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MEASURING LEVELS OF LIVING IN LATIN AMERICA: AN
OVERVIEW OF MAIN PROBLEMS

by

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poverty and basic needs satisfaction. We feel that that picture is hopelessly

partial and incomplete, however sophisticated the interrelationships between

different aspects of levels of living that are taken into account, without

the simultaneous reference to the conceptual, measurement and analytical

problems of relating inequalities in levels of living, poverty and basic needs

insatisfaction to their determinants in the productive system, their setting

in the institutional system, and their structural role in the patterns of

development and the life styles.

The rather informal treatment of each issue was inimical to putting

all problems in a national accounting context. Nevertheless, we think that

many of the points raised are germane for the effective insertion of levels of

living in national accounting practices, which in turn may draw these practices

a step more away from their overwhelming emphasis on production and growth

towards a more equilibrated position that may enhance their usefulness as a .

multipurpose quantitative devise.

II. · CONCEPTUAL AND DEFINITIONAL PROBLEMS

1.   Alternative approaches to the measurement of levels of living

The level of living of human beings corresponds to the degree of
satisfaction of their needs and is determined by the set of their resources
and of their opportunities (i.e. the set of their feasible decisions), including
the access to free or subsidized commodities or services and to social security
systems.

Thus, the concept of level of living synthesizes the various aspects
of well-being and the circumstances that may affect it. Therefore, its
measurement could be approached, in principle, from different perspectives.

A preliminary and basic distinction should be made between the perceptual
measures of individual well-being and the various approaches that focus on the
objective or impersonal quantitative measures of the levels of living.

The measurement of the subjective elements of well-being in terms of
the individuals' aspirations, perceptions, satisfactions and attitudes, constitute
a relatively new and increasingly active field of applied research, which may
prove to be a necessary functional complement of objective measures for analysis
and policy purposes. However difficult these measures are, they may be of
particular importance in societies undergoing rapid changes, or in transitional
phases of development as it happens in many Latin American countries.

On the other hand, the objective measurement of living conditions
may focus on indicators for each of the components of levels of living or on
the resource base which the households may apply to obtain satisfyers for their
wants.

The first approach requires indicators of "inputs" into each group
of needs -the "outputs" being the degree of satisfaction of each need- or
component of levels of living, such as health, nutrition, shelter, clothing,
education, employment and work conditions, protection and security, recreation,
relations with the physical and social environment, participation, and human
freedoms. These last components -usually referred to as "non material needs"-
are not easily quantifiable from an objective standpoint, but surveys to
households and individuals are central to any effort at assessing living conditions
in such areas.

But even the construction of physical indicators of the degree of satisfact
of the more "material" components of levels of living presents many conceptual
and operational problems. Moreover, their combination into a single composite
objective measure of the level of living is hindered by the conceptual
complexities of considering individual preferences and of carrying out interperson
comparisons of well-being and by the subsequent difficulties in selecting an
appropriate procedure for aggregating the component measures. The search for
a composite measure, however useful it may be for planning and monitoring

purposes, should not overlook the potential richness of a set of data on the different components of the level of living for the analysis of the multivariate structure of well-being.

The traditional approach to solve the problem of aggregating different satisfyers and also to compare levels of living is to focus on the monetary value of the commodities and services satisfying each group of needs: the consumption expenditures of individuals and households. The consumption expenditure of a household may be considered an approximate measure of its level of living under the assumption that the household distributes its budget over the different goods available in a way that maximizes its satisfaction, and insofar as the size and composition of the household is also taken into consideration. However, it is only an approximate measure, since the comparison of amounts spent for consumption do not allow for differences in the prices faced or in the actual access to commodities and services by different households, cover neither current savings that may contribute to future well-being, nor goods and services provided free or at nominal rates by the government, and do not incorporate the direct contribution of wealth to the level of living.

Income constitutes a somewhat more comprehensive measure of the level of living than consumption expenditures, insofar as it provides not only the amounts allocated to consumption but also those currently saved that increase wealth and hence future -and to some degree, also present- well being. On the

other hand, income synthezises the results of applying the resources of the
household to obtain purchasing power: the time and skills of its members
applied to work, their wealth -through its monetary yields- and their rights
to social security. However, money income does not include the eventual
contribution to well-being of the time allocated by the household for leisure,
education and non-economic activities in its assumedly utility-maximazing
behaviour. What it is perhaps of greater importance, income usually does not
incorporate services provided free or subsidized by governments to households
(such as health services or education), which may constitute a significant
component of the level of living. Finally, current income includes the yields
accrued from different types of wealth, but do not capture whatever direct
contribution to the level of living may make wealth, through its bearing on
security on the size of the opportunity set and on the participation in political
power.

2.   <u>The individual recipient and the household as units of analysis</u>

In order to study levels of living, the basic unit of analysis should be the group of persons sharing their resources so that the levels of their individual well-being are closely interdependent and are heavily influenced by the common decisions about how to use those resources and how to allocate the satisf ers obtained. In the type of society prevailing in Latin America, this group is the household.

The basic criteria for identifying members of a household - and, hence, for defining the household - are common housekeeping arrangements, including common provisions for dwelling, food and other essentials of living. These criteria are incorporated into the international recommendations for population censuses and household surveys [1]. Although there is a tendency in the practice of the Latin American censuses for the seventies to assimilate the household with the housing unit [2], in some household surveys efforts are made to apply more rigorously the concept mentioned above.

However, for welfare purposes, the family concept of the household, as

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[1]   U.N., <u>Draft Principles and Recommendation for Population and Housing Censuses</u> E/CN.3/515, 1978. <u>U.N., Handbook of Household Surveys.</u> Studies in Methods, Series F NQ 10, New York, 1964. ILO, <u>International Recommendations</u> on Labour Statistics, Geneva, 1976.

[2]   CEPAL <u>La Experiencia Latinoamericana en los Censos de Población de 1970 y Orientaciones para los Censos de 1980.</u> E/CEPAL/1052. Santiago, 1978.

a group of persons who not only live together and have common living arrangements but are also mutually related, may provide a more appropriate unit of analysis. The family is, unlike the household, a "social institution", in which the reciprocal behaviour between its members is guided by socially accepted norms that therefore also influence the degree of their participation in decisions regarding the common strategy for appling the resource base and for using its yields. The members of the househeeping household, not included in the family, are more likely to be discriminated against in arrangements regarding intra-household distribution of well-being. In Latin America, the most noticeable group of such persons are the domestic servants living in, which is significant not only in rural but also in urban areas. In some rural areas, traditional forms of dependent work (like the "agregados") may also involve a significant proportion of persons in the households that do not share in the *same* way the household's well-being.

Whichever the definition of the household being used, the analysis of the determinants of levels of living cannot be carried out up to the production processes and the ways in which incomes are originated and redistributed without reference to the individual recipient. As far as the resource base of the household includes fixed or financial assets, these could be attributed to the household as a whole, and the welfare distribution could be associated with the distribution of this wealth. But insofar as household income includes

primary incomes, the analysis of disparities in levels of living should be made with reference to the productive activities in which these are earned are the personal requirements for their fulfillment: the individual earner and his job.

In other words, in order to measure disparities in levels of living, the relevant unit is some concept of the household. But in order to analyse the determinants of those disparities, reference should also be made to the individual recipient.

The overall distribution of income among individual recipients is not a relevant measure of disparities in levels of living. Nevertheless, it can convey a fair picture of the disparities in the capabilities and opportunities of the members of the households to earn incomes. Because of that, it can be used as a proxy for the distribution of income among households. At least, in general, the higher the concentration in the income distribution among individual recipients, the higher it is among households. Nevertheless, the degree of concentration of both distribution is, for the same time and place, significantly different, since households tend to compensate the relative disadvantages in the earning possibilities of its members with a greater proportion of active members (see table 1).

For the multivariate analysis of the determinants of levels of living, as measured through income, the individual recipient is the crucial unit, since

we concentrates the personal and occupational characteristics of the job in
which income is originated. The relationship between the level of living of
the household and the characteristics of the jobs of its members goes both
ways, since many of the individual decisions on the opportunity and conditions
to get into or out of the labour market are only understood under the light
of the strategy of the household regarding its means of livelihood. That is
the case with many situations of underemployment, and also of the unpaid
family workers.

The identification of the head of the household is important, at least,
for two reasons. First, as a synthetic way of linking the level of living of
the household with the occupational and personal characteristics to which its
most important income-that of the head-corresponds. Secondly, as a way of
identifying the socio-economic characteristics of the household, through the
extension to it of some of the characteristics of the head (occupational
attachment, education, etc.) under the assumption that household with heads
of similar characteristics have more similar patterns of behaviour. Clearly
this assumption is more acceptable for families and perhaps more for nuclear
families.

3.   <u>The size and composition of households</u>

As we have just seen, the household is the necessary reference unit

for the measurement of levels of living on the basis of aggregate indices

like income or consumption. Should we know more about intrahousehold

distribution of goods and of productive roles perhaps the individual could

become the ultimate unit for the analysis of well-being. But as things stand,

this analysis should take into consideration at least how many and what kind

of individuals share, in principle, the satisfyers provided by the common

(also shared) resource base of the household.

Thus, reduction of income or consumption of the household to a per

capita basis may give a better approximation to actual well-being of the house-

hold for comparison purposes. But it does not take into account either the

composition of the household or the existence of economies of scale in consumption.

For one thing, not all members of the household have similar claims on

the available goods and services, hence the convenience of making all members

of the household homogeneous by means of some equivalence rule. Since the

stage of the life cycle is perhaps the more important single determinant of

differences in needs between members of the same household, the normative

reduction to adult-equivalent units has been repeatedly proposed; the

consideration of sex has also been proposed, but this is more questionable

from a normative -although not so, perhaps, from a behavioural- point of view.

Moreover, this procedure should be applied to each group of needs, which
becomes rather arbitrary beyond nutrition; also, this implies that equivalences
vary with total consumption levels, because of the varying composition of
consumption expenditures.

Alternatively,methods have been devised for estimating equivalent
adult scales on the basis of actual consumer behaviour, which have been reviewed
elsewhere 1/ . As it is concluded there,when equivalent adult scales are
looked at from the point of view of utility theory, the hypothesis that a
change in household composition will have similar effects to a change in all
market prices is most unlikley to hold rigorously. The shakiness of behavioural
equivalences for each category of expenditures can be better realized when
considering the differences in intrahousehold distribution behaviour between
households with different socio-economic characteristics and even of different
income strata 2/ .

1/ See A.Brown and A. Deaton "Models of Consumer Behaviour: A Survey" in
    The Economic Journal, Vol. 82 No.328, December 1972.

2/ In passing, it should be noted that this kind of adjustment does not
    take into consideration the eventual contribution of children or of
    bigger families to the level of living of the household, a debatable
    matter that may well be enclosed away with other "non material" aspects
    of levels of living.

Furtheremore, there are economies of scale in household consumption,
that in principle are beneficial to bigger households, but that may also
depend on household composition, and therefore could be incorporated into
the estimation of equivalence scales.

However difficult the problem of normatively establishing or of
estimating equivalence scales, the effect of household composition and of
economies of scale sould not be overlooked, and at least gives rise to a
caveat when going from the distribution by total household income to the
distribution by per capita household income, in the sense that actual disparities
in levels of living may lie somewhere in between. As can be seen from Table
2, the average household size in each income group increases with income,
although not to a very great degree. In general, averages in the 30 to 50
per cent with lower income are below the average size for all households, and
averages in the 10 to 20 per cent lowest are well below these averages. The
problem for the comparability of levels of living lies in the dispersion within
each income group. The dispersion in the distribution of households according
to size in each income groups is not so dissimilar with respect to that of the
distribution among all households, althoughmean and mode shift, as income
increases, in a way that is somehow reflected in the average size of successive

income groups. The mere fact that dispersion by size is significant

among household in any income group points at the limitations of the

distribution according to total household income for portraying the overall

inequalities in levels of living.

The data on Table 3 illustrate this point, but it also shows how

diverse in size are households rearranged by per capita income, which buoys

up the unsolved problems of standardizing only by household size.

On the other hand, the reduction of household incomes to a per capita

basis, which appears quite reasonable from a normative point of view, may

not find enough support when based on actual consumer behaviour. A recent

study on consumer behaviour in Latin American cities found that: " Consumption

rises as there are more adults in the family, each additional adult increasing

expenditure by about 4 per cent on average. An additional child adds only

about half as much to consumption. Spending out of a given income therefore

tends to increase until the household includes adolescent children, and there-

after to decline. This pattern is observed both with current income and

with estimated permanent income" [1]. These results would not give ground to

a reduction of household income to a per capita basis, although —even discounting

for economies of scale- the eventual intra household redistribution of

[1] Philip Musgrove, Consumer Behaviour in Latin America - Income and spending
     of families in ten Andean cities, an ECIEL Study, the Brookings Institution,
     Washington, D.C. 1978., pp. 121-2.

expenditures among members involves a reduction in their level of living.

