

UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



Distr.
LIMITED

ST/ECLA/CONF.9/L.11
25 June 1962

ORIGINAL: ENGLISH

LATIN AMERICAN SEMINAR ON HOUSING STATISTICS AND PROGRAMMES
2-25 September 1962
Copenhagen, Denmark
Item 5.3 of the tentative programme

THE USE OF NATIONAL ACCOUNTS STATISTICS TO ASSESS
THE ECONOMIC SIGNIFICANCE OF HOUSING

prepared by the Secretariat of the Economic
Commission for Latin America

Sponsored by:

The United Nations
Economic Commission for Latin America
Economic Commission for Europe
Statistical Office
Bureau of Social Affairs Housing, Building and Planning Branch
Bureau of Technical Assistance Operations
The Government of Denmark
The Inter-American Statistical Institute

In collaboration with:

The Latin American Demographic Centre
The Inter-American Housing and Planning Centre

TABLE OF CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
I. Introduction	1-6	1
II. Economic Aspects of dwelling construction ...	7-51	3
III. Physical resources needed for housebuilding..	52-61	20
IV. The importance of house-ownership as an economic activity	62-75	23
V. Consumer expenditure on rent	76-87	28
VI. Household income and the cost of dwellings...	88-98	34
VII. Conclusions	99-103	39

I. INTRODUCTION

1. In the Latin American countries, as in many other areas of the world, a large part of the population lives under housing conditions which are below the minimum acceptable level. Particularly in the great cities, overcrowding or housing in shacks or other temporary structure is prevalent in the region among the lower income groups. Because of the high population increases and a constant inflow of more people to the cities, this situation tends steadily to worsen in spite of efforts on the part of the Governments concerned to provide low-cost, permanent housing to some extent.
2. Housing conditions, on the whole are also below standards in the rural areas. Such conveniences, as running water and electricity are generally lacking and the houses are often built with materials which are not well suited for the purpose. Large sections of the indigenous population in some countries of the region live under housing conditions similar to those of their forefathers.
3. In view of the pressing need for improved housing, the inclusion of new dwelling construction as one of the important items in the economic and social development plans now being formulated in the Latin American countries is essential. That the provision of improved housing has to be one of the most important features of social development hardly needs amplification. But there is also a growing realization that the provision of adequate housing is a fundamental condition for economic development.
4. In formulating a housing plan it is necessary not only to have a clear picture of the need for additional housing in physical terms, i.e. the number of dwellings, but also to gather as much information as possible on the significance of the housing sector for the economy as a whole. This information is needed to get an idea of the repercussions which expanded housing construction is likely to have on the economy, and to evaluate the economic feasibility of the housing plan. Economic and social development has to take place on a broad scale and the authorities in charge of the coordination of the planning effort are inclined to give greater priority

/for the

for the housing authorities to be able to present information relevant to all aspects of their plan in order to assure a proper consideration of housing problems in determining general objectives of the plans of economic and social development as well as to ensure co-ordination and consistency of the actions which are proposed in this sector in relation to the corresponding programmes of the other economic sectors.

5. There is a serious discrepancy between the urgency of the housing situation in Latin America and the importance of the house-building and other related industries on the one hand and the availability of the statistical data required for administrative and planning purposes on the other. Housing programmes require long-term planning and adequate statistics are urgently needed not only in connexion with the programmes themselves but for the formulation of both short and long-term economic policy which directly affect the possibility of their implementation. The additional cost involved in the collection of more adequate statistical data would be amply repaid by the savings effected as a result of more efficient planning and fuller exploitation of the available resources.

The data required to obtain a picture of the economic significance of housing are mainly of a macro-economic nature and a considerable amount of relevant information could be obtained from the national income accounts of the countries concerned if these were presented in enough detail and were sufficiently reliable. Information from employment statistics, family living surveys, government accounts, etc. is also needed to supplement national income data in throwing light on various aspects of the problem.

6. This paper is arranged in five main parts, dealing with the economic aspects of dwelling construction, physical resources needed for house-building, the product of the consumer sector constituted by house-owners, expenditures on rent and household income and the cost of dwellings. In each part, conceptual and methodological problems connected with the relevant statistics will be discussed and the availability of data in the region reviewed. An attempt will also be made to analyse the available statistical material to some extent.

/II. ECONOMIC

II. ECONOMIC ASPECTS OF DWELLING CONSTRUCTION

7. In table 1 are shown in synoptic form the national accounts data currently available in the region which are of interest in assessing the economic significance of housing in the context of economic and social development. Data on fixed capital formation in dwelling and its relationship to other macro-economic magnitudes are of most direct relevance in this respect and therefore will receive somewhat fuller treatment in this paper than the other national accounts concepts related to housing.

(a) Significance of the investment in dwelling construction

8. As a background to the subsequent discussion of statistics needed and statistics available for assessing the economic significance of fixed capital formation in dwellings it may be useful first to review in general terms some of the economic problems connected with this activity.

9. The number of dwellings which can be built during a given period of time is limited by the funds available for fixed capital formation in housing and by the manpower and materials on hand for the purpose. The supply of both the funds and the resources in manpower and materials which can be channeled into this activity is to some extent elastic. However, if the share of resources used for dwelling construction has already reached a relatively high level, the scope for further increase is in general relatively limited.

10. The total resources available for capital formation of all kinds depend on various factors and in any case it could hardly be expected that the efforts that may be made to increase investment could produce spectacular results in a short period of time. At present, out of the part of domestic expenditure which is used for capital formation of all kinds, very few countries allocate more than one third for dwelling construction.

11. Foreign aid could increase the total funds available for consumption and investment and if used primarily for capital formation, might also raise the investment coefficient. Aid earmarked specifically for housing development could also lead to an increase in the share of total capital formation used for this purpose. But even substantial amounts of aid are not likely to increase available resources by a high percentage

Table 1

NATIONAL ACCOUNTS DATA CURRENTLY AVAILABLE IN LATIN AMERICA FOR AN
ASSESSMENT OF THE ECONOMIC IMPORTANCE OF HOUSING

Country	Gross domestic expen- ditures	Gross domestic fixed capital formation	Construction expenditures		Consumption expenditures		Gross domestic product by indus- trial origin	Product of ownership of dwell- ings sector
			Total	Dwellings	Total	Rent		
Argentina	X	X	X	0	X	0	X	0
Brazil	X	X	0	0	X	0	X <u>a/</u>	X <u>a/</u>
Chile	X	X	X	0	X	0	X	X
Colombia	X	X	0	0	X	0	X	X
Costa Rica	X	X	0	0	X	0	X	X
Cuba	X	X	0	0	X	0	0	0
Ecuador	X	X	X	X	X	X	X	X
Guatemala	X	X	0	0	X	0	0	0
Honduras	X	X	X	X	X	X	X	X
Mexico	X	X	0	0	X	0	0	0
Peru	X	X	X	0	X	X	X	0
Venezuela	X	X	X	X	X	X	X	X

a/ Net product.

/and will

and will essentially be marginal to the funds available from domestic sources. Also, the supply of manpower and materials for all purposes is limited and if a too large part of these resources is diverted to capital formation, there is a danger of creating or worsening economic imbalances.

12. Capital formation in dwellings is undoubtedly productive in the direct economic sense of the term, because dwellings produce housing services which are part of the domestic product. However, capital formation in dwellings does not have the expanded productive effect of investment in the key industries. This fact makes, substantially larger investments for this purpose, as compared to investments which have an expanded productive effect, more difficult to justify on purely economic grounds.

13. Although in the short run the effects of improved housing in maintaining or increasing the working capacity of the population are not immediately evident and therefore tend to be disregarded from a purely economic standpoint, there is, however, a growing realization that expenditure on dwelling construction, in providing for the satisfaction of a fundamental human need, is a necessary infrastructure investment without which economic development is not possible in the long run. In Latin America, the glaring deficit of dwellings for the lower income groups makes it likely that economic development even in the short run would hardly be feasible without an improvement of the housing situation.

14. It has been stated^{1/} that, in the economic field, the development of housing programmes through the creation of new building material industries, the expansion of existing supply agencies and the increase in work opportunities has led to an expansion of all national economic activities auxiliary to the building industry. Further, that the development of housing programmes leads, in general, to an increase in productivity since enlargement of markets permits mass production and consequently an increase in the earnings and productive use of industrial equipment, and because the workers' output is increased due to improved living conditions

^{1/} United Nations Economic Commission for Africa, Report of the Workshop on low-cost housing and related community facilities, held in Tunis, Tunisia, 9-22 October 1961 (E/CN.14/SWCD/4).

created by better housing. Finally, that an increase in permanent housing leads to greater stability among the population which may be the starting point for regular work and the beginning of economic and social progress.

