in this field. It should also be made clear that in Vene-

(h) It is equally conceivable that limits can be imposed on increases of  $D_{bp}$ , and on this basis there would be a narrower area of solutions in a rather oversimplified form.<sup>79</sup>

But the increase in the credit balances granted by the private bank is closely correlated with the increase in savings and time deposit balances. This is a function

zuela the level of over-all liquidity in 1962 was relatively low mainly because of the fact that the product included many activities which—like petroleum and mining and a good section of agriculture and handicrafts—hardly flow through the domestic monetary sphere; and because the production apparatus was not very diversified and the financial markets not fully extended.

<sup>79</sup> Note that in the abscissa increases in the savings and time deposits are represented rising towards the right; while in the ordinate the increases in the credit balances of the private bank are shown increasing downwards. Under these conditions, as the lines approach the intersecting point the total level of the means of payment must increase.

of the costs of the private bank, which has to borrow to pay the interest on its deposits and of rediscounting as well as the *ex-post* dependency of the increase in deposits on the increase in credit; the policy of cash positions; the rediscounting habits of the private bank; the structure of sight savings and time deposits, and the effect of other variables. It would be better to speak not of "function" but of "the correlation observed" to which expression can be given in a relation which, in this case, is linear. The function for the Venezuelan case, effected in years of growing or shrinking deposits and credit, as the case may be, is indicated by *ab* in figure III.

This means that when a minimum limit is placed in the axis of the abscissas, the result is an equal restriction in the ordinate which passes through point T and is marked by the line  $C_{bp1}$ . The same line devotes the limits of the increase in private bank credit balances, in the hypothesis of minimum deposit growth.<sup>80</sup>

In this way, the area of solutions will have narrowed down until it is covered by the triangle XYZ shaded in figure III, and may be achieved without changing monetary policy, if *ab* passes within it.

But this does not happen in the example, and if the linear relation of deposits to credits were rigid when the value of the average variable in the abscissa reaches the maximum limit set, the value of the ordinate will imply the existence of a restriction placed outside the area of solutions, and indicated by the line of points  $C_{bp2}$ , which crosses *ab* at point U on line C, of greater increase in the means of payment, and which therefore, does not satisfy the maximum restriction imposed earlier. Therefore, XYZ contains an area of greater probability of solutions, given the value of the slope of *ab*.

(i) There do exist various alternatives to resolve the problem arising from the fact that *ab* does not pass within the area of solutions in the example. One way would be to modify the slope of the line AB, making it enter the area of solutions. In order to achieve this, certain lines of monetary policy should be developed, which are identifiable in an intra-banking model, for

<sup>80</sup> Up to now the analysis assumes that there exists a linear relation and that this relation is a single one. Instead of by a line, the area of relation could be identified by curves which limit it and which need not necessarily be parallel to each other.

which the new estimated slope would be a datum, naturally processable in various numerical alternatives.

Thus, the approximation to an area of solutions indicated, in the example, the need to give a pendular movement to the curve which marks the dependent relationship between increases in deposits and loans, providing some guidance to monetary policy decisions, and to the subsequent formulation of the intra-banking model.

(j) The choice of a solution for the alternatives provided by the area determined in the way described will be made with all transactions except the intra-banking operations covered in the line II-b of the matrix of the flow of funds used as a reference.<sup>81</sup> The final approximation requires, therefore, the formulation of a model which takes as data the results of the preceding processings, and shows how the instruments of the banking system should move in order to achieve the established levels. This stage operates only on the banking transactions segment of line II-b in the reference matrix.

In the case of the Venezuelan example some multipliers were used. The over-all approximation was insufficient since it did not specifically indicate the instruments which must be used in policy guidance. Certain advances are being made to create a model capable of serving for this stage of the design.

This model, already more restricted, could be planned from certain reaction equations, of measurable form and parameters and could be included in definition equations for which accounting data and balance-sheets for each individual agency as well as an over-all balance-sheet, as happens in a private bank, are available.

The formulation of such a model would be considerably facilitated by the preparation of a *submatrix of intra-banking transactions, on current and capital account*. The inclusion of a current account is necessary, given the sensitivity of the result of the bank's profit and loss account as a guiding factor for policy changes.

A matrix calculation of this kind for the intra-banking transactions in capital account of the Argentine bank was effected annually during the period 1955-1961.<sup>82</sup>

<sup>81</sup> It will be advisable to separate the credits by deadlines with the object of improving this approximation.

<sup>82</sup> See *Financiamiento del desarrollo*, a paper by the author, published in 1960 by the Federal Investment Council of the Argentine Republic.

## VI. FINAL DETAILS

1. The purpose of this paper was to outline an itinerary, at the general macro-economic level, without delving into specific fields of policy more than was absolutely necessary. It is, therefore, a paper of the type developed in breadth, with just enough penetration into each particular field to achieve its objective, and seeks to limit itself to providing a consistent frame of reference for the more searching work required in each branch.

2. In designing the programme, the expert ought to start from certain political premises. If practical experience in Latin America is taken as a guide, he may not always find it easy to do so,<sup>83</sup> since there has not

in every case been widespread contact between career experts in permanent planning organizations and politicians sufficiently well-versed in economics. However, rapid progress is being made towards this goal.

In the case of an annual programme, in which immediate economic policy is outlined, this link between planners and levels of political decision is essential.

3. The same applies to the levels of implementation. A monetary programme, for example, cannot be prepared in an ivory tower and then imposed upon the central bank, which must carry it out. The excessive tendency

work, instructed them to take as points of reference the "points of political decision" deriving from the diagnosis which the very same experts prepared (decree of January 1964).

<sup>83</sup> A notable exception is provided by the case of Uruguay, whose Executive Authority, in ordering the planners to start



towards feudalization of administration makes it even more imperative that the technical levels and political levels of the agencies of implementation should be already involved from the stage of formulation of the programme. This is particularly important because the planning organizations work according to their own lights chiefly where policy is not properly outlined. They cannot subsequently become instruments of implementation in order to assure the fulfilment of the plan.

4. Over the short term, the possibility of broad innovations or drastic changes in certain fields is reduced to the extent that a country's economy achieves greater regularity from an institutional and economic standpoint. Certain variables cannot fluctuate very much in a single year. Nevertheless, in Latin America, the inflationary processes, the sensitivity to events abroad, the relative efficiency of the public administration, and other similar factors, provide a much broader range of variation. It will therefore be necessary to work with various hypotheses and not attempt immediately to include in the plan preconceived schemes of policy or utilization of given instruments. Hence, the work "in stages", the search for areas of solution rather than single solutions and, when this is impossible, the addition of a "basic" solution with an analysis of sensitivity, to establish the degree of variation of certain endogenous variables as a function of the important elements of the problem.

5. A short term plan contains sociological and political variables expressed in economic terms. It should, therefore, be technically valid and have political expression in order to serve the community.

Among the points of considerable importance to political expression are employment and the purchasing power of salaries. Although information today is usually insufficient for undertaking a programme at income levels, it is conceivable that a plan will have to marshal the support of the lower income strata of society, provided that provisions were made for the improvement of what might be called a "coefficient of satisfaction" of their needs.

6. One year is usually a very long period for a precise outline, especially in countries where the basic economic sectors have marked seasonal periods. It will be necessary, therefore, to develop the programme for shorter periods, at least for the most relevant variables. These periods ought to be sufficiently long to permit reasonable and efficient estimates; and sufficiently short to permit supervision of its application so as to make changes, if necessary, as the programme proceeds and without waiting for the economic balance sheet at the end of the year, when nothing can be done.

7. As far as the technical formulation is concerned, this planning process in stages could perhaps be prepared

in a simultaneous approximation, provided that operative parameters are calculated and reasonable limits are placed on certain variables. Perhaps having one stage for the physical flows and another for the financial flows, would give the financing programme its proper place — at the service of specific physical objectives.

8. In so far as this paper contains an approximation of the design of the objectives of a monetary policy from the first steps in the field of programming of the physical flows, it is believed that:

(a) The joint programming of physical and monetary elements is certainly possible;

(b) When a decision is made to optimize a physical variable, as in this case, the physical flows should constitute data in the monetary problem. If they do not respect certain reasonable restrictions in the field of financial flows, the field models of the physical flows must be reprocessed;

(c) The use of matrices of the flows of funds as a frame of reference for the different stages of planning, sources and uses being made equal at the level of each agency, will always make it possible to reach a formally consistent diagram of transactions;

(d) It is possible to compute the increase — positive or negative — in liquid funds which each agency needs to have available. Therefore, an area for the increase of the means of payment can be established, set within over-all limits of liquidity, for the economy as a whole, outside which inflationary pressure of monetary origin is generated both above and below these limits;

(e) If, in a country suffering from inflation, it is conceded that price increase can be checked by means of credit restrictions which assumes that accurate dependency ratios between both variables have been determined — the programmer will have to submit to the choice of the politician two obvious alternatives:

(i) The optimization of a physical variable, with a maximum restriction imposed upon the increase of bank credit, or

(ii) The minimization of the credit increase, with a minimum restriction imposed upon the growth of a strategic physical variable (the product, or employment, for example). *The important thing is that this restriction should be effectively established* since otherwise, the social cost of stabilization might be beyond that which is feasible.

Thus, identifying the connecting mechanisms between the growth of the means of payment and price increases, both alternatives can be estimated and offered to the politician for his choice, at different levels of the inflationary cost of development and the social cost of stabilization.



## RURAL ELECTRIFICATION IN LATIN AMERICA

The first Latin American Seminar on Rural Electrification was held at Buenos Aires, from 16 to 22 November 1964. It was organized by the Government of Argentina through its Energy and Fuel Department, with the co-operation of the Economic Commission for Latin America and the publication "Revista Latinoamericana de Electricidad". More than 250 delegates from fourteen countries attended the meetings, and over fifty papers were submitted.

The session was presided over by Juan Sabato, Chairman of the Argentine Organizing Committee, and the Vice-Chairmen were J. Crouzeilles Abreu (Brazil), E. Ovalle Barros (Chile), S. Sáenz Nieves (Mexico), N. E. Clapp (United States) and R. Zuloaga (Venezuela). Adolfo Dorfman, Director of the ECLA Natural Resources and Energy Programme, was Director of the Seminar and also General Rapporteur together with Alejandro Vegh Villegas. The topics for discussion were distributed among five committees, of which the respective Rapporteurs were A. Eidlicz, E. García, J. L. Pérez, C. Robertson Lavallo and A. Vegh Villegas.

The agenda, account of proceedings and the main conclusions of the Seminar are given below.

### AGENDA

- A. *Rural electrification in Latin America: requirements and criteria for its establishment*
  1. Suitable areas for the development of rural electrification.
  2. Economic and social criteria governing their selection.
  3. Establishment of zonal and national priorities.
  4. Technological conditions in the electric power and agricultural sectors.
  5. Comments on the results obtained in certain countries.
  6. Analysis of past mistakes, their underlying causes and possible remedies.
- B. *Plans, installation costs, financing and rates*
  1. Integration of rural electrification plans with national and zonal development plans for agriculture and electric power.
  2. Programming schedules and criteria of size.
  3. Investment and costs: diesel generation systems, independent units and single-phase and three-phase interconnected distribution systems.
  4. Unit costs; consumption level and structure.
  5. Rates.
  6. Financing: contributions from consumers and the State; subsidies; national promotion and development banks; funds provided under electricity legislation.
- C. *Technical features and standardization of materials*
  1. Standardization of voltages and materials.
  2. Design characteristics of the distribution networks, tolerances and degrees of safety.
  3. Domestic production of materials for cables and networks; regional co-ordination in the establishment of industries.
- D. *Institutional and juridical organization*
  1. Electric power, agrarian and co-operative legislation.
  2. Public agencies working in this field at the national, provincial, state or municipal level.

3. Private agencies: electricity companies, co-operatives, consortia, etc.

### E. *International technical and financial co-operation*

1. Dissemination of technical information.
2. Personnel exchange, fellowships and courses.
3. International technical co-operation.
4. International financing organizations: terms and methods.
5. Financing of suppliers of materials and electricity network construction firms.

### ACCOUNT OF PROCEEDINGS

#### A. *Requirements and criteria*

The living levels of the rural population in Latin America are in general unsatisfactory and any socio-economic process that aims at improving them must establish a clear-cut system of priorities for the various stages of the work. The electrification of rural areas can undoubtedly be one of the key factors in bringing about such an improvement, provided that minimum conditions of population density, size and tenure of holdings, income and educational level obtain.