The rearrangement of households according to their per capita income results in a greater degree of overall concentration, as can be seen from Table 4, although in same cases the share of the lower strata is not significantly reduced.

4. Income and consumption as measures of the levels of living

As was previously indicated, current income is a conceptually more comprehensive measure than current consumption, because it also includes amounts saved. And it is reasonable so, since income is made up of most of the "yields" of the resource base of the household, who may seek satisfactions either through current consumption or other activities.

Only for practical reasons private consumption expenditures may be selected as a better index of the levels of living than current income. These could be the presumption that consumption can be measured with a greater accuracy than income or the observed fact that most household surveys indicate greater levels of current expenditures than of income for the lower 50 per cent —or even 80 per cent— of the population, that cannot be explained away through real dissaving (see Table 5). But even so, income should be a better concept for measuring the overall disparities in levels of living, although consumption could provide a better measure of the levels of living of the poor.

The selection of one or the other measure make a lot of difference

for comparing levels of living at the extremes of the social pyramid, and

may result in a significant difference in the measurement of overall inequality.

A reclassification of households in the Mexican income and expenditure survey

for 1968 (survey 2 in Table 13), resulted in the following:

	G
Distribution of total household income	0.53
Distribution of total consumption expenditure	0.49

However, as was also indicated above, both concepts have some limitations

for the measurement of levels of living, that should be considered in detail.

There are different concepts of income, depending on the stage of the

process of creation, appropiation, distribution and redistribution of incomes

in which attention is focused. These are systematized in the SNA and the

complementary guidelines for income distribution statistics [1]/, which can be.

taken here as a background for the discussion.

For the measurement of levels of living, it is convenient to use the

concept that comes closest to the budgetary restriction households face when

maximizing their utility. That concept is the total available household income,

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[1]/ U.N. A System of National Accounts. Studies in Methods, Series F.NO 2, Rev.3, New York, 1968.

U.N. Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households. Studies in Methods, Series M. NO 61. New York, 1977.

after deducting direct taxes and all social security contributions from
total household income. However, for some policy purposes, it may be
convenient to look at the disparities in levels of living as measured by
total household income, before those deductions, since that is the income
on the basis of which redistribution through tax policy is designed.

It should be noted, to this respect, that the concept of total
household income as defined in the guidelines includes, for accounting
reasons, employers' contributions to social security and similar schemes,
which are conventionally deducted -along with employees' contributions-
for arriving at total available household income. It is more convenient,
for measurement purposes, to use a concept of household income that corresponds
to actual accruals to the households, therefore excluding employers' contribution
to social security. To such a concept we refer henceforward as total household
income.

In Latin America, income taxes have not an important redistributive effect
because of low rates, multiple exemption provisions and pervasive evasion.
On the other hand, social security contributions have in fact a more or less
neutral redistributive effect. These facts determine that the distribution
of total available household income and that of total household income have

a very similar degree of concentration, as is illustrated with the data

on Table 6.

It should be noted that, as discussed below, total household income

tends to be reported to household surveys net of some deductions.

However indifferent may be to use one or the other concept for analyses

requiring relative incomes, the difference between total available household

income and total household income —that in Latin American countries represents

between 1 and 4 per cent of the latter aggregate— may have some significance

when assessing the absolute levels of living of specific groups of households.

5.   Imputed incomes

Total household income includes different kinds of imputed incomes,

in order to make possible the comparison of levels of living of households

that resort to different solutions for obtaining the goods and services they

need.

Wages and salaries in kind represent something between 4 and 8 per cent

of total wages and salaries, in Latin American countries. They may represent

between 25 and 35 per cent of wages and salaries in agriculture, and between

3 and 8 per cent of the total in non-agricultural activities. The scanty

available evidence on the distribution of this form of wages and salaries,

although itself affected by biases and omissions, indicate that wages in kind

are concentrated in the lower strata of income recipients, although
in agriculture they could have a greater dispersion. For example, according
to the PNAD-Income Survey in Brazil for 1972 (survey 5.1 in Table 13) a
fourth of agricultural employees in almost every bracket received wages in
kind while, among non-agricultural employees, a fourth in the lower 40 per
cent received this form of income, but very few in the medium and higher
brackets did. This pattern among employees in urban areas is confirmed
by surveys 5 in Argentina and 3 in Venezuela, and is to a good extent due to
the case of domestic servants.

To comply with the objective of attaining comparability of the level
of living of different households and individuals, wages in kind should be
imputed according to the opportunity cost in the market for the recipient.

The wages received -either in cash or in kind- by domestic servants
living in a household defined according to the housekeeping concept should
be excluded from total income of that household and considered as another
intrahousehold transfer. This reveals one of the advantages of using the
family concept of the household, which allows the consideration of the welfare
situation of domestic servants under a more realistic light.

There is no need to impute the wages and salaries corresponding to
the unpaid family workers, since the yield of their work is already included
in total household income through the enterpreneurial income of the household's

productive unit which is appropriated by the head of the household.
However, when comparing incomes of individual receipients, these imputations
should be made, and also the corresponding deductions to the income of heads
of such households.

The value of home produce consumed within the same household should
also be imputed and included in total household income. In general, for
level of living purposes this valuation should be done at the prices the
household would otherwise pay for those goods in the market. The most important
type of this kind of imputed income is, in Latin America, home-produced agricultu
consumption. In the countries in which the peasant economy is more widespread,
like Mexico or Peru, this type of income may represent around 20 or 25 per
cent of total enterpreneurial income originated in agriculture. As far as
some surveys provide evidence as to the distribution of these incomes,

they may represent a very significant proportion of total enter-
preneurial incomes from agriculture in the lowest quartile (something around
40 per cent); that, on the other extreme, they are a very small proportion of
agricultural incomes in the upper strata and that they are, anyway a significant
part of agricultural incomes in the intermediate strata.

Home produce for own consumption outside agriculture is of little
significance: from 2 to 4 per cent of total enterpreneurial incomes in non-
agricultural sectors.

The distribution of imputed enterpreneurial incomes can be
illustrated by the data in Table 7, from the 1968 income and expenditure
survey in Mexico (survey number 2 in Table 13).

Total household income should include imputed rents for the services
of dwellings occupied by their owners. This imputation should be made
at the opportunity cost of those services in the market, i.e.: the rent of
an equivalent dwelling unit. Table 8 exemplifies the distribution of these
imputed rents, as measured by the ECIEL surveys. Although imputed rent
as a proportion of household income is sometimes lower in the lowest quartile,
- which is reasonable- and it may be lower similar or higher than the mean at
the upper end, its distribution is strikingly uniform, and observed patterns
in each city corresponds to the local distribution of homeownership.

6.   Access to public services and imputation of their value

Goods and services furnished free or at reduced charges to the house-
holds by the government or non profit institutions (education, health, piped
water, sewage, recreation, etc.) or enterprises (like radio and television),are
clearly a contribution to the level of living of the households receiving them.
That is not the case with "public goods" collectively shared (like security,
justice, etc.) that may be considered overhead public expenditures, given
their inevitability.

Total household income do not include the value of these services.
They are included in the concept of total income of the population, also
proposed in the supplementary guidelines for income distribution statistics 1/.
In that proposal, the common practice of distributing public expenditure among
households is followed, since they recommend the valuation of these services
at the net outlays of the organization providing them(e.i.: current costs
incurred by the organizations reduced by the fees and other outlays of households
for the goods and services).

This form of valuation is based on practical considerations, but do
not take into account actual contributions of these services to the well-being
of the households; they do not even take into consideration the differential
quality of services provided to different groups of households. However, it
is the only feasible way of estimating the value of these services, although
recourse has to be made both to the accounts of the organizations that make
the expenditures and to information about actual access of different households
to the services. This transfers the measurement of income to the processing
stage, beyond the information provided by the household.

A study carried out along these lines for Colombia 2/, some of which
results are summarized in Table 9, found that:

1/ U.N. op.cit
2/ Marcelo Selowsky Who Benefits from Government Expenditure? A case study
   for Colombia. Oxford University Press for the World Bank, 1979.

"The total subsidy per household from education and health is remarkably constant across income groups. This constancy disappears, however, when subsidies are broken down by type of education and by type of health service. Subsidies for primary education are much larger for low-income households, and those for higher education are much smaller. NHS subsidies are higher for low-income families, whereas SSS subsidies are lower."

"The constancy of the subsidy as expressed per household does not hold if expressed per capita, because household size is substantially larger in the poorest quintiles. The per capita subsidy for the richest quintile is 1.65 times the per capita subsidy for the poorest quintile."

" Expressed as a percentage of the household income, the total subsidy is substantially larger for low-income groups: 24.5 per cent of the household income for the poorest quintile, compared with 2.5 per cent for the richest quintile."

As can also be seen from Table 9, the estimated value of education and health subsidies represents, in the case of Colombia, an addition of almost 7 per cent to aggregate household income.

An alternative approach to valuation of public services and their aggregation into a concept of total income, is the investigation of actual access to each service, of access costs and associated costs to the household, of main obstacles to access to some services and of the opinion of the household

about the benefit it derives from each service. Although this approach

do not enable aggregate measures it may provide a rich data base for

the analysis of this crucial and little researched aspect of levels

of living.

III. THE MEASUREMENT OF POVERTY

1.   The concept of poverty

The concept of poverty is essentially normative. The notion of poverty

is ultimately based on a value judgement about which are the minimum acceptable

levels of living, with reference to some norm about basic needs and their

satisfaction, in order to discriminate between which are considered poor and

which are not.

In the same society there often coexist different - and even conflictive -

collective valorations of poverty and basic needs. Thereby, it is no wonder

that the discussion of the poverty problem is plagued with differences in

criteria and norms that stem from different moral and political evaluations

about the existing social order and the way in which society should be orginised.

The norms on which the concept of poverty is founded, the policies selected to

attack it, and the assessment of their feasibility, are imbedded into the same

valoration. The definition of poverty responds, either explicity or implicitly,

to the whole of the valorative scheme of those who formulate it. The problem

for the social scientist spelling out a definition of poverty is either to try

to identify and make explicit whatever consensus may exist or to rest upon its

own valorative position.

Poverty is always relative, as far as the norm used to define it is

related to a specific social context and is referred to a certain scale of
values, associated to a style of living. But this contextual relativity should
not imply that the definition of poverty must be made only in relative terms.
We believe, like Sen, that "there is and irreducible core of absolute deprivation
in our idea of poverty which translates reports of starvation, malnutrition
and visible hardship into a diagnosis of poverty without having to ascertain
first the relative picture. The approach of relative deprivation supplements
rather than competes with this concern with absolute despossession" [1].

Moreover, our perception of that irreducible core of absolute deprivation
takes as reference, beyond the context of each country, some basic elements of
welfare in the style of living prevailing in industrial societies, in which we
believe every human being has a right. The absolute norm in which the
definition of this irreducible core is based stems from our present notion of
human dignity and from the universality we confer to basic human rights, the
fulfillment of which should not depend on the local scarcity of resources nor
on the culturally imbedded resignation acquired through centuries of misery.

Thus, poverty definitions in absolute terms attempt to specify the
levels of absolute deprivation to which the prevailing inequalities may give

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[1]   A. Sen Three Notes on the Concept of Poverty, Income Distribution and
       Employment Programme, WEP 2-23/WP 65. ILO, Geneva, 1978.

place, on the basis of norms about which are the minimum requirements considered adequate in the satisfaction of basic needs. Even when in specifying those norms local conditions and cultural features of the population are taken into consideration - and, therefore, the definition is made society-especific - the requirements of the norms may be less subject to levels of living actually prevailing in that society or to the average level of resource presently available in it, and may be more inspired in universalist valorations of human dignity. That is clearly the case with the basic needs approach to poverty.

Beyond the core of absolute poverty, situations of actual relative deprivation - as distinct from feelings of deprivation - may extend, only definable as a function of the style of living prevailing in each community.