15. In the industrially advanced countries, total employment in construction is usually about 20 to 30 per cent of that in all manufacturing industry, and housing probably accounts for about half of the total direct and indirect employment in construction. In the less developed countries, a national housing programme can provide a similar large employment potential. In rapidly developing and urbanizing countries, employment in construction appears to be the first step in the shift of rural migrants from agricultural to industrial pursuits. On the other hand, shortages of housing result in a high and inflationary rent level which can lead to high wages and production costs which in turn will have an adverse effect on economic development.^{2/}

16. An adequate rate of savings is a pre-condition of economic progress. Creation of the savings habit is often difficult, even where incomes allow it, and since housing offers a tangible, desirable and personal objective people can be more readily induced to save for housing than for other forms of investment. A housing policy and programme, therefore, which provide the means and the incentive for individuals to amass their own saving for housing will contribute to general economic development both by the actual savings realized and by the saving habit created.^{3/}

17. Investments in housing and urban development programmes, together with education and health, belong to the category of social overhead project and, like the economic overhead projects (such as transport, communication and power), are basic to economic development. These overhead projects provide little or no yield in foreign exchange. They usually furnish low returns in the short run and take a considerable time to realize any yields in financial terms. Their benefits, however, are derived from the more balanced development of economic activities which they are supporting.^{4/}

2/ United Nations, Group of Experts on Housing and Urban Development, The role of housing and urban development in national development programmes, Working Paper No. 4, New York, 1962.

3/ See footnote 2/.

4/ United Nations, Report of a Special United Nations Fund for Economic Development, United Nations Publication, Sales No: 1953. II.1, para.107. /18. Some

18. Some conceptual and methodological problems connected with obtaining the statistical data needed to analyse the economic significance of dwelling construction will be discussed below and the methods of estimation actually applied in some of the Latin American countries will be briefly reviewed. On the basis of the available data an attempt will be made to analyse the economic significance of dwelling construction in the countries of the region. The conclusions arrived at must necessarily be highly tentative, but the analysis may illustrate what could be done if sufficiently ample and reliable data were made available.

(b) The coverage of the national accounts concept of dwelling construction

19. In its proposal for a standard system of national accounts and related tables,^{5/} the Statistical Commission of the United Nations recommends that fixed capital formation in dwelling be shown as a separate item in the table on the composition of gross domestic capital formation by type. Total gross fixed capital formation in dwellings is defined to include "all expenditures on new construction and major alterations to residential buildings including the value of the change in work in progress, but excluding the value of the land before improvement. The expenditure covers the cost of external and internal painting and all permanent fixtures such as furnaces, fixed stoves, central heating and water supply installations and all the equipment customarily installed before renting". This definition is applied by countries of the region which estimate fixed capital formation in dwelling.

20. Various breakdowns of total expenditures on dwelling construction would be very useful for a full analysis of its economic significance. For instance, it would be useful to know its distribution by urban and rural areas, by size and characteristics of dwellings and by new construction and major repairs. The distribution of the total expenditure by public and private sectors would also be of interest to show the part played by governments in dwelling construction.

^{5/} "A System of National Accounts and Supporting Tables", Studies in Methods, Series F, No 2, Rev.1, United Nations, New York, 1960.

21. It is also important to know how large a part of total annual expenditures on dwelling construction is needed to replace houses worn out by normal wear and tear or destroyed. Depreciation allowances on the actual replacement value of the dwelling stock estimated for national income purposes would give an approximate measure of this. Estimates of the replacement value of the dwelling stock are, of course, also of the greatest interest in themselves and not only as the basis for calculating the annual depreciation allowances.

22. Although they only include specific recommendations about including figures on total gross fixed capital formation in the national accounts estimates, the United Nations' standards, of course, are not intended to prevent country estimates from including any number of classification of dwelling construction by type as well as estimates of both net and gross figures, as long as they are kept within the general framework of the definition of the total.

23. It should be noted that gross fixed capital formation classified by type in the national accounts only refers to items which represent an increase in the capital stock from the point of view of the country as a whole. As a consequence of this, the value of the land on which the buildings are constructed is not included in fixed capital formation in dwellings. A special item for "land" is included in the classification recommended by the United Nations, but this item refers only to net expenditures, including legal and other fees connected with the transfer of land from one owner to another and not to the value of the land itself.

24. In the classification of fixed capital formation by industry, however, the United Nations recommends that the movement of already existing capital goods should be taken into account as positive capital formation of the industry of purchase and negative capital formation of the industry of sale. Acquisition of land by the industry "ownership of dwellings" therefore should include the value of the land purchased or rented for residential construction. In practice however, the few countries of the region which estimate capital formation by industry have not been able to adjust their figures for transactions between industries in existing

/fixed capital,

fixed capital, including land. Since the cost of acquiring land in the countries of the region often amounts to a considerable part of total cost of the house-building projects, it would be very useful if the Latin American countries, in developing their estimates of fixed capital formation by industry, could take this factor into account.

25. In opening up new areas for dwelling developments it is necessary to put down new water-mains and sewer-pipes, to construct light and telephone lines and to work up new streets and roads. For the purpose of assessing total cost of a housing programme it is of interest to know the present ratio between these expenditures and the direct expenditures on fixed capital formation in dwellings. In the Latin American countries this is so much the more important because the cost of many public utilities is not borne by the Government but by the private builders themselves, and therefore directly increase the cost of dwelling construction. At present, however, no information is available in the national accounts or elsewhere, which makes it possible to evaluate the importance of these items.

(c) Availability of data and methods of estimation

26. Construction expenditure is one of the most difficult items to estimate in the national accounts anywhere in the world, because the basic statistics on which these estimates have to be built are usually rather inadequate. Two main methods have been applied in Latin America. The method most widely used is to base the estimates on building permit statistics for the private sector and on data extracted from the government accounts for the public sector. An alternative method based on domestic production and imports of building materials with appropriate mark-ups is used in at least one country of the region.

27. Building permit statistics are available for many Latin American countries, but as a rule they cover only the capital or selected urban areas. (See table 2.) A few countries have building permit statistics which also cover the rural areas, wholly or in part. In addition to being limited in geographical coverage, building permit data also suffer from other weaknesses such as the fact that some building takes place without permits, that not all buildings for which permits are issued are actually

Table 2

BUILDING PERMIT STATISTICS AVAILABLE FOR LATIN AMERICAN COUNTRIES

Country	Residential construction specified	Coverage
Argentina	No	Floor area of all new buildings completed in the Federal District of Buenos Aires.
Brazil	No	Floor area of buildings authorized in State capitals. Reconstruction is included.
Chile	Yes	Floor area of new buildings authorized in 13 communes.
Colombia	No	Ground area (including gardens, patios, etc.) of new buildings authorized in 18 cities.
Costa Rica	No	Floor area of new buildings authorized; private construction only.
Cuba	No	Total number of building permits issued for private urban construction.
Guatemala	No	Floor area of private construction completed in Guatemala City, including extensions.
Mexico	Yes	Number of buildings completed in the Federal District.
Panama	Yes	Number of building permits issued in the Districts of Panama City and Colon for private construction.
Venezuela	No	Ground area of new buildings authorized.

Source: United Nations, Supplement to the Monthly Bulletin of Statistics, New York, 1959

/completed and

completed and that there is a time-lag of varying length between the issuing of a permit and the completion of a building. When used for estimating totals covering the whole country these data must therefore be adjusted both for geographical undercoverage and for incomplete coverage of house-building in the areas for which they are available.

28. The adjustments of the building permit statistics with respect to geographical undercoverage appear in general to be incomplete in the region and several countries prefer to make no such adjustment at all in their estimates. Others make an adjustment by assuming, for instance, that new dwelling construction has the same relationship to the existing stock of dwellings as at the time of the most recent housing census in the areas covered by building permits statistics as well as in the areas not covered by them. Statistics of finished building based on the certificates of occupation required in most countries of the region are sometimes used in adjustments for the time-lag between the issuing of building permits and the completion of the dwelling, as well as for the non-utilization of permits. In countries which use the values stated in the building permits directly in their estimates of the value of dwelling construction, rough adjustments are usually made for possible under-valuation. All these adjustments are, however, necessarily very approximate and it is on the whole likely that the use of the building permit method leads to some under-estimation of construction expenditures for most countries of the region.

29. Some countries use the building permit method to make full estimates of the construction component of fixed capital formation for bench-mark years only, while for other years they extrapolate total fixed capital formation by means of volume price indicators. For Brazil, for instance, there exists a detailed estimate of fixed capital formation for 1949 including a breakdown of construction expenditures by dwellings and other. For the years after 1949, however, total fixed capital formation has been estimated by means of a series for apparent consumption of raw materials for capital goods production of national origin and a series for the imports of capital goods. No breakdown of total fixed capital formation is therefore available for the years after 1949.