In the course of the discussions at the Seminar, it was pointed out that the provision of electric power to rural areas by means of high-tension cables depended on whether a large proportion of the land was split up into holdings, thus ensuring an adequate level of consumption density. Size is not the only determinant; tenure is also a factor to be borne in mind, since the initial investment per consumer is high and farmers should therefore have sufficiently stable conditions of tenure allowing them to enjoy for some time to come the benefits of the financial effort they must make to secure electrification.

The mechanization of farming frees the rural worker from toil and physical suffering, allows him to live in more comfortable circumstances and raises agricultural productivity. However, in countries with an abundant supply of unskilled labour, where the labour absorption capacity is relatively low or on the decline, the advantages of replacing human labour should be carefully considered in each case.

Thus rural electrification does not exist in a vacuum. It must be viewed in conjunction with the inadequate and unsound social and economic infrastructure in rural areas, and its many dynamic links with other sectors may provide both the tools and prerequisites for development.

The task of supplying the Latin American countryside with electricity is vast and costly. In this connexion reference was made to the low average *per capita* electricity consumption. This is even lower in the rural areas where half the population of Latin America lives, few of whom have access to electric power.

It was generally agreed that although the public authorities have a strategic role in rural electrification develop-

ment, any action they may take should be closely co-ordinated with the activities of local communities to which a large number of tasks could be entrusted within the over-all plan of work. Local contributions could take the form either of funds or of assistance in the work itself.

The use of electric power for household and production purposes involves a process of education that would either precede or accompany the establishment of the power network and provide information for producers with no previous access to electricity. Without this process of education, combined with a sales campaign for electrical machinery and appliances, initial consumption might be so low as to make unit costs prohibitive. It was also pointed out at the Seminar that the staff in charge of rural electricity plants and networks should be encouraged to pursue their education and technical training in order to prevent the mishandling of the equipment from causing its rapid deterioration and, consequently, an economic loss.

Unless rural income is high enough to ensure self-financing of a large proportion of the initial investment made by producers, the savings accumulated in the course of utilization cannot be expected to cover the cost of buying machinery for the productive use of electric energy, since the sums involved would far exceed the capital required to set up a rural distribution system. Priority should therefore be given to areas in which the type of farming is such as to ensure that the productive uses of electric energy will account for a substantial share of total consumption. Some examples are areas under irrigation, dairy and truck farming and the preparation and preserving of agricultural commodities that need industrial processing to improve their sales possibilities.<sup>1</sup>

If the economic conditions of producers in the same area differ widely, a suitable infrastructure can be laid for a rural electrification system to meet the needs of the wealthier consumers deferring to a subsequent stage the link up of the smaller-scale producers whose installations can be financed by savings obtained from the provision of electric power to the first group of customers.

When economic analysis shows that electric energy can provide better and cheaper service than independent power units the farmers are very likely to put up a large share of the initial capital invested in installation and distribution. Since farmers are nearly always reluctant to make technical and economic changes, the advantages to be derived must be made quite clear to them and the economic benefits expressed in simple and easily understandable terms.

In areas where agricultural savings are high, rural electrification would help to direct those resources towards non-luxury investment beneficial to the economy as a whole. In the absence of suitable outlets for his savings, the farmer often chooses investments that are of secondary importance from the economic standpoint.

Other requirements include a supply of electric energy in urban centres or sub-stations near the areas that are to be electrified, in addition to communication faci-

ties for transporting the materials needed for the establishment of the networks and their upkeep during operation.

In order to keep the burden of investment per customer within reasonable bounds, it was suggested that there should at least be one consumer per kilometre and that load density should be approximately 10 kVa for the same distance.

It was agreed that a co-operative or community spirit in which individual efforts could be co-ordinated and incorporated into the work of the public sector was essential for the successful establishment of rural electrification.

Stress was laid on the importance of properly co-ordinating rural electrification programmes with plans for national power network expansion and agricultural development. Rural electrification programmes are often a natural offshoot of the integration and interconnexion of generating and consumer centres since, in stringing power cables across agricultural land, it may often be advantageous to reduce the voltage and distribute the power over the whole area. As regards the second group of plans, the choice of the order in which the different areas are to be electrified may well be related to the production targets and incentives specified for those areas when the programmes were prepared, while at the operational level, agricultural extension services will conceivably include the correct and efficient use of electric power both for production and within the undertaking itself.

As the Seminar found that there was some confusion as to what is really meant by rural electrification, it was decided that clear definitions should be given. It was noted, for instance, that a large number of the electric power co-operatives in certain countries were located in urban centres and had only an indirect and tenuous connexion with rural activities. It was suggested that a distinction should be drawn between the electrification of rural areas proper and that of urban centres with a population consisting mainly of rural workers. Within the first group, a further distinction could be made between each of the following, in view of their different characteristics: (a) areas of intensive cultivation; (b) green belts encircling big towns; (c) other areas.

## B. *Planning, costs, rates and financing*

### 1. *Planning*

From the standpoint of economic planning and given the relatively large outlay that might be required for a rural electrification programme, the participants agreed that the sum to be contributed by the State for that purpose should be determined within the framework of the Government's over-all investment plan.

Apart from this necessary link with the investment programme, rural electrification planning should form an integral part of the plans for the electric power sector as a whole and be closely connected with all rural planning activities, whether economic or social.

In commenting on the conditions prevailing in the countryside, the participants stressed the fact that the rural areas are the least developed sections of the Latin American countries and that no real national progress can be made until the numerous bottlenecks existing in those areas have been removed. In that connexion it

<sup>1</sup>Price ratios play a fundamental part in this since savings capacity largely depends on the prices received by the farmer and the cost of his production equipment and consumer goods, while the profitability of labour substitution depends on the relationship between the price of the electrical machinery, the price of each kilowatt consumed and the cost of the labour to be replaced.

was pointed out that the aims of rural electrification are both economic and social, the former covering all aspects of the use of electric power in production.

But the predominantly social basis of a programme of this kind exercises an indirect economic influence by raising the living level of rural families and thus increasing the possibilities of settling rural areas. Even when the investment has little to offer from the standpoint of a conventional profit and cost study it may nevertheless be a great value to the community. However, it was stressed that investment under a programme of the kind described should not divert an unduly large amount of funds from other competitive uses in the agricultural sector that generally bring about an immediate rise in the level of productivity per hectare of land worked. To prevent this from happening, close co-ordination should be maintained between rural electrification programmes and over-all agricultural development programmes at both the design and operational stages, since the extension activities carried out by regional agronomists can help to intensify and rationalize the use of electricity in the work and life of the rural family.

As regards the economic benefit of using electric power in the mechanization of farming, a distinction was made between raising productivity per man/hour and productivity per hectare. In the first case the relationship between the price of the agricultural commodities, the price of machinery and the cost of the labour to be replaced must be included in the reckoning. Due care should be taken not to aim at labour substitution targets similar to those set up in countries with very different price ratios, such as Australia, the European countries, New Zealand and the United States, where the input-output price quotients for machinery are much more favourable to the producer and where the cost ratio of one machine/hour to one man/hour is considerably lower. The economics of labour substitution should therefore be worked out in relation to the terms of trade between the agricultural sector and the other sectors of the economy and to the latter's capacity to absorb the surplus labour produced by the introduction of modern techniques into agriculture.

Most of the participants agreed that it was both necessary and justifiable to establish subsidies or make income transfers in the interests of a rural electrification programme. Various ways of securing resources were suggested, among them, earmarking a certain proportion of the revenue from agricultural taxes and the levy of a surcharge on urban consumers. It was pointed out that the second method was tantamount to tax discrimination but could be justified to some extent by past events since, in most of the Latin American countries, the rural areas have been subsidizing the towns through systems of control, differential exchange rates, foreign trade taxes and consumer subsidies on goods and urban services, such as basic foodstuffs, transport, electric light, etc.

It was stated that one of the first requisites for sound planning is to estimate as accurately as possible the rate at which future demand will expand in the area to be supplied with power. Demand can expand in three ways: through extension, wider coverage or increased consumption. The first occurs when the area of supply is extended, the second when new customers are added within the same area and the third when existing consumers step up their average consumption. Both the aggregate growth

rate and structure of demand, as well as the factors underlying the process of expansion, have a vital bearing on such important aspects as the design of an electrification programme, the choice between a single-phase and a three-phase system, and the initial oversizing of the structure.

As regards the selection of a generating source to provide rural areas with electric power, it was agreed that the rural networks distributing energy generated at a focal point should be placed on the same footing as individual generator units powered by diesel engines, windmills or both. If, for instance, a Government were to adopt a development measure involving a subsidy or specific protection for one of the above systems, it should do the same for the others to ensure that the price system would operate smoothly and that the consumer could make his choice in keeping with the requirements of the economy as a whole.

Once the need for a rural electrification programme has been recognized, the problem of geographical selection crops up, in other words, the order of priority in which the different parts of a particular country are to be supplied with electric power. It was suggested that preference might be given to the more dynamic areas or to potential consumer demand where specifically expressed. It was also agreed that a prior study of costs with sales forecasts would normally enable the potential electrification areas to be ranked on the basis of estimated rates of return or profit-cost coefficients.

Once a study of this kind has been made, the first step would logically be to electrify the areas that would yield the best results according to the profit-cost analysis. But if the State or its development agencies can afford it, it might well be possible to extend electrification below the specified floor represented by the rate of return that is equivalent to the minimum rate for low-risk investment in the capital market. In any event a distinction could be made between short and long-term profitability, when there would be every justification — even if social benefits were discounted in favour of a purely economic criterion — for establishing a subsidy during the first few years of the system's existence, to be repaid at a later stage.

The participants agreed on the need to comply with the fundamental conditions which had been laid down for a subsidizing mechanism of the kind described at the meeting on electricity rates (Santiago, December 1962), namely:

(a) The subsidy should be justified by a thorough study of its cost and of the economic and social benefits to be derived from it;

(b) It should be clearly recognized by the recipients as a subsidy and publicly acknowledged as such by the taxpayers in general;

(c) Its financing should be commensurate with the aims pursued and, above all, should not affect the profitability of the enterprise in any way — in the present case the public utility concessionary — serving as the medium for the subsidy.

## 2. *Costs, rates and financing*

As in the case of every investment in plant for providing a given area with a service, the unit costs of installing an electrification system are reduced as the surface and linear densities of demand increase. The Seminar's dis-

ussions centred on the costs per kilometre and per user for linear densities from 10 to 50 kVa/km which is the range for most of the areas in Latin America where rural electrification is likely to take place with the aid of the State. For densities of less than 10 kVa/km the rate of return is extremely low, but at densities of over 50 kVa/km it is more than enough for the systems in question to be built without recourse to external contributions.<sup>2</sup>

As regards rates, the possibility of applying the usual standards was evaluated. Mention was made in this connexion of the conclusions reached by the seminar on rate bases which discussed the same question (Santiago, Chile, December 1962). Rural rates would therefore follow the same standards, although their average level might be reduced in relation to the total cost as and when the transfer mechanisms referred to before enter into operation. With respect to the possibility of establishing a single national rate it was agreed that the decision to do so would depend on the length and other features of the system, since a flat rate is feasible in Uruguay which forms an economic whole, but unworkable in Chile where the differences in the cost of supplying energy are too great for unification to be anything but a threat to the efficiency of resource allocation. It was agreed that if a flat rate was out of the question the structure of the tariff in the different areas should be unified to prevent a variety of criteria from being applied.

Some of the participants suggested that it would be desirable to fix differential rates which would benefit some uses such as irrigation. Others opposed this step on the grounds that the same economic objective of reducing the unit cost for heavy users whose peak demand comes at off-peak hours could be achieved through the establishment of a universally applicable and rational rate schedule which would favour consumers with load characteristics of that kind.

With respect to financing, the salient aspects discussed included the advisability of setting up highly versatile and flexible mechanisms,<sup>3</sup> and the need for consumers to share in the initial investment in order to stimulate their interest and desire to co-operate in the project. There was a consensus of opinion that generation and transmission projects up to and including 33 kVa should be financed by the electricity company holding the concession, while the capital costs should be charged at a later date to rural consumers through the block tariff. The problem is therefore one that arises in regard to the financing of intermediate and low-pressure voltage gear, which is directly chargeable to the customer. From the various financial systems proposed by the participants for building cables and plants with a voltage of less than 15 kV, it is apparent that the customer's initial contribution is usually about 25 per cent of the investment, either in cash or in the form of some of the building materials and labour needed. The remainder is financed by the electricity enterprise that dispatches block energy, by the national and State Governments and by special rural electrification funds supplied from domestic and external sources. This sometimes results in a net subsidy.

<sup>2</sup> For Argentina, Chile and Uruguay it is estimated that the cost per kilometre would be 1,000 to 2,000 dollars, on the assumption that a reasonable target for 1980 is the complete electrification of all suitable rural areas in those countries.