Definitions of poverty in relative terms correspond to norms that endeavour to take explicitly into account the actual deprivation with respect to the average levels of satisfaction of needs in that society - that are assumed, thereby, to be representative of the dominant styles of living - and to reflect, at the same time, the average availability of resources in that society. Some relative definitions (Townsend, Atkinson) do not prejudge on the extent of the issue. But definitions of the type "the x per cent of households with lower incomes" do prejudge on the extent of the issue and imply that poverty will be always with us; more than definitions of poverty they

constitute an approach to the problem focussing on inequality at the lower

extreme of the welfare range.

2.   Poverty measures

The above discussion of conceptual problems in the measurement of

levels of living provides the basic framework for considering poverty measures

and the identification of the poor.

Whether from an absolute or from a relative standpoint for the

definition of poverty, a basic problem is still to select the indices to be

used as measures of the levels of living. Even from an absolute standpoint,

there is a broad option between measuring poverty by setting norms as to the

minimum acceptable satisfaction for each group of needs and by setting the

norm in terms of levels of income or consumption at which people can be assumed

to satisfy those needs.

The first approach is more symptom-oriented and, as far as appropriate

indicators for each group of needs are devised and used separately, it can

deal with "specific poverties" and may prove to be more useful for planning

and monitoring a process of development oriented to the satisfaction of basic

needs. However, in order to deal with "comprehensive poverty situations" some

kind of aggregation procedure of partial indicators have to be adopted, which

involves making (normative?) assumptions about the rate of substitution
between the satisfyers of each group of needs.

To estimate levels of income or consumption at which basic needs are
assumed to be satisfied has the advantage of synthesizing needs satisfactions
in one indicator, assuming perfect knowledge and optimizing behaviour on the
part of the household, but also admitting a host of influences - product
differentiation, propaganda, demonstration effects - that may divert consumer
behaviour from the satisfaction of the norms adopted by the planner. Moreover,
consumers are not always efficient optimizers - particularly as regards nutrition
and health - and the intrahousehold distribution of goods is not always
equitable with regard to the needs of different members, circumstances that
may be even more noticeable in poverty situations. Even more, the poor may face
different prices to those faced by other groups, as well as special access
difficulties to specific goods or services. To this, it should be added that
current income and consumption measures do not include the services furnished
free or at reduced charges by the government, the actual access to which is
crucial in identifying and solving poverty situations.

Furthermore, setting targets for public policy in terms of income or
consumption may blur the visibility of the groups to which the policies should be
directed and, as far as those policies are income-oriented, may leave aside
the non-earning poor [1].

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[1]   See P. Streeten The distinctive features of a basic needs approach to
development. Basic needs paper N⍛ 2, Policy Planning and Programme Review
Department, World Bank, 1977.

Methods are being experimented to identify the poor on the basis of

multivariate analysis that may avoid, at least, the need to measure income

and consumption for that purpose , although they still rest upon one of

these measures for devising the identification procedures and only apparently

avoid the problem of setting norms for each dimension of the level of living 1/

When using an aggregative measure of poverty, consumption expenditure

seems clearly preferable. It is more stable than income   and, therefore,

identifies less "transient poor" . It is also presumably more reliable;

whatever the possible explanations for the considerable differences in table 5

between income and expenditure - ruling out significant overreporting of

expenditures -, their mere existence points out at the unreliability of the

income measure at the lower strata of the pyramid. However, for relative

definitions of poverty, it should not be proper to focus on the overall

distribution of consumption and its parameters, since it leaves aside

non-consumption components of levels of living in the middle and upper strata.

The prevailing style of living to be taken as reference for setting the relative

poverty norm is better portrayed by the income of those strata - and their

wealth, if it were feasible to measure - or, at least, by average income.

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1/   See R. Ferber and P. Musgrove "Finding the Poor" in The Review of
        Income and Wealth, series 34 NQ 3, September 1978.

The reduction of the poverty measure to a per capita basis is a
necessary adjustment. But, as has been discussed above, it would be most
appropriate from a normative standpoint to make the reduction using
equivalence scales that take into consideration the influence of the composition
of the households on their needs.

3.   Drawing poverty lines for Latin American countries

Poverty lines in terms of per capita consumption expenditure have been
drawn for eleven Latin American countries [1].

These lines are based on a consciously normative definition of poverty
in absolute terms. They express synthetically a judgement of which are the
minimum acceptable levels of satisfaction of a set of basic needs, below which
situations of actual deprivation occur, which are culturally recognised as such
and are deemed morally unacceptable.

The poverty lines have been made as much country-specific as possible,
but from a regional standpoint, and should be interpreted as an overall
statistical yardstick useful to broadly delimitate poverty situations and to
assess their extent in each country, on a comparable basis.

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[1]   O. Altimir La Dimensión de la Pobreza en América Latina. Cuadernos
       de la CEPAL, NQ 27. CEPAL, Santiago de Chile, 1979. (Study undertaken
       as part of the ECLA/World Bank Project on the Measurement and Analysis
       of Income Distribution in Latin America).

A food-based method was used; for each country the cost of food basket adequately minimum nutritional requirements was estimated, and the total budget corresponding to the poverty line was fixed at twice these minimum food costs, as a way to cover the value - at current prices - of the goods required to satisfy the basic needs that in these societies are currently covered by means of private consumption. The components of basic needs which - according to present institutional systems - should be satisfied through the provision of free public services are not covered by these budgets, which only include those private consumption expenditures associated with or complementary to the access and use of such public services.

i) Nutritional requirements and minimum food baskets

Minimum energy and protein requirements for each sex and age recommended by FAO/OMS were used for obtaining average minimum daily requirements of calories and proteins per person for the entire population of each country around 1970. Results ranged from 2,260 to 2,350 calories daily per capita, and from 40 to 43 grams of protein daily per capita.

The normative food basket for each country was obtained in a way as to satisfy the minimum nutritional requirements for that country taking into account both the actual availability of each type of food in the country and the food habits of the population, and so that there were no possibilities of

substituting one type of food for another without increasing significantly
the cost of the diet.

In each country around 40 main items were selected. Apparent per
capita consumption for these items is the average diet. In order to obtain
the minimum normative diet these average diets had to be downgraded to the
minimum nutritional requirements. In so doing, the weight of those items
of greater price per calorie or protein were reduced in favour of those with
lesser prices. These relative substitutions were carried out, however,
according to a set of constraints that were intended for reconciliating current
nutritional criteria with existing food habits.

ii) Estimates of minimum food budgets

In most Latin American countries statistics on consumer prices are only
kept for the capital city or its metropolitan area. Consequently, minimum
food budgets were first estimated for the capital city of each country, and
then adjusted in order to obtain budgets broadly applicable to the whole of
the urban population and eventually to the national level.

Each food item was valued at the price of the lesser quality variety
included in the price survey, in order to get the minimum food budget for the
capital city. On the basis of the scanty information available on the
interregional price differences, minimum food costs for the rest of the urban

areas were estimated at 5% less than those of the capital cities. Considering

the even more limited evidence on urban-rural price differences, and the

proportion and imputed value of self-consumption in rural areas, minimum

normative food baskets for these areas were estimated at 25% below the cost

of the diet in the capital city.

iii) Non food consumption expenditure

The food-based method for drawing poverty lines requires the normative

adoption of some relationship between food and non food expenditure. To use

the proportion of total consumption actually devoted to food by lower income

groups, even if reflecting an allocation of resources under conditions of

hardship, implies that food expenditure has the same elasticity as expenditure

in other items, which is not true.

It was deemed more adequate, from a normative point of view, to use the

proportion spent by those households in the group whose expenditure on food is

somewhat higher than the minimum food budget established. Available evidence

from family budget surveys indicate that in every country, the groups of urban

households so defined spend on food between 40 and 50 per cent of their total

consumption expenditure. This evidence led us to draw the poverty lines for

urban areas, in every country considered, at twice the amount of the minimum

food budget.

Based on similar though scantier evidence on the consumption patterns
of rural households, poverty lines for the rural areas were drawn considering
that non food private consumption should amount to 75% per cent of the cost
of the minimum food requirements in rural areas.

These norms imply that the amounts calculated for non food expenditure
adequately cover the other basic needs that are currently satisfied by private
consumption, assuming that households that are above the minimum food threshold
are also above the minimum threshold for other basic needs. This assumption
was nevertheless verified with respect to dwelling expenditures and those
expenditures required for complementing the use of free public services.

iv) Access to public services

The question of the extent of social public services in each country and
of the probability that the poor have actual access to them, is important, at
least, for the intercountry comparability of the estimates of the incidence of
poverty obtained by this method, although there is no indication of actual
access of the poor in each country.

An examination of available indicators of the extension of those social
services that in Latin American countries are mainly provided publicly, give
the following clues under the assumption that the probability of the poor
having access to them is lower than the average for the entire population:

whereas the children of poor families in Argentina or Chile have a probability greater than 7 per cent of not attending primary school, that probability is higher than 40 per cent in Ecuador and Mexico; probabilities of not attending secondary school are greater than 70 per cent in some countries and over 85 per cent in others; the probability of having access to health services in some countries are three times (Argentina, Uruguay) or twice (Brasil, Chile, Costa Rica) those in other Latin American countries (Colombia, Mexico, Peru), a feature that is confirmed by the differences in the probability of death between one and four years of age; the probability of low income urban population having drinking water is presumably lower than 70 per cent in almost all the countries of the region, and that of having sewage facilities is unlikely to be higher than 35 per cent in most countries.

The significant differences in the probabilities of the low income population having access to education and health services in each country, blur to a certain degree the comparability of the estimates of the extent of poverty obtained on the basis of poverty lines for private consumption. Moreover, these rough attempts to summarize the probable situation of the poor as to their access to public services does not take into consideration the eventual differences in the quality of those services.

v) The poverty lines obtained

Table 10 shows the poverty lines estimated, for each country, according to the procedure explained, at 1970 prices in US dollars.

The table also includes "destitution lines" corresponding to the cost of the minimum food basket, since households whose total income or consumption is even lower than those amounts are very likely to suffer from acute deficits of nutrients.

The minimum food budgets estimated vary between 75 and 130 dollars of 1970 yearly per person, depending on the country. This relative uniformity is a reflection of the absolute nature of the definition of poverty utilized and of the application of a common procedure to establish the normative consumption levels.

The corresponding poverty lines vary between 150 and 250 dollars of 1970 of annual household consumption per person. These levels are somewhat higher than those used by some global studies [1] in order to obtain regional estimates of poverty. The differences are mostly a consequence of the fact that the poverty lines estimated here are explicitly normative and are more region-specific.

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[1]   World Bank, The Assault on World Poverty. Problems of rural development, education and health. The Johns Hopkins University Press, Baltimore and London, 1975.

International Labour Office (ILO), Employment, growth and basic needs: A one-world problem, Report of the Director General of the International Labour Office, Tripartite World Conference on Employment, Income Distribution and Social Progress and the International Division of Labour, Geneva, 1976.

4. The extent of poverty in Latin America

Poverty lines in per capita terms estimated for all households, irrespective of their size, should be cut-offs in the distribution of households by size of per capita consumption.

For each of the countries considered there are income distribution data from one or more household surveys circa 1970. However, as is indicated below, only some of them are of national coverage. On the other hand, some of the data available come from family budget surveys for principal cities and the rest are from employment or income surveys. Special tabulations had to be obtained from some ECIEL surveys in order to have the distribution of households by size of per capita consumption (see table 2 b). But in most cases the only data available referred to the distribution of households by size of household income, which forced to guesstimate the relationships between the two distribution on the basis on available evidence, along with adjustments for the underestimation of incomes which is considered below.

Estimates in table 11 were independently obtained for the nation as a whole and for the urban areas, using the corresponding poverty lines. Estimates of poverty in rural areas were obtained residually and can only be considered indicative of a very broad order of magnitude.

Urban poverty extended to more than a third of urban households in some countries (Brasil, Colombia, Honduras), whereas it affected 15 per cent of households in Chile and Costa Rica, and only 5 per cent in Argentina.

However, the extent of poverty in rural areas (never less than 20 per cent, and reaching more than 60 per cent in some countries) makes the picture of the incidence of poverty at the national level not so diverse. Disregarding Argentina - and perhaps Uruguay - not less than 20 per cent of households are poor in countries like Chile, Costa Rica or Venezuela, and more than 40 per cent are poor in Brasil, Colombia or Peru.

It should be pointed out that these estimates of the incidence of poverty in each country are in most cases lower than those that should have been obtained applying the poverty lines to the official (unadjusted) results of the surveys considered.

Aggregate estimates of poverty for the whole of the Latin American region were obtained, from the country estimates, by means of a regression model. According to them, almost 40 per cent of Latin American households are poor, the incidence of poverty in urban areas being 26 per cent and in rural areas almost 60 per cent of households. These estimates are close to those obtained by ILO, and are tantamount to saying that almost 110 million persons were in poverty in Latin America around 1970, and that almost 70 million of them were located in rural areas.