/30. Only

30. Only three countries of the region^{6/} (Ecuador, Honduras and Venezuela) currently publish separate figures for dwelling construction in their national income accounts, while the other countries which use the building permit method publish data on total construction only. The same three countries are also the only countries of the region which publish data on fixed capital formation by industry. The figures they show for capital formation in the sector "ownership of dwellings" are, however, identical to those shown as capital formation in dwellings in the breakdown by type of capital goods and therefore are not adjusted for purchase or lease of land for purposes of house-building.

31. Venezuela publishes more ample information on construction activities in its national accounts than any other country of the region. Building permit data covering the whole of the country are available and ratios between permits issued and buildings finished have been established by means of information on the start, progress, completion or interruption of building construction in the two main centres. These data combined with information from housing and population censuses and data obtained from the various public housing institutions have made possible estimates of dwelling construction classified by urban and rural, of the existing stock of dwellings and of depreciation.

32. The reason why so few of the countries which use the building permit method in estimating construction expenditures present separate data for dwelling construction in their national accounts is that the basic data on building permits in most countries of the region are available only as totals without any classification by dwellings and other buildings. Since the basic schedules on which these data are based generally give information about the types of building for which the permit is issued, it would appear that a classification by dwellings and other buildings could be obtained without much additional effort as a special calculation for national

^{6/} Similar official estimates are available for Chile up to 1954. For Argentina and Colombia, unofficial estimates were made for use in the ECLA studies of the economic development of these countries, covering the period up to 1955 and 1953 respectively.

income purposes. In practice, however, there may be obstacles against such procedures, e.g. the agency responsible for the building permit statistics may not be the same as the one which makes national income estimates and therefore may not have the resources to make a special calculation of this kind or may be reluctant to place its basic material at the disposal of the national income estimators.

33. Another reason why the countries sometimes may prefer to show only total construction expenditures in their national income estimates even if the building permit data would make possible a breakdown by dwellings and other construction is that they may consider the basic data too unreliable or too unrepresentative to show any details. A breakdown of the total by dwellings and other construction might give a distorted picture of the actual relationship between the components and therefore may be discarded by the national income estimators.

34. Argentina, for instance, publishes figures on total private construction only although the method of estimation apparently would make possible a breakdown of the total. Data on building permits issued and information on finished or approved work are available for Greater Buenos Aires and a number of principal municipalities in the interior, classified by dwellings, commercial buildings, industrial construction and additions to existing buildings. The floor space built is valued for the purposes of the national income estimate of construction expenditures, at the average cost of construction for each of these types of buildings in the various regions, obtained from construction enterprises, housing credit institutions and various other sources. The value of buildings in the rural areas is not included because it is not covered by the building permit statistics.

35. If the building permits system has sufficient coverage and is well organized, the basic permit schedules could be used to work out approximate classifications of dwelling construction by type (urban or rural), by cost and by quality for the national income accounts. Information on government accounts would also make it possible to extract the government share from total dwelling construction. Such breakdowns are at present very scarce in the region. Considering the importance of more detailed

/and reliable

and reliable data on dwelling construction, it is hoped that countries will in future utilize their building permit statistics more fully in their national income estimates and also improve the basic data available in this field.

36. For Panama, a different approach has been taken in estimating construction expenditures, by using the so-called commodity flow method. Figures on the value of domestic production and imports of building materials from the basic statistics and a percent addition has been made for the other components of total building costs. Since statistics on the production and particularly on the imports of building materials are relatively abundant, this method may lead to a total estimate of better coverage than by applying the permit method, if permit statistics are inadequate.

37. In practice, however, it may be difficult to identify some items of building materials in the import statistics because they may be classified together with items which have other uses, such as, equipment of various kinds. The same commodity can sometimes also be used both directly as building material or as a raw material in a further process of production. Moreover, available resources often do not permit as full an analysis of the basic production and import statistics for the national income estimates as might be possible.

38. Another difficulty in applying this method is that the CIF or ex-factory cost of materials constitutes only part of total building costs, and the other components which usually represent more than half the total have to be added to the cost of materials. Since this addition has to take into account not only labour costs, but also customs duties, freight and mark-ups of middle-men for the various types of building materials, it is difficult to determine accurately and therefore a rough figure is used in most cases.

39. However, the most serious objection to the method from the viewpoint of this paper is that by its very nature it precludes an estimate of construction expenditures by component. Since the same materials are generally used for dwelling construction and other building, it is, of

/course, not

course, not possible to distinguish between these two purposes in allocating domestic production and imports of such materials. Countries using this method could therefore only obtain separate figures on dwelling construction in their national accounts by making an independent estimate based on a different set of basic data.

40. It is clear what has been said that the data now produced by the Latin American countries in their national accounts fall far short, in detail and quality of what is ideally required to analyse the economic significance of dwelling construction. A fuller utilization of whatever basic data are available, combined with further surveys from building permits, may be one way of obtaining improved estimates in the relatively short run without the expenditure of much extra resources. To become really satisfactory, however, the national accounts estimates of dwelling construction ought to be based on more solid data obtained from construction censuses and annual sample surveys based thereon. This long-term goal therefore should not be lost sight of.

(d) Expenditures on dwelling construction in relation to other macro-economic magnitude

41. As already mentioned in the preceding section, few data on dwelling construction exist in the national accounts of the countries of the region and the available figures suffer from many weaknesses with regard to coverage and reliability. However, mainly to serve as an illustration of the importance of obtaining more ample and reliable information in this field, an analysis in the broadest terms will be attempted on the basis of the data available. Since estimates for countries outside the region are also used in the following, it should be noted that with few exceptions these figures are also subject to similar reservations as regards their reliability.

42. No direct comparison of the absolute levels of dwelling construction between this and other regions is possible at present, because figures converted to a common currency do not exist. Although no entirely satisfactory technique has so far been developed for converting total products into a common currency, some calculations have been made which

/give a

give a general idea of the relative levels of the total in this region and in Western Europe and the United States.^{7/} The data available (see table 3) indicate that the percentage of total product used for dwelling construction probably does not differ very much between this region and the more industrialized areas. It may be somewhat lower here.

43. It is well-known fact that building costs in many Latin American countries are relatively high, because many building materials have to be imported and the domestic building materials industry in most countries has too a limited market to operate on the most economical scale.

Dwelling construction in this region is also heavily concentrated in the large cities where wage-levels in some countries are relatively high. The high building costs are generally considered to be one of the chief obstacles to the provision of low cost housing on a large scale in Latin America.

44. On the basis of available estimates of gross product for Europe (in United States dollars) made by the OEEC and for Latin America by ECLA it may be assumed that the per capita gross product in the United States is around five times and in Western Europe about two and a half times higher than in Latin America. If similar ratios are assumed for dwelling construction, this implies that total resources spent for this purpose per person in Latin America amount to only about 40 and 20 per cent respectively of the corresponding expenditures in Western Europe and the United States.

45. Even if it is assumed that the figures on dwelling construction for this region are underestimates compared to those of the other regions it is not likely that the degree of underestimation would be high enough to change the general picture to any significant extent. Among other things, the figures for the countries of the region generally do not cover the construction of shacks in the cities and only inadequately cover rural building. Estimates for some large cities indicate that perhaps as much as one quarter of the housing units actually constructed are shacks.^{8/}

7/ See: OEEC, An international comparison of national products and the purchasing power of currencies, Paris, 1958, and United Nations, Economic Survey of Latin America, 1958, Mexico, 1959.

8/ Banco Central de Venezuela, Memoria 1959, states that both in 1950 and in 1959 about one quarter of the all housing units in urban areas were shacks.