<sup>3</sup> Both juridical and operational. A case in point is afforded by the rural electrification "consortia" of Mendoza, Argentina.

The redemption period for these contributions depends on the user's capacity to pay and varies from a minimum of four or five years to as much as twenty-five or thirty years, the medium of recovery being invariably the monthly or two-monthly bill.

It was stressed that the special funds set up for rural electrification should be permanent and that their real loan capacity should be maintained or even increased over the years. In other words, the fund's capital should be kept in circulation and not eliminated. A few participants suggested that loans debited to the fund should contain an anti-devaluation clause to safeguard the value of the balance and interest. Others disagreed on the grounds that co-operatives might be adversely affected since their rates were not protected by any such automatic device. In their opinion, the continuity of the fund could be assured through a tax on the extra income that would accrue from the beneficial effects of rural electrification.

As the ability to save is very unequal in rural areas and the profit-cost ratio varies widely from one part of a country to another, the participants considered that the agency responsible for implementing the rural electrification programmes should establish one type of mechanism for areas where the customers would be able to carry the whole burden of financing and another for those where external contributions would be needed as well. Some distinction might also be made between modes of payment in the same area on the basis of the consumer's ability to pay. The general and special rural electrification programmes in Puerto Rico were quoted as cases in point.

The analysis of financing on the basis of the tariff and of the need to keep the user's equipment in line with investment in the system as a whole referred to Puerto Rico and Venezuela in particular. Both have adopted the device of guaranteed minimum consumption, which encourages consumers to buy equipment and should therefore be supplemented by sales promotion for the products in question, on the same lines as the examples given previously.

### C. *Technical features and standardization of materials*

#### 1. *Technology*

It was pointed out at the Seminar that the reasons for the low consumption density and load factor that make the establishment and operation of rural electrification systems such an onerous task, especially in Latin America, also explain why far less demand is made upon them for quality and continuity of service than on urban and industrial systems. For instance, the economic and social consequences of a few hours' break in the supply of power to rural areas cannot be compared with the repercussions in urban centres where vital services are affected or industrial activities halted that by their very nature can be interrupted only at heavy cost. Accordingly, in the search for economic methods of providing rural areas with the benefits of electric power, a special technology has been developed, particularly for distribution.

With respect to generation and transmission, it was recognized that in recent years the interconnexion of electric power systems has made headway in a number of Latin American countries, thereby reducing the cost of energy. A great many small isolated plants still exist with high generating costs and inadequate services, but

the general tendency is to replace them by sub-stations fed by high-tension cables from integrated systems including major hydroelectric plants. Important factors in this connexion are the lack of specialized local personnel who can be trusted to do satisfactory repair and maintenance work at plants that are far from the main towns; the shortage of spare parts, because much of the cooling water is sometimes of poor quality, thus giving rise to serious technical problems.

A comparison of the principal technical characteristics of the design of rural distribution lines in some Latin American and European countries, Canada and the United States brought to light certain disparities that were undermining the economical operation and efficiency of the systems. Some of these are listed below.

#### (a) *Methods of distribution*

An extensive discussion was held on the technical and economic pros and cons of the single-phase and three-phase systems for rural distribution purposes. Mention was made of the fact that the latter are most commonly used in Europe while the single-phase type designed by the Rural Electrification Administration (REA) predominates in the United States and Canada, although the REA is currently re-examining its ideas on the subject. In Latin America as a whole there seems to be no special preference for either system; on the contrary, a variety of opinions and methods can be found in one and the same country. In Chile, the Empresa Nacional de Electricidad (ENDESA), which originally advocated the REA one-phase type, has come to favour the three-phase system in the majority of cases.

Most of the participants were of the opinion that a rural consumer demand of less than 5 kVa could be supplied most economically by a single-phase system whereas large and medium-scale demand (above the 10-15 kVa range) could best be dealt with by a three-phase system, particularly as regards the prime movers, since the cost of single-phase engines is steeply scaled and engines of more than a certain power ceiling are not produced.

When a single-phase system has a heavy load, imbalances often occur between phases; this leads to poor voltage regulation and reduces the amount of installed capacity available.

As regards supplies for small-scale consumers, the maximum economy can be achieved with a single-phase system and a single ground return wire. This method entails a solid ground connexion for the neutral in the three-phase transformer supplying the primary network, and for the high-tension terminals in each single-phase distribution transformer (secondary network). Grounding should be done carefully and regularly overhauled in order to avoid outages and prevent accidents from occurring because of the existence of high voltage differences between points with not much ground clearance. Moreover, for the sake of safety, the cases and neutrals of the transformers should be well earthed. In addition, the participants agreed that there was no one solution to the problem of single-phase versus three-phase systems, and that each case had to be considered on its own merits in the light of the different economic, physical, safety, geophysical and other factors involved. It was pointed out, with particular reference to the reduction of primary investment costs and the low level of consumption during the early stages of operation, that

it is often highly advantageous to build a single-phase system in the first instance and provide for its conversion to three phases at a later date.

#### (b) *Voltages*

It was noted that the most common voltages in rural distribution are 13.2 and 13.8 kV, although several others ranging from 2.3 to 25 kV are also used between phases.

For instance, the REA in the United States prefers multi-grounded systems and voltages of 7.2/12.47 kV, while Canada, with similar systems, uses voltages of 8/13.8 kV and occasionally 6.9 kV as well.

In Argentina and Chile most of the lines have a voltage of 7.6/13.2, although the latter has begun to make extensive use of 13.3/23 volt lines. In Puerto Rico a shift has been made from 4.8 kV delta systems to star systems of 4.8/8.32 kV.

In coastal areas where the air is thickly laden with salt, voltages of less than 15 kV are generally preferred because oversizing of the insulators regular washing, or coating with silicones are expensive and do not provide a definitive solution to the problem of the surface losses that take place in that kind of environment.

#### (c) *Transformers*

Transformers for delivering power to the consumer system are usually pole-slung and of 3.5 or 10 kVa. As the course followed by the lines over the fields takes them near the points of consumption, the low-voltage networks are very small.

#### (d) *Poles*

Experience in the United States, Canada and Puerto Rico favours the use of treated wooden poles, but reinforced concrete is preferred in Latin America. The mean life of the former is twenty-five to thirty years and the most common lengths are 30, 35 and 40 feet. In Chile wooden poles are now kept for lines of minor importance only. They were formerly used extensively there, but are in process of replacement by reinforced concrete poles.

Although wooden poles are inexpensive, the preservative treatment they have to be given and the long distances they have to be hauled raise the price. As their useful life is only about eight to ten years, reinforced concrete can be justified on both technical and economic grounds. It is hoped, however, that when methods of utilization and, more particularly, of treatment, have improved, there will be a change in the trend recorded.

In the north of Brazil, the advantage of a smaller initial investment has been overshadowed by heavier maintenance and operating costs. A case in point is the Companhia Hidroelétrica do Rio São Francisco, which has some 1,600 km of line with wooden poles. In the South (Rio Grande do Sul), however, eucalyptus poles treated with pentachlorophenol have given very good results, and about 60,000 poles are now in use there.

An experiment with wooden poles made some years ago in Uruguay did not have very happy results, but as a good treatment plant is now available there, it has been decided to revert to them. Laboratory tests have been carried out on Uruguayan timber in the United States in order to discover the most suitable preservative treatment for them.

Argentina's experiences with wooden poles have been fairly encouraging. In Cuba, on the other hand, wooden poles have been ousted by new types, mainly of prestressed concrete. Those formerly used were of yellow pine.

As reinforced concrete poles need not be treated with preservative and can be made near the point of destination, transport and operating costs are very low. For other technical reasons, such as the possibility of achieving high mechanical strengths that would allow lines with long spans to be built, and of standardizing mechanical accessories (hardware), such poles are preferable in many cases.

#### (e) *Conductors*

The good conducting properties of copper, added to its mechanical strength and favourable price, have made it for many years the only metal used for transmission and distribution conductors.

More recently, the steady rise in copper prices compared with the relative stability of aluminium prices have gradually led to the displacement of copper from what was formerly its exclusive preserve. By the mid-fifties nearly 40 per cent of the high and low-voltage distribution lines in the United States were made of aluminium. Initial investment in such lines can be cut by as much as 25 per cent through the use of aluminium conductors.

A comparison between aluminium conductors and copper conductors of electrical equivalence shows that the former have a transverse section that is 61 per cent larger, weigh 50 per cent less and have a mechanical strength of 37 per cent less. Aluminium's lack of strength has been offset by giving the conductors a steel core.

The main disadvantages of using aluminium for conductors are the fact that its surface hardness is less, and that it may cause problems when cable connexions and repairs and connexions with copper conductors have to be made. The first can be remedied by taking special precautions when the wire and cables are strung, tautened and connected with the insulators to prevent any damage being done to the lines. As regards the second, special accessories (compression connectors) and anti-rust preparations have to be used, while the third, which involves electrolytic corrosion, can be dealt with by careful tin-plating to separate the different metals or the use of connectors made of special alloys.

By and large, aluminium cables are greatly preferred for rural systems, although the C. A. Luz Eléctrica in Venezuela and ENDESA in Chile have obtained excellent results from hard copper conductors. It was mentioned that the electric conductor industry in Chile—one of the world's foremost copper producers—is fairly well developed.

#### (f) *Insulators*

For the type of lines reviewed, pin-type insulators are normally used on the supports, and disc insulators on the suspension and anchorage structures. Differences were remarked between normal insulation, and insulation for foggy or contaminated areas.

#### (g) *Anchorage and braces*

Anchorage structures are placed every 1,000 or 1,500 metres of line, steel cables and reinforced concrete deadmen being used for the purpose.

#### (h) *Voltage regulation*

It was noted that the tolerances accepted by the REA in the United States for maximum voltage drops are 7 per cent on primary lines, 2 per cent on secondary and service wires and 3 per cent for the transformer. ENDESA in Chile accepts a maximum drop of 8 per cent, tolerating in exceptional cases a drop of 10 per cent, while the Autoridad de las Fuentes Fluviales de Puerto Rico has fixed a voltage regulation limit of 10 per cent for supplies to customers in both urban and rural areas.

When there is a balanced three-phase load, simple automatic voltage regulators are often used to improve the regulation on lines that may be carrying a far heavier load than before. The solution is less simple when the load is unbalanced. The regulators are generally of the auto-transforming type, although capacitor banks are also used. These have the advantage of reacting immediately to load variations.

#### (i) *Safety measures*

In the countries that have made the greatest progress with rural electrification and have set up long distribution lines, special importance is attached to protecting the systems, the devices mainly employed being cut-out fuses, sectionalizers, circuit breakers, reclosers and over-current relays.

Cut-out fuses are chiefly used to protect branch lines since any fault, however shortlived, will leave the area covered by the fuse out of power until the fuse has been replaced.

The reclosers are oil-immersed. When a fault occurs on the line, their contacts open and close automatically a number of times before finally locking out. This type of recloser has been widely adopted for trunk lines because it can work by itself unless the fault happens to be a sustained one. Good continuity of service is thus obtained and less staff required. It was noted that a combination of these types of device gave highly reliable and selective protection, and that reclosers could also be used in conjunction with sectionalizers, since certain kinds of sectionalizers were made to open automatically at the moment the recloser had its contacts separated.

#### (j) *Meters*

The meters preferred are those that can be adjusted for stable operation. They are usually enclosed in metal all-weather cases, with an automatic circuit-breaker to safeguard the installations controlled by the meters. Cyclometer registers are employed to make it easy for customers to read their meters themselves.

## 2. *Standardization and project cost reduction*

#### (a) *Standardization*

In view of the extent of the area to be covered by the rural distribution systems, the safety margins to be observed and, above all, the need to make an appreciable reduction in building, installation and operational costs, the participants agreed that it was essential to standardize system design, methods of construction and installation and the type of equipment used.



For instance, the first step taken by the REA (United States) after its establishment was to standardize systems, lines, structures, materials and equipment, contracts, procedures and relations. It was also noted that in Canada and Puerto Rico and, to a lesser extent, in Brazil and Chile, standards appropriate to local conditions and experience are enforced. In Argentina a certain amount of uniformity is apparent in rural electricity services although each Province exercises separate jurisdictional rights.

In the Latin American countries where rural electrification is still in its infancy, streamlining and standardization should be introduced as soon as possible in order to avoid the piecemeal arrangements that are so costly to the national economy. Standardization should be carried out at the regional as well as the national level, so that substantial reductions can be made in equipment and material costs through the institution of economies of scale and specialized production as advocated by the Latin American Free-Trade Association.

It was recommended that an international technical committee be set up with the co-operation of such organizations as ECLA to lay down broad guidelines for unifying the electric power standards enforced in the individual countries on a region-wide basis.

