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EVIDENCE AND IMPLICATIONS FOR PUBLIC POLICY

Markos J. Mamalakis; Anders J. Danielson;
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WORKING PAPER SERIES

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Preface

These papers were prepared as part of a joint project between the Latin American Program of the Wilson Center and the Department of Economics, the University of Wisconsin-Milwaukee, on *Distributional Mobility in Latin America: Evidence and Implications for Public Policy.*

The invited papers in this publication by Markos J. Mamalakis, Anders J. Danielson, David E.Hojman and Fernando Medina, all of whom are experts on Latin America, are original or revised versions of papers presented at a conference on "Distributional Mobility in Latin America: Evidence and Implications for Public Policy" held at the Woodrow Wilson Center in Washington, DC, on October 15, 1998. This conference was jointly organized by Markos J. Mamalakis, Professor of Economics, the University of Wisconsin, Milwaukee, and Joseph S. Tulchin, Director, Latin American Program, the Woodrow Wilson Center.

The aim of the project and the related conference was to highlight the importance of the neglected issue of distributional mobility in understanding the roots, nature, and corrective policy implications of inequality, poverty, exclusion and stagnation in Latin America. The message emerging from this project and conference is that without better statistics and improved understanding of the multiple dimensions of distributional mobility, strategies to promote growth, alleviate poverty and reduce inequality are likely to remain flawed.

The authors of the papers and organizers of the conference wish to express their gratitude to Jere R. Behrman, William R. Kenan, Jr., Professor of Economics, University of Pennsylvania, Nancy Birdsall, Senior Associate, Carnegie Endowment for International Peace, Carol Graham, Senior Fellow and Co-Director, Center on Social and Economic Dynamics, Foreign Policy Studies Program, The Brookings Institution, Michael Ward, Statistical Advisory Service, the World Bank, and Adriaan M. Bloem, Division Chief, Real Sector Division, Statistics Department, International Monetary Fund for their participation at the conference as discussants of the papers.

Sincere thanks also are expressed to the Tinker Foundation for its generous support of the project and conference.

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Introduction

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Improving the welfare of individuals and households is a widely accepted public policy goal. Welfare is, however, an elusive concept. It is almost impossible to measure it directly. We, thus, resort to indirect, albeit always imperfect, measures.

Yardsticks that have been used to measure economic welfare in Latin America include general ones, such as growth of per capita income, reduction or elimination of absolute poverty, full employment, reduced inequality and price stability, as well as other specific indicators such as life expectancy, infant mortality, years of schooling, caloric intake, number of nurses or physicians per capita, and so forth.

A variety of factors influence welfare.

Total, as well as individual welfare, are ultimately determined by the quantity (level) as well as quality of the private (food, clothing, housing), semipublic (education, health and welfare) and collective (public administration and defense) commodities (goods and services) produced and/or used at a moment in time, during a year, over a lifetime, over generations and so forth. Individual and household welfare also, however, very much depends on the distribution of the aforementioned goods and services, and of the income generated during their production, among them at a moment in time, over a lifetime or between generations.

In addition, therefore, to the central impact of the quantity, quality and distribution of goods and services, our perception of the level and changes in welfare likely will vary, possibly drastically, depending on whether we view a snapshot picture, different snapshots or a rolling film tracing turns and twists of welfare over a lifetime or between generations.

Last but not least, the still picture(s) or unfolding film could project vastly different scenarios of levels and changes in welfare depending on whether the observing photographer chooses to focus the camera on private, semipublic or collective consumption, labor and/or property income, wealth, or some other variable as most accurate measure(s) and indicator(s) of welfare.

Discourse about changes in welfare of households/individuals over time as a consequence of variations in the quantity/quality and distribution/use of private, semipublic and collective commodities and/or some other economic variable, brings to the forefront the vital issue of mobility.

As previously mentioned, changes in welfare in Latin America over time have been measured by using a variety of criteria. Unfortunately, the vital criterion of mobility has been neglected to the point that many conclusions about welfare variations may be suspect, or even downright erroneous.

Mobility is the concept that provides us with an entry into the realm, the landscape of continuous, dynamic, evolving change and movement in economic, and possibly social, welfare. Mobility enriches our understanding of the causes and effects of development by supplementing snapshot, static pictures of economic and social reality by motion images of welfare changes over short periods, a lifetime or even generations. Mobility as an idea focuses attention on the intertemporal (within generations or between generations) movement of welfare of households or other entities as measured by economic or social status indicators such as consumption, income, wealth and so forth. Mobility as a concept is also inextricably linked to, and raises, issues of freedom, choice, dynamism, opportunity, justice and democracy.

In addition to focusing attention on the vital, intertemporal, dynamic aspects of welfare, in addition to offering the opportunity of using a variety of indicators to trace the movement of welfare-status, in addition to revealing the considerable value of a better understanding of the neglected relative dimension of welfare-status movements, the notion of mobility also opens up new knowledge frontiers by making it possible to trace the welfare-status of a wide spectrum of continuously interacting entities -- economic agents.

As a result of a generous grant by the Tinker Foundation, a project on "Distributional Mobility in Latin America: Evidence and Implications for Public Policy" was carried out during 1998. As part of this project, a conference on the same topic was held at the Woodrow Wilson Center on October 15, 1998. The invited papers presented by Markos J. Mamalakis, Anders J. Danielson, David E.Hojman and Fernando Medina at the conference, which constitute the present discussion paper, are summarized below.

In his paper on "Distributional Mobility and Justice in Latin America: Macro, Meso and Micro Issues", Markos J. Mamalakis aims to place the complex, fundamental mobility issue at the center of the economic development debate in Latin America.

It is pointed out in the paper that the prevailing picture of Latin America as a continent characterized by high distributional inequality is partial and incomplete because of the almost total absence of longitudinal, panel, statistical information in respect to movements over time in economic status indicators for specific entities such as households, individuals, and producers. Furthermore, it is suggested that the puzzle of Latin American underdevelopment can not be solved unless the missing complementary pieces of distributional inequality and distributional mobility are created and put together.

Going beyond traditional mobility analysis, the argument is made that there exists a need for a better understanding and separate treatment of such complementary welfare-status indicators as private, semipublic and collective consumption, income, wealth and so forth. "Indicators" of mobility frequently are also causes of mobility, carrying their own momentum. Only special, in depth, analysis can provide the missing "welfare indicator" puzzle piece.

Furthermore, the Mamalakis paper goes beyond traditional analysis in the area of entities or economic agents whose mobility is being analyzed. It proposes incorporation into mobility analysis of producers. If the challenge of overcoming Latin American underdevelopment, poverty and inequality is to be met, it will be necessary to find not only the missing piece of movements over time of welfare-status indicators of households and individuals (household mobility) but also the missing piece of movements over time of welfare-status indicators of producers (producer mobility). Furthermore, both pieces need to be ensconced in their complementary places within the overall mobility and development puzzle. Without sustainable producer mobility there may be no sustainable distributional mobility of households in Latin America and vice versa. Finding the missing "entities" puzzle piece is as important in solving the mobility puzzle as finding the missing "welfare indicator" puzzle piece.

Economic status indicators used in mobility analysis are normally such aggregate, cumulative variables as consumption, output and income. All these aggregate variables are made up of value added mesoecomponents by goods and service activities. The paper aims to contribute to the solution of the Latin American mobility (rigidity) and underdevelopment puzzle by seeking to find the missing piece of the role of mesoeconomic constitutions and sectoral value components in determining the growth of aggregate welfare indicators, e.g. consumption or income, the quality of these indicators, their distribution among households and producers, and ultimately the welfare interactions between households-consumers and producers. Finding the missing and neglected "mesoeconomic" piece promises to facilitate the formulation and implementation of poverty alleviating, mobility enhancing and income raising policies.

Last but not least, the paper hopes to contribute to a better understanding and solution of the Latin American mobility and underdevelopment puzzle by retrieving the neglected, elusive, missing piece of a composite, mesoeconomic "justice". It is suggested that principles of "libertarian justice in production" may be as necessary as principles of "social contractarian justice in the distribution of semipublic and collective consumption" and as necessary as principles of "communitarian justice" when it comes to the ever evolving inter-agent, inter-entity, household-producer relations. Ultimately, it is argued, these libertarian, contractarian and communitarian principles are not only compatible but even reinforcing since each is valid in separate economic domains.

Furthermore, if the compatibility and complementarity of these approaches is recognized, they will all be implemented, thus enhancing the common good.

Ultimately, with these distinct but complementary principles of justice coexisting in the separate but intertwined realms of the economic and social fabric, a benevolent utilitarianism guided by the principle of Maximum Utility for All, instead of its founding principle of the largest utility for the largest number of people, may be achieved. The proposed composite principle of justice, which is based upon and derived from the mesoeconomic approach, would facilitate relative mobility within a quantitatively and qualitatively increasing flow of output.

In the paper on "Poverty, Growth and Distributional Mobility in Jamaica: Implications for Public Policy", Anders J. Danielson characterizes poverty in Jamaica and tries to examine the extent to which changes in mobility, defined as the proportion of the population changing income quintile during a given period of time, can assist in explaining observed changes in the extent and distribution of poverty. While the paucity of reliable data prevents a full-scale, econometric analysis, the major results of the paper, most of which corroborate earlier findings, are as follows.

First, Jamaica scores relatively well on social and distributional indicators, compared to other Caribbean countries as well as lower middle-income countries in general. This reflects to a large extent the ambitious programs initiated by Michael Manley in the 1970's, and the signs of deterioration observed for recent years are consistent with the prudent economic policies pursued in the past decade.

Second, the poor in Jamaica are in general characterized by being rurally based, having low education and on the average having larger families than the more well-off. Female-headed households, however, are, contrary to the situation in many other countries, not more prone to poverty than male-headed; nor are the poor subject to significantly higher unemployment. The relatively equal distribution of income (or expenditure) recorded in the data is consequently somewhat misleading: taking household size into account renders the distribution of income less equal.

Third, no panel data based on recurring observations are available, so distributional mobility per se cannot be studied. However, given the character of the poor, education and better access to fertile land would seem the most efficient strategies for poverty eradication.

Finally, while the production pattern of the poor suggests that they have not lost from the economic reforms pursued for almost two decades, survey data suggests otherwise. Consequently, since social output is deteriorating, poverty is on the increase, and the state is being dismantled, it is of importance for policy makers to either find new ways of addressing poverty issues or to find a reasonable trade-off between reform

objectives and poverty objectives. Given that the poor are easily identified, targeted subsidies may be an efficient way of accomplishing this.

In the introduction it is pointed out that mobility per se is not necessarily a useful concept; it has to be complemented with other, standard, indicators of "development", "standard of living" or "poverty".

In attempting to characterize Jamaican poverty, i.e. who are the poor, two points are made: (a) Jamaica scores high on social indicators and poverty therefore poverty is less severe than in comparable economies; (b) poverty appears to have decreased, at least up to 1993. This is notable, because there is evidence for other economies that the kind of reforms that have been going on in Jamaica for at least two decades increases poverty, at least temporarily.

In respect to socio-economic mobility, distribution and growth, Danielson argues that public policies are extremely important for how poverty changes over time. There are three aspects of this. First, some research indicates that about half of Latin American inequality (above OECD inequality) can be explained by a different policy with regard to transfers. Thus, by increasing transfers Latin America should be able to reduce income inequality substantially. Second, what the public sector does is important to understand poverty. The poor benefit more from certain public activities. Third, a policy concentrated on alleviating poverty through transfers may create poverty traps which run counter to intentions. Policy design is thus of utmost importance.

The main conclusion of Danielson's paper is that high mobility renders it more easy for government to pursue successful anti-poverty programs and that the design of policy, in turn, affects mobility. Two important points are (1) that transfers linked to income may decrease mobility and thus alleviate, rather than abolish, poverty and (2) that targeted programs to low-mobility groups are necessary, unless society is willing to accept that some people (in, for instance, subsistence agriculture) become increasingly marginalized.

In his paper on "Income Mobility: Types, Effects, and Policy Implications", David E.Hojman argues that it may be misleading to claim that mobility in general is always a positive development. Mobility is important because some forms of it may play a favorable role, in terms of compensating for excessive income inequality, encouraging fast output growth, easing social tensions, and increasing political stability. However, some types of mobility have historically been the result of successful rent seeking (particularly in Latin America). High rates of some types of mobility may come together with high inequality (as either cause or consequence). Short-term mobility may be associated with undesirable short-run macroeconomic fluctuations, and therefore with transitions in and out of unemployment. Structural change may provoke one-off mobility, which, even if it rewards elastic responses to price signals in competitive markets, may not be useful for policy purposes because of its one-off

character. In terms of generating incentives, intergenerational mobility may take too long, even under the most favorable assumptions on time preferences and altruistic attitudes. Not all types of mobility compensate for high inequality. 'Absolute mobility', as defined by Fields and Ok (1996), may also be misleading because an increase in aggregate output may not constitute a Pareto improvement, if it worsens inequality. Out of five types of mobility examined by this paper, there is only one, which unequivocally fulfills all the positive tasks expected from it. This mobility is market-driven, economically efficient, and medium-term, and it relies on the presence of a good educational system and on competitive markets free from rent seeking.