Table 3

GROSS FIXED CAPITAL FORMATION, CONSTRUCTION EXPENDITURES AND
EXPENDITURES ON DWELLING CONSTRUCTION, 1957-1959

Country	Gross fixed capital formation as percent of gross domestic product	Construction expenditures		Expenditures on dwelling construction		
		As percent of gross fixed capital formation	As percent of gross domestic product	As percent of construction expenditures	As percent of gross fixed capital formation	As percent of gross domestic product
Argentina, 1955	15.1	55.8	8.5	48.6	27.1	4.1
Chile, 1954	8.4	66.5	5.6	58.7	39.1	3.3
Colombia (1953) ^{a/}	22.9	60.4	13.9	19.5	11.8	2.7
Ecuador	12.5	54.9	6.9	32.6	17.9	2.2
Honduras (1955-57)	13.2	67.5	8.9	38.8	26.2	3.4
Mexico, 1955	14.0	...	...	...	17.1	2.4
Panama	14.3	64.8	9.2	...	...	...
Peru (1956-58)	24.9	38.8	9.7	...	...	...
Venezuela ^{b/}	25.4	60.4	15.4	20.6	12.4	3.2
British Guiana (1954-56)	19.7	59.2	11.6	29.9	17.7	3.5
Jamaica	22.6	...	...	...	13.4	3.0
Puerto Rico ^{c/}	22.1	62.4	13.8	36.2	22.6	5.0
Trinidad and Tobago	25.5	55.6	14.2	...	...	...
Denmark	17.8	42.6	7.6	37.1	15.8	2.8
Greece (1956-58)	16.5	64.9	10.7	47.6	30.9	5.1
Italy	21.3	59.7	12.7	47.8	28.5	6.1
Netherlands	24.2	50.2	12.1	41.1	20.6	5.0
Norway	29.7	44.0	13.1	32.5	14.3	4.2
Portugal	16.0	69.4	11.1	28.7	19.9	3.2
United Kingdom	15.4	47.9	7.4	36.7	17.6	2.7
United States	16.8	66.3	11.1	40.7	27.0	4.5

Source: United Nations, Yearbook of National Accounts Statistics, 1957, 1959 and 1960, New York, except Argentina; United Nations, El Desarrollo Económico de Argentina, Anexo Estadístico (E/CN.12/429.Add.4), Santiago, 1958; Colombia: United Nations, El Desarrollo Económico de Colombia, Anexo Estadístico (E/CN.12.365/Add.1/Rev.1), Santiago 1957; Mexico: United Nations, External Disequilibrium in the Economic Development of Latin America: The case of Mexico (E/CN.12/428), La Paz, 1957; Panama: Dirección de E. y Censos, Ingreso Nacional Años 1955-59, Estadística Panameña, Año XX, Serie "C"; Venezuela: Banco Central de Venezuela, Memoria 1959, Caracas 1960. Chile: Cuentas Nacionales de Chile, 1940-54. CCRFO 1957.

^{a/} Based on figures at 1950 prices.

^{b/} Based on figures at market prices of 1957.

^{c/} Fiscal years beginning 1 July.

This type of housing must, however, be considered as one of the most acute symptoms of the dwelling shortage rather than as additional dwelling space provided, and may therefore rightly be disregarded. As regards expenditures on dwelling construction in the rural areas, indications are that they constitute a relatively insignificant part of the total.^{2/}

46. It is not known how much of the total expenditures on dwelling construction is spent on luxury type housing, but the share is no doubt high in most countries of the region. In spite of considerable efforts on the part of governments to provide cheap financing of low cost housing through such measures as the creation of loan funds with low interest rates and long amortization periods and the encouragement of cooperative financing, most dwelling construction is still financed by private capital. This capital demands high interest rates and a low amortization period and therefore is directed towards the building of houses which bring a high rent. The amount of dwelling space actually provided may therefore be considerably smaller than the present expenditures on dwelling construction could have supplied if directed towards more modest types of housing.

47. Part of gross fixed capital formation in dwelling is used for the repairs of existing houses to increase their lifetime or to replace houses worn out through normal wear and tear or accidents. It is doubtful whether repair costs are adequately covered in the estimates for the Latin American countries but it is also known that major repairs are to some extent neglected by the owners of the dwellings.

48. Estimates for some Latin American countries indicate that annual gross fixed investment in dwellings in the region probably amounts to about six per cent of the depreciated value of the existing dwelling stock. If two per cent is needed for replacements, this means a net addition to the dwelling stock of around four per cent annually or slightly more than the population increase which is estimated at about 2.6 per cent for

^{2/} Estimates published in Banco Central de Venezuela, Memoria 1959, show that in Venezuela dwelling construction in the rural areas in the period 1950-1959 was 8.1 per cent of the figure for the urban areas. According to United Nations, El Desarrollo Económico de Colombia, Anexo Estadístico (mimeographed) Santiago 1957, the corresponding figure for Colombia during the period 1945-1953 was 4 per cent.

the region as a whole.^{10/} Very little is therefore left to provide the necessary housing for the large part of the population which is at present virtually without a roof over their heads.

49. Available data indicate that dwelling construction as a percentage of total gross product and as a percentage of total fixed capital formation is lower in the Latin American countries than in more industrialized countries outside the region. While the share of total product used for dwelling construction in the seven countries of the region included in table 3 varies roughly from 2 and 4 per cent, the corresponding percentage for the more industrialized countries is between 3 and 6 per cent. The table shows that there are several less industrialized countries outside the region which spend a greater share of their gross product on dwelling construction than do the Latin American countries. (e.g. Greece with 5.1 per cent Puerto Rico with 5.0 per cent and Malta with 4.2 per cent.) This would suggest that the Latin American countries do not spend as much on dwelling construction as they could even at their present level of development.

50. Some information on the public share in dwelling construction is available for Ecuador and Venezuela. In the former country, the public sector accounted for about 6 per cent of the total during the period 1955-1957.^{11/} The data on public expenditure for dwelling construction available for Venezuela are not quite comparable with the figure for total dwelling construction. However, they indicate that the public share was considerably higher here, possible around 20 per cent.^{12/} This indicates that the relatively high figures for total expenditures on dwelling construction in Venezuela are partly due to a special effort on the part of the Governments to supply low-cost housing by direct building.

^{10/} Estimates in the ECLA studies on Argentina and Colombia show that the average annual increase of the dwelling stock in Argentina between 1945 and 1955 was 4.4 per cent while the corresponding figure for Colombia during the period 1945-1953 was 3.8 per cent. For Venezuela, which has a better record in this respect than most countries of the region, the average annual increase in the dwelling stock between 1950 and 1960 was as high as 9.3 per cent. In spite of this relatively high increase, the Memoria 1959, of the Banco Central states that the housing problem is still very far from being solved.

^{11/} Banco Central de Ecuador, Memoria, 1958.

^{12/} Banco central de Venezuela, Memoria 1959 and Memoria 1960. /51. Very

51. Very little statistical material is available for a comparison of expenditures on dwelling construction with expenditures for other social purposes in the region. There are, however, indications that fixed capital formation in dwellings is approximately equal to or somewhat higher than total expenditures on education by government as well as the private sector in the regions, which probably amounts to about two to three per cent of the gross domestic product. It is generally recognized that the present level of education expenditures is also grossly inadequate.

III. PHYSICAL RESOURCES NEEDED FOR HOUSE-BUILDING

52. If the financial resources are found for a greatly expanded programme of dwelling construction, the next step is to gauge what the programme would require in terms of materials and manpower. The problem of manpower. The problem of manpower would in most countries probably be mainly one of vocational training and not of numbers available. With regard to materials, however, the problem is to assess whether the domestic building materials industries can be developed in the short run to such an extent that they can meet not only the requirements of increased house-building but also the extra demand for other construction which will arise when economic development is accelerated. To estimate the future requirements for manpower and imported as well as home-produced building materials, it is necessary to know as much as possible about the present supply of these resources.

(a) Manpower

53. Employment data referring to the house-building industry alone are normally not available anywhere in the world, but only data for construction activity as a whole. The reason for this is that the manpower occupied in the building and construction industry may be used for various types of building work during one and the same period and therefore cannot easily be allocated to any specific type of activity.

54. Neither is it easy to obtain current data on employment in the construction industry as a whole, because building and construction work is frequently undertaken by enterprises organized on an ad hoc basis for a special project and these enterprises as well as the more permanently organized

/censuses often

censuses often operate with transitory manpower. This makes it difficult statistically to identify both the industry and its employment.

55. Current data on employment in the construction industry are at present very scarce for the Latin American countries. The countries of this region should, however, have a good starting-point for developing such data in the future because of their comprehensive social security systems. For the time being, however, the population censuses are practically the only sources available for information of this kind. A number of Latin American countries held censuses around 1960 and up-to-date figures will therefore become available in the near future to replace the obsolete information from the 1950 censuses.

56. Since existing data are few and not quite suitable for the purpose, special surveys would be necessary to obtain the information on manpower needed to carry through a housing programme. Such surveys need not be very extensive, but could be limited to engineering-type studies on man-hours required in building various kinds of typical houses. On the basis of the results of surveys of this type and the number of houses to be built, total manpower needed for dwelling construction could be estimated and compared to an estimate of the total supply of labour and the requirements for other activities.

(b) Materials

57. The building materials industries have developed considerably in Latin America since the war. Available data show that cement production in the major countries has increased several times during this period and it is also known that domestic production of iron and steel for building purposes has increased considerably. Many of the smaller countries, however, still depend largely on imports for their building materials and none of the countries are as yet fully self-sufficient in this respect. The need for imports combined with the high domestic transportation costs for building materials from the few centres of production are factors which bring building costs up to a relatively high level in Latin America. Limited domestic markets have also prevented the development of building industries on the most economical scale. However, large-scale dwelling construction combined with possibilities for specialization when the common

market goes into effect should improve the outlook for lower domestic production costs in the future.