Standardization on such lines, which would do much to cut down costs, should act as a dynamic force and not be allowed to become a brake on the introduction of new materials and techniques. On the contrary, norms and standards ought to be periodically revised in the light of scientific and technological progress.

As regards the conditions that certain public supervisory or development agencies may impose in special cases, it was pointed out that the technical specifications of a contract or bid could be very exacting provided that they did not overstep prevailing standards, and that the latter should not be modified at the behest of a single person but only when the agencies responsible for formulating and revising them had come to an agreement on the matter.

#### (b) *Project cost reduction*

In the light of concepts already accepted by the participants,<sup>4</sup> it was suggested that initial investment in electrification systems should be reduced by simplifying their design and equipment, even at the cost of some slight sacrifice in continuity and quality of service and an increase in operational activities, since this would reduce costs considerably and widen the electric power market while maintaining the most stringent safety measures for persons and property.

Suggestions as to possible ways of reducing investment were to refrain from using various kinds of expensive automatic equipment in the early stages, since their sole purpose was to reduce the frequency and duration of power breaks to the minimum; to tolerate at the most unfavourable ends of the consumption scale slightly higher voltages than would be permissible in more advanced countries; and to use wooden poles in certain cases instead of reinforced concrete (although their upkeep would eventually demand more time and effort).

When the current worth method of analysis is adopted for assessing the benefits and costs of a particular project,

<sup>4</sup> See sections A and B.

the rate of interest should be the "economic cost of the money" (or opportunity cost) which, in Latin America, can be as much as 10, 12 or even 14 per cent, as noted by the Latin American Electric Power Seminar held at Mexico City in 1961.

In these circumstances, the fact that costs (and receipts) play an increasingly small part in current worth after a certain length of time shortens the significant portion of the analysis to as little as eight or ten years. This testifies to the huge share of initial investment in the total cost of power to the rural consumer, as against that of operational and maintenance costs.

A number of other examples were given such as the establishment of single-phase systems for strictly rural use with provision for converting them later to a three-phase system. In this case, the additional cost of the consumer's equipment would have to be taken into account as well as that of the installations.

The possibility of analysing and evaluating the effects of power breaks by means of a calculation of probabilities was also considered by the Seminar.

The participants were interested to hear that the REA had originally assumed that demand in rural systems would double every ten years, but in the light of experience, had amended their estimate to six years or even less.

It was recommended that initial investment be reduced to the fullest extent compatible with the safety and efficiency of the service so that the benefits of electrification might be enjoyed by as many people as possible. Materials standardization is essential for cutting down on costs, as is mass production of standard types.

In adopting a distribution system the production capacity of domestic industry should be taken into account, and the activities of the supplying and executing organs should be co-ordinated in order to guide production.

#### (c) *Domestic materials industry*

A large number of the parts, materials and equipment used for rural electrification are now being manufactured locally in several Latin American countries. In many cases satisfactory levels of continuity and quality have been attained, although in others considerable effort is still required before the goods produced can compete on world markets. The vigorous development of rural electrification and standardization of the main network components would help to bring about the necessary improvements.

Various participants praised the activities of building firms in this field, pointing out that they had a key role to play in the provision of both technical and financial assistance to rural customers.

#### D. *Institutional and juridical organization*

##### 1. *General information*

From a purely theoretical point of view, irrespective of the particular concepts that may be embodied in the legislation of individual countries, rural electrification satisfies a vital community need in any country or area and should therefore be regarded as a public service in the full sense of the term.

Because of the innumerable criteria and systems existing in Latin America, the participants decided to concentrate on analysing a few typical methods of insti-

tutional and juridical organization employed for rural electrification purposes there. An account was given of the various institutional solutions adopted in the different countries with their respective advantages.

It was generally felt that the existence of a number of different political and juridical régimes made it advisable for each country to institutionalize rural electrification in its own way, with the machinery that was most appropriate for its particular systems and customs, whether this took the form of public, semi-public or private enterprises or co-operatives.

The participants then proceeded to review the rural electrification activities of the State (public and semi-public agencies) and private companies. The following aspects were discussed: (a) provision of satisfactory legislation; (b) control over the enforcement of such legislation; (c) development of new sources of energy; and (d) technical and financial assistance.

In the course of the Seminar, it was repeatedly pointed out that the pattern of institutional and juridical organization in each country would depend on the particular conditions prevailing there. One of the determining factors was whether the system of Government was centralized or federal and another the degree of independence enjoyed by municipalities and other local authorities.

## 2. Co-operatives

It was generally agreed that, of all the possibilities reviewed the most advantageous for rural electrification purposes is the co-operative system. Its juridical form may vary from the co-operative societies in Argentina and Chile to the State Electrification Boards in Mexico.

The idea of a co-operative mainly derives from the fact that a rural service is difficult to run on a profit basis. A co-operative association among the users themselves therefore provides an answer to a supply problem which has not been effectively dealt with in other ways.

If the co-operative method of rural electrification is to be successful, a number of measures should be taken, namely:

(a) The drafting of co-operative legislation to promote and facilitate the organization of such associations, and to establish their basic tenets, which are of supreme importance for the full development of a democratic society;

(b) The provision of technical and financial assistance by State development agencies, or by semi-public or mixed organizations with similar objectives;

(c) The provision of technical and financial assistance by international development organizations;

(d) The avoidance of undue control and State intervention liable to impede the development of a free co-operative movement.

It was also considered that rural electrification should be planned on a nationwide basis, and that co-operative associations should therefore confine themselves to building distribution facilities, leaving the infrastructural works to public, semi-public, or mixed enterprises of varied juridical organization depending on the characteristics of the country in question.

## 3. National experiences

A particularly extensive discussion was held on the institutional characteristics in some of the Latin American countries. These are briefly outlined below.

### (a) Argentina

The basic principles in all questions relating to electric energy are laid down in Act 15,336 of 20 September 1960, which defines the public utility, determines the radius of national jurisdiction and sets forth the criteria by which concessions are governed. Co-operative legislation is embodied in National Act 11,388.

As laid down in articles 36 and 37 of Act 15,336, the Fuel and Energy Department is the supreme supervisory authority with full Government powers of inspection and control in respect of the generation, transforming and distribution of energy within the national jurisdiction. The Federal Electric Power Council is answerable to the Department.

The Department is expected to promote the integrated development and rational operation of national electric power systems (S.E.N.) through the interconnexion of power plants and networks within the national jurisdiction, and to ensure that electric power is circulated and distributed without hindrance throughout the country.

Under the terms of article 32 of the same Act, the Fondo de Reserva de la Energía Eléctrica and Fondo de Reserva de Electrificación Rural are united into a single body: the Fondo Especial de Desarrollo Eléctrico del Interior.

The Fund is administered by the Fuel and Energy Department with the assistance of the Federal Electric Power Council, and has the following functions:

1. To make contributions and loans to the Provinces for their electrification plans;

2. To give loans to municipalities, co-operatives and consortia of electricity users for initial installations, and for the construction and expansion of plants, distribution networks and ancillary facilities;

3. To give loans to private companies in the public electricity service for expanding and improving their facilities in plants with a capacity of not more than 2,000 kW.

The terms for these loans are, in the second case, an interest rate of not less than 6 per cent annually and an amortization period of fifteen years, and in the last case, an interest rate of not less than 8 per cent and an amortization period of five years. The amortization periods can be extended for a further ten years provided that the loans are used wholly or partially for the execution of rural electrification works, in which case the rate of interest may be reduced to 3 per cent annually.

As Argentina has a federally organized Government, the Provinces also have certain powers as regards electric energy, particularly generation and transmission, which they either do themselves or through electricity co-operatives. The latter are nearly always small public utility companies, since they generate energy and distribute it to local communities. As these communities often consist of villages near focal points in the countryside, they undertake to a certain extent the functions of rural electrification.

During the last ten years, rural electricity co-operatives have obviously been growing, by extending their lines

either in the vicinity of the small communities they service, or by installing new lines, especially in rural areas.

The Federación de Cooperativas, an association of long standing, gives a substantial amount of technical, financial and legal assistance to its members.

The private sector includes a type of organization known as a "consortium",<sup>5</sup> which has a number of specially interesting features, and is widespread in the Province of Mendoza. A consortium operates in the following way: an entrepreneur finances and builds a rural line, and signs an option with one or two interested parties representing the consortium. Once the line has been installed, other parties may acquire rights in the consortium under the open contract, and when the system has been completed and is in working order, a co-operative is formed or the bodies concerned join one that is already in existence. The contributions of new users are adjusted in order to maintain the capital value of the system intact.

#### (b) *Brazil*

The public supervisory bodies are the National Water and Electric Energy Council and, at the federal level, the Water Department.

The Federal State can transfer its powers of control to the individual States, provided that an adequate technical and administrative organization exists.

Special mention should be made of the experiences of the Centrais Elétricas de Minas Gerais S.A. (CEMIG) and the Companhia Hidroelétrica do São Francisco S.A. (CHESF) in rural electrification. These enterprises believe that rural electrification can best be undertaken on the basis of co-operatives which permit the consumers to be at one and the same time owners, administrators and members of a non-profit-making organization.

Consequently, both enterprises have set up subsidiaries, contributing in some cases up to 2 per cent of their profits. The main task of such subsidiaries is to promote rural electrification by setting up the installations and forming co-operatives with the users.

The co-operatives pay the subsidiary the value of the installations in proportion to the kVa contracted for in transformer in monthly instalments which are registered as the co-operatives' capital in the form of shares.

Co-operatives are advised by ERMIG (Electrificación Rural de Minas Gerais) and ERPASA (Electrificación Rural de Paulo Afonso) in matters relating to supplies from the main enterprise, and, once they have acquired financial autonomy and their own capacity, become block clients of the enterprise.

#### (c) *Chile*

Chilean legislation is not concerned with rural distribution as a whole apart from the question of electricity co-operatives. It focuses instead on urban distribution which is the only service definitely classified as a public utility. The relevant laws on electricity services and co-operatives are embodied in the Ley General de Servicios Eléctricos and the Ley General de Cooperativas.

The enterprises are not compelled to supply rural consumers outside the initial obligatory zone covered

by the concession which usually comprises the built-up areas of a town or part of them, unless a special agreement to that effect has been signed by the two parties concerned and the necessary installations have been financed by the users.

Co-operative associations are defined by law as non-profit-making institutions set up for purposes of mutual assistance, with certain basic features. They are authorized to distribute power among their members without a concession. Members of a co-operative may include juridical persons, even those in public law such as the Treasury and municipalities. No member may possess more than 10 per cent of the capital stock, with the exception of non-profit-making corporations which can hold as much as 50 per cent and juridical persons in public law on which no limits are imposed.

The application of the electricity legislation is supervised by the Dirección General de Servicios Eléctricos, which is answerable to the central Executive through the Ministry of the Interior. But the Department does not have extensive powers as regards rural electrification, apart from the control that it exercises over the activities of the public utility enterprises, and over the requests for concessionary rights in its installations submitted by co-operatives. In the former case, it can compel the concessionaire to build rural lines and extensions outside the obligatory area when the enterprises in question are guaranteed a minimum consumption value.

Co-operative legislation is controlled by the Departamento de Cooperativas, while the Development Corporation (CORFO) undertakes the supervision of electricity co-operatives, and provides the technical assistance that is essential for rural electrification.

The Federación de Cooperativas, an association of secondary rank, is designed to protect the interests of its members and give them juridical, technical and accounting assistance.

Financial assistance has usually been given in the form of four-year bank credits and, more recently, through the creation of a fund for electricity co-operatives based on a proportion of the revenue from taxes on electric energy generation. Loans made by the fund are long term, being repayable in fifteen years' time, and have a novel feature in that the value can be adjusted in accordance with certain indexes. This removes any similarity to a subsidy that may be found in other loans.

The municipalities can play a dual role in rural electrification:

(i) As public utility concessionaires, in which case they can provide rural customers with electricity in keeping with the general principles laid down, in other words, by contributing the necessary funds for setting up the installations; and

(ii) As members of the electrification co-operatives, to receive power for distribution to the inhabitants under their jurisdiction, thereby encouraging the growth of the co-operatives and, in so doing, increasing the amount of funds available for extending their lines.

As the areas over which the electricity companies hold concessionary rights usually include large tracts of land in the countryside, the companies also undertake rural electrification. Being profit-making institutions by their very structure, recognized and ratified as such by law,

<sup>5</sup> A similar type of system exists in Chile.

the rates they charge are higher. They do, however, supply a large proportion of rural consumption.