In Chile, large inequalities coexist with fast growth. There is little evidence of mobility, apart from one-off. The educational system tends to reproduce inequalities, rather than contribute to diminishing them. Since the 1970s (and with a different emphasis after 1990), some progress has been made in several areas, including education and the control of excessive rent seeking. Some one-off mobility followed the free-market, open-economy reforms of the 1970s and 1980s. However, there is little intergenerational, lifecycle, and market-driven (or economically efficient medium-term) mobility. On the positive side, employment has been increasing at a fast rate, but there is no guarantee that the macroeconomic cycle has disappeared for the foreseeable future. This paper's policy recommendations point towards making education generally accessible and its quality less uneven, towards further controlling rent seeking, towards generating new opportunities for employee training, and towards improving the amount and quality of both the qualitative information and statistical data which are periodically collected by officials and other agencies.

In his paper on "Measuring Mobility: Present State of Affairs and Plans for the Future", Fernando Medina makes the following points. For social programs aimed at improving people's living conditions to be implemented, monitoring mechanisms need to be devised so that they can track changes in living standards. Longitudinal studies are the right mechanism for generating information on developments in dynamic phenomena, especially when the objective is to study changes in the living patterns and social mobility of particular social groups. In the countries of Hispanic America there are a number of programs designed by government agencies and international organizations that aim to improve the welfare of families living in extreme poverty. Current information systems, however, are not able to provide data on population cohorts of a type that enables policies to be monitored on a longitudinal basis. Panel surveys offer the prospect of a mechanism capable of generating data on changes in income, employment, poverty and income distribution, among the many economic phenomena whose development it would be helpful to monitor. The paper contains some reflections on the benefits and limitations of panel surveys in relation to cross-sectional studies, and on other alternatives that are used to generate information on groups of households and individuals.

Distributional Mobility and Justice in Latin America: Macro, Meso and Micro Issues*

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1. Summary

This paper aims to place the mobility issue at the center of the economic development debate in Latin America.

Snapshots of the level and relative distribution of consumption and income in Latin America suggest high levels of poverty and inequality. Our understanding of the poverty and inequality problems is, however, incomplete because of the paucity of information and analysis in respect to intragenerational and intergenerational mobility in relative and absolute living standards of individuals and households. The present paper hopes to provide a better understanding of the neglected, but vital, phenomenon of mobility by extending previous analysis in the following areas. First, the narrow mobility analysis using consumption or income as "welfare indicators" is broadened to include private, semipublic and collective consumption, narrow, intermediate and total income, as well as wealth, as indicators of change of living conditions of households over time. Second, the analysis of mobility "entities" is expanded beyond the traditional focus on individuals and households to include producers. Production conditions of producers are measured by their private, intermediate and total income. Third, it introduces the "meso dimension" of mobility and demonstrates its vital complementarity to the micro and macro dimensions. Fourth, it develops a composite theory of justice demonstrating that freedom and equality are necessary, and have complementary roles, in achieving individual-household and producer mobility.

Integrated longitudinal surveys that could provide information about household living conditions and producer production conditions are recommended. Remedial mesoeconomic public policies also are suggested.

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2. Introduction

The statistical evidence in support of the hypothesis that the distribution of income in Latin America is highly unequal and that large numbers of individuals live in poverty is overwhelming (Behrman, 1998; Birdsall and Londoño, 1997; Deininger and Squire, 1996; Lustig and Deutsch, 1998; Mamalakis, 1996f; Morley, 1994; Psacharopoulos et al., 1997). The statistical evidence in respect to intragenerational and intergenerational mobility is, however, minimal (Fields, 1998; Morley and Robinson, 1998).

Fields (1998) provides a comprehensive review of five concepts of mobility. These are time-dependence, which measures the extent to which well-being in the past determines well-being of an individual in the present; positional movement, which takes place when there is a change in the economic position of an individual; share movement, which occurs when individuals' share of the total income changes; symmetric income movement, which arises when individuals' incomes change and the analyst is concerned about the magnitude of these fluctuations but not their direction; and directional movement, when income gains and losses are treated separately. Fields, thus, focuses on five interpretations of individual mobility as measured by a single variable, e.g. income. Behrman (1998) examines the permanent income, life cycle earnings, first order Markov and Markov matrix models, and the axiomatic approach which could use cross-sectional household data, time series of cross-sectional household data sets, and longitudinal (panel) household data to model and measure the degree of total and relative social mobility of individuals both across generations and within generations.

The need to focus on mobility becomes obvious when the existing evidence on changes in household income levels and distribution is considered. Changes in household income levels and distribution are examined in UN, ECLAC (1998a, Table B.2, pp. 25-26) by providing statistics in respect to urban and rural average household income, the Gini coefficient, income share of poorest quartile, income share of poorest 40%, income share of richest 10% (percentages), average income of richest 10% as multiple of average income of poorest 40% and, households with below average income (percentages) for 13 Latin American countries.

The welfare picture provided by these statistics is partial and incomplete because it fails to incorporate household mobility. It is beyond the scope of this paper to examine the strengths and limitations of these statistics for all countries and periods. Instead, brief remarks will be made in respect to each one of the above measures in an effort to demonstrate the importance of mobility analysis and statistics in gaining a correct understanding of poverty, inequality and related phenomena.

Average household income statistics refer to average monthly per capita household income divided by the per capita poverty line. These figures, which are

given in parentheses, are high in some countries, e.g. Argentina, Greater Buenos Aires, 1994 (4.91), Chile, urban, 1996 (4.00), Costa Rica, urban, 1994 (3.09), Panama, urban, 1994 (3.40) and Uruguay, urban, 1994 (4.06), but low in other ones, e.g. Bolivia (17 cities), urban, 1989 (1.77), Brazil, rural, 1979 (1.30), Chile, rural, 1987 (1.80), Colombia, rural, 1994 (1.53), Guatemala, rural, 1989 (1.00), Honduras, rural, 1990 (0.70), Mexico, rural, 1989 (1.57), Panama, rural, 1989 (1.90), Paraguay (Asunción), 1990 (1.92), and Venezuela, rural, 1992 (1.93). Almost all countries provide these statistics for many years. What is not revealed by this statistical information is the degree of mobility of households over time. Nowhere in this information is it stated that the households earning the average income, or the poverty income, remain the same or change from one period to another, whether they move up or down the income scale and so forth. The income inequality revealed by these statistics is of the snapshot variety. It could remain the same, increase, or disappear, when lifetime income is considered. Without information on mobility, we cannot assume that this snapshot picture of inequality correctly reflects permanent, lifetime income inequality.

The picture of inequality provided by the Gini coefficient is also static in nature, even when these coefficients refer to different years, in which case it is comparative static. For example, in Argentina (Buenos Aires), the value of the Gini coefficient, which is given in parentheses, is in 1980 (0.375) and in 1994 (0.439); in Bolivia it is in 1989 (17 cities) (0.484) and in 1994 (9 cities) (0.434); in Brazil, urban, 1979 (0.493), 1993 (0.512); Chile, urban, 1987 (0.485), 1996 (0.473); Colombia, urban, 1980 (0.518), 1994 (0.505); Costa Rica, urban, 1981 (0.328), 1994 (.363); Guatemala, urban, 1986 (0.464), rural (0.472), urban, 1989 (0.479), rural (0.432); Honduras, urban, 1990 (0.487), 1994 (0.459); Mexico, urban, 1984 (0.321), 1994 (0.405); Panama, urban, 1979 (0.399), 1994 (0.451); Paraguay, urban, 1986 (0.404), 1994 (0.417); Uruguay, urban, 1981 (0.379), 1994 (0.300); and Venezuela, urban, 1981 (0.306), 1994 (0.387). None of these statistics provides any evidence that households remain in the same relative income position or experience upward or downward relative mobility. They cannot be relied upon to serve as indicators of lifetime or permanent inequality. Both high and low values of Gini coefficients can be associated with high, low or no relative mobility. The picture of lifetime income and welfare levels and changes could vary significantly depending on the degree of relative as well as absolute mobility. Thus, generalizations as well as strategies based on the one sided vision projected by the Gini coefficients could be inaccurate and counterproductive.

The next three snapshot measures of inequality may also provide an inaccurate and misleading picture of lifetime or permanent inequality both within and between countries, if unaccompanied by information in respect to household mobility. All three indicators suggest a high or moderate degree of inequality in the distribution of income. All three, however, refer to the distribution of income at a moment, a year, in time. They are snapshot pictures. By themselves, they reveal little about the level or changes in the relative position of households in terms of lifetime or permanent income. For example, according to the criterion of income share of poorest quartile, inequality has

been high. The income share of poorest quartile, which is given in parentheses, has been less than 10 percent in most of Latin America: Argentina, urban, 1992 (7.3); Bolivia, urban, 1989 (5.4), Colombia, urban, 1980 (4.9); Mexico, 1984 (10.5); and Venezuela, urban, 1981 (10.0). In Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Honduras, Panama, and Paraguay, the income share of poorest quartile has been below 10 percent in all years for which information is provided by UN, ECLAC (1998a: Table B.2). Only in Mexico (1984), Uruguay (1990, 1992, 1994) and Venezuela (1981, 1990) has this share been at or above 10.0 percent. Once again, we cannot determine on the basis of these statistics whether the households in the poorest quartile cohort are the same over time, whether some are new entrants to the labor force starting at the bottom of the income-earnings scale, whether and what proportion has moved upwards on the relative income scale from one year to another, whether upward and/or downward mobility is slow or rapid, related to age, longevity in a job, age and so forth. In other words, we do not know and cannot find out on the basis of these statistics whether the "belonging to poorest quartile" characteristic of households is temporary or permanent. We do not know the degree to which this snapshot picture of belonging at the bottom of the relative income scale corresponds and reflects the permanent or lifetime position of a household in the relative income scale. Only with mobility analysis could we obtain such a picture.

The picture of relative income inequality revealed by the income share of poorest 40% is as follows. High inequality, suggested by an income share of less than 12%, exists in Brazil, urban (1979, 1987, 1990, 1993) and Colombia, urban (1980, 1993, 1994), rural (1993, 1994). Moderate inequality, suggested by an income share between 12% and 18%, exists in Argentina, Bolivia, Brazil (selected years), Chile, Colombia (selected years), Costa Rica, Guatemala, Honduras, Mexico (selected years), Panama, Paraguay (Asunción), Uruguay (selected years) and Venezuela (selected years). Low inequality, suggested by an income share of poorest 40% above 18%, is evident in selected years in Costa Rica, Mexico, Uruguay and Venezuela. Once again, however, it cannot be assumed that "poorest 40%" households are the same in all years and that the relative position of households "within poorest 40%" or within the whole income scale is or will remain the same. Without additional information in respect to mobility, any link between these snapshot pictures of relative inequality and lifetime relative inequality position is purely hypothetical, conjectural, and speculative in nature.

This does not mean that permanent relative or absolute income inequalities do not exist in Latin America. It simply means that the aforementioned statistics cannot be used as reliable information to draw strong conclusions about the relationship between snapshot-onetime and lifetime-permanent income inequalities.

Fascinating insights into the magnitude of inequality in the distribution of income are also provided by the statistics of the income share of richest 10%. In Argentina, Buenos Aires, this share has ranged between 29.8% in 1980 and 34.8% in 1986. In Bolivia, it was 38.2% in 1989 in urban areas (17 cities). In Brazil, urban, it

ranged between 34.7 (1979) and 41.9 (1993) %. In Chile, urban, it ranged between 34.1 (1987) and 45.1 (1990) %. The range in Colombia, urban, was between 35.3 (1986) and 43.8 (1993) %. In Costa Rica, the highest share was 28.5% (rural, 1995). In Guatemala, the highest share was 39.5% (rural, 1986). The shares in Honduras, Mexico, Panama, Paraguay (Asunción), Uruguay and Venezuela were all below a maximum of 38.9% (Honduras, urban, 1990). These shares were quite low in some countries, e.g. Honduras (29.9, rural, 1992), Mexico (25.8, urban, 1984), Panama (28.1, rural, 1979), Paraguay (28.9, urban, 1990), Uruguay (25.4, urban, 1994) and Venezuela (20.5, rural, 1981). Once again, the above statistics do not reveal who the richest households are, whether they are the same over time, whether and how many new households enter each year the exclusive club of the "richest", how many lose the status of being "richest" through downward mobility, whether the richest are such because of high labor and/or property incomes and so forth. Since the distribution of labor incomes is notoriously unequal in Latin America, "labor households" could occupy an important place among the richest. This would be, by definition, the case in those countries where household surveys capture primarily, or exclusively, labor incomes. Such "labor households" could easily display high degrees of mobility moving from a poverty level at the beginning of their careers to the status of richest at the peak of their professional accomplishments. An analysis of mobility within the cohort of households earning "labor" income could be as valuable in identifying the causes and cures of inequality as the aforementioned statistics of income shares of the richest 10%, and, possibly, even more so. Mobility analysis could, possibly, and quite usefully, reveal the degree of dynamism of an economy as it identifies the "old richest", the "new richest", the entrepreneurs, the innovators and so forth. It could, also, distinguish between rigid kleptocratic oligarchies, on the one hand, and income- and wealth-creating, highly mobile, educational, entrepreneurial and other elites, on the other hand.