Half of the population in poverty is estimated to be in situations of destitution although, as can also be observed from table 2 , in most countries these situations affect rather a third of the poor.

However, caveats should be issued as to the applicability of the destitution lines estimated for the rural areas, mainly because of the role self-consumption may play in allowing successful adaptations to a situation of extreme resource scarcity.

In urban areas, where destitution may constitute a more clear-cut notion, usually a third of poor households are in the situation defined as destitution, insofar as their actual total consumption amounts to less than what is needed for an adequate diet.

As was previously discussed, there is a point in measuring poverty according to a relative definition, along with poverty defined as absolute deprivation. The comparison between the two measurements provides hints about how much inequality is imbedded into absolute poverty, about how far away from the average availability of resources in the country the normative assessment of absolute poverty is in that country, and about to what extent existing inequalities may give rise to situations of relative deprivation beyond the absolute minima.

Across the same distributional data for each country, relative poverty lines were drawn according to the norm suggested by Atkinson [1] of defining relative deprivation below half the average household income per capita. Results obtained are presented in table 4.

In most countries, relative poverty so defined affects a significantly higher proportion of households than absolute poverty. Even in the countries with higher absolute poverty, the relative norms would make an additional 5 to 10 per cent of the households being considered poor. In those countries in which the incidence of absolute poverty is less severe, relative poverty nevertheless would cover more than a third of the population.

Urban poverty relative to urban averages would run as high as 50 per cent in Brazil and Colombia, 40 per cent in Mexico, more than a third in most other countries, and around 25 per cent in Argentina and Uruguay.

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[1] Atkinson, A.B., _The economics of inequality_. Clarendon Press, Oxford, 1975.

IV. DATA PROBLEMS

1. Data problems from the standpoint of the user

The user concerned with the measurement and analysis of levels of living in Latin America, even after having made up his mind with respect to the conceptual problems outlined above, faces some trying problems in connection with the validity and realiability of available data and consequently on how to handle it.

First, there is usually a variety of sources of information on the distribution of income: income tax records, social security records, economic censuses and surveys of economic establishments, population censuses and household surveys. The reliability of each of these sources has to be assessed and also their relevance for the analysis of levels of living, of course, demands for data can be restricted to household surveys, because they are more relevant for the measurement and analysis of levels of living and also because they provide, in principle, data subject to more precise methodological controls. But then there is - as revealed by a glance at table 13 - a variety of household surveys, among which income and expenditure ones - that are more adequate for levels of living purposes - are scanty, and may be non-existent in some countries.

Furthermore, many surveys are not of national coverage which forces, in order to get a fair picture of inequalities in the society as a whole, to complement them with data from other sources or with bold assumptions about the levels and distribution of welfare in the areas not covered by the surveys.

Subnational coverage and scantiness of relatively sophisticated surveys are both associated with limitations in survey-taking capabilities in the country, which might also affect the quality of the data gathered.

Questions about the reliability of the data from household surveys often arise when comparing them, through appropriate procedures, with national accounts estimates. Questions that readily blossom into what biases may exist in the measurement of each type of income, which is their direction and pattern, and by how much and how they may affect the comparison of levels of living.

These doubts prompt a need for knowing the relevant aspects of the design of the samples. This need is seldom thoroughly satisfied by the producers of the data. But even then, some questions about the representatives of the sample can only be put aside on a bona fide basis, since only direct knowledge can appease doubts about such matters as the adequacy of the sampling frame, the rigour with which selection procedures were applied and the characteristics of non-response.

There is also a need for indications about the quality of the data, which faces the vacuum created by the surprisingly little research done on non-sampling errors and particularly on response errors.

And then, there is the all too frequent lack of tabulations relevant for the analysis of levels of living among the published data and the difficulties that weak data processing capabilities in the producing agency pose to actual access to the data base for flexible retrieval or multivariate analysis.

2. Different sources of income distribution statistics

Even in countries with a properly enforced and widespread income tax system, its records are unsuitable for use as the sole source for estimating the aggregate income distribution, since they typically cover only recipients above the non-taxable income minima, the definition of taxable income results from a multiplicity of exemptions and deductions, and joint reporting of some members of the same family may blur the definition of the reporting unit. On top of all this, in Latin America, pervasive tax evasion severely restricts the coverage of income and income recipients in tax records and the reliability of the income data they provide.

Social security records are an unquestionably useful source of
income data in those Latin American countries where social insurance schemes
have a wide enough coverage. In the first place, they may provide detailed
information on the distribution of the various types of pensions, and even
perhaps on the redistributive effects of the other social security schemes,
where they exist. But they represent also, in the second place, a source of
particular potential value for obtaining data on the distribution of non-agricul
tural wages and salaries. A few of the income distribution estimates carried
out in the region have made good use of social security data.

In these records the unit of enumeration is the establishment, and
the job is the statistical unit, but insofar as the income of employees consist
of their remuneration in a single job, social security statistics may turn
out to be an independent source of considerable value for estimating the size
distribution of wages and salaries. On the other hand, social insurance
records typically do not provide information about the household.

Moreover, the usefulness of social security records may be impaired
in most Latin American countries by the actual coverage of the system and by
evasion which although not as widespread as tax evasion, tends to leave out
of the statistics both low-wage earners and workers in small establishments.

Economic censuses and surveys of establishments, which may cover agriculture and various industries, typically collect data on establishments. However, they may eventually provide information on the distribution of personal enterprises by size of profits, that may provide a good approximation to the distribution of enterpreneurial incomes. Becuase of their direct link with estimates of incomes originating in the respective production sectors, they fit well into national accounts aggregates and are not so difficult to combine with data from other sources. Nevertheless, they frequently have less than total coverage of the production units in each sector, leaving out significant proportions of small units and own account workers. These enquiries give almost no information about the characteristics of the enterpreneurs and none about their households, although the data on the characteristics of the production units may prove crucial for the analysis of the determinants of income inequalities.

Population censuses including income questions [1] may provide useful distributional data. Estimates of the agregate distribution of income based on such data may be severely affected by response biases originated in the

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[1] In Latin America, seven of the 1970 censuses (those of Brazil, Colombia, Costa Rica, Mexico, Panama, Peru and Venezuela) included some kind of income question.

limitations of this statistical instrument for investigating income and by

the uncertainty about the income concept actually measured. But insofar as

those biases do not significantly affect the ordering of individual recipients

or households according to income, such income data may prove to be a very

important variable - although perhaps to be used only as a scaled variable -

among the set identified in the data base on households that is created

through the census, which could then be used for some analyses of the levels

of living.

Household surveys should be the ideal source for estimating the

size distribution of income and for analysing its characteristics, although

they ought to be complemented with establishment data in order to pursue the

analysis of the productive and institutional determinants of income. The

household is their observation unit, and the income concept may be made as

appropriate - both for estimation purposes or for different analyses - as

the type of survey permits. Moreover, the ability to investigate many

characteristics of the households and its members turn household surveys

into a device for creating whole data bases suitable for multivariate analyses.

3.   Income data from different types of surveys

Table 13 intends to give a summary picture of the main household

surveys carried out in Latin American countries during the sixties and the

first half of the seventies, that investigated incomes according to
different definitions and methods.

Income and expenditure surveys have for long been regarded as the
main source for the measurment of household income and its distribution,
since they provide the technical means to investigate incomes received
from all sources, in cash or in kind, by each member of the household, to
impute the rent of owner-occupied dwellings and to differenciate between
current incomes and other financial flows. However, this type of surveys
are costly and highly demanding in terms of technical resources; that is
why they have been carried out only occasionally in Latin American countries
or, at best, at intervals that vary between five and ten years, and why the
coverage of most of them has been limited to the main metropolitan areas (see
table 13). Also, given the budgetary constraint and the complexities of
investigating consumption expenditures in detail, the proportion of survey.
resources allocated to the investigation of income is a minor one.

Perhaps these are the reasons for the relatively recent appearance
in Latin America of specialized income surveys (Panama, 1970; Brazil, 1972
and 1976) or of supplementary modules on income in some rounds of the labour
surveys (Chile, 1968 and 1971; Argentina, 1970). Income surveys, if carried
out systematically, may well be a solution for monitoring trends in the

distribution of income between infrequent income and expenditure surveys, that provide a wider panorama of levels of living. Evenmore, they may yield the only feasible measurement of the distribution of income at the national level as long as income and expenditure surveys do not attain national coverage because of limitations of resources and operational capabilities.

Labour surveys usually investigate earnings and might also inquire about household incomes in some detail. Some Latin American surveys in fact collect data on other types of income received by each active person, which allows to approximate household income. However, in this type of surveys only a small amount of total survey resources is devoted to income questions, and there is usually a lack of adequate training of the interviewers for eliciting more accurate responses from the respondents to these questions.

4) The underestimation of household incomes vis à vis national accounts

a) The rationale of the comparison

The comparison of household income totals and averages with the corresponding aggregates, similarly defined, in the national accounts give, at least, a measure of the inconsistencies involved in handling both sets of data and in reconciling them. But it may also provide clues to the relative reliability of household surveys data and to the direction of their bias.

This criterion is, of course, debatable. However, there are some good reasons for taking the discrepancies in income estimates between national accounts and household surveys as a first approximation to a measure of the reliability of the latter. First, given the tendency towards underreporting common among all types of household surveys, and the usual tendency to underestimate incomes in national accounts -as revealed by most revisions of GDP estimates-, when survey results fall short of national accounts aggregates it is likely that actual underreporting is at least of the order of magnitude indicated by the discrepancy. Secondly, national accounts estimates in Latin America have attained enough uniformity -across countries and along time- regarding their conceptual content, the estimation procedures and their completeness in the coverage of productive activities, as to be considered a statistical

yardstick synthesizing a fair amount of knowledge about the national

economy and of judgements about the adequacy and reliability of

available data. Last, but not least, these same features have turned

national accounts estimates into the data base par excellence for

macroeconomic analysis, up to a point where the economic profession

-even recognizing the shortcomings of the basic data and the estimating

procedures affecting their accuracy- has come to utilize them as a sort

of vicarious economic reality. This fact is a strong reason to reconcile

survey data on income distribution with the corresponding national

accounts totals, so as to make possible their joint use in macroeconomic

analysis.

This rationale highlights the fact that an exercise such as the one

proposed here only allows for assessing the reliability of survey data

relative to that of national accounts estimates, and that to measure

their actual accuracy, recourse should be had to more rigorous procedures.

It also implies that this should not necessarily be a one-way confrontation,

since household survey results may well serve to reveal some serious

loopholes in national accounts estimates.

b.) Procedure and assumptions

The comparison of mean incomes from available household surveys

-and a couple of population censuses- with the corresponding national

accounts estimates was carried out in the first stages of the ECLA/World

Bank Project. [1]/

It was necessary, for most countries, to go from official national

income estimates to total household income, making use of available

information on flows accruing to other agents. Then, the national

accounts totals were adjusted to the income concept used by each survey.

Survey results were corrected to represent the calendar year, for

price variations and in some cases also for real growth during the year.

Mean incomes were compared, instead of aggregate incomes, to allow

for differences and errors in the coverage of households. National

accounts estimates were related to independent demographic estimates

of private households, which were obtained using household size averages

consistent with those resulting from the surveys, to ensure similarity in

the household concept; since these estimates are usually higher than the

ones obtained by blowing up survey results, this procedure tends to lessen

[1]/ O.Altimir, Income Distribution Estimates from Household Surveys and
Population Censueses in Latin America. An Assessment of Reliabili
Economic Commission for Latin America and World Bank Development
Research Center. September 1975 (mimeo).

the calculated discrepancies between the means. No income allowance was made for the institutional population.

For labour surveys which did not provide incomes per household, the incomes per individual recipient were compared, using for that purpose independent census-based estimates of active and employed population [1] and of the inactive.

For surveys of subnational coverage, relative income differentials were assumed between national means and the means corresponding to the area covered by the survey, on the basis of available information, either from other surveys of national coverage, from regional product estimates or from establishment surveys.

c) The underestimation of total income.

As can be seen in Table 14, although some income and expenditure surveys appear overestimating total household income, most of them fall short of national accounts totals in amounts varying between 15 and 30 per cent.