58. There is at present no way of knowing, on the basis of existing statistics, whether most domestic or imported building material items are used for house-building or for other construction purposes. Therefore, although data are generally available for the countries of the region on the imports of building materials, and many countries also publish data on domestic production of the main materials of this kind, these data are not directly suitable for estimating the present consumption of such materials for the purposes of dwelling construction.

59. As in the case of manpower, the best way to get some idea of the amount of materials used for house-building is therefore to undertake special engineering surveys on the consumption of material for various types of housing. On the basis of such studies, total materials of various kinds needed for an expanded programme of house-building could be estimated and compared with the domestic capacity for production of such materials. A rough idea of the need for imports of building materials may then be obtained, allowing for a possible future expansion of the building materials industries.

(c) Input-output tables

60. Several countries of the region have prepared or are in the process of preparing input-output tables which, among other things, make possible broad conclusions on the direct and indirect effects on the economy of an expansion of total investments. Because of the difficulty of estimating the total value of dwelling construction, and even more so of the inputs in this activity, it has not been possible so far to show dwelling construction as a special item in the input-output tables.

61. As more basic statistics permitting an extension of the input-output tables, become available very useful information on what an increased programme of house-building implies in terms of greater production in the various domestic sectors and increased imports can be obtained. This would provide a good basis for judging whether or not a specific programme for increased dwelling construction is economically feasible.

IV. THE IMPORTANCE OF HOUSE-OWNERSHIP AS AN ECONOMIC ACTIVITY

62. The existing stock of dwellings contributes to the national product by producing housing services, i.e. by making dwelling space available for occupation. The economic value of these services is measured in the national accounts as the difference between rents paid or imputed for owner occupied houses and current expenses incurred by the owners.

63. Although data on the value of dwelling services currently produced are not as directly relevant to the problems of planning and financing a housing programme as are the data on fixed capital formation in dwellings, such data still help to shed light on some aspects of the housing problem. A comparison between countries of the value of housing services in relation to total gross product may also give an approximate indication of relative shares of income spent on housing. This aspect is important in dealing with the countries of this region since information on total rents is scarcer than information on value added in the ownership of dwellings sector.

(a) Concept and methods of estimation

64. In the United Nations recommendations on national accounts, value added in the ownership of dwellings sector is considered part of the domestic product and is defined to include the compensation of employees and the gross operating surplus originating from the use of dwellings. The sector should cover "the contribution to gross domestic product originating from the use of dwellings owned by individual landlords (including rent of owner-occupied dwellings) and in corporate and non-corporate enterprises principally engaged in hiring out premises to other transactors". In principle, all the Latin American countries which estimate value added of the housing sector adopted this definition.

65. A breakdown of domestic product by industrial origin is available for most Latin American countries, but some countries include ownership of dwellings under the heading of "other services" because their basic statistics do not make a separate estimate possible. However, more than half of the countries show value added of the dwelling sector as a separate item on their national accounts.

66. To illustrate the methods of estimation actually applied for this item in the region, a few examples may be drawn from countries which publish detailed information on their national income methodology. In Argentina, for instance, a figure for total rents in 1946 is estimated by assuming that imputed rent of owner-occupied houses was equal to the average rent paid by tenants according to the housing census of that year. This figure has been extrapolated for other years by taking into account the variations in dwelling space provided, the change in controlled rents as registered in the cost of living index, and the probable level of uncontrolled rents for new dwellings. An estimated amount for maintenance expenditures and indirect taxes is finally deducted to obtain gross value added. It is of interest to note, however, that the figures on value added in the ownership of dwellings sector, estimated in this way, are published separately only up to 1947.

67. In Colombia, basically the same method has been used in estimating gross value added in the dwelling sector. The number of dwellings according to the housing census of 1951 are extrapolated for other years by means of data on new buildings in urban and rural areas. Average rents obtained by means of special surveys are then applied separately for the main cities, other urban areas and rural areas. From total rents thus estimated are deducted real estate taxes as shown in the government accounts and mortgage interest as published in the banking statistics, both with some adjustments. Maintenance and repair costs are estimated on the basis of a direct survey, and insurance premiums are considered to be so negligible that they have been disregarded.

68. In Panama, a somewhat more indirect method of estimation is used. The number of occupied dwellings in any one year is estimated as the quotient between total population and the average number of persons per occupied dwelling according to the housing census of 1950. This total is then classified by urban and rural ownership and sub-divided into owner-occupied, rented and rent-free dwellings, all on the basis of ratios from the 1950 census. The number of dwellings within each of these categories is subsequently multiplied by the appropriate average rent according to

/the 1950

the 1950 census. An estimate of total rent at current prices by means of the component for rent in the cost of living index. Finally, an approximate estimate of administrative expenditures, water charges and expenditures on repairs and maintenance is deducted to arrive at value added.

69. No general statement can be made as to whether the figures arrived at by these methods of estimation tend to attach too much or not enough importance to the ownership of dwellings sector, because of the many steps of subjective judgement involved in the calculations. For instance, while the coverage of the housing censuses is not always complete, especially for the rural areas, the average rents applied to the estimated stock of dwellings may well be somewhat high. In particular, the choice of average rent to be applied to owner-occupied houses is often highly dependent on subjective judgement. Finally, the indicators used for extrapolation of rents as a general rule have too limited coverage to be truly representative of the universe they are meant to cover, but it is not possible to say in which direction their movements deviate.

(b) The share of housing in gross domestic product

70. Table 4 shows the percentage contribution of the ownership of dwellings sector to gross domestic product in some Latin American countries and in some countries outside the region. It is evident from what was said in the previous section that conclusions in the broadest terms only can be drawn on the basis of these figures. Even allowing for a degree of statistical non-incomparability, however, it appears to emerge rather clearly from the table that the contribution of the dwelling sector to gross product is on the whole somewhat higher in the Latin American countries than in the more industrialized areas.

71. Since the per capita product of the Latin American countries is considerably lower than in the more industrialized areas, the per capita amount of dwelling services provided is also likely to be lower in spite of the fact that a somewhat larger share of total product may originate in the ownership of dwellings sector. That the amount of dwelling services relative to total income should be higher in this region does, however, require some explanation.

Table 4

SHARE OF THE "OWNERSHIP OF DWELLINGS" SECTOR IN GROSS DOMESTIC
PRODUCT AT FACTOR COST, 1957-59

Argentina (1953-55)	4.8
Brazil a/ (1956-58)	4.3
Chile	7.7
Colombia	5.3
Costa Rica b/	4.1
Ecuador (1956-58)	7.6
Honduras (1955-57)	7.3
Panama	11.1
Venezuela c/ (1959-60)	12.5
Jamaica	3.3
Trinidad and Tobago	1.6
Denmark	4.1
Greece	6.3
Italy	2.4
Netherlands (1955-57)	2.7
Norway d/	2.9
Portugal	3.3
United Kingdom	3.6
United States	2.4

Source: United Nations, Yearbook of National Accounts Statistics, 1959 and 1960 New York, except Argentina: United Nations, El Desarrollo Económico de Argentina, Anexo Estadístico (E/CN.12/429/Add.4), Santiago, 1958; Panama: Dirección de Estadística y Censos, Ingreso Nacional, Años 1955-1959, Estadística Panameña, Año XX, Serie "C"; Venezuela: Banco Central de Venezuela, Memoria 1960, Caracas, 1961.

a/ Based on net figures.

b/ Excluding ownership of dwellings in the agricultural sector

c/ Including interest

d/ Based on figures at market prices.

72. The principal reason is undoubtedly that the valuation of dwelling services, i.e. the level of rents, is relatively high in the region considering the level of per capita income. As will be discussed more fully in the next section, available data clearly indicate that the percentage of incomes spent for rent, particularly by the lower income groups, is much higher here than in the more industrialized countries.

73. Also, the population has to have housing of some kind regardless of the general level of economic activity, particularly if the climate requires more than a minimum protection against the elements. In spite of a relatively larger overcrowding of the available dwellings and the housing of part of the population in quarters which could hardly be called dwellings at all, the quantity of housing space available in the region as compared to more industrialized areas still likely to be more a function of the relative size of the populations than of the comparative income levels.

74. Still another factor conducive to an increase in the relative level of the product of the ownership of dwellings sector in the region is that deductions from the rental income for maintenance and repairs are probably lower than would be needed to keep the dwelling stock in good condition.

75. In table 5, the ratio between gross fixed capital formation in dwellings and the gross product of the dwelling sector is shown for the countries of the region for which such a comparison is possible and for some countries outside the region. These figures show clearly that fixed capital formation in dwellings as compared to the product of the dwelling sector is much lower in this region than in the more industrialized countries. This indicates that capital formation in dwellings here is smaller than the profits arising from house-ownership.