The statistics of the average income of richest 10% as multiple of average income of poorest 40%, which are also extremely informative, would be of even greater value if used in conjunction with mobility statistics. Either scholars or policymakers cannot ignore the income inequalities revealed by these statistics. These multiples range from a high value of 18.2 in Brazil (urban, 1987) to a low value of 4.0 in Venezuela (rural, 1981). These multiples have values that are largely or totally above 10 in Bolivia, Brazil, Chile (urban), Colombia, Guatemala, Honduras, and Panama (urban), and below 10 in Argentina, Chile (rural), Costa Rica, Panama (rural), Paraguay, Uruguay and Venezuela. Nowhere do these statistics indicate that the multiples are enjoyed permanently by some households while other ones languish permanently in the cohort of the poorest. These multiples do not refer anywhere in Latin America to either lifetime or "permanent" incomes. It is likely that the majority, although by no means all households, go through phases in their lifetime characterized by different multiples, experiencing both upward and downward mobility. There are, undoubtedly, households that are poor and immobile, that is, have low income both at a particular moment in time and during their lifetime. Poverty and mobility analyses are, therefore, both inseparable and complementary. Looking at income multiples in the static or

comparative static manner permitted by the statistics of table 2 (UN, ECLAC: 1998a, pp. 25-26) has only limited value. It fails to reveal the presence or lack of dynamism, of mobility, of the determinants, obstacles and facilitators of mobility, of the flow, change, progress, retrogression and stagnation of household status and so forth. Mobility analysis is necessary to inject life into these otherwise still pictures of poverty, inequality and so forth.

The final set of statistics of table 2 provides percentages of urban and rural households with below-average income. These percentages vary but, overall, are very high. The lowest percentages, which are given in parentheses, for each country are as follows: Argentina, urban, 1980 (66), Bolivia, urban, 1989 (71), Brazil, rural, 1979 (72), Chile, urban, rural, 1987 (74), Colombia, rural, 1994 (72), Costa Rica, urban, rural, 1990 (65), Guatemala, urban, rural, 1989 (73), Honduras, urban, rural, 1992 (71), Mexico, urban, 1984 (70), Panama, urban rural, 1979 (67), Venezuela, urban, 1981 (66). In most countries these percentages are in the 70s. Only in Costa Rica are they all in the 60s. In some years, these percentage values are in the 60s in Argentina, Panama, Paraguay, Uruguay and Venezuela. Once again, we do not know, and these statistics do not inform us, whether households have only temporarily or permanently above or below average incomes. These statistics do not refer to or reveal lifetime or permanent above or below average incomes. There is undoubtedly mobility, i.e. upward and downward movement, in the average itself as well as mobility in the sense of moving from below to above average income and vice versa. Mobility statistics and analysis can only reveal the nature, magnitude, strength, and so forth of these movements.

The approach of the present paper, which is complementary to those of Fields and Behrman, focuses on, what can be seen as, four substantive, rather than technical, aspects of mobility. First, it is argued that individual well-being and mobility are composite phenomena and notions that are shaped by, and incorporate, private, semipublic and collective consumption, on the one hand, and private, semipublic and collective income, on the other hand. These composite phenomena-notions require composite modeling and measures. Second, it is argued that household well-being and mobility have two-way links to producer well-being and mobility, and that the study of the characteristics of the latter is indispensable for, and inseparable from, the study of the former. It is believed that the dual focuses on (a) household and producer mobility and (b) the multiple consumption and income indicators of mobility could enhance the effectiveness of public policy. Third, it is argued that mesoeconomic constitutions and value added components shape mobility by determining the quantitative and qualitative growth of aggregate welfare indicators such as consumption and income, their distribution among households and producers, and ultimately the welfare interactions between households-consumers and producers. Fourth, an attempt is made to formulate a composite theory of justice demonstrating the complementary roles of freedom and equality in enhancing household and producer mobility. Our understanding of the mobility issue would be greatly enhanced by collection of data

along the lines suggested by this paper. Access to new, hitherto missing, data likely will open up frontiers for valuable new research.

3. Composite Well-Being and Mobility of Households and Producers, and Indicators-Criteria Used to Measure Them

Well-being of individuals and households can be measured by using a variety of criteria (Mamalakis, 1996*l*). According to some economists, individual (or household) well-being is determined primarily by the level of consumption. According to others, it is income that determines the well-being of households. Whether it is from an analytical or measurement perspective, an attempt will be made in this essay to demonstrate that, when examining the issue of household mobility, it does matter whether well-being is determined by consumption, income, or a combination of the two, or of their subsets. Although Mamalakis (1996a; 1996b) has developed the foundations of a framework for analyzing justice, well-being, and poverty, from the perspective of household consumption and income, neither in the literature on Latin America, nor in the philosophical discourse on justice (Rawls, Nozick) does there exist an adequate, comprehensive framework for analyzing justice, well-being and mobility by incorporating the roles of both households and producers.

Presented in Table 1 is an updated version of the Mamalakis (1996a) framework that includes a tentative effort to develop measures of mobility of both households and producers.

TABLE 1

A. Alternative Measures of Absolute or Relative Individual or Household Mobility

Mobility Measured in Terms of:

Consumption: $_hC_1$. Private or Narrow Household (h) Consumption ($_hC_1$ = $_hC^{\pi}$ consumption of private commodities)

$_hC_2$. Broad or Intermediate Household Consumption ($_hC_2$ = $_hC_1$ plus consumption of semipublic services, i.e. $_hC^{\theta}$)

$_hC_3$. Total Consumption ($_hC_3$ = $_hC_2$ plus consumption of collective services, i.e. $_hC^{\lambda}$)

Income: $_hY_1$. Private or Narrow Income ($_hY_1$ = compensation of household labor and property services)

$_hY_2$. Broad or Intermediate Income ($_hY_2$ = $_hY_1$ plus in kind consumption of semipublic services)

$_hY_3$. Total Income ($_hY_3$ = $_hY_2$ plus in kind consumption and attributions of collective services)

B. Alternative Measures of Absolute or Relative Mobility of Producers
Mobility Measured in Terms of Producer (p) Consumption of Collective Services and Income

Collective Consumption:	$_pC_1$.	Right to Private Property
	$_pC_2$.	Sanctity of Legal Contracts
	$_pC_3$.	Free and Equal Access to Markets of Labor and Property Factor Services
	$_pC_4$.	Free and Equal Access, Entry and Exit to Markets for Incremental and Cumulative Private and Semipublic Products
	$_pC_5$.	Other Rights and Entitlements, e.g. Equal Treatment by Government in Terms of Taxation, Tax Holidays, Subsidies and so Forth
	$_pC_6$.	Right to Political Stability
	$_pC_7$.	Right to Price Stability
Income:	$_pY_1$.	Private or Narrow Income ($_pY_1$ = entrepreneurial income)
	$_pY_2$.	Broad or Intermediate Income ($_pY_2$ = $_pY_1$ plus in kind consumption of semipublic services)
	$_pY_3$.	Total Income ($_pY_3$ = $_pY_2$ plus in kind consumption and attributions of collective services)

In Latin America there has been major interest in, and concern about, inequality in individual and household well-being. Unfortunately, the literature on distribution rarely specifies the exact nature of the variables that serve as a foundation for measuring household inequality. Is it the inequality in private consumption ($_hC_1$ or $_hC^{\pi}$), in semipublic consumption ($_hC^{\theta}$), in collective consumption ($_hC^{\lambda}$), in $_hC_2$ ($_hC^{\pi}$ + $_hC^{\theta}$), in $_hC_3$ ($_hC^{\pi}$ + $_hC^{\theta}$ + $_hC^{\lambda}$), in private income ($_hY_1$ or $_hY^{\pi}$), in semipublic income ($_hY^{\theta}$), in collective income ($_hY^{\lambda}$), in $_hY_2$ ($_hY^{\pi}$ + $_hY^{\theta}$), in $_hY_3$ ($_hY^{\pi}$ + $_hY^{\theta}$ + $_hY^{\lambda}$) or any combination of the above? Longitudinal studies generating information on the level and changes of $_hC_1$, $_hC_2$, $_hC_3$ and $_hY_1$, $_hY_2$, $_hY_3$ would improve the study of the living and production standards and mobility of particular groups of households and producers.

There do not as yet exist in the literature criteria for measuring the production conditions of producers over time. We may need such criteria, however, in an effort to measure the capacity and willingness of producers to create the private, semipublic and collective commodities necessary for sustained development, and to introduce adequate public policies. Part B of table 1 includes some tentative criteria for measuring producer mobility. Furthermore, an attempt could be made to develop criteria for measuring the degree of fairness, or justice, of various mesoeconomic constitutions and its impact on producer mobility.

Quantitative and qualitative evidence suggests that high levels of poverty, inadequate output growth, social exclusion of indigenous populations, women and the poor, and inequalities have been caused by unfair patterns of distribution of private, semipublic, and collective commodities and of private, intermediate, and total income, among households and producers (Mamalakis, 1998a; 1996a; 1996b; 1996f; 1992b; 1969).

Comparisons of well-being and poverty in Latin America are made difficult since household surveys in various countries use different concepts of income. In an effort to highlight the importance of using comparable concepts, these surveys and the income concepts they used are examined next.

4. The Notion of Income in the Households Expenditure and Employment Surveys of Latin America

Household mobility can be measured in terms of a variety of concepts of consumption and income. Furthermore, mesoeconomic policies can affect mobility through their two-way interactions with household consumption and income. In addition, if the statistical information contained in household surveys is to be correctly used for comparative analysis and policy formulation and implementation, it would be necessary to determine the comparability between the notions of income and the corresponding statistics resulting from these surveys.

The household surveys of Latin America and the study that analyzed them (Avendaño-López, 1998) use concepts of income that do not necessarily correspond either to the concepts presented in the preceding section of this essay or to those formulated in the system of national accounts 1993 which are presented in the section that follows. These income concepts and the countries using them in their household surveys are the following: (a) total income (Brazil, Panama, Paraguay), (b) primary monetary income (Argentina, Bolivia, Ecuador), (c) total income plus own account consumption and imputed rents (Chile-INE, Chile-CASEN, Peru, Paraguay), (d) primary income plus transfers (Colombia-urban), (e) primary monetary income plus transfers (Colombia-rural, Venezuela), (f) primary income plus transfers plus own account consumption (Costa Rica), (g) total income plus imputed rents plus agricultural gains (El Salvador), (h) primary monetary income plus own account consumption (Honduras), (i) monetary wages and salaries (Mexico) and (j) primary monetary income plus imputed rents (Dominican Republic) (Avendaño-López, 1998: 194).

In an effort to develop the best possible indicators of mobility and determine the usefulness of the income concepts of this study, of the Avendaño-López study, and of System of National Accounts 1993 (SNA93), I am presenting in the following sections, first, a detailed review of the notions of income utilized in the household surveys being carried out in Latin America. Second, these notions of income are critically evaluated

and compared to the notions of income and consumption presented earlier in this essay and in the national accounts.

In the case of Argentina, in the permanent household survey, "income" is defined to include wages, salaries, compensation of own account workers, bonuses, earnings of owner or employer, including designated salary, withdrawal of merchandise or products for own consumption, coupons, tickets, stamps and similar for food or purchase of merchandise, retirement or pension benefits, rents and interest, earnings, profits and dividends, unemployment insurance, severance compensation, student grants, food quotas, contributions by persons not living in the households, family food and milk allowances, pharmaceuticals and so forth.

The Argentine concept of "income" includes all types of payments for labor and property factor services as well as consumption of specific products. It also includes a variety of current transfers. This notion can be described as disposable income plus in kind consumption. It does not include in kind consumption of semipublic and collective services, with minor exceptions. It can thus serve as a solid, but nevertheless partial, indicator of economic welfare and absolute and relative mobility.

In the case of Bolivia, in the integral household survey, "income" includes wages, salaries, pensions from retirement, disability, widowhood and orphanage, family assistance from separation or divorce, contributions from other households or persons, rents, loan or deposit interest, compensation from claims, savings, Christmas and other bonuses, earnings premiums, production bonuses, social security payments and other.

The Bolivian concept of "income" includes compensation for labor and property factor services, numerous current cash transfers as well as property (savings) itself. It excludes actual, in kind, consumption of semipublic and collective services. The Bolivian concept of income is not strictly comparable to the Argentine one.

In Brazil, in the national household survey, "income" includes wages and salaries in cash and in kind, various forms of property income and various transfer payments. As in the cases of Argentina and Bolivia, the Brazilian notion of income is a combination of factor incomes, in kind consumption and current transfers. This mixed concept of income plus consumption plus transfers provides a mixed measure of welfare. Welfare of households in the cases of Argentina, Bolivia and Brazil is determined by the absolute and percentage importance of factor incomes, in kind consumption primarily of private commodities and, occasionally, and to a lesser extent, of semipublic services, and current transfers. Economic, as well as social, mobility could vary as a function of the absolute and relative changes of these three (or more) income components. As in the cases of Argentina and Bolivia, in kind consumption of semipublic and collective services is not included in the Brazilian concept of income. It is thus difficult, if not impossible, to measure absolute or relative changes in mobility

using the criteria of intermediate and/or total consumption and income advanced in this essay.