In general, the samples for most of the ECIEL surveys may be subject to selection errors, due to defective sampling frames, that would bias

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[1] Based on preliminary estimates of those published in CEPAL La Población Económicamente Activa en los Países de América Latina por Sectores de Actividad Económica y Categorías del Empleo: 1950, 1960 y 1970. E/CEPAL/R.206. Noviembre de 1979 (mimeo).

the estimates of the means upwards and the estimates of the variances

downwards. The positive discrepancies with national accounts shown

by the surveys for Colombia and Perú, which are perhaps the ones in

the ECIEL programme that were carried out with more care, may reflect

the joint effect of that type of bias and of a moderate underreporting

of incomes. On the contrary, if the same kind of error was present in

the selection of other ECIEL samples, the negative discrepancies of their

income results would indicate degrees of underreporting that may be even

greater and of the same order of those revealed by the other income and

expenditure surveys analyzed. Most of these were one-time surveys, with

recall periods of a year for all or many of the income items, and negative

discrepancies may be taken as indicative of the degree of underestimation,

even discounting the possible telecoping effect of the long reference

periods. The few income surveys carried out in Latin America underestimate

income to a degree which is, at best, similar to that attained by income

and expenditure surveys. As a class they are, however, rather more heterogenec

and their reliability has to be assessed by comparing the concepts of income

actually investigated by them against similar concepts derived from the

national accounts.

Perhaps the best of them is the PNAD-Income Survey carried out in

Brazil, which was a special income survey of national coverage, that falls

short of national accounts totals by around 15 per cent. The special

income survey carried out in Panama in 1970 may be considered of a

similar degree of reliability. Income supplements to current labour

surveys, like the ones used in Argentina (survey 5) and in Chile (surveys

2.1 and 2.2) consistently underestimate household incomes by 30 to 40

per cent. Discrepancies of this same order are recorded for income data

obtained from special surveys with specific social concerns like the one

carried out in Colombia (2) in 1974.

Labour surveys usually only investigate total money incomes or total

money earning among the economically active. Once the corresponding

adjustment to national accounts averages are made in order to make the

comparisons possible, survey averages fall between 15 and 40 percent short

of these, as can be seen from table 14.

d)   The underestimation of different types of income

The degree of accuracy is very seldom uniform accross types of income

in any single survey. Comparisons of mean incomes of each type with the

corresponding national accounts aggregates reveal a clear pattern: wages

and salaries may be more or less underestimated -and even, in some cases,

not at all- but enterpreneurial incomes almost always show a greater degree

of underestimation; transfers usually tend to be more underestimated than

wages and salaries, but less than enterpreneurial incomes; on the contrary,

property incomes actually realized are more heavily underestimated than these, while many surveys provide higher estimates of imputed rents than those included in national accounts.

The best income and expenditure surveys estimate wages and salaries very close to corresponding national accounts averages. However, the combined effect of an upward bias originated in the selection of the sample offset by a downward reporting bias, cannot be completely disregarded; as an example, the presence of the first type of bias was revealed when, analyzing the sample composition of the Mexican survey for 1963 (survey 1), a possible underrepresentation of agricultural employees was detected. As can also be seen in Table 14, other income and expenditure surveys may under-estimate mean wages and salaries between 15 and 30 per cent, as the net effect of different biases.

However, it should be noted that salaries in the national accounts tend to exclude some components of the salaries of employees in the higher echelons, that surveys attempt to capture as such.[1], although probably with little success.

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[1] for example, fringe benefits, likely to be included as inputs in the accounts of the enterprises, or participation in benefits, that are part of the net operating surplus.

Enterpreneurial incomes in income and expenditure surveys
usually fall short of national accounts totals by something between
25 and 50 per cent. Indeed, the few surveys that overestimate this
type of income are suspect of sample bias. Evenmore, actual discrepancies
may be greater than indicated in subnational surveys, since relative income
differentials assumed for this type of income to adjust the national accounts
averages to the areas covered by the surveys tend to be on the conservative
side.

However, the discrepancies between enterpreneurial income in the
national accounts and incomes from the own business, workshop or profession
as measured by the surveys can only be considered as indications of the
reliability of these results as far as the surveys intended to measure enter-
preneurial income, although it can be fairly presumed that what they really
have measured —with whatever biases— is net incomes after deduction of all
kinds of business expenses and outlays, including that part of accrued enter-
preneurial income that is either reinvested in fixed assets or increase in
stocks, or applied to reduce liabilities or kept as financial assets of the
business.

In general, income and expenditure surveys capture only a small proportion
of realized property incomes. However, some of the ECIEL surveys show
averages close or even far above those derived from national accounts.

This fact cannot be explained away by possible biases in the selection

of the samples and can only partially be attributed to have assumed too

conservative urban-national differentials for this type of incomes; it

rather suggests the very likely possibility that property incomes received

in cash are grossly underestimated in the national accounts [1].

Conversely, imputed property incomes -consisting of rent of owner-

occupied dwellings- as measured by the surveys are usually quite higher

than the corresponding averages from national accounts, suggesting either

a tendency towards underestimation in this aggregate or a wide difference

between valuation criteria applied by the owner and by the national

accountants, or both.

Income surveys apparently measure all types of income with degrees

of underestimation similar to those attained in income and expenditure

surveys. Perhaps the main difference to this respect is in the measurement

of property incomes, since this type of surveys capture an even lesser

proportion of realized incomes and imputed rents not so above national

accounts averages. This difference in relative accuracy appears to be

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[1] Dividends received in shares are almost surely neither included in
survey totals nor among realized property incomes estimated in national
accounts.

particularly noticeable in income supplements to labour surveys.

The labour surveys analyzed are of varied quality. This is mainly reflected in the discrepancies obtained for money incomes of employees, which in some surveys are close to nil and in other surveys may be some 15 or 20 per cent below national accounts averages, as can be seen in Table 14. Although this type of surveys usually measure only money wages, the relative accuracy of those measures appears to be similar to that obtained in income and expenditure surveys in the measurement of total wages and salaries.

Mean money incomes of the self-employed in labour surveys fall short of averages obtained from national accounts in something between 25 and 50 per cent, discrepancies which are broadly similar to those calculated for enterpreneurial incomes in most income and expenditure surveys. In some labour surveys of national coverage, a tendency has been observed to over-estimate money incomes of the self-employed in agriculture (biased samples?), while those of self-employed outside agriculture are underestimated to a degree greater than indicated.

5. Response biases in the measurement of different types
     of income

In the absence of rigorous research of response errores, only guesses

can be made about the main sources of response biases to income questions,

resting upon practical experience on how surveys are carried out in

Latin America and on handling their results for the analysis of levels

of living.

The outstanding determinant of the quality of the data obtained

by different surveys seems to be the quality of field work and the degree

of control exercised on it, even beyond the type of survey and the

characteristics of the questionnaire. The adequacy and thoroughness

of the instructions to the interviewers and the resources spent on their

training have been key elements in achieving better data quality.

Perhaps the somewhat better quality of responses obtained by income

and expenditure surveys has been influenced by the more thorough training

they require in order to investigate consumption expenditures, that

has spilled over income questions. On the contrary, instructions

regarding these questions are usually rather careless and do not anticipate

common response biases.

Response biases cannot be completely overcome, and the sensible

way to deal with them is to improve the questionnaire and the conditions

of the interview as far as it is cost-efficient, and then carry out

rigorous research to ascertain the degree and direction of remaining

biases and their relevance for each analytical purpose.

There are three aspects of the questionnaire and the questioning

techniques that may bias the responses in different ways: the reference

period, the degree of detail with which each income concept is

investigated, and the selection of the respondent. Long reference

periods, which intend to capture infrequent incomes, may induce

memory distortions. Detailed questions, intended to avoid omissions,

also to capture infrequent incomes, and even to use the more adequate

reference period for each type of income, on the other hand are costlier,

tiring and may cause respondent unwillingness to co-operate or to give

accurate data. Directing the questions to a single respondent in the

household may give rise to gross underreporting of the other members,

even more if the respondent selected is not the economic head of the

household. It is very likely that when urban employees reply to a single

broad question about their earnings in a short reference period, they tend to

provide the amount of their customary earnings in cash, net of deductions.

Any attempt to include infrequent receptions or wages in kind will

require detailed questions and precise instructions. That is perhaps

why labour surveys seem to measure the first type of concept with a
similar degree of accuracy to that in which income and expenditure
surveys measure the broader concept of wages. In any case, taxes
and contributions deducted from wages and salaries are unlikely to
be included.

Wages in kind tend to be omitted or grossly underestimated
unless investigated as a separate item and in considerable detail.
Even so, they are difficult to measure in traditional work relationships
or status. Employees in agriculture may consider some flows that
actually are wages in kind - like the use of living quarters - as
cuatomary "obligations" of the employer not to be accounted as salaries.
The same may happen with many components of wages in kind of domestic
servants. Income and expenditure surveys offer the possibility of
investigating flows that are wages in kind from the consumption side,
provided the distinction is made between goods purchased and goods
received "free".

Most surveys enquire about enterpreneurial incomes by means
of one or a few questions about incomes from the own business or
profession, net of business expenses and outlays. In this respect,
income and expenditure surveys do not differ from other types of

surveys, except in the longer reference sometimes used. The likely

response to this kind of questions - with whatever voluntary response

bias - corresponds closely to the amounts withdrawn from the production

unit for current consumption by the household or purchase of durable

goods. It is very likely that accrued enterpreneurial income reinvested

in real assets, in financial aspects - although personal, perceived

as "business operations" - or in reducing liabilities are visualized

as business outlays, and that so also are payments of all direct taxes.

In fact, it is a questionable practice in national accounts

estimation to consider that corporate or quasi-corporate enterprises

may appropriate as such a net value for institutional saving out of

their operating surplus, while for the other enterprises - that may

proceed in the same way - the whole of the enterpreneurial income is

considered to be appropriated by the households. Perhaps it should

be better to leave aside this accounting convention and try to measure

through household surveys, as accurately as possible, net withdrawals

from personal enterprises, even after deduction of direct taxes and

contributions. Oterwise, proper measurement of enterpreneurial income

would require a questionnaire design that endeavours to reconstruct

in an approximate way the accounts of the personal enterprise, mostly

from memory; this is not only costly, but the effectiveness of such a
technique has still to be tested.

However, perhaps that is the only way to attain a better degree
of accuracy in the measurement of farmers' incomes, and particularly
their component of home produce consumed by the household. With
present questioning techniques, biased towards urban situations, home
produce for self consumption is very difficult to measure.
But some national surveys apparently obtained fairly acceptable results
by approaching the estimation of farm output and its uses, like the
1968 survey for Mexico (number 2 in Table 13), or by inquiring in detail
about home produced consumption like the 1972 income survey for Brazil
(number 5.1 in Table 13).

Realized property incomes perhaps can only be measured with some
accuracy in special surveys on savings, assets and liabilities. Unlike
earnings, the existence or not of this type of incomes cannot be
checked through other questions in the survey, and apparently a good
deal of voluntary underreporting might crystallize in the omission of
property incomes.

On the contrary, household surveys may and do measure imputed
rents of owner-occupied dwellings with a reasonable degree of accuracy.

The many questions and direct observation by the interviewer on the characteristics of the dwelling unit, that any household survey may include, offer multiple checkpoints for the assessment required. Better instructions to the interviewers may reduce the frequent tendency to overestimate somewhat this item.

The measurement of current transfers appear to deal with the same kind of response bias than that of monetary salaries, with the difference that infrequent receipts are fewer and also are deductions.

6.   The different accuracy in measuring income or consumption

It is generally accepted that income and expenditure surveys underestimate income more than total consumption expenditures. However, when compared with the corresponding national accounts aggregates, Latin American income and expenditure surveys present a somewhat mixed picture.

Even among ECIEL surveys, which are more comparable from a methodological standpoint and were carried out in four waves of interviews throughout a year, the results do not give enough room for generalizations. The surveys for Peru and Colombia (see Table 13), which one would be inclined to consider the best of this group,

apparently do not underestimate either average income or average consumption; in fact, they show global saving coefficients somewhat higher than those resulting from national accounts, which is only natural, since these surveys only cover the main metropolitan areas. The survey for Argentina (number 3 in Table 13), may understimate income by somewhat around 15 per cent, but average consumption expenditure might even be an overestimate. But the ECIEL survey for Chile (number 1 in Table 13) underestimate income by more than 20 per cent and consumption presumably to a greater extent.

One-time income and expenditure surveys also provide a mixed picture. In some of them - like maybe the case with survey 3.3 in Colombia - sample biases may operate in the direction of overestimating income relative to consumption. In others - like surveys 3.1 and 3.2 in Colombia - the reverse is found. Mexican income and expenditure surveys (see Table 13) have underestimated both, usually income slightly more than consumption.