(d) *Mexico*

The institutional organization of supervisory activities is embodied in the Ministry of Industry and Trade (Department of Electric Power) and the Comisión de Tarifas de Electricidad y Gas. The former is the supervisory body and is responsible for regulating energy generation, transforming, transmission, distribution, importing and exporting in order to make the best possible use of electric energy for the good of the community. The latter fixes and revises the rates, authorizes contracts and supervises the public utility companies.

Entrepreneurial activities and technical assistance come within the province of the Federal Electric Power Commission, in accordance with an Act of 11 January 1949 amending that of 1933 and 1937. One of the functions of the Commission is to organize electricity consumers into co-operatives in order to secure supplies on the most favourable terms for the customers.

The Commission deals with the question of rural electrification in two ways: either directly, when it has to do with densely populated areas including industrial centres and important farming activities; or through State Electrification Boards, when the supplies are for small communities and rural areas of little importance. These Boards, which have developed considerably since 1952 when the first agreement was signed with a State (the State of Mexico), have a capital composed of equal contributions from the Federal Electric Power Commission on the one hand, and the State Governments and users on the other, but operate through the Commission.

In view of the increase in the number of projects to be carried out and the programme of expansion prepared by the Federal Electric Power Commission, the latter has set up a technical and administrative service known as the Departamento de Juntas Estatales de Electrificación. This operates as part of the Commission itself, which is responsible for directing the activities of the Boards in question and co-ordinating the projects executed by the State-owned agencies.

(e) *Uruguay*

A monopoly of electric energy production and distribution for public use throughout the country is held by a legally established and autonomous juridical person with its own capital known as Usinas Eléctricas del Estado.

Rural electrification has taken place solely in the vicinity of Montevideo and in parts of the San José and Colonia Departments. It is still at an early stage of development, since the energy it distributes is mainly dispatched to densely populated towns.

*E. International technical and financial co-operation*

With respect to the activities of international financing organizations, the participants agreed that, when providing assistance, these organizations should differentiate between the areas in which rural electrification is obviously productive over the short term and those where its purpose is predominantly social, the economic benefits being indirect and attainable over the long term only. This type of distinction is made, for instance, by the credit system of the Inter-American Development Bank.

Some participants were of the opinion that financing institutions should revise their current policy of priority allocation, and attach greater importance to rural electrification.

Numerous references were made to the notable part played by the National Rural Electric Cooperatives Association (NRECA) in promoting rural electrification in Latin America, with the financial assistance of the United States Government Agency for International Development (AID). Ecuador, Venezuela and Uruguay are cases in point.

The way in which these organizations operate is illustrated by the example of Santo Domingo de los Colorados in Ecuador. The project comprises a feasibility study, a plan of execution, the promotion of co-operatives, the establishment of a generating unit and distribution in towns to begin with and subsequently in other urban centres and rural areas. AID and NRECA first co-operated in the preliminary studies and then during the second half of the plan of execution consisting in rural electrification proper, the first half of the plan (the electrification of urban areas) being left to the users themselves. Two of the main aspects of the assistance given by AID are the development of co-operatives and discussion of the principles underlying their establishment and operation.

It was generally considered desirable that the assistance provided by AID and NRECA be intensified and co-ordinated with the electric power and agricultural projects sponsored by the International Bank for Reconstruction and Development (IBRD), the Inter-American Development Bank (IDB) and specialized institutions of the Organization of American States (OAS).

Mention was made of the need to protect local agencies that take out loans with international organizations from the financial harm they may incur in becoming hard currency debtors but soft currency creditors, particularly those Latin American countries where inflation is rife. Possible ways of safeguarding them would be to incorporate an anti-devaluation clause into the loans they were granted to place other resources permanently at the agencies' disposal or to arrange for funds to be regularly supplied by the Treasury or development and investment banks.

International financing organizations should also help to promote intra-regional exports of capital goods for the electric power industry. They could do this by supervising the quality of the materials and equipment through institutes for standardization and control in the countries of origin that enjoyed a sufficiently high reputation in their field of work.

Some of the participants laid great stress on technical co-operation including such aspects as visits by technicians to the United States, Canada and Europe to benefit from the experience accumulated in those countries, and the exchange of staff among electricity companies, co-operatives and institutes concerned with rural electrification in Latin America, the establishment of institutes for electricity research and development in relation to agriculture, and permanent contact between the institutes in question, electricity enterprises and agricultural extension services in the region and the research group working on the same questions in the United States Department of Agriculture.

A question that should be dealt with by the electric power agencies and agricultural institutions acting in close co-operation is the relationship between agricultural training at all levels and electric energy yield. Information on pest elimination, milk cooling, and grain drying with the aid of electricity should be well disseminated since it provides a stepping-stone between the stage of simple promotion and subsidies and electricity as a predominantly social service to that of rural electrification on an industrial basis.

Attention was also drawn to the vital importance of extending technical co-operation to include the exchange of information among the Latin American countries on their systems and standards, the equipment and materials available and the technical and productive capacity of industry in the individual countries, so that the manufacture of equipment for energy generation and distribution can be integrated with that of equipment for the consumer.

#### MAIN CONCLUSIONS

1. Rural electrification is an urgent social need and an indispensable service for promoting and strengthening the economic and social development of rural areas, and should be encouraged by public and private means.

2. As a result, it is desirable for rural electrification to be incorporated into agricultural and social development plans, and dovetailed with their other objectives.

3. The provision of electric power for rural uses should be regarded as part of the general infrastructure and as a public utility serving the interests of the community.

4. Given the close association between electric power and agricultural development, a suitable proportion of the special funds for energy, electrification or agricultural development should be earmarked for financing rural electrification.

5. In view of the social services performed by rural electrification, it should be granted preferential loans with long amortization periods and low interest rates.

6. The development of rural electrification at a more rapid pace calls for vigorous and sustained efforts on a joint basis, preceded and accompanied by the education of the future consumers.

7. The public sector is called upon to play an important and at times decisive role in planning, guiding, assisting and advising in all that pertains to rural electrification.

8. Private enterprise should also play an active and closely co-ordinated part in these activities at the local level, particularly as regards the distribution of electric energy to consumers.

9. In order to arouse interest in and promote such activities, all types of local participation should be encouraged, especially in the form of co-operatives and similar associations.

10. With a view to creating the necessary instruments to develop co-operatives on the most favourable basis, laws should be passed to facilitate the establishment of this kind of association among electric power consumers in rural areas.

11. In order to plan the sequence of electric energy distribution to rural areas in a systematic way, an order of priorities should be drawn up based on, among other factors, the economic value of the area, property distribution, the volume of investment required, the ability of the population to finance the costs and their social needs.

12. In particular, a distinction should be made between extensive rural electrification and intensive electrification for productive purposes.

13. A clear line of demarcation should be drawn between the economic and the social objectives of rural electrification. For achieving the former, the rates, while reasonable, should be high enough to cover economic and financial costs. Part of the relative costs of attaining the social targets would be borne by the public authorities.

14. If consumption characteristics at the initial stages of rural electric power development call for the use of subsidies, these should be granted in such a way as not to affect the efficiency or profitability of the agencies specifically responsible for the electricity service.

15. There has been a marked tendency for rural electrification to develop on the basis of zonal or interconnected generating plants and/or trunk transmission lines for supplying local distribution networks.

16. Despite this tendency, demand in areas that are remote or have low electricity consumption density should be supplied in the first instance by single power units or small independent systems.

17. It is advisable to introduce modern techniques, mechanization and electric power into agricultural work provided that they are economical and have no adverse effects on the use of rural labour in productive activities.

18. In order to reduce installation and operating costs while maintaining adequate safety margins, stress should be laid on planning in advance, design simplification, the standardization of voltages and materials, etc., and the establishment of uniform rate schedules for all the Latin American countries.

19. Encouragement should be given to the production in Latin America of the materials and equipment required for rural electrification, with due attention to quality and price.

20. In order to aid the exchange and adaptation of useful international experiences in rural electrification, it is recommended that facilities be established or expanded for co-operation between the Latin American countries and the rest of the world in the exchange of personnel and information, technical and financial assistance, organizational development, technical research, professional training and refresher courses and pre-investment studies.



## RECENT ACTIVITIES OF ECLA

### I. SECOND INTER-AMERICAN SEMINAR ON CIVIL REGISTRATION\*

*(Lima, 30 November to 11 December 1964)*

The Second Inter-American Seminar on Civil Registration<sup>1</sup> was organized by the United Nations, through its Statistical Office, the Bureau of Technical Assistance Operations, the Economic Commission for Latin America, and the Latin American Demographic Centre, and was held in Lima from 30 November to 11 December 1964. The Government of Peru, the Inter-American Children Institute, the Pan American Health Organization and the Inter-American Civil Registration Association also co-operated in the organization of the Seminar. The convening of the Seminar was in response to the recommendation of the Inter-Agency Committee for the Improvement of Civil Registration in the Americas (convened in Montevideo from 12 to 16 June 1961 by the Inter-American Children Institute), and in accordance with resolution 18 (IX) and 8 (XII) of the United Nations Statistical Commission and resolutions 154 (VII) and 169 (IX) of the Economic Commission for Latin America. The main aims of the Seminar were to determine the functions of a civil registration service and the economic and social implications, determine the principles for the organization and operation of a model civil registration service, and lay the bases for a regional programme to improve these services during the period 1965-69.

The Seminar was attended, in a personal capacity, by sixty-five participants from twenty-five countries (Argentina, Bolivia, Barbados, Brazil, Canada, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Vincent, Trinidad and Tobago, the United States of America, Uruguay and Venezuela). In addition to the sponsoring agencies, the following international agencies and institutions were represented at the meetings: the Inter-American Statistical Institute, the Inter-American Children Institute, the Pan American Health Organization and the United

Nations Children's Fund (UNICEF). The discussions were directed by Mr. Numa León de Vivero, National Director of Statistics and Censuses of Peru, as Chairman, and by Mr. Rubens Porto, Director of the Department of Statistics, Ministry of Justice and Internal Affairs of Brazil, and Mr. Errol Donald Braithwaite, Deputy Registrar General of Trinidad and Tobago, as Vice-Chairmen. Mr. Ulises Fonseca Talavera, Civil Registrar of the Capital District of Managua, Nicaragua, and Mrs. Elena Alménar de Ochoa, Chief of the Technical Section of the Division of Vital Statistics of the Ministry of Health and Social Welfare of Venezuela, acted as Rapporteurs.

During its discussions the Seminar recognized that the civil registration service is an institution with a social purpose which carries out an essential service for the community. It should be a government service and its basic functions should be of a juridical and statistical nature.

The juridical function is to register the events and juridical acts that are the basis of the civil status. This makes possible the organization and proper functioning of the juridical system governing the relations of the individuals organized in families and their relations with the State. This system rests on a number of juridical events: birth, which gives rise to the personality, the civil status, and to other rights and duties; death, which extinguishes the personality in question, and gives rise to rights of inheritance and other rights and duties; and all the other vital events (marriage, divorce, separation, annulment, adoption, legitimation and recognition) which create, modify or extinguish a civil status and various rights and duties.

As regards the statistical function, it was considered that the wide use of the data on the vital events collected by the civil registration service is the principal means of improving the existing knowledge of the demographic variables, a knowledge which is an essential basis for development planning, especially in such sectors as public health, housing and education. The civil registration service, in short, is an active component of the group of services that co-operate to permit the State to attain its proper ends, directed to the welfare of the people and to meeting the needs and expectations of each community. The civil registration service forms part of a group of institutions, all of which should co-operate at the national level with definite goals in mind, for the purpose of improving the level of living of the population, within the framework of national planning.

\* The report of the Seminar is contained in document E/CN.12/704.

<sup>1</sup> The First Inter-American Seminar on Civil Registration was held in Santiago, Chile, from 29 November to 11 December 1954. Its report (United Nations publication, Sales No.: 1955.XVII.7, Statistical Papers Series M, No. 23) drew attention to the heterogeneity of registration methods, the lack of clear and uniform definitions, and the defective administrative arrangements for national civil registration services. Since then these conclusions have been endorsed by the United Nations Seminar on Evaluation and Utilization of Population Census Results in Latin America (Santiago, Chile, 30 November to 13 December 1959) and the Vital Statistics Sub-Committee of the Inter-American Statistical Institute's Committee on Improvement of National Statistics (COINS) at a meeting in Washington from 27 February to 10 March 1961.

The participants considered that, in accordance with the above-described principles, it was necessary to study the cultural level of the population and how far it had become aware of its civic duties, including the rules and practices of civil registration, and what difficulties the public had to overcome in order to comply with their obligations in that respect, with a view to seeking appropriate educational measures to bring about an improvement in the attitude of the community to civil registration. This task should form part of the whole programme to promote and give institutional form to public participation in the process of development.