In Chile, in the integrated program of household surveys by the National Institute of Statistics (INE), "income" includes net wage and salary compensation, including family allowances, other monetary or in kind benefits, employer or own account incomes, rents of any type, imputed rents for owner occupied dwellings, retirement, disability, orphanage and unemployment benefits, single family subsidies, supplementary pensions, student grants and other state subsidies, other permanent incomes such as marriage pensions or other household to household donations, interest on saving deposits, stocks, bonds and so forth.

In Chile, in the survey of socioeconomic characterization (CASEN), "income" is defined to include all monetary forms of compensation, allowances or bonuses, compensation in kind, withdrawal of products from own enterprise for own consumption, proceeds derived from sale of agricultural products, any type of rents, food pensions, money contributed by members temporarily absent from household, compensation for temporary jobs (only for unemployed), interest on deposits, stock dividends, donations by persons alien to the household or by institutions, value of consumption of agricultural products produced by the household and other incomes.

In the case of Chile, "income" is, again, defined to include not only all types of monetary compensation of labor and property factor services but also different types of in kind consumption and current transfers. As in the cases of Argentina, Bolivia and Brazil, the notion of compensation of employees used in the Chilean surveys is far narrower than that used in the national accounts, since it excludes the fringe benefits that are not part of disposable income when wages and salaries are earned. In addition, in kind consumption of semipublic and collective services, which may be a major determinant of factor income-based and -measured mobility and welfare, is not captured.

In Colombia, in the national household-labor force surveys in urban and rural areas, "income" is defined to include labor income, interest, dividends, rents, pensions, assistance in cash, food allowances and housing as part of labor compensation, and net income from business or profession.

In Costa Rica, in the household surveys with multiple objectives, "income" includes all forms of compensation of employees, including payments in the form of food, clothing, shoes, housing, transportation and so forth, profits or earnings of employers or own account workers, including the value of products withdrawn from or services utilized from the enterprise for own consumption, incomes from secondary occupations, retirement and pension benefits, subsidies, student grants, other transfers in cash, interest and rents from all types of property.

In Ecuador, in the recurrent employment and unemployment survey in urban areas, the notion of "income" is defined to include compensation received by employers, own account workers, government employees, salaried workers in private enterprises, wage earners and household servants, rents, interest, retirement pensions and other revenues.

In the multi-purpose household survey of El Salvador, the notion of "income" encompasses all forms of compensation of owners-employers, own account workers, "uncompensated" family workers, members of cooperatives, permanent and temporary employees, apprentices, domestic servants and others, as well as allowances, bonuses, commissions, per diems, payments in kind, depreciation of vehicle, combustibles, retirement and pension benefits, food allowance, rents of dwellings, stores and land, assistance from family members and friends who reside in the country, dividends, profits, and depreciation of vehicle.

In the recurrent, multi-purpose household survey of Honduras, the notion of "income" is defined to include wages, salaries, in kind payments of food, clothing, shoes, housing, transportation and other, earnings and proceeds from self-employment or as an employer in own business office, industry or farm, withdrawal of products from own business, enterprise or farm for own or family use.

In the national survey of urban employment of Mexico, the notion of "income" includes labor compensation, bonuses, paid vacation, profit sharing, housing credit, private medical service or health insurance.

In the household survey of Panama, the notion of "income" includes gross wages and salaries, net revenues of employers or own account workers, retirement or pension benefits, family assistance, bonuses, rents, interest or profit sharing, lottery and other game proceeds, student grants or subsidies and other proceeds.

In the household survey of Paraguay, the notion of "income" is defined to include revenues from principal, secondary and other activities, bonuses, rents, interest, family assistance, retirement or pension benefits and other proceeds.

In the national household survey of living standards and poverty of Peru, "income" is defined to include net wages and salaries, overtime pay, bonuses, moving and other expenses, in kind payments of food, clothing, shoes, transport, housing, health and other, net profits, own consumption of household production and of commodities acquired for business purposes, current transfers such as retirement and unemployment payments, recurrent remittances from other households, divorce or separation payments, food payments, widowhood, orphanage and survivor's benefits, profits, interest from deposits in banks and cooperatives, stock and bond dividends, net rents of buildings and machinery, rents from agricultural lands, severance, accident or old age compensation, inheritances, bonuses, lottery and other game proceeds.

In the national survey of the labor force of the Dominican Republic, "income" is defined to include compensation for labor services as well as proceeds from own account production.

In the continuous household survey of Uruguay, the notion of "income" is defined to include wages, salaries, daily pay, commissions, overtime and incentive pay, social benefits (family allowances and so forth), bonuses, vacation salaries, tips, housing, food, clothing, mutual fund and other payments in kind, of workers and employees of the private and public sector, cash, family allowances and other social benefits and value of products withdrawn for own consumption by own account workers without and with a store, employer income received in cash and in kind, employer profit sharing in cash and in kind, cash, family allowances and other social benefits, and products withdrawn for own consumption free or at a reduced price as a member of a production cooperative, profit sharing as a member of a cooperative, retirement and pension benefits, student grants and subsidies, family assistance, divorce and separation contributions, contributions from other households, rents, interest, dividends and other proceeds, and imputed rent on owner occupied dwellings.

In the sample household survey of Venezuela, the concept of "income" is defined to include compensation of employees, owners, employers, and own account workers, food, housing and other in kind payments of employees, overtime, transport and food allowances, employer contributions to saving accounts, commissions and tips, survivor's or orphanage payments, assistance from family or other persons, social security benefits, retirement benefits, rent from properties, interest and dividends and other.

The notion of "income" in the household surveys of Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, Dominican Republic and Uruguay, has the following common characteristics. All surveys attempt to include as income all forms of monetary compensation of labor services that form part of disposable income. Most fringe benefits which, from the perspective of the employer, constitute part of compensation of employees and are part of labor costs and earnings within the national accounting framework, are excluded. Furthermore, all surveys include, to varying degrees, in kind consumption as part of income. In addition, current transfer payments, which do not constitute compensation for current factor services, are included as part of income. To the extent that these surveys include households that act as producers in the form of unincorporated enterprises, their indicators likely will reflect changes in household as well as in producer welfare. Most surveys attempt to include under income, compensation of property services provided by households. The degree of success of capturing all forms of property income in the surveys likely varies significantly over time and between nations

Although they are similar, the notions of income used in the household surveys of the Latin American countries are not strictly comparable because of the different degrees to which monetary compensation of factor services, in kind consumption, and current transfers, are included in "income." In all instances, it appears likely that the estimates of household income derived from these surveys fall short of the income estimates made according to the system of national accounts.

Household and individual mobility can be measured by using as a criterion or indicator any combination of the following variables: (1) labor income, including or excluding fringe benefits; (2) property income, cash or imputed; (3) in kind consumption of private commodities; (4) in kind consumption of semipublic services (health, education and welfare); (5) in kind consumption of collective services produced by the public administration and defense activity; (6) current cash transfers; (7) capital transfers, in cash or in kind.

It would be very useful if household surveys and longitudinal studies included questions clearly distinguishing between household consumption and income. Furthermore, an attempt should be made to include questions that clearly distinguish between household consumption expenditures funded by household revenues and consumption in kind which augments household real "income". Also, it would be useful to identify the components of household revenues or incomings and separate them into (1) labor income or compensation, (2) property income or compensation, (3) cash transfers and (4) other. In addition, in order to obtain an accurate picture of income as compensation of factor services, it would be important to distinguish between in kind consumption of private commodities as part of compensation, in kind consumption of private commodities as transfers to supplement consumption funded by factor incomes, and in kind consumption of semipublic and collective services as funded out of income, primarily through taxes, or as a redistributive transfer to augment final consumption of individuals and households with low income-based capacity to fund them.

To the extent that the surveys and panel studies contain questions that clearly distinguish between the different components of consumption, factor incomes and other "incomes" or incomings, it would be possible to prepare sets of statistics that are comparable over time and among nations, measure mobility using a variety of consumption and income status and welfare indicators, and use public policy to shape private, semipublic and collective consumption and the corresponding types of "income" in an income-raising and mobility-facilitating manner. This is both a necessary and difficult project and much likely will be learned while it is being carried out.

5. Primary Income, Disposable Income and Adjusted Disposable Income According to SNA93 and the Notion of Total Income

In tracing relative and absolute household mobility, the three SNA93 notions of income, namely primary income, disposable income and adjusted disposable income can be used as economic indicators. It is possible, and even likely, that the picture of mobility of households over time may vary significantly depending on whether primary income, disposable income or adjusted disposable income is used as a social or economic indicator.

A careful examination of the SNA93 concepts of income is important for a variety of reasons. First, each of the three income concepts provides distinct insights into our understanding of the process of mobility and the conception of justice. Second, the SNA93 income concepts can, by being compared to those found in table 1, possibly lead to even better concepts of income and consumption in the future. Third, the SNA93 concepts provide a link between the concepts of income and consumption found in table 1 and the complex set of income concepts of the household income, expenditure and employment surveys of Latin America which were discussed in the preceding section. Fourth, accurate and comparable statistics of income and consumption can only be obtained if the concepts of income, consumption, wealth and so forth of the household surveys are clearly defined, operational and comparable. Fifth, studies of mobility can only be as good and mobility promoting public policies can only be as effective as the underlying concepts and statistics are precise, operational and comparable.

Income, however, is derived and follows production. We, therefore, begin with a definition and analysis of production. Production is the process of using scarce, or costly, resources to create useful commodities, i.e. goods and services capable of satisfying human needs (Mamalakis, 1996*l*; 1998b). According to the SNA93 (p.4) "production is ... a physical process, carried out under the responsibility, control and management of an institutional unit, in which labour and assets are used to transform inputs of goods and services into outputs of other goods and services."

The central SNA framework describes "the essential phenomena which constitute economic life: production, income, consumption, accumulation and wealth (SNA93: 17)." Accordingly, it begins with the production account, which is designed to emphasize value added. It then proceeds to distribution of income accounts. The first is the primary distribution of income account. The second is the secondary distribution of income account and the third is the redistribution of income in kind account. These will be examined in this section. The remaining accounts, namely the use of income account (use of disposable income account and use of adjusted disposable income), the accumulation accounts (capital account, financial account, other changes in volume assets account and revaluation account), the balance sheets and the rest of the world

account are not examined here because of their limited direct relevance to the issue of mobility.

The production account records the activity of producing composite commodities, i.e. adding value by various sectors-activities. Its balancing item, gross value added, is defined as the value of output less the value of intermediate consumption and, is a measure of the contribution to GDP by an individual industry, producer or sector. Gross value added is the source from which the primary incomes of the SNA are generated and is therefore carried forward into the primary distribution of income account (SNA93: 2).

Value added by activities or industries is the focus and foundation of the mesoeconomic analysis used in this essay. Tables 2-9 demonstrate the various steps of production and addition of value by goods and service activities.

SNA93 distinguishes two main kinds of institutional units, or transactors—households and legal entities. The latter are either entities created for purposes of production, mainly corporations and non-profit institutions (NPIs) or government units, including social security funds. Institutional units are essentially units that are capable of owning goods and assets, incurring liabilities and engaging in economic activities and transactions with other units in their own right (SNA93: 3). They are all crucial in production by creating value in various economic activities.

Producers can be legal entities or households. According to SNA93 (p. 3), there exist the following four mutually exclusive categories of legal entities that function as producers-transactors: non-financial corporations, financial corporations, government units, including social security funds, and non-profit institutions (NPIs) serving households (NPISHs).

Non-financial corporations are "institutional units which are principally engaged in the production of market goods and non-financial services" (SNA93: 19). Financial corporations are "institutional units which are principally engaged in financial intermediation or in auxiliary financial activities" (SNA93: 19). General government includes "institutional units which, in addition to fulfilling their political responsibilities and their role of economic regulation, produce principally non-market services (possibly goods) for individual or collective consumption and redistribute income and wealth (SNA93: 19)."

Non-profit institutions serving households (NPISHs) are "legal entities that are principally engaged in the production of non-market services for households and whose main resources are voluntary contributions by households (SNA93: 19)."

Non-financial corporations, financial corporations and general government are institutional units containing "establishments which are market producers, producers

for own final use and other non-market producers. Market establishments produce mostly goods and services for sale at prices which are economically significant. Producers for own final use produce mostly goods and services for final consumption or fixed capital formation by the owners of the enterprises in which they are produced. Other non-market establishments supply most of the goods and services they produce without charge or at prices which are not economically significant (SNA93: 22)."

In addition to the four mutually exclusive categories of legal entities that function as producers-transactors, namely nonfinancial corporations, financial corporations, government units, including social security funds, and NPISHs, there is also the fifth category, namely households, of institutional units or transactors that can function as producers.

Households are "all physical persons in the economy, with the institutional unit in the household sector consisting of one individual or a group of individuals. According to the criteria given for defining the institutional unit, the household of the owner of an unincorporated enterprise in general includes this enterprise, which is not considered an institutional unit (except under certain conditions). The principal functions of households are the supply of labour, final consumption and, as entrepreneurs, the production of market goods and non-financial (possibly financial) services (SNA93: 19)."