Finally, the ENCA survey carried out in Peru apparently underestimated consumption to a greater degree than income.

However, it should be noted, in comparing consumption from household surveys with private consumption from national accounts, that

this measure is residual; it therefore may include consumption attributable

to private non profit institutions that may have not been captured when

estimating the services sectors, and may incorporate biases resulting

from the eventual underestimation of investment, particularly that of

net increase in non-agricultural stocks.

For these reasons, the discrepancies indicated above in household

consumption expenditure as measured by surveys should be taken only as

an indication of a possible underestimation of the aggregate, usually

somewhat less than that of aggregate income, and maybe concentrated

in middle and higher strata, which are more motivated to conceal their

economic position, not only as seen through income but also through

expenditures.

This has led to propose [1] the identification of income under-

reporting along the distribution through the negative mean saving

coefficients. As can be seen from Table 5, this criterion would lead

to major adjustments in the incomes of the lower groups.

It should be noted that there are households recording expenditures

roughly similar to their income in every income group, as is illustrated

[1] Ida Navarrete, "La Distribución del Ingreso" in El Perfil de México
en 1980, Vol. I, Siglo XXI, México, D.F., 1970.

by Table 16, where these households constitute a third of all households
in almost all income brackets. Also, it can be observed that households
with income lower than expenditure are around a half of lower income
households, between 35 and 45 per cent of those in middle strata, and
even a significant proportion in upper levels.

This picture coincides with existing knowledge about households'
saving behaviour, that dissaving is not a behaviour characteristic of
lower strata only. Mean relations between net savings and income by
strata, as portrayed in Table 5, is the result of higher amounts
dissaved than saved in the lower strata and higher amounts saved than
dissaved in the upper strata.

However, this reasoning does not take into consideration response
biases. But even taking them into account, it should be admitted that
a certain proportion of the households appearing as dissavers - and,
therefore, of the amounts dissaved - in each bracket may reflect actual
household behaviour and not the result of differential biases in
reporting income relative to consumption. Of course, significant
dissaving in lower strata is always suspect, since their lack of credit
worthiness and other obstacles render difficult their access to

conventional financing mechanisms and that, on the other hand, permanent

real transfers from the rest of the economy to these households seem unlikely.

But there are also reasons to admit actual dissaving among these households.

For one part, shortrun desequilibria arising from the purchase of durables;

more likely, temporary decreases in income characteristic of the occupational

situation of poor households; but also more permanent disequilibria, associated

to their incapacity of covering their basic needs and fed by increasing nominal

indebtedness - possible in inflationary situations - or informal mechanisms

of transfers among households.

All this points at the incovenience of measuring overall inequalities

under the assumption that income underestimation can be dealt away by looking

at recorded dissaving, but also at the advisability of looking at the level of

living of the poor through consumption rather than through income, although

their income and its sources is crucial for understanding the determinants of

their situation.

7.   Consequences for the comparison of levels of living

The discrepancies indicated above between incomes measured through

household surveys and the macroeconomic estimates from national accounts pose

the question of how income underestimation distort comparisons of levels of

living and the measure of the inequalities. Even more that, as has been

shown, income underestimation is significantly different by type of income.

How those aggregate underestimations distribute by income strata is

an open question.

A basic query is if underreporting has a stronger association with the

size of income or with the type of income. Voluntary concealment or distortion

of incomes is likely to be more associated with size of income, but omissions

for memory failures,lack of information or defective comprehension of concepts

probably tend to be associated with the type of income. However, in any

specific instance of underreporting both circumstances may combine.

Various hypotheses can be ventured regarding the association between

voluntary biases and the size of income. The most neutral of them is that

underreporting is proportional to income, which implies a unit income-elasticity

of the bias. Another credible hypothesis is that there is a tendency to

convey an image of the own economic position similar to that of the "average

type", as this is perceived by each group; this would imply the overestimation

of lower incomes and the underestimation of upper incomes and, hence, an

increasing income-elasticity of the bias, from negative to positive values.

Finally, it could be assumed that there is no voluntary concealment at lower

levels and that it appears at a certain level, in increasing proportions of

income,that is, with an income elasticity greater than one.

With respect to involuntary underreporting of different types of incomes, we have already reviewed the different biases that are likely to be found in the measurement of each of them.

Both kinds of underreporting may combine, fulfilling the objective of concealment of a portion of income through the omission of some of the sources of household incomes, or of transitory components of each type of income, or of those difficult to reconstruct from memory, or even of those on which the saving of the household is based.

Which hypothesis is preferred as to the eventual income-elasticity of the combined biases by type of income and by size of income depends, of course on the analysis of each survey. But it is seldom tenable the hypothesis, so common when using household survey results in a haste, that overall income underreporting has an income elasticity close to unity and that, therefore, has no significant effect on the measurement of inequality.

For comparative purposes, the ECLA/World Bank Project has adjusted some of the available income distributions from household surveys based on the following - rather conservative - assumptions:

i) underreporting - voluntary and involuntary combined - is associated more with the type of income than with the size of income;

ii) overall undeclared incomes of each type correspond to the discrepancy between the estimate for that type of income from the national accounts - corrected for conceptual content - and survey results, when the discrepancy was positive;

iii) income-elasticity of underreporting, within each type of income, is one;

iv) however, underreporting of realized property incomes occurs only in the upper quintile.

As in each bracket of the aggregate distribution coexist households with different composition of income that - even according to our basic assumptions - may have got into the same cluster as a consequence of biases of very different magnitude, it was split into socioeconomic groups, a partition relevant for differentiating with respect to income type. The adjustment assumed, then, a unit income-elasticity of underreporting of all types of income for each socio-economic group, with the exception of the underreporting of realized property incomes, that was allotted to the upper quintile [1].

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[1]   In addition to this general procedure, in some cases supplementary corrections were made for obvious biases in the representation of some group in the sample.

The results of this exercise are sumarized in table 15. With some exeptions, overall income concentration increases significantly with the adjustment, both at the national and at the urban level. In terms of the share of the upper decile, something between 4 and 8 percentage points of total household income is added. In terms of the share of the lower 40 per cent of household, something between 1 and 3 per cent of total income is reduced.

Table 1

LATIN AMERICA: RELATIVE CONCENTRATION IN INCOME DISTRIBUTION AMONG HOUSEHOLDS AND
AMONG INDIVIDUAL RECIPIENTS

Country	Survey	Nº a/	Income distribution among households			Income distribution among individual recipients		
			Lower 40	Upper 10	G	Lower 40	Upper 10	G
a) Urban areas								
Argentina		5	16.0	28.8	0.385	15.7	31.6	0.406
		6	18.1	26.1	0.361	17.5	30.2	0.360
Brazil		5.1	8.6	47.0	0.569	8.0	50.4	0.589
Colombia		3.2	11.9	37.4	0.484	10.0	43.0	0.531
		3.3	10.9	41.1	0.514	7.9	48.7	0.584
Costa Rica		1.1	14.1	33.4	0.438	13.6	37.4	0.458
		1.2	14.3	33.8	0.436	13.4	40.6	0.475
Perú		4	10.2	36.9	0.618	7.4	40.6	0.539
Uruguay		1	14.3	30.5	0.419	10.0	35.7	0.428
		2	18.5	28.2	0.354	16.1	28.8	0.386
b) Rural areas								
Brazil		5.1	6.3	48.2	0.567	8.4	50.4	0.584
Colombia		3.2	16.2	35.0	0.415	13.0	37.8	0.463
		3.3	17.0	31.2	0.388	11.5	36.3	0.475
Costa Rica		1.1	13.0	38.0	0.468	13.2	36.8	0.458

a/ see Table 10.

Table 2

LATIN AMERICA: AVERAGE HOUSEHOLD SIZES IN DIFFERENT PERCENTILE GROUPS
OF THE DISTRIBUTION OF INCOME AND CONSUMPTION

a) Distribution according to total income

Country	Survey N a/	Coverage b/	All Households	10	20	30	40	50	60	70	80	90	100
Argentina	3	M.A	3.6	2.4	3.0	3.3	3.5	3.7	3.8	4.0	4.3	4.2	4.5
	5	M.A	3.3	1.3	1.7	2.3	2.7	3.0	3.1	3.3	3.4	3.6	4.0
Brasil	5.1	U	4.4	4.0	4.1	4.4	4.4	4.5	4.7	4.8	4.9	4.8	4.4
Colombia	1	M.A	6.1	4.9	5.4	6.5	6.3	5.6	6.9	6.9	6.1	6.3	6.5
	1	U	6.3	5.0	5.7	6.1	6.4	6.4	6.6	7.0	6.5	6.7	6.6
Costa Rica	1.1	U	5.3	4.9	5.3	5.2	5.2	5.3	5.3	5.3	5.4	5.4	5.5
	1.2	U	5.0	4.9	5.0	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0
Chile	1	M.A	4.7	3.7	4.5	4.5	4.8	5.0	5.3	5.1	5.1	5.0	4.3
	2.1	M.A	4.7	3.0	3.7	4.4	4.4	4.8	5.0	5.2	5.5	5.2	5.9
	2.1	U	4.9	3.6	3.8	4.7	4.7	4.8	5.2	5.2	5.7	5.4	5.6
Honduras	1	U	6.1	4.9	5.3	5.3	5.5	5.9	6.3	6.5	6.4	7.2	7.0
México	2	U	5.8	4.9	5.2	5.3	5.8	5.7	5.8	6.1	6.3	6.2	6.1
Perú	3	U	5.3	4.2	4.7	4.7	5.3	5.6	5.6	5.6	5.7	6.1	6.0
	1	M.A	6.5	5.7	6.1	6.3	6.1	6.4	6.9	6.4	7.0	6.6	7.2
Uruguay	2	M.A	3.6	3.1	3.4	3.4	3.4	3.4	3.6	3.7	3.8	4.1	4.3
Venezuela	1.1	M.A	5.4	4.8	5.2	4.9	5.2	5.5	5.4	5.2	5.5	5.6	6.4

Cont. page 1

Country Survey N a/	Coverage b/	All Households	10	20	30	40	50	60	70	80	90	100
		b) Distribution according to per capita consumption										
Colombia	1	M.A	6.1	8.0	7.7	7.0	6.3	6.0	6.1	5.9	5.3	4.9	4.6
Chile	1	M.A	3.7	7.0	6.0	5.6	5.3	4.7	4.3	4.1	3.8	3.6	2.6
Perú	1	M.A	5.8	8.4	7.8	6.6	7.1	6.3	6.2	5.6	5.9	5.5	5.1
Venezuela	1.1	M.A	4.6	8.3	6.7	6.2	5.5	4.9	4.5	4.4	4.4	4.4	4.2

a/ See table 10.

b/ M.A: Metropolitan area; U: Urban area.

Table 3

PANAMA: DISTRIBUTION OF HOUSEHOLDS BY HOUSEHOLD SIZE IN EACH QUINTILE
GROUP OF THE DISTRIBUTIONS BY TOTAL INCOME AND BY PER CAPITA
INCOME.

	All households	20	40	60	80	90	100
a) Total income							
1 person	9.1	17.9	10.4	8.7	5.4	4.0	1.4
2 persons	13.2	13.9	15.7	13.5	13.0	9.7	10.0
3- 4 persons	27.0	23.3	25.1	27.5	28.6	30.8	30.3
5- 6 persons	24.7	21.4	23.9	23.6	25.4	28.7	30.1
7- 8 persons	16.1	14.8	16.4	16.2	17.3	14.4	17.6
9-10 persons	6.5	6.7	6.1	7.1	5.9	6.5	7.1
11 and more persons	3.4	2.0	2.4	3.4	4.4	5.9	3.5
b) Per capita income							
1 person	9.1	3.1	8.0	7.9	8.4	15.2	20.6
2 persons	13.2	6.8	9.7	11.2	15.7	19.9	25.2
3- 4 persons	27.0	20.1	21.1	26.1	33.9	36.9	30.9
5- 6 persons	24.7	27.6	24.9	28.3	25.3	19.4	15.8
7- 8 persons	16.1	25.6	20.2	17.5	11.4	7.0	5.0
9-10 persons	6.5	11.8	10.2	4.9	4.0	1.1	2.0
11 and more persons	3.4	5.0	5.9	4.1	1.3	0.5	0.5

Source: Tabulations from Survey 1 (See table 10)

Table 4

LATIN AMERICA: RELATIVE CONCENTRATION IN THE DISTRIBUTION OF HOUSEHOLD INCOME ACCORDING TO TOTAL HOUSEHOLD INCOME AND TO PER CAPITA HOUSEHOLD INCOME

Country	Survey Number a/	Coverage b/	Year	Distribution according to total household income			Distribution according to per capita household income		
				Lower 40	Upper 10	G	Lower 40	Upper 10	G
Argentina	5	M.A.	1970	16.0	28.8	0.385	18.9	28.3	0.347
Colombia	3.6	N.	1972	5.9	50.8	0.618	5.9	52.8	0.624
Costa Rica	1.1	N.	1966-67	12.8	36.2	0.468	9.9	40.8	0.524
	1.2	U.	1971	14.3	33.8	0.436	10.9	39.1	0.501
	2	N.	1971	13.1	36.6	0.461	13.8	37.8	0.460
Peru	2	M.A.	1971-72	14.8	33.8	0.426	11.2	44.5	0.522
Panama	1	N.	1970	7.2	43.5	0.569	6.6	45.1	0.587

a/   See table 10.

b/   N: National; M.A: Metropolitan area; U: Urban area.