Table 5

GROSS FIXED CAPITAL FORMATION IN DWELLINGS AS PERCENT OF THE
GROSS PRODUCT OF THE SECTOR OWNERSHIP OF
DWELLINGS

Argentina, 1953-55	147.7
Chile, 1952-54	44.8 ^{a/}
Colombia, 1953	51.9
Ecuador, 1956-58	32.5
Honduras, 1955-57	51.6
Mexico, 1953-55	44.7
Venezuela, 1956-58	50.6
Denmark, 1957-59	69.6
Greece, 1956-58	97.4
Italy, 1957-59	284.3
Netherlands, 1955-57	190.4
Norway, 1957-59	161.4
Portugal, 1957-59	103.7
United Kingdom, 1957-59	85.6
United States, 1957-59	232.1

Sources: United Nations, Yearbook of National Accounts Statistics, 1957, 1959 and 1960, except Argentina: United Nations, El Desarrollo Económico de Argentina, Anexo Estadístico (E/CN. 12/429/Add.4), Santiago, 1958; Colombia: United Nations, El Desarrollo Económico de Colombia, Anexo Estadístico (E/CN.12/365/Add. 1/Rev.1), Santiago, 1957; Venezuela: Banco Central de Venezuela, Memoria 1959, Caracas, 1960.

^{a/} Gross Fixed capital formation in dwellings as percentage of net product of the sector ownership of dwellings.

V. CONSUMER EXPENDITURES ON RENT

76. If housing is scarce and the income level of the population is low expenditures on rent tend to constitute a large part of total consumption expenditures, particularly for the lower income groups. High levels of rent also tend to increase the part of the total product used for consumption and thus prevent an increase of private savings necessary to finance additional housing construction.

77. The rent component of personal consumption expenditures in the national accounts provides information on total paid or imputed rents for the population as a whole. This item, if related to such relevant macro-economic magnitudes as total domestic product or total private consumption gives over-all averages which conceal broad variations for the different strata of the population. Family living surveys relating to the lower income groups provide supplementary data which help to provide some idea of the size of these variations.

(a) Concept of rent in national accounts and family living surveys

78. In the United Nations recommendations the rent item of private consumption expenditures is defined to include "all gross rent (actual and imputed gross rents on owner-occupied houses as well as actual and imputed ground rents payable) including water charges and local rates. Rent will generally be space rent, covering heating and plumbing facilities, lighting fixtures, fixed stoves, wash basins and other similar equipment which is customarily installed in the house selling or letting. Expenditures of tenants on indoor repair and upkeep (for example, indoor painting, wall paper, decorating, etc.) are included". This definition is in general accepted by the countries of the region which estimate consumer expenditures on rent, with the modifications required by differences in local practice.

79. Local rates and water charges are included with rent in the United Nations definition because these expenditures are considered inextricably connected with rent expenditures proper. The same could perhaps also be said of the item "fuel and light" and to a lesser extent of the item "furniture, furnishings and household equipment", which are both kept separate from rent in the standard recommendations. For a consideration

/of the

of the economic significance of housing where it is necessary to consider rent in relation to, say, building costs, it would seem preferable, however, to apply a definition which limits the concept of rent as closely as possible to actual house rent paid and imputed.

80. In family living surveys, several countries both inside and outside the regional make it a practice to group rent expenditures together with expenditures on related items, often electricity and sometimes fuel or water. Another reason for the incomparability of rent data from family living surveys is the fact that they refer to samples of different groups of the population and of different sizes in the various countries. Most frequently, a sample is taken of workers' families in the capital city, but sometimes salary earners are also included and occasionally rural families as well. All these factors have to be taken into account when data from family living surveys are used in comparing levels of rent expenditures.

(b) Availability of data and methods of estimation

81. Five Latin American countries (Ecuador, Honduras, Panama, Peru and Venezuela) provide a breakdown of personal consumption expenditures in their national accounts estimates and these countries also show separate figures for rent (see table 6).^{13/} As mentioned in the previous section, several more Latin American countries estimate the product originating in the sector ownership of dwellings and to do this they have to take as their starting-point an estimate of total rents. Since available basic statistics do not permit these countries to estimate the other components of consumer expenditures, the rent component is not given.

82. For a short survey of methods actually used in estimating paid and imputed rents in some countries of the region, reference is made to the discussion in the previous section on the methods applied in estimating the product of the ownership of dwellings sector.

83. Family living surveys with varying coverage have at one point or another been made in practically every country of the region (see table 7).

^{13/} In addition, official estimates are available for Chile (up to 1954), and unofficial estimates in the ECLA country studies for Argentina (up to 1955) and Mexico (also up to 1955).

Table 6

RENT AS PERCENT OF CONSUMER EXPENDITURES AND OF GROSS DOMESTIC
PRODUCT AT FACTOR COST, 1957-59

Country	Percentage of consumer expenditures	Percentage of gross domestic product at factor cost
Argentina (1953-55)	9.3	7.0
Chile (1952-54)	12.5	...
Ecuador (1954-56)	9.3	7.3
Honduras (1955-57)	8.8	7.5
Mexico (1953-55)	5.6	...
Panama	13.7	11.7
Peru (1955-57)	20.3	14.7
Venezuela (1958-59)	12.4	...
Jamaica	5.5	4.3
Denmark (1956-58)	6.4	4.4
Italy	3.4	2.5
Netherlands	7.4	4.7
Norway	7.9	5.1
United Kingdom	9.0	6.8
United States	12.9	...

Sources: United Nations, Yearbook of National Accounts Statistics, 1957, 1959 and 1960, except Argentina; United Nations, El Desarrollo Económico de Argentina, Anexo Estadístico (E/CN.12/429/Add.4), Santiago, 1958; Panamá: Dirección de Estadística y Censo, Ingreso Nacional, Años 1955-1959, Estadística Panameña, Año XX, Serie "C"; Venezuela: Banco Central de Venezuela, Memoria 1960, Caracas, 1961.

Table 7

RENT AS A PERCENTAGE OF FAMILY EXPENDITURES

Country	Year	Percent age	Other items than rent proper- ly included	Coverage
Argentina (Buenos Aires)	1943	16.7	Electricity	Unskilled workers' family earning between 100 and 250 pesos per month and consisting of man, wife and 2 children.
Brazil (Sao Paulo)	1951/52	25.0	-	300 workers' families.
Colombia (Bogotá)	1953	21.8	-	212 wage-earners' families of 3 persons.
Costa Rica (San José)	1949	7.8	-	258 middle class and workers' families.
Cuba (Havana)	1953	13.6	-	Wage-earners' and salaried employees' families with annual income from 500 to 3 000 pesos.
Dominican Republic (Trujillo City)	1947	26.4	-	49 families of 5 persons each with incomes up to 30 pesos per month.
Ecuador (Quito)	1950	7.5	-	50 wage-earners' families with monthly income from 300-800 sucres. 300 workers' families of 5 members.
El Salvador (San Salvador)	1954	16.5	-	
Guatemala (Guatemala City)	1946	15.2	-	59 workers' families of average size (5.1 persons) with incomes between 32 and 107 quetzales a month.
Haiti (Port-au-Prince)	1949/50	11.9	-	Families of low income living in urban and suburban areas.
Honduras (Tegucigalpa)	1950	17.0	-	78 workers' or employees' families with at least 2 members and annual income ranging from 1 000 to 2 500 lempiras.
Nicaragua (Managua)	1953	12.3	Ind. water and electricity	Industrial workers' families of 6 members with monthly expenditures of 556 cordobas.
Panama (Panamá City)	1952	20.6	Fuel, light and ice	276 middle-class and workers' families with annual incomes between 1 000 and 3 000 balboas.
Paraguay (Asunción)	1938	15.9	-	100 workers' families of 5 members each.
Peru (Lima)	Periodical	18.0	-	Periodical social studies.
Venezuela (Caracas)	1945	23.6	-	Study of family living conditions in Caracas.
Jamaica (Kingston)	1954	12.0	Water and electricity	Manual workers in Kingston and lower St. Andrews Metropolitan area earning below £300 annually.
Puerto Rico	1952	15.5	Fuel and light	Urban and rural families with average annual income of \$ 1 081.
Australia	1950-53	9.0	-	Censuses and consumption estimates.
Ceylon (Colombo)	1949/50	5.7	-	455 manual workers' families.
Denmark	1948	7.8	-	443 wage-earners' and salaried employees' families in Copenhagen and its suburbs, 16 provincial towns and 2 rural villages.
Italy	1953	2.3	Water	Covers 92 towns. 80% rents controlled.
Malta	1946	6.0	Repairs	
Norway	1951/52	7.8	-	Wage-earners' families in 17 towns and 10 industrial centres.
United Kingdom	1953/54	8.7	-	11 638 urban and rural wage-earners' households where head had weekly gross income of less than £20.