The Seminar, in addition to evaluating the level of development of the civil registration service in the Americas, and analysing the factors that have prevented full application of the recommendations of the First Inter-American Seminar on Civil Registration, put forward the basic legal principles for a model civil registration service, together with appropriate organizational and operational patterns. The Seminar also drew up a suggested outline that could be followed in each country by the central planning agency, and the services that make up the system that produces vital statistics, with a view to improving civil registration during the five-year period 1965-69.

The Seminar discussed the need for the countries of the region to promote an exchange of information, especially in relation to the application of new programmes, and to facilitate an exchange of experts as advisers and observers. The Seminar also suggested some forms that international technical assistance should take.

The discussions at the Second Inter-American Seminar on Civil Registration led to the following conclusions:

(a) The juridical function of civil registration is as important as ever. At the same time, the statistical function is also of great importance because of the data furnished for development planning and the study of social change. To facilitate the full performance of both these functions, civil registration should represent a felt need for the whole community, and should be an institution that forms part of the national process of development planning.

(b) The resolutions of the First Inter-American Seminar on Civil Registration are still fully applicable. Consequently it is desirable that countries should do all they can to carry them out.

(c) The international agencies that have an interest in the efficient functioning of civil registration, including

the United Nations Statistical Office, the Latin American Demographic Centre, the Pan American Health Organization, the Inter-American Statistical Institute and the Inter-American Children Institute, should co-ordinate their activities in order to make the best use of any resources that may be made available for this purpose. To this end it is suggested that a committee should be set up consisting of representatives of the agencies concerned, which will undertake to promote an integrated programme for improving the civil registration services in the Americas.

(d) Countries that are without modern legislation on civil registration should review and amend their laws in the light of the indication and recommendations of the Seminar.

(e) Similarly, the civil registration services must revise and redefine their aims in accordance with the functions they should perform as part of the modern organization of government, and with the activities they carry out in co-operation with other institutions.

(f) It is an urgent task to evaluate the degree of omission from the registers and carry out studies to determine the cause. Such studies should be made regularly and should take the form of a co-operative undertaking by the institutions that participate in the production of vital statistics.

(g) It is advisable that countries should try out methods of organization and operation that could be used by the national committees on vital and health statistics that, it is suggested, might more appropriately be called national committees on civil registration and vital and health statistics, because of the part that they can play in promoting an improvement in civil registration.

(h) A competent organization should prepare and publish a statistical manual for registrars, describing in simple terms the elementary technical principles involved.

(i) Countries should work out a five-year programme to cover the period 1965-1969, for improving their civil registration services, in line with the suggestions and the outline put forward at the Seminar. This programme should form part of the country's development plans. Although the chief responsibility for the formulation and development of such programmes falls to the Governments, their success cannot be assured without co-ordinated, full-scale and prompt assistance from international organizations.

## II. SEMINAR ON THE DEVELOPMENT OF THE CHEMICAL INDUSTRIES IN LATIN AMERICA\*\*

(Caracas, 7 to 12 December 1964)

The Seminar on the Development of the Chemical Industries in Latin America was organized by the Economic Commission for Latin America (ECLA) and the Bureau of Technical Assistance Operations of the United Nations (UNBTAO), with the co-operation of the Central

Co-ordination and Planning Office (CORDIPLAN) and the Association of Manufacturers of Chemical Products of Venezuela. The meetings were held in Caracas from 7 to 12 December 1964, and were attended, in a personal capacity, by fifty participants and ninety-five observers from ten Latin American countries (Argentina, Brazil, Chile, Colombia, Ecuador, Honduras, Mexico, Peru, Uruguay and Venezuela) and from the United States.

\*\* The report of the Seminar is contained in document E/CN.12/719.



In addition the Seminar was attended by four special consultants and eight officials of the sponsoring agencies.

The purpose of the Seminar, convened in accordance with the terms of ECLA resolution 234 (X), is clear from the items discussed, which were as follows:

1. Present situation in Latin America's chemical industry:

(a) Supply and demand in each country and in the region as a whole;

(b) Centralization of information and bringing it up to date.

2. Analysis of certain problems relating to the development of the chemical sector.

3. Prospects of a regionally integrated development of the main sectors of the chemical industry:

(a) Fertilizers and pesticides

(b) Plastics, synthetic resins and plasticizers

(c) Artificial and synthetic fibres

(d) Synthetic elastomers and carbon black

(e) Alkalis and chlorine derivatives

(f) Dyes and pigments

(g) Synthetic detergents and other chemical products.

4. Evaluation of the possibilities of an integrated regional development of the chemical industry.

The debates were presided over by Mr. Antonio Ledesma Lanz, Director General of the Venezuelan Petrochemical Institute, Chairman of the Seminar; Mr. Nuno F. de Figueiredo, Director of the Joint ECLA/Institute/IDB Programme for the Integration of Industrial Development, representing the United Nations, Director of the Seminar; and Ricardo Pinés, President of the Association of Manufacturers of Chemical Products of Venezuela, as Secretary of the Seminar. The Seminar was based on an analysis and discussion of seven basic documents submitted by the ECLA secretariat and thirty-eight information documents prepared by national development or planning agencies, by national associations of manufacturers, by industrial enterprises or by experts.

#### ADVANTAGES OF INTEGRATION

In discussing the possibilities of a regionally integrated development of the Latin American chemical industry, attention was drawn to the following advantages of such an integration:

1. Economies in production costs resulting from:

(a) Locational advantages, that is, the advantages of better location of productive activities in relation to the most economic sources of raw materials, energy and fuel and other inputs that make up much of the costs of production;

(b) Better use of capacity in both existing and future plans;

(c) Raising the level of operational efficiency in existing and future plants;

(d) More economic scales of production, in the light of the relation between plant size and costs for individual production lines in the chemical industry.

2. Economies in investment resulting from:

(a) Adoption of production scales at least equal to the minimum economic scale for each individual product,

rising progressively to scales closer to the optimum economic scales found in the most industrially advanced countries;

(b) Accumulation of external economies and the economies made possible by the concentration of the chemical industry in multiple-production complexes.

3. Increase in the foreign exchange available, resulting from:

(a) More rapid import substitution at the regional level, through the expansion of industrial production because of the more dynamic character that the sector will take on through the presence of the factors listed above, and in particular because of the increase in output that can be achieved without any additional investment through the appreciable reduction in the capital-output ratio associated with the better use of the total annual investment in the region as a whole;

(b) An increase in foreign exchange resulting from a rise in exports to the rest of the world, encouraged by the greater efficiency and lower costs that would result from the changes in the structure of the industry.

#### ECONOMIES OF SCALE AND TRADE LIBERALIZATION

The significance of economies of scale, in the development of the chemical industries and in the regional specialization resulting from liberalization of trade, was discussed at length. The incidence of economies of scale on the location of chemical production activities depends on various circumstances that often have conflicting effects.

Firstly, the effect of economies of scale on costs is much more marked for products of the heavy chemical industry — basic raw materials and intermediate products — than for products falling more into the category of end goods. For the first group capital charges represent at least 40 to 55 per cent of the cost, whereas for the second group the percentage is much lower. However, the heavy industry products have a relatively low value per ton, and consequently their price is much more affected by transport costs. Clearly the products of large-scale regional plants intended to serve several countries, or perhaps the whole region, would have to contend with long distances and high transport costs, and the larger the plant and the more widely dispersed the markets, the higher transport costs would be. Consequently in extreme cases the transport costs for integrated consumer markets might well cancel out the economies of scale obtainable with an ideally located regional plant of large scale. This situation, which would certainly be exceptional, can be shown to be possible on the basis of figures on costs, scale and possible locations in relation to a comparative cost study for an ammonia plant with a daily output of 200 tons in Brazil using costly raw materials, and a similar plant with a daily output of 400 tons in Venezuela that could use cheap raw materials. This study shows clearly that the transport costs bulk so large in the price of the product that it would be more economic for Brazil to produce the ammonia locally with costly raw materials in a smaller plant. However, the same figures show that this high incidence of transport costs, which can even cancel out economies of scale, would not apply on the basis of other hypotheses for the same product and the same two locations. Consequently in cases like this integration should be based on arguments other than those relating to costs, unless it is

conceded that for products of low unit value in an area where transport costs are high there is not much room for regional specialization.

What are these other arguments unrelated to comparative costs? Although the Seminar did not dwell on this point, some mention should be made of a question which was dealt with in more detail in some of the documents submitted to the Seminar.<sup>2</sup> In fact regional integration may be justified on grounds of regional balance in the distribution of investment or promotion of trade, as part of a general view or development and trade in the region on a basis of reciprocal concessions.

In connexion with economies of scale, there is another point that may have a significant practical effect in the consideration and negotiation of specific integration schemes. It has been suggested that the comparative analysis of production costs in the various possible locations should include special emphasis on whether the machinery in question is produced in the country being considered as a possible location for the industry concerned. The fact that certain countries of the region, notably Brazil, manufacture a very high proportion of the equipment needed for the expansion of the chemical industry must introduce another factor into the consideration of comparative advantages. There is no doubt that a comparison between two countries, in one of which practically all the equipment concerned is imported, whereas in the other it is produced by domestic industry, would be incomplete if it disregarded the effect in the second case on income, and the general stimulating effects of this local production. All these points are particularly important in Latin America, especially in any comparison of locations in which Brazil is included.

The foregoing considerations raise the question of whether the chemical industries constitute an industrial sector for which a regional market can easily be formed. One of the participants in the Seminar expressed some doubt on this point, and said that the close interdependence of the different branches of the chemical industry, which can provide each other with markets and with by-products, points to the desirability of concentrating many different branches of production in the same place, rather than dispersing them over a number of different countries. Furthermore, the main cost item in this industry is capital, not raw materials or labour. Consequently when a country with a small domestic market exports a chemical product, those who benefit most are the manufacturers of the equipment and the holders of the patent for the process (in both cases enterprises outside the region), rather than the factors of production in the country concerned. This handicap applies less to end products, in which the labour element bulks larger in the cost. Consequently integration in the chemical industries should begin with manufactured end products.

#### GENERAL QUESTIONS OF INTEGRATION

The discussions underlined certain concepts that, though not new, are of special importance for the future integration of the chemical industries.

<sup>2</sup> See *La industria química en América Latina* (E/CN.12/628/Rev.1, United Nations publication, Sales No. 64.II.G.7), and Thomas Vietorisz, *Planning of the chemical industries at the national level* (information document No. 28 submitted at the Seminar).

(a) The formulation of national plans for the development of the chemical industry is a first step towards the preparation of regional integration programmes. It seems fairly clear that the countries most favourably disposed to integration and best placed to discuss possibilities and specific plans for specialization are those that have already drawn up national plans for the development of the chemical industry (Mexico, Colombia and, to a lesser degree, Venezuela). The attitude of the countries that have not yet achieved the same degree of crystallization in their plans for expanding the chemical industry is much more reserved with respect to integration of markets.

(b) The specific plans for integration of chemical industries are much more likely to result from a drive to make the various national plans compatible and complementary than from some automatic system of tariff reductions based on comparative advantages. None of the participants seemed to accept the possibility that the choice of items to be developed in each country result from any automatic system of abolishing obstacles to trade with a view to bringing into play the market forces based on the comparative advantages in each country. In fact it was fully recognized that the advantage that a country could obtain by developing a given project or chemical item could not be evaluated solely in terms of a comparison of production costs based essentially on natural resources, scales of production and transport costs, but must also be viewed in the light of the role that such an item or specific project could play within the general industrial development plan, in terms of its association with other projects, the establishment of external economies and the creation of a balanced industrial structure. These considerations, which are extraneous to questions of costs and economies of scale, can only be taken into account when the programme for the development of the chemical industry has been drawn up within the framework of a general industrial development plan and evaluated in the light of that plan.

(c) Questions of costs and economies of scale are consequently relegated to second place. As previous ECLA studies were based on the analysis of hypothetical production costs in different places and with different scales of production, the analyses of possibilities of integration worked out for the main chemical items represent schemes based on arguments of costs and scale, and do not take account of the position of each item or project in the individual countries within the integrated programme of chemical development drawn up in that country. It was not possible to take account of the factors extraneous to costs and scale because in many countries no such integrated plan had been drawn up, and an approach based on such factors can only be adopted on the basis of a comparison of plans prepared by the principal countries. This may be a discouraging conclusion for those who are anxious for a rapid advance towards a Latin American common market. There is a resistance to the consideration of specific programmes for the integration of the chemical industries in those countries that have not yet drawn up any such plans at the national level, or any over-all economic and social development plans to provide a framework for chemical programmes. And these countries in fact include the largest Latin American countries, that together represent two thirds of the whole regional market.