Thus, households are considered as producers when, as entrepreneurs and owners of unincorporated enterprises, they engage in production of market goods and non-financial (possibly financial) services. Thus, the welfare and mobility of households may be determined not only by the compensation of labor and capital (property) services supplied by them in fact or markets, and their final consumption, but also by their direct contribution to output and corresponding compensation as entrepreneurs and owners of unincorporated enterprises.

Value added may be measured gross, i.e. including consumption of fixed capital, or net, i.e. by deducting consumption of fixed capital.

We can now proceed to link the notions of income presented in table 1 to those of the System of National Accounts (SNA93).

Income, value added and, the domestic product are generated by nonfinancial corporations, financial corporations, general government, households and non-profit institutions serving households (NPISH). Value added is the sum of compensation of employees payable to workers employed in the production process, operating surplus/mixed income, and any taxes, less subsidies, on production payable or receivable as a result of engaging in production. The latter ones consist of taxes payable or subsidies receivable on goods or services produced as outputs and other taxes or

subsidies on production, such as those payable on the labor, machinery, buildings or other assets used in production.

Once value added is generated, it is distributed to the factors of production labor and property and to government (through taxes, less subsidies, on production and imports). This first step in the distribution of income is referred to in SNA93 (p. 30) as the primary distribution. The primary incomes of SNA93 are not the same as the private incomes of table 1. The Mamalakis notion of private incomes of table 1 includes only compensation of employees and operating surplus/mixed income but excludes any taxes, less subsidies, on production payable or receivable as a result of engaging in production, which are part of primary incomes in SNA93. It includes only primary incomes of households but excludes primary income of government.

If production is to be maximized on a sustainable basis, efficient producers need to be rewarded and resources must be allocated to the most efficient uses. Labor and property services must be rewarded according to their contribution to output (desert) and directed towards the most efficient uses.

Mobility of households/individuals can be observed by tracing over time their compensation of employees and/or operating surplus/mixed income which serve as status indicators. Furthermore, taxes on production and imports less subsidies, which is the third item in the allocation and distribution of primary incomes, can be used as an indicator of one of the instruments used by government to influence mobility.

The primary distribution of income account consists of two consecutive accounts. The first is the generation of income account and the second is the allocation of primary income account.

The generation of income account records, from the perspective of producers, distributive transactions which are directly linked to the process of production. The resources consist of value added. Its uses include (1) compensation of employees payable to workers employed in the production process, and (2) taxes less subsidies on production payable or receivable as a result of engaging in production, as far as they are included in the valuation of output. Finally, (3) it includes operating surplus/mixed income as the balancing item (SNA93: 30, §2.115).

"The allocation of primary income shows the remaining part of the primary distribution of income. It records, for each sector, property income receivable and payable, and compensation of employees and taxes, less subsidies, on production and imports receivable, respectively, by households and government (SNA93: 30, §2.116)." Primary income covers (1) operating surplus/mixed income, (2) net property income, (3) compensation of employees, and (4) taxes, less subsidies, on production and imports receivable (SNA93: 30-31, §2.116).

Within the allocation of primary income account, SNA93 (31, §2.117; 106, §4.142-143; 160-61, Table 4.3; 164, §7.18-20; 180, §7.117; 424, §19.20) introduces the notion of entrepreneurial income and the entrepreneurial income account. Both of these are important in the analysis of mobility of both households and producers. They can also assist in understanding the principle of justice from both the freedom and equality angles.

Accordingly, for nonfinancial and financial corporations and households, i.e. the sectors which are important private, i.e. non semi-public and collective, market producers, "the allocation of primary income account may be partitioned into two sub-accounts, namely the entrepreneurial income account and the allocation of other primary income account in order to show the additional balancing item, entrepreneurial income, which is closer to the concept of current profit familiar in business accounting (SNA93: 31, §2.117)."

Entrepreneurial income, like operating surplus and mixed income, is a balancing item that "is only relevant to producers, but one that can only be calculated for institutional units and sectors and not for establishments and industries. The entrepreneurial income for a corporation, quasi-corporation, or institutional unit owning an unincorporated enterprise engaged in market production is defined as its operating surplus or mixed income, plus property income receivable on the financial or other assets owned by the enterprise, minus interest payable on the liabilities of the enterprise and rents payable on land or other tangible non-produced assets rented by the enterprise (SNA93: 164, §7.18)." "... in the case of the non-financial and financial corporations sectors, the only difference between entrepreneurial income and the balance of primary incomes is that entrepreneurial income is measured before the payment of dividends and withdrawals of income from quasi-corporations. It is an income concept that is close to the concept of profit and loss as understood in business accounting (at least when there is no inflation) because it is calculated after deducting from the operating surplus any interest and rents payable and adding property incomes receivable (SNA93: 164, §7.18)."

For a household that owns an ordinary unincorporated enterprise it is not possible to estimate entrepreneurial income, if it is not "feasible to divide the property incomes payable and receivable into those attributable to the enterprise and those attributable to the owner(s) in a personal capacity (SNA93: 164, §7.21)."

At this point, a brief explanatory note on the notion of mixed income appears appropriate. "Production within the household sector takes place within enterprises that are directly owned and controlled by members of households, either individually or in partnership with others (SNA93: 106, §4.139)." The owner of a household unincorporated enterprise normally offers two types of factor services. First, he can offer entrepreneurial services creating and managing the enterprise, and second, he can provide labor services similar to those provided by paid employees. When the owner

acts primarily as an entrepreneur, innovator and risk taker, the surplus from production that eventually accrues to him represents primarily a return to entrepreneurship. In those instances, however, that the principal function of the owner is to provide skilled or unskilled labor services, most of the surplus may represent remuneration (desert) for such services. Because the surplus of the activities of a "household unincorporated enterprise normally represents a mixture of two very different types of income, (it) ... is ... described as "mixed income" instead of "operating surplus" (except for the surplus arising from the production of own-account housing services) (SNA93: 106, §4.142-143)."

The notion of justice enters the primary distribution of income by being linked, on the one hand, to the generation of income, and, on the other hand, to allocation of primary incomes to compensation of employees, net property income, operating surplus/mixed income and taxes, less subsidies on production payable or receivable as a result of engaging in production.

Justice in the generation of income and production can be said to exist if the collective services serving producers lead to the maximum sustainable production of composite goods and services and, the maximum sustainable compensation of employees, operating surplus/mixed income and taxes, less subsidies on production payable or receivable as a result of engaging in production. It is possible that justice in the generation of income and production exists if there is maximum freedom in all input and output markets and collective services produced by government are enjoyed equally by all producers.

Disposable income, which is the balancing item in the secondary distribution of income account, is derived from the balance of the primary incomes of an institutional unit or sector by (a) adding all current transfers, except social transfers in kind, receivable by that unit or sector and (b) subtracting all current transfers, except social transfers in kind, payable by that unit or sector.

In SNA93 (pp. 30-32; 183-202), the secondary distribution of income shows how the balance of primary incomes of an institutional unit or sector is transformed into its disposable income by the receipt and payment of current transfers excluding social transfers in kind (SNA93: 183). This second step covers redistribution of income through, essentially, transfers in cash. The disposable income concept of the SNA93 is similar to the intermediate income ($_hY_2$) of table 1 in that both include current transfers. They differ, however, in that $_hY_2$ includes transfers in kind which are excluded from the SNA notion of disposable income. As will be seen later on, $_hY_2$ is the same as adjusted disposable income.

"The secondary distribution of income account covers in principle redistribution of income through transfers in cash only, in order to distinguish two steps in the redistribution process, one through transfers in cash, the other through transfers in

kind. This distinction is made in the relations between households from one side, general government and NPISHs from the other. However, it is not significant in the case of corporations and the rest of the world. For this reason, transfers in kind to and from corporations or the rest of the world are recorded in the secondary distribution of income account, as if they were cash (SNA93: 31, §2.118)."

The secondary distribution of income account distinguishes three main types of current transfers: current taxes on income, wealth and so forth, social contributions and benefits and, other current transfers. The first category of transfers includes taxes on the incomes of households or profits of corporations and of taxes on wealth that are payable regularly every tax period (SNA93: 183). The second type of transfers, denoted as social benefits "are current transfers received by households intended to provide for the needs that arise from certain events or circumstances, for example, sickness, unemployment, retirement, housing, education and, family circumstances. There are two kinds of social transfers: social insurance benefits and social assistance benefits. To qualify as social insurance benefits the transfers must be provided under organized social insurance schemes.... Social assistance benefits are intended to meet the same kinds of needs as social insurance benefits but are provided outside of an organized social insurance schemes and are not conditional on previous payments of contributions (SNA93: 183-186, §8.7)."

Mobility may be measured, as well as determined, by the extent to which households participate in social insurance schemes and/or are beneficiaries of social assistance programs. Justice may be satisfied according to the utilitarian, libertarian, and the composite-justice approaches, when social insurance benefits broadly correspond to social insurance contributions (desert). Justice may be violated, however, according to the above as well as the contractarian approach, when major population segments are excluded both from social insurance benefit and social assistance benefit schemes. In this latter case, both the welfare level and the degree of mobility of those "excluded" from social benefit schemes, i.e. social insurance benefit and social assistant benefit schemes, are likely to suffer. The issues of justice, mobility and distribution will be explored in greater detail in subsequent sections of this essay.

Adjusted disposable income is the third SNA93 notion of income. It is obtained by including social transfers in kind. Adjusted disposable income is attained in the third phase of the process of income redistribution that incorporates the redistribution of income in kind. The redistribution of income in kind account shows how the disposable income of households, NPISHs and, government units is transformed into their adjusted disposable income by the receipt and payment of social transfers in kind (SNA93: 183, §8.1).

Adjusted disposable income is the balancing item in the redistribution of income in kind account. It is derived from the disposable income of an institutional unit or sector by (a) adding the value of the social transfers in kind receivable by that unit or

sector, and (b) subtracting the value of the social transfers in kind payable by that unit or sector (SNA93: 188, §8.24).

Because social transfers in kind are payable only by government units and NPISHs to households, it follows that the adjusted disposable incomes of the general government and NPISHs sectors are lower than their disposable incomes, while the adjusted disposable income of the household sector exceeds its disposable income by the total value of social transfers in kind (SNA93: 188, §8.25).

Apart from the balancing items, disposable income and adjusted disposable income, all the entries in the redistribution of income in kind account consist of social transfers in kind. Social transfers in kind consist only of social benefits in kind and transfers of individual non-market goods and services provided to resident households by government units, including social security funds and NPISHs (SNA93: 187, §8.19).

The categories of social transfers in kind, i.e. social benefits in kind, are: (1) social security benefits, reimbursements, (2) other social security benefits in kind, (3) social assistance benefits in kind, and (4) transfers of individual non-market goods and services (SNA93: 187, §8.22).

The third phase of SNA redistribution of income in kind takes the process of income redistribution one stage further. The SNA93 notion of adjusted disposable income is the same as the Mamalakis notion of intermediate income ($_hY_2$) of table 1 in that both include current transfers in cash and in kind. SNA93 does not have a notion of total household income that is comparable to the Mamalakis notion of total household income ($_hY_3$) as presented in table 1.

Social transfers in kind "consist of individual goods and services provided as transfers in kind to individual households by government units (including social security funds) and NPISHs, whether purchased on the market or produced as non-market output by government units or NPISHs.... Social security benefits in kind are subdivided into two types: those where beneficiary households actually purchase the goods or services themselves and are then reimbursed and, those where the relevant services are provided directly to the beneficiaries (SNA93: 201, §8.99)."

Social assistance benefits in kind "consist of transfers in kind provided to households by government units or NPISHs that are similar in nature to social security benefits in kind but are not provided in the context of a social security scheme (SNA93: 201-202, §8.104)." Transfers of individual non-market goods or services consist "of goods or services provided to individual households free, or at prices which are not economically significant, by non-market producers of government units or NPISHs ... all the non-market services produced by NPISHs are, for simplicity and by convention, treated as individual in nature.... Individual services consist mainly of education and

health services, although other kinds of services such as housing services, cultural and recreational services are also frequently provided (SNA93: 202, §8.105)."

It is of special interest and importance to focus at this point on the primary incomes of government which include receipts from taxes on production and imports. In principle, primary incomes are payable out of the value added of enterprises. However, "receipts from taxes on production and imports are treated as primary incomes of governments even though not all of them may be recorded as payable out of the value added of enterprises (SNA93: 157, §7.2)." Taxes on production and imports "correspond *grosso modo* to "indirect taxes" as traditionally understood--indirect taxes being taxes that supposedly can be passed on, in whole or in part, to other institutional units by increasing the prices of the goods or services sold. However, it is extremely difficult if not impossible to determine the real incidence of different kinds of taxes and, the use of the terms "direct" and "indirect" taxes has fallen out of favour in economics and is no longer used in the system (SNA93: 169, §7.50)."