Table 5

LATIN AMERICA: GLOBAL PROPENSITIES TO SPEND (C/Y) OF DIFFERENT GROUPS OF
HOUSEHOLDS IN THE DISTRIBUTION BY TOTAL INCOME

a) National level

Country	Survey No a/														
Colombia	3.2	H C/Y	All households 1.02	19.6 1.43	48.9 1.27	68.7 1.17	78.7 1.10	84.6 1.05	90.0 1.02	93.4 0.93	96.8 0.85	98.9 0.75	100.0 0.82	
	3.3	H C/Y	All households 0.86	10.2 1.23	35.7 1.16	58.4 1.06	72.2 1.01	78.8 0.95	85.1 0.89	90.4 0.82	95.3 0.79	98.0 0.78	100.0 0.56	
Mexico	1	H C/Y	All households 1.02	18.4 2.19	43.5 1.47	65.1 1.19	76.0 1.15	91.0 0.98	95.6 0.91	97.5 0.76	99.1 0.75	100.0 0.54		
	2	H C/Y b/	All households 0.94	5.4 1.42	20.8 1.21	40.8 1.14	81.6 1.02	94.6 0.90	98.0 0.81	100.0 0.69				
	4	H C/Y	All households 0.97	10.2 1.24	16.5 1.07	23.2 1.10	31.7 1.04	41.1 1.00	51.4 1.00	64.1 0.98	74.6 1.02	83.3 0.95	90.3 0.94	94.5 0.94 97.4 0.91

b) Urban areas

Country	Survey No a/														
Argentina	3	H C/Y	All households 0.96	19.3 1.21	43.6 1.11	62.7 1.02	82.1 1.01	100.0 0.88						
Colombia	1	H C/Y	All households 0.95	10.0 1.42	20.0 1.20	30.0 1.20	40.0 1.18	50.0 1.09	60.0 1.01	70.0 1.03	80.0 1.03	90.0 0.91	95.0 0.87	100.0 0.74
	3.1	H C/Y	All households 0.97	7.3 1.26	28.9 1.11	53.3 1.02	66.6 1.00	74.8 0.95	82.6 0.95	88.5 0.91	92.3 0.88	96.3 0.87	100.0 0.83	
	3.2	H C/Y	All households 1.01	10.6 1.45	32.7 1.29	54.6 1.20	68.0 1.14	76.7 1.08	84.7 1.04	89.8 0.95	95.2 0.86	98.4 0.76	100.0 0.85	
	3.3	H C/Y	All households 0.84	7.3 1.24	25.4 1.13	45.9 1.10	61.4 1.05	69.3 0.99	77.5 0.95	85.6 0.83	92.5 0.81	96.8 0.78	100.0 0.55	
Chile	1	H C/Y	All households 0.84	10.0 1.99	20.0 1.43	30.0 1.28	40.0 1.19	50.0 1.01	60.0 1.02	70.0 0.93	80.0 0.87	90.0 0.86	95.0 0.81	100.0 0.65

Continuation page 1)

Country	Survey Nº a/													
Mexico	1	H	All households	9.9	29.3	50.3	65.3	86.0	92.8	95.7	98.5	100.0		
		C/Y	0.98	2.14	1.51	1.28	1.20	1.01	0.93	0.77	0.75	0.55		
Peru	1	H	All households	10.0	20.0	30.0	40.0	50.6	60.6	70.0	80.0	90.0	95.0	100.0
		C/Y	0.93	2.82	1.69	1.34	1.22	1.21	1.11	1.01	0.87	0.91	0.70	0.59
Venezuela	1.1	H	All households	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	95.0	100.0
		C/Y	0.93	1.64	1.40	1.22	1.20	0.93	0.89	0.93	0.90	0.86	0.84	0.74

H: cumulative percentages of households according to total income

a/ See table 10.

Table 6

LATIN AMERICA: DIFFERENCES IN CONCENTRATION BETWEEN THE DISTRIBUTION BY
TOTAL INCOME AND BY AVAILABLE INCOME

Country	Survey Nº a/	Distribution of household by total income			Distribution of household by available income		
		Lower 40	Upper 5	G	Lower 40	Upper 5	G
Ecuador	1 - Quito	10,78	24,25	0,518	10,90	26,34	0,518
Colombia	1 - Bogota	13,82	25,64	0,472	13,93	29,58	0,468
Peru	1 - Lima	12,59	24,89	0,487	12,71	24,83	0,486
Venezuela	1 - Caracas	14,58	18,86	0,429	14,60	18,91	0,427

a/ See Table 10.

Source: Philip Musgrove, op.cit.

Table 7

MEXICO: DISTRIBUTION OF IMPUTED ENTERPRENEURIAL INCOMES
ACCORDING TO THE 1968 INCOME AND EXPENDITURE SURVEY
(Survey NQ 2 in Table 10)

Monthly Total household income	Households (%)	Distribution of total enterpreneurial incomes (a) (%)	Distribution of imputed enterpreneurial income (b) (%)	Proportion of (b)/(a) (%)
Up to 300	7,9	1,0	3,1	32,6
301 - 400	6,2	1,9	4,4	24,6
401 - 530	8,3	2,6	5,2	20,8
531 - 700	8,6	3,3	7,6	24,2
701 - 950	15,6	6,4	11,5	18,9
951 - 1 250	11,2	6,8	11,9	18,4
1 251 - 1 700	11,0	7,9	10,3	13,6
1 701 - 2 220	8,9	12,2	13,2	11,3
2 221 - 3 000	7,6	9,0	9,6	11,1
3 001 - 4 000	5,3	7,4	4,3.	6,1
4 001 - 5 200	3,5	8,1	5,4	7,0
5 201 and more	5,9	33,4	13,5	4,2
Total	100,0	100,0	100,0	10,5

Source: Special tabulations provided by Secretaría de la Presidencia.

Table 8

LATIN AMERICA: IMPUTED RENT AS INDIVIDUAL MEAN SHARE OF HOUSEHOLD INCOME

Country	Survey Nº a/	Income quartiles				Mean
		First	Second	Third	Fourth	
Colombia	1 - Bogota	7,96	14,67	15,52	11,81	12,84
	Barranquilla	9,86	5,91	7,51	9,35	8,12
	Cali	8,77	11,50	11,13	10,80	10,34
	Medellin	8,35	12,45	11,80	13,23	11,26
Chile	1 - Santiago	7,59	10,36	12,65	12,68	10,85
Ecuador	1 - Quito	1,77	6,40	13,56	26,77	11,72
	Guayaquil	1,75	3,73	6,82	17,02	7,47
Peru	1 - Lima	6,66	8,26	8,05	11,50	8,64
Venezuela	1 - Caracas	8,91	8,56	8,13	13,80	9,84
	Maracaibo	16,08	9,45	8,18	6,16	9,80

Source: Philip Musgrove, op. cit.

a/ See Table 10.

Table 9

COLOMBIA: DISTRIBUTION OF SUBSIDIES FOR EDUCATION AND HEALTH PER HOUSEHOLD AND PER CAPITA, CLASSIFIED BY INCOME QUINTILE

(1974 pesos)

Income quintile (poorest to richest)	Subsidy for education Total	Subsidy for health Total	Total subsidies for education and health	Mean household size (persons)	Subsidy per capita 1974 pesos	Subsidy per capita 1974 US$	Annual household income	Subsidy as a percentage of household income
1	1,921	617	2,538	6.87	369	13.3	10,368	24.5
2	1,961	626	2,587	5.99	436	15.6	17,820	14.5
3	1,810	774	2,584	5.38	480	17.4	25,032	10.3
4	1,950	635	2,585	4.80	539	19.5	36,912	7.0
5	2,064	505	2,569	4.25	604	21.9	104,388	2.5
Country average	1,947	631	2,578	5.50	468	17.0	38,904	6.6

Source: Marcelo Selowsky Who benefits from Government Expenditure? A case study for Colombia.
Oxford University Press for the World Bank, 1979.

Table 10

LATIN AMERICA: POVERTY AND DESTITUTION LINES.   ANNUAL BUDGETS PER PERSON, AT 1970 PRICES [b]

(US$ - US Dollar)

Country	Poverty Lines				Destitution Lines			
	Capital City	Urban Average	Rural Areas	National Average	Capital City	Urban Average	Rural Areas	National Average
Argentina	249	249	164	231	124	124	93	117
Brasil	197	197	130	162	98	98	74	85
Colombia	176	170	116	147	88	85	66	77
Costa Rica	196	190	128	152	98	95	73	82
Chile	256	249	168	225	128	125	96	116
Ecuador	220	213	145	173	110	106	83	92
Honduras	190	183	125	142	95	92	71	77
Mexico	185	179	122	157	93	89	70	82
Peru	181	176	119	148	91	88	68	78
Uruguay	234	234	153	214	117	117	88	110
Venezuela	287	277	189	252	144	139	108	130

[b] Converted at the average exchanges rates for imports in 1970.

Table 11

LATIN AMERICA: ESTIMATES OF THE INCIDENCE OF POVERTY IN LATIN AMERICAN COUNTRIES Ca.1970

Country	Percentage of households below the poverty line			Percentage of households below the destitution line		
	Urban	Rural	National	Urban	Rural	National
Argentina	5	19	8	1	1	1
Brasil	35	73	49	15	42	25
Colombia	38	54	45	14	23	18
Costa Rica	15	30	24	5	7	6
Chile	12	25	17	3	11	6
Honduras	40	75	65	15	57	45
Mexico	20	49	34	6	18	12
Peru	28	68	50	8	39	25
Uruguay	10	..	..	4	..	..
Venezuela	20	36	25	6	10	10
LATIN AMERICA	26	62	40	10	34	19

Table 12

ESTIMATES OF RELATIVE POVERTY IN LATIN AMERICAN COUNTRIES Ca.1970

Country	Percentage of households below the relative poverty line [a]	
	Urban	National
Argentina	27	28
Brasil	52	54
Colombia	43	48
Costa Rica	34	36
Chile	38	39
Honduras	40	58
Mexico	44	48
Peru	34	48
Uruguay	25	-
Venezuela	37	38

[a] Defined as one half of the average household income.