Source: Supplement to the Monthly Bulletin of Statistics., United Nations, 1959.

/However, several

However, several of these surveys are ten or more years old and none relates to a more recent year than 1954. They cannot therefore be assumed accurately to reflect the composition of expenditures today. The countries concerned are aware of this and several have set themselves the urgent task of conducting new surveys which should provide a better weighting base for their cost of living indexes.

84. The methodology of family living surveys is generally arrived at obtaining from a sample of families data on their specific expenditures, item by item, during a period of time. This is done by requesting them to keep detailed accounts or by sending enumerators who get the information by direct questions at different points during the period. Since rent is an item on which the families are easily able to give accurate information, expenditures for this purpose and their share in total expenditures may be assumed to be accurately reflected in the family surveys.

(c) The share of rent in consumer expenditures

85. Subject to the reservations made previously concerning the quality of the data, the figures shown in table 6 appear to indicate that rent constitutes an appreciably higher percentage of consumer expenditures in Latin America than in more industrialized countries. The data presented in table 7, taken from family living surveys show a considerable difference for the lower income groups. While none of the low-income families in the countries outside the region which are shown in the table (Jamaica and Puerto Rico excluded) at the time of these surveys spent as much as 10 per cent of their total outlays on rent, in no less than eleven of the Latin American countries for which figures are shown, the corresponding ratios were above 15 per cent and in three of them it was around 25 per cent. The very high percentage spent for rent by the low income families which constitute the bulk of the population, is no doubt the deciding factor in raising the national average as compared to the more industrialized countries.

86. Since rent control has been introduced in many of the Latin American countries, the share of rent in the budgets of the low income families may possibly be somewhat lower now than it was at the time the surveys were taken. But since rent control is difficult to enforce

/the deficit.

the deficit in the supply of low-cost housing is very great, rents even for sub-standard housing still undoubtedly tend to be driven up as high as the market can bear.

87. Another purely estimative factor may have made the general level of rents as calculated in the national accounts of the Latin American countries higher than the real level. Most dwellings are in the rural areas and the majority of these are either occupied by their owner or by tenants on a rent-free basis. The average rents imputed to these dwellings, which are often of very low quality, may possibly be too high. Be that as it may, there is hardly any doubt that the level of rents for low income families in the region is very high, particularly for the type of housing for which the rent is paid.

VI. HOUSEHOLD INCOME AND THE COST OF DWELLINGS

88. Much has been said concerning the extent to which the population in the developing countries is able or unable to afford a minimum dwelling but very little information is available concerning the methods employed to arrive at these conclusions. The success of housing programmes ultimately depends upon the ability of the population either to purchase or rent the dwellings constructed and the financial aspects of housing programmes are based not only on the investment required for the construction of dwellings but on the ability of the population to pay for the occupancy of the new dwellings. It seems essential, therefore, that statistical data be obtained to estimate, as accurately as possible, the distribution of household by income groups and the proportion of the incomes that can be devoted to housing. The quality of the dwellings to be constructed (size, material, facilities) may be graduated to match as far as possible the ability of the population to purchase or rent the housing provided. There comes a point, however, in the process of decreasing the cost and quality of dwellings to meet the ability of the population to pay, where a minimum level is reached (minimum dwelling). Beyond this minimum level there will be a population group (substantial in developing countries and existing also, but to a lesser extent, in developed countries) unable to afford to pay for even a minimum dwelling. For these groups estimates must be made of the amount of financial or other assistance

/required and

required and the form in which the assistance is to be made available (rent, subsidies, purchase subsidies, self-help construction etc.), will have to be decided. The use of statistics to determine the extent to which households are able to finance their essential social needs out of their regular income is essential. The question which needs to be answered can be formulated as follows: given a certain average level of income, a distribution of household by income groups and corresponding patterns of expenditure, what proportion of the households can, or cannot, afford minimum satisfactory dwellings at current or expected prices? The question whether households can afford a type of minimum satisfactory dwelling is normally dealt with in the formulation of national housing programmes.

89. As far as possible, data should be obtained on income and consumption patterns for all important sectors of the population. These may include population groups distinguished by income classes, social and economic characteristics, and national groups, urban and rural sectors, household or family types and geographic areas. Such studies should be instituted with a view to evaluating regional differences in income and consumption patterns and to analyzing sources of income and distribution of expenditure at different income levels, for specific industrial and occupational groups, etc. Each important sector of the population (farm labourers, salaried workers, miners, etc.) have their own consumption patterns and there is often a marked difference between major areas. In particular, a special study shall be made of the differences of the industrialized and less-developed areas and those in which specific industries and agriculture are predominant.

90. Total consumption and savings can sometimes be assessed on the basis of information concerning household income, but it is generally agreed, in the light of available experience, that expenditure data are often more accurate and more readily obtainable than information on total household income.

91. The quality - and thus the cost - of dwellings constructed in housing programmes will be influenced by the total amount devoted to

/housing within

housing within over-all economic and social development programmes, the quality of existing housing, the urgency of housing needs and the ability of the population to pay for housing. Unfortunately, in countries where the proportion of the national budget devoted to housing is small the ability of households to pay for housing is also greatly reduced. The problem becomes one of providing as many dwellings as available resources will permit, corresponding as far as possible to the housing needs of the various population groups and to their financial ability to pay for housing, while maintaining certain levels in respect of quality.

92. Important factors in establishing the ability of the population to pay for housing will be the purchase price or rental of the dwellings to be provided in the programme and, in the case of dwellings to be purchased, the amount of the down payment to be made by the purchaser, the period fixed for amortization of the mortgage and the interest rate to be charged. Special research will be required to discover how far various standards of quality can be maintained while reducing the costs of the dwellings constructed. In addition to variations in the costs resulting from size, lay-out, facilities, construction techniques, type of material etc., costs may vary according to whether the dwellings are being constructed in rural or urban areas or according to the region in the country in which they are being constructed. A system of checking building costs should be considered as a complement to information concerning the cost of housing. Statistical information concerning all elements of building costs for various types of housing in different regions of the country should be made available with a view to reducing the costs wherever possible.

93. In the lowest income groups the proportion of income that can be devoted to housing may be estimated by taking into account the minimum expenditure required for such essentials as food and clothing. As income levels rise, however, household expenditure patterns will have to be studied more closely, since the proportion of income devoted to housing will depend not only upon the ability to spend a certain proportion of income on housing but also on the importance attached to housing as compared to other items of household expenditure.

94. Preliminary estimates of the ability of the population to pay for housing may be obtained from national income figures available annually from the national accounts. By taking the average size of households a rough estimate can be made of household income which may serve to provide a general idea of the possibility of households purchasing or renting dwellings of a certain price. It has been tentatively stated^{14/} that in developing areas mass housing on the scale required can be provided only within a cost of dwelling to per capita national income ratio ranging between 2 to 1 and 5 to 1 rather than the 10 to 1 now frequently found. This would imply for a programme of 10 dwellings per 1 000 inhabitants a financial investment of 2 to 5 per cent of the gross national product. It would suggest costs of not more than \$200-300 in Asia and Africa and \$500 to \$1 000 in Latin America. In El Salvador it has been estimated that 17 per cent of the total families have monthly incomes of 50 colones or less and that 45.5 per cent have monthly incomes of not more than 150 colones. The average cost of a dwelling (excluding the cost of the land and of urbanization) is estimated at 6 000 colones. Assuming a 1 per cent monthly payment of interest and amortization, the monthly payments on such an investment would be 60 colones. However, it is estimated that the families in the lowest income group could pay only 7.4 colones monthly for housing and that the group with incomes of 150 colones or less could pay between 11 and 18 colones a month.^{15/}

95. Private consumption expenditure, also available from the national accounts, will provide a very general idea of the proportion of total household expenditure represented by housing. Income data collected during population censuses would also be useful since in general housing census data is available as of the same data as the population census and

^{14/} United Nations, Group of Experts on Housing and Urban Development, Mobilizing national and external resources for the extension of housing and urban development, Working Paper N°6, 5 February 1962.