Taxes on production and imports consist of "taxes on products payable on goods and services when they are produced, delivered, sold, transferred or, otherwise disposed of by their producers; they include taxes and duties on imports that become payable when goods enter the economic territory by crossing the frontier or when services are delivered to resident unit by non-resident units; and, when outputs are valued at basic prices, taxes on domestically produced products are not recorded in the accounts of the System as being payable by their producers plus other taxes on production, consisting mainly of taxes on the ownership or use of land, buildings or other assets used in production or on the labour employed or, compensation of employees paid (SNA93: 169, §7.49)."

These taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units. What is important to mention here is that these taxes, which are transfer payments, are also regarded as primary "incomes", a term normally reserved for requited transfers, or requited payments to the suppliers of labor or, property factor services. The category "primary incomes of government" elevates government to a unique, and distinct from labor and property, factor of production that is compensated for its services. Leaving aside at this time many unresolved analytical and methodological issues, it is important to point out that "primary government income" is created not because government is providing something in return to the individual unit making the payment but because governments do use the funds received from taxes on production and imports to provide goods or services to other units, either individually or collectively, or to the community as a whole on a non *quid pro quo* basis. The magnitude, nature and distribution of these goods and services provided by the government on an unrequited basis to other units, either individually or collectively, or to the community as a whole, which are funded by its primary income, can significantly affect both the causes and indicators of mobility. The imputed value of the various forms of private, semipublic and collective consumer commodities

produced and/or provided by the government and funded with its primary income can increase all components of consumption, namely, ${}_hC^{\pi}$, ${}_hC^{\theta}$, and ${}_hC^{\lambda}$, and income, namely, ${}_hY_1$, ${}_hY_2$ and ${}_hY_3$, of households. These transfers could affect both their welfare level and their capacity to offer factor services and receive income payments.

As we have already seen, SNA93 contains the primary distribution of income account, the secondary distribution of income account and, the tertiary or redistribution of income in kind account. The secondary distribution of income account covers redistribution of income through, essentially, transfers in cash. The tertiary, or redistribution of income in kind account relates to further redistribution through transfers in kind. However, none of these accounts incorporates the distribution of collective services produced by the state, or of collective consumption. None of these accounts can provide a quantitative estimate of total consumption or total income as defined in table 1. These collective services, which are provided by government, "consist mostly of the provision of security and defense, the maintenance of law and order, legislation and regulation, the maintenance of public health, the protection of the environment, research and development, etc. (SNA93: 214, §9.84)."

What is, therefore, needed is a fourth, quartic, or total (re)distribution account, which incorporates the value of collective services, produced and attributed to households. This account has not been prepared up to now because of formidable unresolved analytical and methodological issues and problems. Since welfare of individuals, households, producers and the community as a whole, however, depends so much on the quantity, quality and distribution of these collective services-consumption, neither the notion of justice nor that of mobility can be fully explored, understood and defined, as long as these services are excluded from economic calculus.

As an example, total disposable income of institutional units could vary depending on whether the cost of producing collective services by government is covered by its primary income originating outside the value added by enterprises or, from taxes on value added and its components. Total disposable income of institutional units could also vary depending on the extent to which the cost of producing collective services is covered by mineral depletion rents that are part of gross but not net value added in mining. Since depletion of a non man-produced mineral resource has played such an important role in the production of collective, and other, services in Chile, Peru, Venezuela, Ecuador, Bolivia, and Mexico, the impact of these "depletion rents" on the total disposable income of households, government, NPISHs, nonfinancial and financial corporations could provide valuable lessons to policymakers. Export taxes, taxes on production not originating in value added and, taxes on imports, could all be treated as "primary income of government" as the collective agent of the community. Since the division of government revenues between primary income and other forms may significantly affect the various forms of distribution of income among and within institutional units, i.e. the primary, secondary, tertiary and quartic, major issues of justice as fairness embodying the principles of both equality and freedom may arise.

Income and expenditure surveys in Latin America and elsewhere are normally, exclusively, focusing on the household sector. They do not directly capture the disposable and adjusted disposable income of the general government and the NPISHs sectors. However, they do aim, to varying degrees, to capture both the disposable and the adjusted disposable income of households.

6. Mobility and Justice: The Complementary Household and Producer Perspectives

Welfare, well-being or, utility of households can be measured by a variety of social and economic indicators. Absolute or relative consumption, income and wealth are among the commonly used ones. The key characteristic of these indicators is that they provide a means of measuring the extent to which households and individuals have their needs satisfied and, the utility, well-being or other measure of benefit that they derive when their needs are being satisfied. Furthermore, the focus is on the needs of households and individuals as consumers of goods and services. The household or individual as the agent that derives satisfaction from the purchase, use and/or consumption of goods and services is at the center of discourse and analysis.

It is natural, therefore, that analysis of mobility has centered around the household and the individual and their welfare status as revealed by such economic indicators as consumption and income. It is also natural that a group of philosophers has developed theories of justice that center on the household and the individual or, has emphasized the fact that no theory of justice can be developed unless the welfare of households is an integral component of its structure.

The most obviously household-focused theory of justice is the utilitarian. Jeremy Bentham (1970), John Stuart Mill (1926), and others formulated the well known principle of maximum utility for the largest number of people as the universal foundation of an ideal social order. Bentham and the utilitarians most succinctly formulated this ophelimistic approach. It is also found however in a rudimentary form, in the writings of Plato (*Republic*) and Aristotle (*Politics*). The welfare of the household as a consumer either able or deprived of the capacity to satisfy basic needs is also the focus of attention of Catholic writings and the National Conference of Catholic Bishops (1986). The so-called third Humanitarian Way, which is advanced as a better system of justice than either capitalism or communism, looks primarily at the individual, its poverty, deprivation, hope, love, or prosperity. The contractarians, and specifically Rawls (1977), also focus on the welfare of the individual. Inequality is accepted as part of a fair system of justice as long as it benefits the least advantaged member of the society. Even the libertarians and Robert Nozick (1974) emphasize the notion of freedom of the individual and the least extent of interference by the state.

This emphasis on the welfare of the household and the individual in defining justice, poverty, deprivation and mobility can only go a limited way in understanding and defining these aforementioned situations or concepts. The status of a household can indeed be identified by the theories that focus on its welfare. These theories, however, are incomplete, and can even be downright wrong, when it comes to identifying the causes of poverty, the reasons of injustices, the determinants of (im)mobility, deprivation and (in)exclusion. I am not arguing that the theories and authors focusing on the individual and its welfare are wrong. I argue that their theories are partial and incomplete. And as a consequence, their policy recommendations can be wrong and counterproductive, i.e. reduce rather than increase individual welfare, because and when they can create negative incentives in income creation, production and, demand-supply interactions in the markets for labor and property services.

The analysis of mobility is inseparable from the analysis of justice. And neither one of them can be fully understood unless the household and individual are an integral part of it. The triangular relationship between mobility, justice and, the household does not exist in a vacuum, however.

Welfare as measured by consumption can arise only to the extent that income has been generated, distributed and redistributed. In turn, however, income can be earned by labor and property services only to the extent that, and as long as, there is production. Unless producers are offered a system of incentives that rewards them for the multiple and ever changing risks of participating in labor and property factor services as well as the incremental and cumulative output markets, both income generation and the welfare derived from income-based consumption will be insufficient to eradicate poverty, increase absolute and relative mobility and, lead to sustainable long-term development. Unfortunately, many theories of justice and most research on mobility ignores the role of production and producers.

This lack of attention of what I call the welfare of producers by many focused on the household, along with the prevailing inadequate understanding of the composite, multifaceted nature of consumer and household welfare, are responsible, in my opinion, for the prevalence of incomplete theories of justice and mobility and inadequate developmental policies implemented in Latin America at least since Independence.

The role of the producer has not been, however, neglected by all theories of justice. Some, as we will see next, have emphasized it. It has been, however, largely misunderstood. Sometimes, this misunderstanding has had calamitous implications. This has been the case of hard core Marxism, populism, some strands of structuralism, and in most versions of the so-called dependency theories which have questioned, often even vilified, the role of private initiative, private producers, private property, the freedom of choice, free and competitive output and input markets for producers and, equal treatment of individuals and producers, by government.

The emphasis on the notion of economic justice focusing on and from the perspective of the producer has indeed a long tradition. Aristotle was one of the earliest and strongest defenders of private property as a condition of sustainable production. Aristotle can be viewed as an early institutionalist and a precursor of liberalism and mainstream economics. We also find a defense of private property in Exodus, 17: "Thou shalt not covet thy neighbour's house ... nor anything that is thy neighbour's." Compensation of labor as a reward for its services and higher pay (desert) for productive servants is found in Mathew 25: 14-27. We find here the seeds of the productivity theory of wages and the emphasis on efficient labor markets. Just wages are those corresponding to productivity.

The vital role of economic activity as the source of producing goods and services that determine welfare is advanced by Carolus Molinaeus. Martin Luther and the Reformation also sanctioned the producer and economic activities. Poverty and suffering were not necessarily a guarantee of happiness and salvation. Max Weber placed efficient economic production in the mainstream with his Protestant Ethic. John Locke (1980) played a major role in creating moral approval of economic activity and producers. Adam Smith, with his invisible hand, demonstrated as no one had done before that the welfare of consumers depends on the self-interest of producers. The declaration of the "Rights of Man": rights to life, liberty, and the pursuit of happiness by Immanuel Kant solidified the concept of justice as fairness to producers. The Kantian version of contractarianism clearly complements the liberal approach of Adam Smith in convincingly demonstrating the vital role of private producers in advancing the welfare of consumers. Other idealists as well as James Madison and Alexander Hamilton (1982) provided further recognition of the important role of producers, Andrew Carnegie and Social Darwinism. The Editors of Fortune and Davenport (1951) linked household welfare to the welfare of private producers. Ludwig Von Mises (1951) exposed the inability of economic calculus under socialism, during a period when the fate of freedom and private enterprise was in doubt and there was much talk about the inevitability of socialism and Marxism. Mikhail Gorbachev also recognized the vital role of producers as he attempted to correct production defects of socialism through political democracy.

Endorsement of the state as owner of means of production and producer is found in Plato, Karl Marx (theory of exploitation) (1948), Friedrich Engels and scientific socialism. Private property and enterprise are held responsible for the unequal distribution of income and consumption. Their prediction that they would also lead to the collapse of the free West did not materialize.

The mesoeconomic approach advanced in this essay follows directly from the arguments presented in the preceding paragraphs of this section. According to the composite theory of justice advanced in this essay, which is based upon and incorporates the mesoeconomic approach, mobility as well as justice need to be

examined and formulated both from the household-consumer and the producer side. Household mobility is shaped both by producer- and production-demand characteristics of compensation received for labor and property services and, the quantity and quality of factor services supplied by it, as they are determined by its various forms of consumption and saving. Mobility and prosperity can be achieved only as long as the principles of justice applicable to the household-consumer are comparable and complementary to the principles of justice applicable to the producer. Establishment of a compatible set of principles of justice by government for households and producers is a mesoeconomic problem in the sense that it refers to the nature of the constitution of government and the value of the collective services produced by the state. The various sections of this essay aim to explore these issues to the extent necessary to formulate policies that can lead to socially, economically and, politically sustainable development within Latin America and elsewhere.

7. Mobility, Inequality and Justice in the Primary Distribution of Income

According to the SNA, the first concept of income is that of primary income. Furthermore, the first stage of distribution, which appropriately is denoted as the primary distribution of income, involves distribution of value added between labor, property and government.

In analyzing mobility and in defining the composite theory of justice it is natural, therefore, to initially focus on the first stage of production of adding value and the parallel primary distribution of income. It may be noted that utilitarian, contractarian, libertarian and communitarian theories of justice seem to lack the basic economic framework needed to address the fundamental issues of welfare, production and distribution raised in this essay. The issues discussed in this section have been part of the Latin American, and global reality, are mesoeconomic in nature and, offer an opportunity to gradually flesh out the composite theory of justice that is needed to analyze mobility.

The following aspects of the primary distribution of income are important and in part discussed in this section. First, since macro output is the sum of meso, value added components, on the basis of what principles, i.e. how is or should this cumulative value added be divided between goods- and service activities (these will be explained in subsequent sections). Should the terms of trade between sectoral value added components, i.e. the meso-terms-of-trade, be determined freely and equally or be controlled by the state? Which theory of justice, i.e. the utilitarian, contractarian, libertarian, composite, or Marxist, is capable of and correct in answering the question of the ideal mesodistribution of cumulative value added?

Second, how should the net value added of an economic activity be divided between primary income of government, on the one hand, and primary income of labor, property and entrepreneurship, on the other hand? Third, how should mineral

depletion rents be divided over time between economic activities, on the one hand, and between government, labor, property owners and entrepreneurs within economic activities, on the other hand?

Some major challenges facing past theories of justice and in developing a new, comprehensive, composite one of both justice and mobility are evident in the discussion that follows. As we will see, it is much easier to raise than answer these questions.

My starting point is that income consists of compensation for labor and property factor services. At any given moment in time the factoral distribution of labor and/or property income as well as the relative distribution of income can display high, medium or, low degrees of inequality. The fact that the distribution of income and its components may be unequal does not mean that it is also unfair. The same argument can apply to lifetime or intergenerational income. Even if intra- or intergenerational income were unequally distributed, such a distribution may not be considered unfair as long as it reflects income as compensation for factor services in free and competitive input markets.