Table 13

LATIN AMERICA: HOUSEHOLD SURVEYS INVESTIGATING INCOME, IN THE LATE SIXTIES AND SEVENTIES

Country	No	Survey title	Executing agency	Year	Type of survey a/	Periodicity	Geographical coverage	Sample size (households)	Income recorded		
									Recipients	Types of income	Reference date or period
Argentina	1	Family budget survey	OADE/CONADE	1963	YB	Ad-hoc	Urban	6 484	All	All	January-February 1963
	2	Food consumption survey	CONADE	1965	P	Ad-hoc	Greater Buenos Aires	2 022	All	All	September-December 1965
	3	Family budget survey	INDEC/BCIRA	1969/1970	YB	Ad-hoc	Greater Buenos Aires	1 749	All	All	July 1969-June 1970
	4	Survey of expenditures in goods and services	INDEC	1970/1971	YB	Ad-hoc	Greater Buenos Aires	7 200	All	All	July-August 1970
	5	Employment and unemployment survey-income supplement	INDEC	1970	L, Y	Ad-hoc	Greater Buenos Aires	2 822	All	All	March 1970
	6	Permanent household survey	INDEC	Since 1972	L	3 a year	Greater Buenos Aires and 19 cities	4 762 b/	All	All	Previous month
Bolivia	1	Permanent household survey	INE	Since 1977	L	Yearly	La Paz, Cochabamba, Santa Cruz, localidad de Montero	ca 6 200	Employed	Earnings	Previous month
Brazil	1	Family budget surveys	IBGE								
		1.1.		1961/1962	YB	Ad-hoc	7 main cities	4 625	All	All	July 1961-July 1962
		1.2.		1962/1963			6 main cities	2 700	All	All	July 1962-June 1963
		1.3.		1963/1964			Rural-4 states	922	All	All	Year 1962
							Rural-1 state	196	All	All	Year 1963
	2	Family budget survey	IBGE/SCIEL	1967/1968	YB	Ad-hoc	Rio de Janeiro, Recife, Porto Alegre	2 430	All	All	April 1967-March 1968
	3	National study of family expenditures (ENDEF)	IBGE	1974/1975	F, YB	Ad-hoc	National	55 000	All	All	August 1973-July 1975
	4	National household sample survey (PNAD)	IBGE	Since 1967 to 1970	L	Quarterly	National	ca 24 000	Employed c/	Earnings in cash in main occupation	Previous week
	5	National household sample survey (new PNAD)	IBGE	Since 1971	L	Yearly	National	ca 80 000	Employed c/	Earnings in cash in main occupation	Previous week or month
		5.1. Income survey		1972	Y	Ad-hoc	National	ca 80 000	All	All	September-December 1972
		5.2. Income survey		1976	Y	Ad-hoc	National	ca 80 000	All	All	Nov. 1975-Nov. 1976
Colombia	1	Family budget survey	CEDE/DANE	1967/1968	YB	Ad-hoc	6 main cities	2 949	All	All	January 1967-May 1968
	2	Study on the distribution of basic services	CCD/World Bank	1974	S, Y	Ad-hoc	National	5 000	All	All	November 1974
	3	National household survey	DANE	1970 to 1972	L	3 a year	National	12 000/6 371	Active	Earnings in main occupation	Previous month
				1974	L	Once a year	Urban	10 915	Active	Earnings in main occupation	September-October 1974
				Since 1975	L	Half-yearly	7 main cities	9 135/7 000	Active	Earnings in main occupation	Previous month
						Half yearly	6 main cities	ca 6 000	Active	Earnings in main occupation	Previous month
		3.1. Stage 2		1970	YB	Yearly	7 main cities	5 550	All		July 1970-Nov. 1970
		3.2. Stage 0		1971	YB	Yearly	National	5 594	All		June 1970-June 1971
		3.3. Stage 6		1972	YB	Yearly	National	2 474	All		August 1971-Sept. 1972

Table 1 (continued)

Country	№	Survey title	Executing agency	Year	Type of survey	Periodicity	Geographical coverage	Sample size (households)	Recipients	Types of income	Income recorded / Reference date or period
Costa Rica	1	Household sample survey	DGEC	1966/1967	L	Yearly	National	10 109	Employed net	Earnings	June 1966-June 1967
	2	Income and food consumption	DGEC	1967/1971	L	Half-yearly	Urban	ca 3 200	In agriculture	Earnings	Previous month
	3	Family income and expenditure	DGEC	1971	E, X	Ad-hoc	National	2 965	All	All	August-November 1971
	4	National household survey	DGEC	Since 1974	L	3 a year	National	ca 3 000	All	All	January-December 1974
								ca 6 100	Employees	Earnings	Previous week
Chile	1	National family budget survey	INE/INDE	1968/1969	YB	Ad-hoc	Greater Santiago	5 373	All	All	Jan. 1968-August 1969
	2	National household sample	INE	1966/1972	L	3-4 a year	National	ca 10 000	Employed not in agriculture	Earnings in cash	Previous week or month
		2.1. Family income survey		1968	X	Ad-hoc	National	10 430	All	All	January-May 1968
		2.2. Family income survey		1971	X	Ad-hoc	National	10 000	All	All	May-November 1971
	3	Third family budget survey	INE	1977/1978	YB	Ad-hoc	Greater Santiago	4 000	All	All	Dec.1977-November 1978
	4	National employment survey—Regionalized sample	INE	Since 1975	L	Yearly	National	ca 22 000	Active	Earnings	Previous month
Ecuador	1	Family budget survey	INE/INDE	1967/1968	YB	Ad-hoc	Quito and Guayaquil	1 969	All	All	February 1967-June 1968
	2	Household surveys 2.1.	DGE	1968	L	Yearly	Urban	3 000	Active	Earnings	January-April 1968
		2.2.		1969	L	Ad-hoc	National	ca 5 000	Active	All	January-April 1969
	3	Population and employment survey	INE	Since 1975	L	Recurrent	Quito and Guayaquil	6 000	Employed	Earnings	Previous month
	4	Family budget survey	INE/INE	1975/1976	YB	Ad-hoc	Urban	ca 7 000	All	All	July 1975-June 1976
Guatemala	1	Income and expenditure survey	UST/IIE	1969	YB	Ad-hoc	Urban	2 000	All	Earnings in cash in main occupation	Dec. 1969-Dec.1969
	2	National household survey on some characteristics of human resources	DGE	1977	L	Ad-hoc	Guatemala Department	1 799	Employed	Earnings in main occupation	March-April 1977
El Salvador	1	Demographic and labour force survey	DGE	1974	D, L	Ad-hoc	San Salvador	1 191	All	All	August 1974
	2	National survey on labour force and demographic aspects	DGE	1975	D, L	Ad-hoc	National	6 450	All	All	March-June 1975
Honduras	3	National family budget survey	DGE	1976/1977	YB	Ad-hoc	National	ca 3 400	All	All	Previous month
	1	Family income and expenditure survey	DGE	1967/1968	YB	Ad-hoc	National	1 780	All	All	March 1967-April 1968
	2	Income, expenditure and food consumption survey	DGE	1977/1978	YB	Ad-hoc	National	...	All	All	Previous 12 months
Mexico	1	Family income and expenditure survey	Dm.Mexico/DGEA	1963	YB	Ad-hoc	National	4 650	All	All	July 1963-February 1964
	2	Family income and expenditure study	Banco Mexico	1968	YB	Ad-hoc	National	5 939	All	All	April 1967-March 1968
	3	Income and expenditure survey	SIDER	1975	YB	Ad-hoc	National	...	All	All	Sept. 1974-August 1975
	4	Income and expenditure survey	DGE	1977	YB	Ad-hoc	National	11 561	All	All	January-June 1977
	5	Continuous employment survey	DGE	Since 1973	L	Quarterly	Urban	ca 35 300	Active	Earnings in cash in main occupation	Previous week or month
Nicaragua	1	Employment situation survey	ODEC	1975/1976	L	Yearly	Managua and 7 cities	6 300	Employees	Earnings in cash in main occupation	Previous week or month
Panama	1	Special household survey on income	DEC	1970	X	Ad-hoc	National	4 500	All	All	Year 1970
	2	Study on the living conditions of households	DEC	1972	YB	Ad-hoc	Ponce City and Colón	1 400	All	All cash income	March-June-September-December 1972
	3	Manpower Survey	DEC	Since 1963	L	Yearly	National	ca 12 000	Employees	Earnings in main occupation	Previous week

Table 1 (concluded)

Country	Id	Survey title	Executing agency	Year	Type of survey [a/]	Periodicity	Geographical coverage	Sample size (households)	Income recorded Recipients	Types of income	Reference date or period
Paraguay	1	Purpose household sample survey	DGEC	Since 1976	L	Yearly	Urban	ca 3 000	Employed not in agriculture	Earnings	Previous week
Peru	1	Family budget survey	CISEPA/BCRP	1968/1969	YE	Ad-hoc	Lima	1 357	All	All	Nov. 1967-Jan. 1969
	2	National food consumption survey (ENCA)	CEN	1971/1972	F, YE	Ad-hoc	National	7 700	All	All	August 1970-July 1972
	3	Household survey-manpower study	OEMEO	1970/1971	L	Ad-hoc	Urban	ca 5 000	Active	All cash income	August 1969-March 1970
	4	Household survey-manpower study	OEMEO	1974	L	Ad-hoc	National	16 400	All cash income	All cash income	Year 1973
Dominican Republic	1	Family budget study	ONE/BC	1969	YE	Ad-hoc	Santo Domingo	532	All	All	Dec. 1968-Dec. 1969
Uruguay	1	Family income and expenditure survey	University/BCRB	1967	YE	Ad-hoc	Montevideo	1 135	All	All	May 1967-May 1968
	2	Employment and unemployment household survey	DGEC	Since 1968	L	Half-yearly	Montevideo	ca 5 000	Employed	Earnings in cash	Previous week
Venezuela	1	Family income and expenditure surveys	BCV/BCVEL	1966	YE	Ad-hoc	Caracas	948	All	All	September 1965-October 1966
	1.1.			1967/1968	YE	Ad-hoc	Maracaibo	1 173	All	All	April 1967-Feb. 1968
	2	Housing market study (BANAP)	BANAP	1970	H	Ad-hoc	Urban	...	All	All cash income	April-November 1970
	3	Household sample survey	DGEC	Since 1967	L		National	ca 10 000	Active	Earnings in cash	Previous week or month
	4	Household sample survey	DGEC	1968/1971	L	Half-yearly	Caracas	ca 3 600	Active not in agriculture	Earnings in cash	Previous week or month

a/ D: Demographic survey
F: Food and nutrition survey
H: Housing survey
L: Labour survey
S: Survey on basic services
Y: Income survey
YE: Income and expenditure survey.

b/ In Greater Buenos Aires only.
c/ Self-employed not in agriculture and employed in all sectors.
d/ Various (optional) reference periods were used, and results were "centered" at 30-VIII-1976.

Table 14

LATIN AMERICA: DISCREPANCIES BETWEEN MEAN INCOMES FROM DIFFERENT TYPES OF SURVEYS AND NATIONAL ACCOUNTS

(Percentage of national accounts averages)

Country	Survey No	Survey Title	Year	Coverage a/	Total Income	Wages and Salaries	Enterpre-neurial Income	Property Incomes Total	Property Incomes Realized	Property Incomes Imputed	Transfers
a) Income and expenditure surveys											
Argentina	3	Family budget survey	1969/70	MA	-15,0	-32,9	-35,0	62,3			82,8
Colombia	1	Family budget survey	1967/68	4 MC	5,0	-7,3	15,5	51,5	-18,0	264,6	351,4
	3	National household survey									
		3.1 Stage 2	1970	7 MC	11,0						
		3.2 Stage 4	1971	N	12,4						
		3.3 Stage 6	1972	N	25,8						
Chile	1	National family budget survey	1968/69	MA	-23,8	-15,3	-36,7	-20,6	-65,5	86,1	-29,5
Honduras	1	Family income and expenditure survey	1967/68	N	-30,4						
Mexico	1	Family income and expenditure survey	1963	N	-26,2	22,0	-53,0	-64,0	-89,3	-.2,2	-46,5
	2	Family income and expenditure survey	1968	N	-27,3	7,6	-51,2	-50,1	-77,2	49,1	-18,1
	4	National income and expenditure survey	1977	N	-33,7	-7,2	-56,2	...	-94,1	...	-15,7
Peru	1	Family budget survey	1968/69	MA	9,7	-1,4	21,9	95,7	48,9	148,9	-26,7
	2	National food consumption survey (ENCA)	1871/72	N	-25,7	-20,3	-25,3	...	-68,1	...	-32,4

Continuation page 1.

| Country | Survey | | Year | Coverage a/ | Total Income | Wages and Salaries | Enterpre-neurial Income | Property incomes | | | Transfers |
	No	Title						Total	Realized	Imputed	
Uruguay	1	Family income and expenditure survey	1967	MA	-13,5	2,2	-29,2	-63,6			-19,8
Venezuela	1.1	Family income and expenditure survey	1966	HA	7,2	- 0,9	- 9,6	171,1	9,8	724,9	17,3
b) Income surveys											
Argentina	5	Employment and unemployment survey-income supplement	1970	MA	-33,2	-16,6	-42,4	...	-89,2		
Brazil	5	National household sample survey (new PNAD) 5.1 Income survey	1972	N	-13,5	- 4,3 b/	-12,6 c/			-45,5 d/	
Colombia	2	Study on the distribution of basic services	1974	N	-42,0						
Costa Rica	2	Income and food consumption	1971	N	-19,6						
Chile	2	National household sample 2.1 Family income survey 2.2 Family income survey	1968 1971	N N	-40,0 -32,8	-23,0 -25,6	-55,7 -42,7	-50,0 -25,4			-56,9 -47,4
c) Labour surveys											
Peru	4	Household survey manpower study	1974	N	-35,6	-19,0	-38,0	...	-83,4	...	-35,6