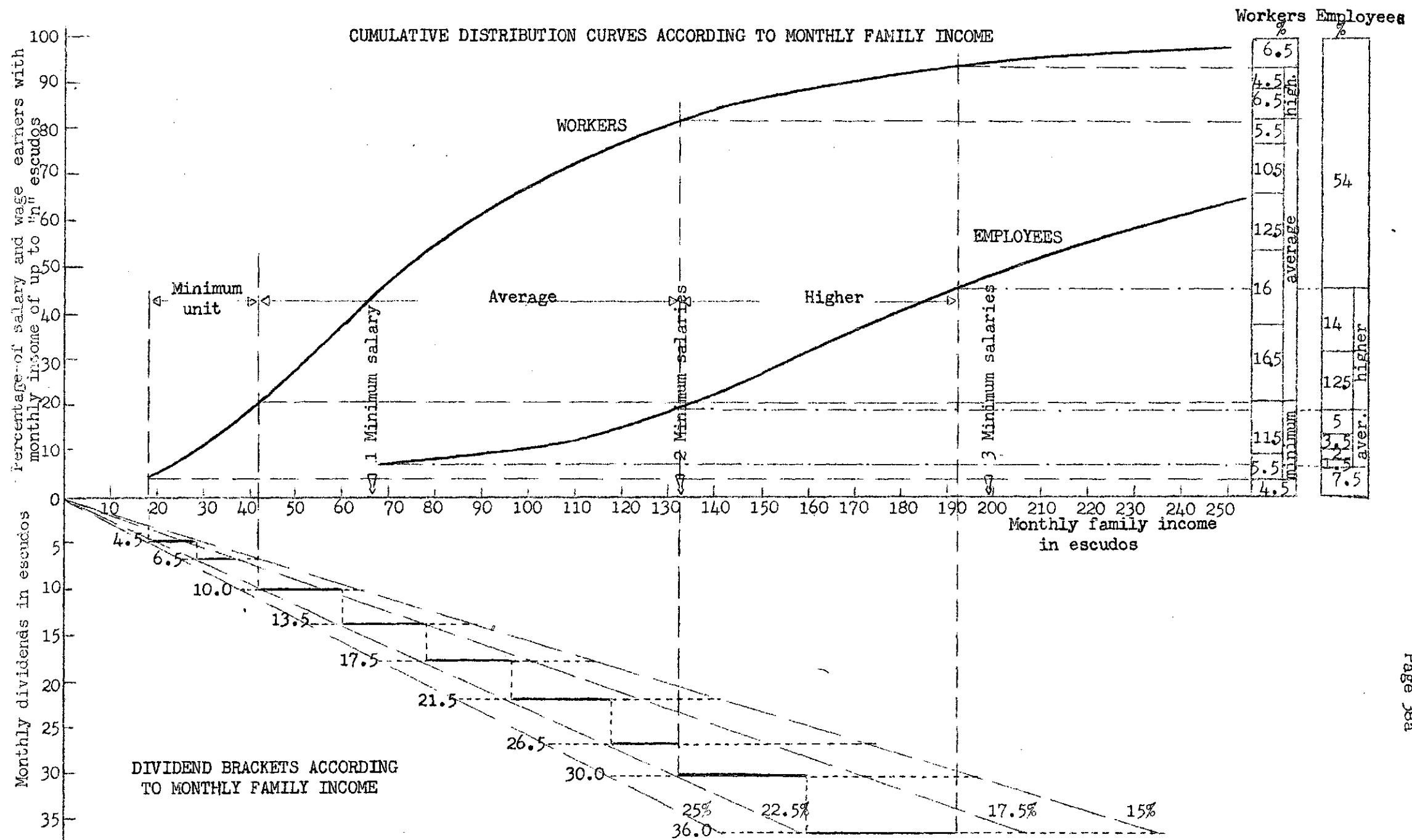
^{15/} United Nations, La Vivienda y la Industria de Materiales de Construcción Programa de Integración Económica del Istmo Centroamericano (ST/SOA/41) New York, 1960.

levels of income can thus be compared with housing conditions as well as being used to provide an estimate of the extent to which households can afford to pay for housing. There still remains the problem of examining expenditure patterns, and another fact to be borne in mind is that since censuses are normally taken at ten-year intervals the data available may be too out of date to be useful.

96. For housing programmes, data will be required on income and expenditure for specific areas and for specific population groups and sample surveys will probably provide the most convenient and efficient method of collecting the data. Since this information is required for many other purposes besides the investigation of housing expenditure there should be a good possibility of such enquiries being undertaken. Information concerning the methodology that might be employed in connexion with such surveys will be included in a Handbook of Household Surveys which is being prepared by the United Nations. The information obtained according to these recommendations would yield data on income, expenditure patterns in general, expenditure on housing, and savings, all of which would be of significance in establishing the capacity to pay for housing. Information might also be obtained from households concerning their desires in relation to housing and their financial ability or willingness to satisfy these desires (the type of dwelling, number of rooms, etc. they would like and the amount of rent, down payment, installments, etc. they would be willing to pay for such a dwelling).

97. With reference to the availability of statistics required to make a preliminary estimate of the ability of the population to pay for housing, per capita national income is available for most of the countries in Latin America, although not on a comparable basis. Private consumption expenditure is available for only eight Latin American countries (table 7) but only for the principal cities.

98. Figure I has been taken from 1962-1964, 2º Plan Trienal prepared by the Corporación de la Vivienda (CORVI), Departamento de Planeamiento Y Estudios Económicos, Santiago, Chile. It shows the distribution of manual workers and salaried employees by their 12 monthly salary together



with the cost of the various types of dwellings being constructed by CORVI and a scale of monthly payments which may be used to determine what proportion of the monthly salary these payments represent. The information concerning the salary of manual workers was obtained from an investigation carried out by the Servicio Nacional de Salud and includes the following categories: agriculture, mining, domestic service, industry, construction, electricity, commerce, transport and other services. The information for salaried employees has been obtained from a survey taken by the Superintendencia de Seguridad Social. It has been estimated that manual workers can pay up to 23 per cent of the family income for housing and that salaried employees can pay up to 26 per cent. On this assumption 4.5 per cent of the manual workers are unable to afford even the initial sanitary unit (bath and kitchen) with CORVI supplies as a minimum unit. Another 5.5 per cent can afford the sanitary unit but not the cost of the minimum dwelling. Some 11.5 per cent can afford a minimum dwelling and the remainder can pay for dwellings in the more expensive categories. Of the salaried employees 12 per cent can afford a dwelling of medium quality and the remainder can pay for more expensive dwellings. The 1962-1964, 2° Plan Trienal will be made available to the participants at the Seminar and more detailed information is included concerning the use of Figure I and the results obtained.

VII. CONCLUSIONS

99. On the basis of the above considerations, some conclusions may be drawn as to the present position of economic statistics which can be used to assess the economic significance of housing in Latin America. The analysis in the preceding sections based on available data also allows some tentative conclusions on the Latin American housing situation in its macro-economic setting.

100. The statistical position may be summed up as follows. Although national income statistics are well developed in the region, only a few countries estimate separate figures for expenditures on fixed capital formation in dwellings, and there is virtually no breakdown of this item according to characteristics useful in assessing whether its distribution is the best one from the point of view of the nation as a whole. Several countries publish figures on the product originating in the ownership of dwellings sector but few countries have a breakdown

/of consumer

of consumer expenditures which allows them to present figures on total rents. Data from more or less obsolete family living surveys are nevertheless available for most countries, showing the share of rent in the expenditures of low-income families. Information on labour and materials consumed in the house-building industry per se is not provided in ordinary statistical sources but could probably be obtained relatively easily by engineering type surveys. Input-output tables exist for several countries of the region but they are not yet presented in sufficient detail to be used for estimating the effects of increased expenditures for dwelling construction on the different sectors of the economy.

101. The quality of the available national accounts data is uncertain and varies from country to country, but on the whole they are not likely to be more than fair approximations. Some improvements may be made and more detail obtained by making fuller use of available basic data. However, in order to develop national income data sufficiently detailed and accurate to be really useful for an assessment of the economic significance of housing, more ample and reliable basic statistics are required. Considering the importance of the fullest and most accurate information possible on the place of housing in the economy, the countries of the region will, it is hoped, make every effort to produce such statistics by improving their building permit data, conducting censuses and surveys of the construction industry and undertaking new family living surveys. A systematic and comprehensive approach is required in order to provide a complete range of statistical data if housing development planning is not to be very partial and far from efficient effort. Population and housing censuses need to be improved and current housing statistics collected at regular intervals. Special enquiries need to be initiated to provide information concerning the relationship between the cost of housing and household income and concerning the availability of labour materials required for housing programmes.

102. A complete solution to the housing problem in Latin America, with an adequate supply of satisfactory dwellings at rent levels which can be financed but still only take a reasonable part of the family income will not be possible except as a corollary to a general economic programme which would raise the levels of living of the population considerably above the present low standard. However, large segments of the population cannot possibly be expected to continue to live under present housing conditions for long. Even while the economic development process is still under way some means will have to be found to bring a reasonable supply of new housing within the reach of the