It is widely agreed that the relative distribution of income in Latin America has been highly unequal. In the minds of many, both lay people and experts, this distribution has been both unequal and unfair. In this section I want to explore some of the factors that can possibly explain why unequal relative distributions of income in Latin America are considered to be unfair. Furthermore, I want to reiterate the fact that inequality cannot be treated separately from mobility and that I believe that we cannot fully develop the notion of justice unless we consider it not only in respect to the distribution of income but also in respect to mobility, in both relative and absolute terms.

First of all, both the factoral and the relative distribution of income are considered as unfair when part of labor or property income is the result of artificial rather than natural, i.e. freely competitive, labor and property markets. A typical example comes to mind. Wages in industry are often higher than in agriculture because industry is protected and subsidized while agriculture is subject to price discrimination and implicit taxes. Workers in industry receive more than what they deserve (desert) as labor compensation while workers in agriculture receive less than what they deserve (desert) as labor compensation. Industrial workers-households are thus relatively richer and agricultural workers-households are relatively poorer than would have been the case under free market conditions. Artificial, distorted indicators provide a picture of artificial, distorted mobility.

According to the libertarian, neoliberal, neoconservative and sectoral clashes perspectives, the artificially unequal terms of trade between industrial and agricultural value added components (incremental outputs), which lead to the aforementioned unfair inequality between industrial and agricultural wages, would disappear if all

labor and property factor markets were free and competitive. It is worth mentioning that establishment of a fair distribution of labor and property income, according to the above ideologies, would require freedom and competition both in the private commodity markets (I am going to discuss later on the features of the semipublic and collective markets) and all markets of factor services.

Before I go on to the next example of a potentially unfair primary distribution of income, I would like to return to the causes of the aforementioned alleged unfairness. According to protectionists, with Friedrich List being an early one, structuralists (Singer, Prebisch), Marxists, populists, and dependistas, the unequal terms of trade between industry and agriculture and the artificially high ratio of industrial to agricultural wages are the short term price dependent economies of the periphery which have to pay for long term development through import substitution industrialization, protection, central planning, state ownership of means of production and other essential forms of dirigism. In the eyes of the interventionist school, the government-sponsored income inequalities are fair because industry as well as capital and labor employed by, it deserves (desert) higher prices and compensation since they are superior in terms of contributing to long-term growth, than agriculture and its factor services, which are inferior and backward in terms of their growth potential.

Suffice it to say here, that after more or less half a century of income inequalities fostered by interventionist structuralism, poverty, inequality, rigidity (lack of mobility), balance of payments disequilibria, inflation and distortions had passed even the highest levels of tolerance and had opened the path to the subsequently widely implemented neoliberal experiment.

The second element in labor and property factor markets, where the principles of justice have been frequently and severely tested in Latin America, is the one arising from the unique importance of the market value of mineral property-capital being depleted and/or agricultural operating surpluses.

The value of primary incomes in mineral and agricultural sectors exporting their value added components has fluctuated widely in Latin America at least since Independence. The first question that has always arisen is about the generation of income within the primary distribution of income: how should value added be apportioned between (1) compensation of employees payable to workers employed in the mineral and agricultural production process, (2) taxes less subsidies on production payable or receivable as a result of engaging in mining or agricultural production, (3) property income payable by enterprises, and (4) operating surplus/mixed income.

It is beyond the scope of this section to explore all the thorny issues of efficiency and justice that arise as a consequence of wild fluctuations in the value added components of mining and agricultural export activities. I will only confine myself to few select aspects that pertain to mobility. The following questions arise. Should that

part of "value added" representing mineral depletion be appropriated by the state and divided equally to all citizens, e.g. Venezuelans, Bolivians or Chileans, in the form of dividends, "income subsidies", semipublic services in kind or collective services in kind? If the answer were yes, relative as well as absolute mobility of recipients of this mineral depletion largesse could increase during export booms and, most likely, reverse itself during cyclical downturns.

Should exclusively either all or some of labor and/or property owners appropriate the mineral depletion or agricultural rent in the export activity? Should it be shared by labor and property factor services giving rise to value added in the complementary activities of transport, trade, finance, storage and so forth?

Or, should mechanisms be created whereby the generation of income account includes a fourth item of transitional mineral depletion or agricultural transitory rents and mechanisms are created to smooth out labor, property or government income over time? These and related issues are mesoeconomic in nature, that is, are not macro consumption or investment ones or micro ones relating to firms/enterprises and households/individuals. They arise because of certain market characteristics of the value added components of specific industries. And these industries or activities are not only agriculture or mining. They could also be shipping, finance, construction, a branch of manufacturing, transport, and so forth, where value added and/or some of its components experience high levels of cyclical (the cycles can be short, medium or long term) fluctuations.

These "structural" dimensions of agriculture, mining and other activities, the mesoeconomic constitutions of these activities, and the mesoeconomic constitutions of the governments in Latin America as they shape and are being shaped by other mesoeconomic constitutions and underlying forces, have created patterns of household and producer mobility that contain much value in explaining their respective development paths.

The secret or puzzle of Latin America's partial, limited, truncated or unequal development is linked to, and is to be found in, the world of mesoeconomics, in the world of interactions between sectors-economic activities and the inability of governmental constitutions to produce the collective services giving rise to sustainable development. The shocks unleashed by widely fluctuating total value added and its components have shaped the mesoeconomic constitutions of almost all economic activities in Latin America. Governmental policies and constitutions have been continuously transformed as a consequence of and in order to control the impact of these shocks.

Although specific and permanent recommendations and conclusions may even today be premature, I believe that the dimension, or principle, of justice as equality is particularly applicable to the primary distribution of mineral depletion rents. Every

citizen, and especially the poor, should share in them. Alternatively, the principle of discrimination whereby depletion rents are appropriated in one or more stages of production, income distribution and redistribution by the upper and middle classes should be rejected as categorically unjust and unsustainable.

However, the principle of justice as freedom should be neither abandoned nor destroyed when it comes to the producers of mining and agricultural value added components. Free and competitive pricing of mineral deposits and/or taxation patterns that take into account wild price fluctuations in the prices of value added and its components could satisfy the concept of justice both from the household (equality bias) and from the producer (freedom bias) side. Even if mineral deposits belong to the state, owners of mining enterprises should be totally private, and/or operate under totally transparent and equal rules so that justice as equal treatment by the state can be upheld.

Furthermore, since there exists no evidence whatsoever that the value added component of any one economic activity is inherently superior to any other ones, the widely used principle of sectoral discrimination in production and income generation should be considered as categorically unfair and be abandoned. Production agents that have free and equal access to the collective services produced by the state should decide how composite commodities should be produced by complementary and competing activities in free markets. Furthermore, the mesodistribution of total value added should be guided by the joint principles of freedom and equality. This would be consistent with the utilitarian, contractarian, libertarian, communitarian and composite theories of justice.

The composite principle of justice recommended here in respect to the primary distribution of income once again focuses attention on the mesoeconomic constitution of government and its irrevocable importance in forging sustainable principles of justice in all other mesoeconomic constitutions. The issue is not necessarily one of a maximalist or minimalist state. The issue is whether the state fulfills its primary, and possibly exclusive, role of producing the collective services that advance the composite principle of justice in a manner that leads to sustainable production, distribution, and use, of all other private and semipublic composite goods and services. Only then can we say that absolute and relative mobility as measured by primary income would be natural and sustainable.

The role of the state in producing the correct collective services is so important, and the task of achieving their correct value is so formidable, that any views underestimating these tasks through reference to minimalism may lead to violation of the principles of justice needed to sustain production and income. The conditions of chaos recurrently afflicting almost all of Latin America attest to the vital role of the state in preserving composite justice in the primary distribution of income and ultimately facilitating mobility.

8. Private, Semipublic and Collective Consumption and Mobility

In much of macroeconomic analysis, the key variables on the expenditure and output side are gross domestic product (GDP), consumption (C), investment (I), exports (E) and imports (M). These are the variables found in tables 2 and 3 of this essay. In 1994, the respective absolute values of these macroeconomic variables were, in parentheses, in US$ billions, GDP (952), C (736), I (gross domestic fixed capital formation, 181), E (220) and M (184).

The largest macroeconomic variable, which is total consumption, is divided in many, but not all, Latin American countries into private final consumption expenditure and government final consumption expenditure. The macro consumption statistics available for Latin America are important because they reveal the long-term growth as well as the cyclical variations in the consumption boundary, i.e. in the total quantity of final consumer goods and services available and used. These statistics provide a useful indicator of the maximum SNA-consumption-based utility that Latin Americans can derive. They do not reveal much, if anything, however, about the distribution of consumption between households, urban and rural areas, various regions within each country or, according to gender, ethnic origin or other characteristics. Macroeconomic variables are intended to be used as indicators of variations in total output and their components, and to be linked to levels and trends in prices and unemployment but not to deal with aspects of distribution and individual welfare.

As far as mobility is concerned, macroeconomic analysis implies that with rapid growth of GDP, I and C, stable prices and full employment, income, consumption and aggregates, but not necessarily individual, welfare of families will grow rapidly enough to possibly make everyone happier than before, although not necessarily to the same degree. The whole field of macroeconomics, and even the very term, which was coined in the 1930s, have their roots in the Great Depression of the 1930s and the unprecedented high levels of open unemployment associated with it. Macroeconomics was indeed born during a decade of a calamitous spiral of downward absolute mobility as measured by both income and consumption. This downward absolute mobility was caused, according to Maynard Keynes, by falling aggregate demand as a consequence of high savings, low consumption and falling induced investment. Fiscal policy could reverse this downward trend, according to Keynes, by restoring the profitability of investment. An upward spiral of absolute mobility would ensue as the fiscally stimulated investment would lead through multiplier effects to the higher levels of income, and consumption expenditures needed to restore full employment GDP.

Mesoeconomics is emphasized in the present essay because it deals with economic phenomena and crises that are distinct from those perceived to be important by Keynes and macroeconomic analysis. The difference between macro and mesoeconomics can be seen in dealing with many economic issues affecting both households and producers. In the present section, the difference between the macro

and mesoeconomic approaches can be seen by focusing on their respective treatment of consumption.

According to Keynes and macroeconomic analysis, consumption matters primarily as a determinant of aggregate demand and as a stimulant of investment.

According to mesoeconomic analysis, it is the value of consumption that matters. It is the value of consumption to its users and the manner in which this value is produced in successive stages by producers operating in the goods and service activities described in tables 2, 5, and 8, where the distinction is made between goods and service activities, and tables 4, 6, and 9, where goods activities are further subdivided into agriculture, hunting, forestry and fishing, mining and quarrying, manufacturing, electricity, gas and, water and construction, and service activities into wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate, and business services, and community, social and personal services.

Consumers goods and services which, according to the mesoeconomic approach, are all composite in nature, fall into three major groups, namely private (C^{π}), semipublic (C^{θ}) and collective (C^{λ}) ones. Accordingly, consumption is also divided into private, semipublic and collective depending on whether it satisfies private, semipublic or collective needs of the society, its households, consumers and producers.

The central, pivotal, primary role of government, within this mesoeconomic framework, is to produce the collective services that will permit households-consumers and producers to interact in a generally free and equal manner leading to sustainable economic growth, maximum natural mobility, full employment and, no poverty as measured by minimum consumption levels.

The role of government is to satisfy the collective needs of households and all producers, i.e. financial and nonfinancial corporations, NPISHs, general government itself as well as households in their function as unincorporated enterprises.

A low level of private consumption may not, therefore, be the result of low investment in physical capital, as in the Keynesian macroeconomic approach, but the result of inadequate values, i.e. inadequate quantities and qualities, of semipublic and private consumption. The focus in the mesoeconomic analysis of consumption and its relation to mobility is a relationship between private needs-private consumption, semipublic needs-semipublic consumption, collective needs-collective consumption and the multiple links between these three categories.

Although all types of consumption satisfy final consumption needs, their distinct nature, as private, semipublic and collective, reveals their distinct roles. Private consumption satisfies primarily such basic needs as those for food, shelter, clothing and

so forth. Semipublic consumption satisfies not only needs for the survival of household members such as those satisfied by social security but, quite critically, also the needs to accumulate skills, knowledge, and attitudes required to participate with increasing efficiency in the markets of labor and property services. Semipublic needs and semipublic consumption can serve not only as an indicator of relative mobility within and between generations but also create the conditions for the presence or absence of mobility, poverty, inequality and so forth.

Semipublic consumption is critical in determining the capacity of an individual to earn income by contributing to production. Semipublic consumption plays a major role in the development of efficient labor and property services markets without which sustained development cannot materialize. Mesoeconomic analysis focuses on semipublic consumption because of its value in shaping smooth and efficient input and output markets, because it serves as a means of addressing problems of poverty, health, security, protection against abuse, social, political and economic exclusion and underemployment or unemployment. Semipublic consumption in the form of health, education and welfare shapes the degree of mobility between informal and formal activities, between rural and urban activities, between unskilled and skilled labor, between households deriving their income exclusively from compensation of labor services and those also earning income from ownership of property and so forth.