(d) The removal of obstacles to trade in the main chemical products should be accompanied by schemes for the expansion of production in the most favourable locations, on the basis of large-scale regional plants whose capital is contributed jointly by the main consumer countries of the region. The principle of the contribution of capital by the countries that import the product concerned is perhaps one of the most important and constructive conclusions reached by the Seminar. The aim would be to make the opening of new importer markets in other countries of the region contingent on the acceptance by those countries of multinational enterprises financed on an intra-regional basis, for new large-scale production for export. The proportion of capital subscribed by private groups or by the Government in the individual country would be roughly proportionate to the share of the plant's output that that country would expect to absorb during the initial phase of operation. In principle the capital contribution of each country would be supplied from national sources, either public or private, but in practice, in view of the great scarcity of capital in most Latin American countries, it seems likely that the capital contribution of the future importers of the product would have to be financed from international sources. This formula was supported by participants from all the countries represented at the Seminar.

#### SPECIFIC INTEGRATION POSSIBILITIES

The specific integration possibilities that have been established for the main chemical items are:

(a) *Fertilizers*. Integration possibilities for the *potassium and phosphate fertilizers* are limited because of the scanty resources in the region. It might be possible to establish a large plant for the production of phosphate fertilizers in Peru to supply the region if the phosphate deposits recently discovered in that country (in Sechura) are sufficiently abundant and of a quality to permit economic exploitation.

The possibilities of nitrogen fertilizer plants on a regional scale are potentially greater, but not in the immediate future since, because the resources in question (natural gas or by-products of petroleum refining) are widely scattered throughout the region, and because of the small importance attached to costs and scale, plants are being planned or put up in all parts of the region. Projects under way or under consideration at the moment are sufficient to cover almost the whole of the estimated demand for 1970. Large-scale regional plants with low production costs would have to be planned for 1970-75, with a view not only to the Latin American market but also to exports to the rest of the world. It is probably that some formula will have to be found whereby such large-scale regional plants would cover only a part of the requirements of the importer countries, so that they could exist side by side with domestic

plants on a smaller scale, with higher costs, in the importing countries, either on the grounds of a balanced internal industrial development, or else under the protection of high transport costs. To secure the agreement of the countries that are net importers, it may be essential to find a formula for the participation of those countries in the financing of the regional plants.

(b) *Petrochemical products (raw materials for plastics, man-made fibres, carbon black, detergents and dyes)*. Because of the close interdependence of the branches of the petrochemical industry there must be regard for the concept of a balanced industrial development, to an equal or greater extent than in the case of fertilizers. There are two opposite views in this respect, one holding that it is better to proceed with integration of the basic raw materials, and then turn to the finished products, and the second that the converse is true. However this may be, there are specific integration possibilities, but they will have to be identified by means of a direct comparison of national plans for chemical development, once such plans have been prepared by all the Latin American countries.

With respect to dyes and pigments, it appears that something can be accomplished sooner, but the production and apparent consumption of this sector is small compared with that of other petrochemical items.

(c) *Sodium alkalis*. This is the chemical item that offers perhaps the best prospects for development, within a shorter period, since the region's main consumer markets are unlikely to be able to expand production on a low-cost basis. It may well be that within the next decade the increasing consumption of these products (caustic soda and sodium carbonate) in the region will be supplied more and more by large-scale regional plants in Colombia, Mexico, and perhaps other countries.

#### LINES OF ACTION

The studies which the Seminar showed to be urgently necessary are of two kinds. In the first place it was recommended that ECLA should continue collecting statistical data on production, installed capacity and foreign trade in the field of chemical products, in order to bring up to date the picture provided in recent documents, and that once a year information should be circulated in the same centralized, standard analytical form to all the countries of the region. A more complete analysis of the evolution of the chemical industries should be prepared every three or four years. The annual statistical survey should cover a limited list of products and be prepared with the assistance of the public and private agencies in each country responsible for the planning of the chemical sector.

ECLA should also prepare reports giving a more detailed analysis of the existing situation and the future outlook for a few selected chemical products.

### III. STUDY TOUR AND WORKSHOP ON ORGANIZATION AND FUNCTIONS OF NATIONAL HOUSING AGENCIES FOR THE IMPLEMENTATION OF HOUSING PROGRAMMES\*\*\*

(Copenhagen, Oslo and Stockholm, 30 August-19 September 1964)

Pursuant to ECLA resolution 224 (X), a study tour of the Scandinavian countries and a workshop, which

facilitated an exchange of experience in the organization and functions of national agencies for the implementation of housing programmes, were held from 30 August to 19 September 1964, under the sponsorship of the

\*\*\* See the provisional report (E/CN.12/715).

Government of Denmark, the Economic Commission for Latin America (ECLA) and other United Nations agencies (the Bureau of Technical Assistance Operations and the Housing, Building and Planning Branch).<sup>3</sup> Attending in a personal capacity were twenty-six officials from eighteen countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay), representing agencies directly related to the housing problem (national housing institutes, economic planning offices, housing banks, building associations, etc.). The Inter-American Development Bank (IDB), the World Health Organization (WHO) and the Governments of Brazil and the Dominican Republic sent observers, and the sponsoring agencies were also represented.

#### STUDY TOUR OF DENMARK, NORWAY AND SWEDEN

During the study tour which took place from 1 to 11 September, several Scandinavian institutions provided full information on the following subjects: aims, instruments and institutions in respect of housing policy and programmes in the countries visited; organization and functions of national housing agencies; the functions of municipalities in relation to housing programmes; organization of financing institutions and housing loan market studies; organization of housing co-operatives and associations of housing co-operatives; organization of non-profit housing institutes; organization and functions of national and local bodies connected with physical planning and urban development; organization and functions of institutions concerned with research on housing materials, design and construction; and the organization of housing production.

In the three countries visited the Governments have assumed the responsibility of establishing guiding principles for the annual construction of dwellings, fixing the necessary production targets and promoting the construction of such dwellings as the economic and social situation in those countries demands. In order to formulate and implement a national housing policy, national agencies have been set up (the Ministry of Housing in Denmark, the National Housing Board in Sweden, and the Housing Bank and Housing Department in Norway). Annual housing construction plans are adopted, to which the Governments allocate funds for the granting of loans and guarantees in respect of a very substantial proportion of the total number of dwellings built in each country. The main instruments for the implementation of housing policy are credit measures, subsidies and building controls.

The following are the basic aims of housing policy in the three countries: (a) to ensure the construction of a certain number of dwellings, as determined each year by Parliament on the basis of a proposal formulated by the national housing agencies (in Sweden this figure was 85,000 in 1964); (b) to encourage the construction of larger, better-quality dwellings than those existing at present (in Norway, for example, the aim is to increase

the average two rooms and a kitchen to three rooms and a kitchen); (c) to promote the maximum increase in housing production by encouraging prefabrication (Denmark's 1960 building programme established a target of 2,000 prefabricated dwellings); (d) to stimulate the construction of housing units for the low-income sectors of the population; and (e) to assure — by means of subsidies — satisfactory housing conditions to families with low incomes, large families, persons in receipt of pensions, and other special groups (the aged, students, etc.).

In spite of the high level of income attained by the Scandinavian countries, the Governments have been compelled to regulate housing production by granting subsidies to the low-income sectors of the population, to promote competition between private enterprises and non-profit organizations, and to control the price of land by the large-scale purchase of urban lots and the rental of State-owned sites. Moreover, the Governments have had to guide and regulate the capital market, specifically through the organization and management of the mortgage bank system. Thus, in recent years, the Government of Sweden has granted third mortgages through the National Housing Board for about 93 per cent of the dwellings built. In Norway, the National Housing Bank and the Small-Holding Bank have financed approximately 70 per cent of the housing construction in the post-war period. In Denmark, some form of State subsidy was received for about 63 per cent of the dwellings erected in 1961. Third mortgage represented between 25 and 35 per cent of the value of property in Sweden.

In the public sector, there are four types of institutions with major responsibility for housing policy and programmes: (a) central housing agencies at the national level; (b) central banks, housing banks, mortgage banks, pension funds and post office savings banks, all of which contribute substantially to the financing of housing programmes; (c) provincial housing bodies which in Sweden are called "provincial housing boards"; and (d) the municipalities.

Besides the housing sector proper, there are other institutions related to housing agencies, such as those at the national and municipal level concerned with town and regional planning, on the one hand, and those engaged in scientific research on housing and on building and building materials, on the other.

In the three countries visited town planning, that is, the preparation of regulatory and other plans to determine the future expansion of cities and to regulate the use of urban sites, is the responsibility of the municipalities. However, there are other agencies operating at the provincial and national level, which advise the municipalities in this field. The municipal authorities have recourse to two main instruments for the implementation of plans: the large-scale purchase of land sites, which are subsequently leased out for periods ranging from twenty to a hundred years, and the application of building codes that involve authorization for all types of buildings and supervision of their construction. There were marked discrepancies in this respect between the three countries visited.

Housing is financed by both public and private sector. In all three countries the following types of credit are granted: (a) short-term or temporary loans accorded

<sup>3</sup> The Inter-American Seminar on Housing Statistics and Programmes had taken place in Copenhagen and Stockholm from 2 to 25 September 1962 (see the report, United Nations publication, Sales No.: 63.II.C.4). An account of it was given in the *Economic Bulletin for Latin America*, Vol. VIII (1963), pp. 94-96.

primarily by the commercial banks during the period of construction; (b) long-term loans backed by first and second mortgages; these are granted in Denmark and Sweden by savings banks, insurance companies, mortgage banks and post office savings banks, and in Norway by the National Housing Bank and the Small-Holding Bank. There are no reinsurance agencies, but the official mortgage banks are backed and guaranteed by the State; (c) long-term loans on a third mortgage basis granted by national housing agencies through their provincial representatives with the municipalities serving as intermediaries.

The participants in the study tour compared the situation in their own countries with what they had seen in Denmark, Norway and Sweden, and drew attention to the fact that in spite of the marked disparities in economic and social structure between the Scandinavian and the Latin American countries, there were nevertheless certain aspects of the former's policies which could be applied in the latter. For instance, although the Latin American countries have adopted housing measures since the beginning of the century and have enacted a great many housing laws, they lack co-ordinated and integrated policies such as those of the Scandinavian countries, and often have no clear-cut housing policy at all. However, most countries of the region have national plans for public investment in housing, and efforts are being made to formulate integrated national housing programmes within the context of over-all economic and social development plans.

The high average *per capita* income of the Scandinavian countries and its equitable distribution enable them to prepare programmes based on the fact that every family can afford the cost of amortization of housing loans. By contrast, in every Latin American country there is a considerable group of families whose incomes preclude the servicing of loans for dwellings that are compatible with accepted housing policy standards. Hence, a large proportion of Latin America's population is forced to go on living in slums, half-completed dwellings and other housing conditions which are unacceptable in the Scandinavian countries.

In many of the Latin American countries, moreover, prolonged inflation prevents the mortgage bank from operating along normal lines, although an attempt has been made to solve this problem by the establishment of adjustable savings-and-loan systems.

Another radical difference is that whereas the Scandinavian countries finance their own housing programmes, these cannot now be undertaken in Latin America without external financing.

Notwithstanding the disparities noted above, the results of the study tour were deemed to have been exceedingly useful. In the light of those results and of the experience hitherto gained in Latin America, it was considered both possible and necessary to improve the present position in so far as a definition of policies and of administrative and financial systems and mechanisms are concerned. Although there can be no question of adopting a general approach for Latin America, it is obviously imperative to establish policies and programmes with clearly defined targets, as well as efficient financing and administrative instruments, in all countries of the region.

#### WORKSHOP ON ORGANIZATION AND FUNCTIONS OF NATIONAL HOUSING AGENCIES

The Workshop that followed the study tour was held at Rolighed, near Copenhagen, from 12 to 19 September. Under the leadership of Mr. Einer Engberg, Chief of Section, Ministry of Housing, Denmark, and Mr. Octavio Cabello, ECLA Regional Adviser on Housing Policies and Programmes, the following topics were discussed: housing policy and programmes; programming for the housing sector and inter-sectoral co-ordination; physical planning at the local level; urban building land policy; rural housing; criteria for the preparation of housing projects; building by self-help methods; prefabricated housing units; housing co-operatives; research; statistics; administration of housing services; financing of housing; the building industry; administrative structure and functions of national housing agencies; and, lastly, the activities of international and regional agencies in the housing, building and planning field of Latin America.

As a result of the discussion of these agenda items arising out of the working papers presented by the ECLA secretariat and by the Housing, Building and Planning Branch of the United Nations, and after also taking cognizance of the information documents contributed to the Workshop, the participants agreed to recommend that the Latin American countries should draw up programmes for the implementation of their housing policies. The formulation of such programmes, together with their execution at the institutional and financial levels, the over-all administration of policy and the evaluation of the results achieved, was felt to be a basic responsibility of the public sector.

Note was also taken of the need to overhaul financial machinery with a view to establishing the proper channels for the tapping of savings, strengthening internal security markets and directing credit flows. It was suggested, however, that the tapping of voluntary savings should be supplemented by a policy of subsidies deriving from fiscal sources, in order to place housing facilities within the reach of the lower income brackets. Such subsidies might take widely varying forms, but the greater the inequity of income distribution, the greater would be the significance and volume of financing of this type.

The close connexion between the housing sector and the other economic activities implied that a housing plan should be tackled at the national level, so that its share in total investment and the gross domestic product could be determined, as well as its links with other economic activities (through the analysis of inter-industrial relationships) and its repercussions on the balance of payments and the financing capacity of the national economy. Housing programmes should therefore be organically integrated with over-all economic development plans, the formulation of which was in the hands of the planning councils or boards in the various countries.

Housing plans should embody the following components: (a) a survey of the existing housing shortage and an estimate of future requirements — taking into account replacement and migration — on the basis of distribution by areas and stratification by household income levels; (b) studies on the production capacity and structure of activities directly linked to the housing sector (building and building materials industries);

(c) a review of the financing system and of institutions connected with the financing of housing; and (d) an analysis of the institutional structure related to the execution of the programme. On the basis of these components, and of the allocations envisaged within the framework of over-all programming, it would be possible to formulate alternative projections and establish targets compatible with those of the other economic sectors, in respect not only of inputs (labour and materials) but also of investment and financing.

The absence of an urban land policy has aggravated housing deficiencies. To the rapid urbanization process which is taking place in all the Latin American countries is added the disproportionate and chaotic growth of the large towns, where plans for the provision of facilities are developed much more slowly. This disorderly expansion has meant in some instances that the public utilities networks have had to be extended on anti-economic lines and with high maintenance costs and in others that most of the housing units built have had to be left unprovided with services. In this context, it was pointed out that the lack of an urban land policy was reflected in one of the gravest problems affecting the cities of Latin America, namely, the practice of squatting, which tends to disrupt urban development and may even bring the development of industry to a standstill.

To remedy this situation, which seriously jeopardizes the success of housing programmes, it was thought that land should be bought and urban services installed by the municipalities. It would thus be possible to increase the available supply of building lots equipped with urban services, so that sites for housing projects would be ready in advance, and the urban land market would be activated.

As regards the possibility of making housing agencies responsible for implementing the foregoing land policy, through the purchase and reservation of sites for their subsequent use, there was a consensus of opinion to the effect that such functions should be fulfilled by the municipalities and other local bodies, under the guidance of directives emanating from the town-planning authorities or from the appropriate technical co-ordination offices. But in view of the weak economic position of the municipalities in most of the Latin American countries, it might be considered admissible for the housing agencies to assume that responsibility temporarily, until the municipalities were ready to shoulder it. In this connexion, great interest was shown in the land purchase policy which is being implemented by the Housing and Town-Planning Institute (Instituto de Vivienda y Urbanismo) in Costa Rica.

In the preparation of a housing project, both the town planning and the social aspects must be taken into account, so that such projects may promote the integration rather than the segregation of population groups. This is the policy pursued in Scandinavia, and it should represent the final goal of endeavour, although it is difficult to apply in the Latin American countries because of the different conditions prevailing in respect of social stratification.

Lastly, it was felt that housing agencies should engage the services of independent professionals to prepare projects, and should negotiate with the professional associations in order to establish equitable fees, with

due regard to the volume and continuity of the proposed works. The central housing agencies, in their turn, would have technical departments qualified to evaluate such projects.

The self-help system, which sometimes arouses opposition on the part of various political and technical sectors, has not always proved as fruitful as might have been expected, despite State aid. Hence the need to evaluate it, in order to ascertain the difficulties it is encountering and the best ways of surmounting them in each case. It was recognized, however, that the housing problem could not be completely solved without recourse to the method in question, and that housing agencies should be technically and administratively prepared to help those interested in resorting to it.<sup>4</sup>

The conclusions unanimously reached on this point were as follows: (a) the spread of the self-help building system should be promoted, and it should be applied to the full extent that local conditions permit; (b) it should be interpreted in its broadest terms, i.e., the owner should act as his own contractor, besides contributing labour, and should hand over certain parts of the construction work (the ground slab, fixtures, etc.) to other contractors.

The possibility of using prefabricated housing units was given special consideration, in view of the importance attached to this method in the Scandinavian countries, and the pitch of perfection to which they have brought it. Its application in Latin America, however, is limited by many obstacles, since mass prefabrication could not become a reality without heavy investment whose amortization only the public sector could guarantee. The participants therefore agreed that Latin America would obviously have a use for prefabrication in a few years' time, but that in present circumstances the factors militating against its widespread application were too powerful to be withstood.

The housing co-operatives existing in almost all the Latin American countries have developed considerably in the last few years. But they have not yet acquired all the importance that might be expected as instruments for overcoming the housing crisis, especially in the case of the middle and lower income groups.

It was recognized that centres for research on housing and building should be set up in all countries.

Similarly, if the housing problem was to be approached with a view to establishing compatibility with the other sectors of the economy, quantitative statistics were essential as well as the establishment of statistical relationships not only among the different economic variables but also among the factors relating to population, housing production, financing, building costs, etc. Accordingly, the following recommendations were formulated:

(a) That national housing agencies should set up housing statistics sections, where these did not already exist in the national statistical services, for the purpose of compiling and processing data on the building industry, the social and economic aspects of the housing situation, and the characteristics of the households benefiting by the housing investment programmes of the public sector;

<sup>4</sup> In Colombia 50,000 housing units have been built by the self-help system.

(b) That whenever countries carried out general population censuses, housing censuses should be taken at the same time;

(c) That national housing agencies should indicate what kind of statistical data they needed in order to formulate their policies and work programmes.

The analysis of the shares of the public and private sectors in the financing of housing programmes showed that almost all existing forms of internal financing machinery (mortgage banks, savings and loan systems, co-operatives, mortgage insurance, savings deposits insurance) were being applied to a greater or lesser extent in Latin America. External resources had also made an appreciable contribution to the financing of the housing sector in the Latin American countries. In this context, the following conclusions were reached:

(a) Financing should be primarily based on an internal financial effort, to be made by both the State and the private sector, through the various kinds of machinery;

(b) The internal financial effort would have to be designed to serve as a counterpart and support for external resources, enabling them to be used on a temporary basis, as seed capital that would help to engender lasting systems and instruments in each country, in conformity with the spirit of the Charter of Punta del Este;

(c) It was essential that each country's financial machinery, economic policy and structures should be endowed with continuity and stability, and that long-term programmes should be safeguarded in such a way as to maintain the continuity of their execution, on normal terms and at reasonable costs;

(d) An endeavour should be made to take more advantage of the experience of individual countries, through the promotion of fuller exchange of information and the establishment of a Latin American association of savings and loan societies;

(e) Policies, legislation and machinery to attract the savings of the community and issue mortgage loans specifically for housing projects of "social interest" should be established wherever they did not already exist;

(f) Measures should be adopted to maintain the real value of savings and housing investment during inflationary processes, as a means of preventing the decapi-

talization of agencies for the financing of housing, and keeping up the morale of savers.

The building industry was one of the most dynamic economic activities, owing to the fact that it employed a high proportion of the labour force and that many subsidiary industrial sectors were dependent upon it. It was essential that Governments, in order to contribute to the development of the industry in question, should promote the preparation and execution of housing programmes calculated to stabilize housing demand and, consequently, supply, as a means of ensuring the introduction of more advanced building techniques and the improvement of productivity in the industry. The following conclusions were reached:

(a) The development of the building industry largely depended upon the continuity of housing programmes;

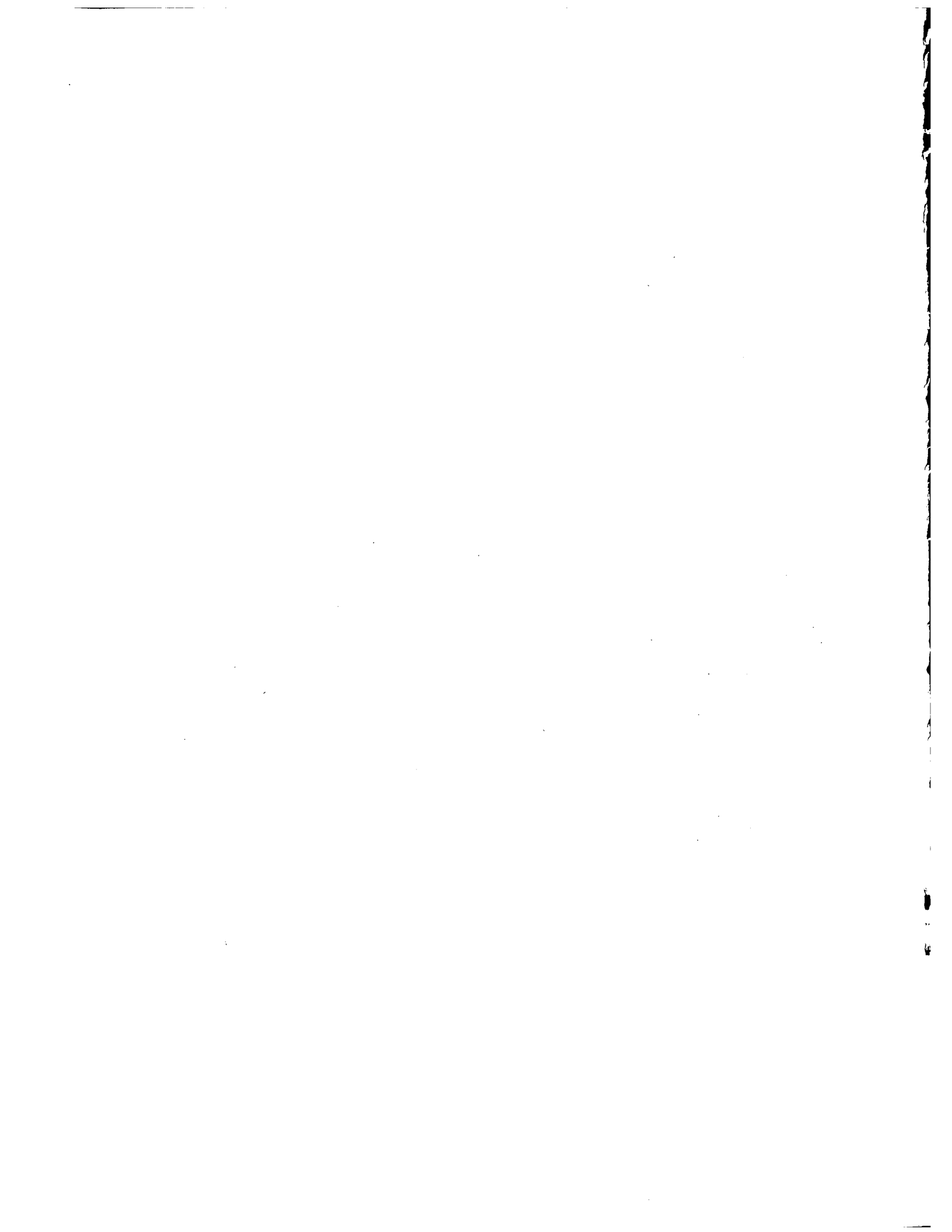
(b) Information centres on the building industry should be set up at either the local or the regional level;

(c) Factors unconnected with the productivity of the building industry affected housing costs and might cancel out the benefits accruing from increased productivity;

(d) Since an improvement in productivity was a social necessity, special attention should be devoted by the housing agencies to research on basic materials, rationalization, adoption of standard-type housing units, etc.

Other subjects of discussion were the activities carried out by the various international agencies that were helping to solve the housing problem in Latin America (Pan American Sanitary Bureau, World Health Organization, Organization of American States, Inter-American Development Bank, Agency for International Development, United Nations World Food Programme), as well as the technical assistance offered by the Scandinavian Governments. The agencies providing technical assistance for housing in Latin America had allocated an aggregate sum of about 2.2 million dollars in 1963, and in the same year capital contributions for housing had amounted to 81.3 million dollars, of which 65.3 million had come from AID and 16 million from IDB.

There did not seem to be a regional system for the co-ordination of international activities in the field of housing. Consequently, a final recommendation was that machinery should be established to ensure better communication among the various institutions and more efficient utilization of the technical assistance resources available for housing purposes.











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