The landscape of Latin America between 1950 and 1999, and even during other periods, has rarely been dominated by crises characterized by the Keynesian ills of high open unemployment, price stability, saving exceeding investment, and widespread unused production capacity. Instead, it has been characterized by highly uneven capacity of labor to offer its services to producers, phenomenal differences in compensation (desert) of labor services, parallel formidable inequalities in the distribution of labor income at a moment in time, money and capital markets repeatedly devastated by bouts of rapid inflation and hyperinflation, and, overall, by formidable rigidities and distortions. Solution of these problems, and overcoming the multiple mesoeconomic obstacles to development, requires mesoeconomic constitutions that emphasize the value of, not only private, but also of semipublic and collective consumption in satisfying the respective needs of the society.

Thus, while Keynes claimed that massive open unemployment was caused by failure in private labor and capital markets due to downward rigidities in prices and the related ineffectiveness of monetary policy, mesoeconomic analysis claims that failure by the state, i.e. government failure, to produce the appropriate quantity and quality of semipublic and public services has been responsible for the manifest malfunctioning of "private" and "semipublic", neither free nor competitive, goods and services markets and, accordingly, stagnation, inflation, underemployment and so forth. Markets for private commodities have not been either free or competitive for prolonged periods. And, furthermore, private and semipublic composite commodities and their components have, all too often, been produced by state, private, or mixed enterprises

under conditions that have violated almost all principles of justice, and especially those of freedom and equality, advanced by the utilitarian, contractarian, libertarian, communitarian or composite approaches.

The very failure of government, which is behind the long term crisis of Latin America, is attributed in the present essay to the prevailing mesoeconomic constitutions of government. These have failed to advance the appropriate mixture of justice as freedom and equality to households and producers. More specifically, the collective services produced by the state in Latin America have failed to advance the principle of justice as equal treatment of all citizens and of equal and maximum freedom for all households-consumers and producers.

The mesoeconomic analysis of consumption reveals its indisputable role as a determinant of production in an additional manner. Government consumption, and the related production of collective services by the state, determines the incentives, the rules of the game, the regulations of creating value added components for all final composite commodities, by all goods- and service-activities. Government consumption creates and maintains the institutions needed for the efficient functioning of input and output markets in agriculture, industry, mining, finance, trade, transport and all other activities. The flow of inadequate quantities and qualities of value added components through the Latin American economic organism over long periods of time is attributed in this essay to failure by government to produce vital collective services on the basis of the composite principle of justice that is fair to households-consumers and producers alike.

Government consumption is, according to mesoeconomic analysis, the central pivot of the economy, because it determines the value of collective services to all economic agents. It also determines the framework within which macro fiscal and monetary policies can be pursued. As evidenced recently in Russia and some economies in transition, Venezuela, Brazil, Korea, Thailand, Indonesia and so forth, monetary authorities can be paralyzed when government fails to promote the common good and they are forced to operate in a "vacuum", to use the term metaphorically, of necessary collective services-consumption.

9. Mobility Conditions of Producers

The main theme of this section is that household mobility is also fundamentally determined by the degree of dynamism of producers. In turn, the dynamism of producers and their contribution to household mobility are determined by the nature of the mesoeconomic constitutions of agriculture, industry, and services. These constitutions determine the rate at which value added and factor incomes are created, i.e. the rate at which labor and property incomes of households will grow. Even if the level of education, health and nutrition of households is high, actual economic output may be stagnant, falling, and low, as a consequence of *wrong* mesoeconomic

constitutions of agriculture, industry and services. During the chaotic 1970-73 Allende years in Chile, the Sandinista era in Nicaragua, the hyperinflationary periods in Peru, Brazil, Argentina, Uruguay and so forth, an almost universal downward trend in production and income, and a parallel increase in downward mobility of traditionally well-to-do households (many of these countries experienced a significant population exodus), demonstrated the undeniable interdependence between the supply of factor services, which is determined by such household features as the level of education of its members and the demand by producers for factor services offered by households, which is determined by the spectrum of mesoeconomic constitutions.

If producers, i.e. nonfinancial corporations, financial corporations, NPISHs, households as unincorporated enterprises and government, are not given the incentives and guarantees needed to generate an adequate rate of return on their investments, including their efforts, their demand for the factor services offered by households will be below the level required to eliminate poverty, reduce lifetime income inequality, increase per capita income, and increase social, economic and political mobility both absolutely and relatively. It is suggested here that the recurrent malaise of production that has been caused by growth- and mobility-inhibiting mesoeconomic constitutions has stifled progress on the poverty, inequality, exclusion, and growth fronts in much of Latin America.

A distinction needs to be made between two separate dimensions of the mesoeconomic constitutions of agriculture, mining, industry and services, both of which affect mobility.

The first dimension of the mesoeconomic constitutions refers to the foundations and rules of production. These include the right to property, sanctity of contracts, free determination of product and factor prices and equal treatment by government. A mesoeconomic constitution of government is considered to be right if it facilitates a match between free consumer demand and the most efficient output supply by producers.

The second dimension of the mesoeconomic constitutions refers to the rules of the game in respect to the distribution of incremental and cumulative outputs to users, consumers and beneficiaries. A mesoeconomic constitution is right, fair, or just, if it distributes the incremental and/or cumulative, output on the basis of some universally fair principles, e.g. that revenues of government from depletion of oil, copper, tin, silver, gold, iron, nitrate and, other mineral resources or, semipublic and collective services produced by government, be distributed equally among citizens without discrimination on the basis of gender, ethnicity, region, religion, and so forth.

The mesoeconomic constitutions of goods and service activities must be, on the one hand, producer- and supplier-friendly, i.e. provide the incentives for efficient and profitable production, and, on the other hand, household-consumer- and buyer-

friendly, i.e. promote the freedom of choice of consumers and protection against fraud. Furthermore, the mesoeconomic constitutions of activities producing semipublic and collective mesocomponents of composite commodities must balance the interests of the users of these composite services and those of the NGO and government employees responsible for generating the appropriate quantity and *value* of the composite services of education, health, welfare, public administration and defense. This is a difficult balancing act. And, in Latin America, the gap between the actual and desirable mesoeconomic constitutions remains substantial. Persistence of poverty, intra- and intergenerational inequality, long periods of stagnation, and environmental decay are, here, attributed to the multiple factors responsible for the gap between actual and desirable mesoeconomic constitutions.

10. Mobility During Periods of Instability and Chaos: The Complementary Roles and Challenges of Mesoeconomics, Mesopolitics and Mesosociology

Social, political and economic instability reflects government failure. Such instability exists because the collective services produced by the state have been inadequate and distorted. Economic, social and political chaos, disintegration and collapse also reflect government failure. The above undesirable phenomena arise because of the failure of the state to produce the collective services needed to achieve the goals of political, social and economic stability, including price stability, full employment, balance of payments equilibrium, poverty alleviation, increased social, political and economic mobility, reduced inequalities and improved social, economic and political inclusion.

The downward absolute mobility of households and individuals as measured by average real compensation during periods of chaos can be frightening, to say the least. ECLAC has prepared and provided to the author indices of the evolution of average real compensation of labor on the basis of official statistics for the 1980-1977 period. The indices, which are average annual ones with 1990=100, can serve as indicators of the impact of chaos and instability.

The case of Peru reveals the incredible degree of destruction that chaotic inflationary, political and social conditions can inflict upon the economic system and on absolute mobility as measured by the index of average real remuneration. Real labor compensation as measured by this index collapsed from a level of 343.5 in 1982 to 208.6 in 1988 and to 100.0 in 1990. In other words, real wages in 1990 were less than one third of their level in 1982 and less than half of their level in 1988. The fifty percent decline in average real wages between 1988 and 1990 is calamitous according to any standard. The suffering, pain and dislocations caused by it can be imagined only in extreme cases of unbridled external or internal warfare.

Although the ECLAC indices refer to average real remuneration, it is likely that some wages declined more than others. Under deplorable conditions of massive

average falls in real wages, some workers and their families suffered labor compensation reductions pushing them below the absolute poverty and extreme deprivation line. As recently as 1997, real wages in Peru had increased only by 10.3 percent above their bottom-of-the-depression level of 100.0 percent in 1990. Seven years after hitting rock bottom of 100 in 1990, real wages had thus recovered only a minimal fraction of their approximately two thirds decline between 1981 and 1990. The collapse of the mesoeconomic constitutions of all goods and service activities as the Peruvian Government first failed and then attempted to create a constitution that would lead to a sustainable production of the collective services of peace, social and economic coexistence, and possibly integration, was traumatic and pervasive. It reflected above all in my opinion, the pervasive failure of successive Peruvian Governments to recognize the paramount importance of pursuing the principles of social and economic justice that are fair and acceptable to all economic agents: to both households and producers; to the Indians of the Altiplano and the large scale producers of industrial agricultural products of the Coastal Regions; to the military; the Catholic Church; to the many non-profit institutions serving the poor; to the urban informals; and, so forth.

The chaos and damage evident in Peru between 1982 and 1990 is the result of mesoeconomic failure. It is a failure of producing necessary collective services in a society inhabited by a wide variety of indigenous populations, immigrants, narcotraffikers, small scale farmers, large scale foreign, expropriated and state owned corporations and so forth. It is a failure of what I refer to as mesopolitics, i.e. the ability to create a political system that is capable of producing sufficient political, social and economic harmony to prevent the chaos and destruction described in the preceding paragraphs. It is the result of the failure to perceive the inseparability of mesoeconomics, mesopolitics and even mesosociology where each mesocategory or mesofield simply focuses on a different dimension of the social, political and economic structure or focuses on the same process of production, allocation, (re)distribution and capital accumulation but from the complementary perspectives of economics, politics and sociology.

To a large extent the chaos and disintegration observed not only in Peru, but also in Argentina, Colombia, Brazil, Guatemala, Nicaragua, Chile, El Salvador and elsewhere in Latin America during various eras is caused by governmental failure to produce mesoeconomic constitutions that apply the composite principle of justice advanced in this essay as conceived not only from an economic (mesoeconomic), but also from political (mesopolitical) and sociological (mesosociologic) perspective. To a large extent this failure is the result of the often exclusive preoccupation of economists with macro and microeconomics or, on the other extreme, the belief of many economists, some would call them pseudoeconomists, that price stability, free markets, balance-of-payments equilibria and all, or most, fundamental economic laws either do not exist or are irrelevant and can be ignored or violated. In either case, chaos and its destruction, as seen in Peru, are the ill-conceived and ill-born offspring of the neglect of mesoeconomics, mesopolitics and mesosociology.

The decline in labor income and, correspondingly, of living standards was, during 1981-1988, in Nicaragua even worse than in Peru. Real wage compensation fell from 482.8 in 1981 (always with a base of 100.0 in 1990) to only 37.3 in 1988. The devastation inflicted by the civil war was massive. Real wage compensation in 1988 was less than ten percent of its level in 1981. Real wage compensation tripled between 1988 and 1990 but, even so, reached a level of only approximately twenty percent of its peak in 1981, during the 1980-1997 period. As recently as 1997, real wage compensation was still around this twenty percent level. The war-induced economic, monetary, political and social chaos so profoundly destroyed almost all foundations of Nicaragua's economic organism and mesoeconomic foundations that recovery has been slow and minimal. In the civil war between combatants that espoused notions of justice that had little, if anything, in common, production, income and consumption, in all their forms, suffered. The collective services produced by the adversaries were those of war, destruction and devastation. Peace, tranquility and any notion of benevolent, upward, relative or absolute, mobility were sacrificed.

From these chaotic circumstances, a simple, fundamental lesson emerges. Only mesoeconomic constitutions of government that produce collective services advancing the composite notion of justice acceptable by both households and producers and, which facilitate all phases and aspects of production, consumption, investment, exports, imports and so forth, can lead to sustainable prosperity and harmonic coexistence. The origin of chaos is meso (economic, political and social) and prevention and control of it is also meso (economic, political and social) in nature.

Although not chaotic of the Peruvian and Nicaraguan scale and magnitude, instability conditions have led to significant downward mobility as measured by the index of average annual wages also in other countries. In Venezuela, the index fell from 219.0 in 1981, to 100.0 in 1990, and as low as 55.5 in 1996. In Uruguay, real wages remained stagnant throughout 1980-1997 (108.5 in 1980, 109.9 in 1997). A similar real wage stagnation prevailed in Paraguay (the figures in parentheses pertain to 1980 and 1997) (102.1; 117.0), Panama (96.2; 105.8 in 1994), Mexico (128.3; 101.1), Honduras (136.2; 112.7 in 1992), Costa Rica (115.8; 110.0), Colombia (102.1 in 1986; 110.0 in 1997), Rio de Janeiro (94.0; 108) and Argentina (130.0; 100). All aforementioned countries have been afflicted by defective mesoeconomic constitutions, or have experienced the transitory costs of moving from defective to efficient and sound ones.

Only in three countries has the real wage indicator moved in a positive direction between 1990 (100.0) and 1997. These are: Chile (131.8) where economic, social and political (return to democracy) mesoeconomic reforms have been unparalleled in Latin America although nevertheless still incomplete; Bolivia (123.1) where modest, vital mesoeconomic reforms have been initiated; and, Guatemala (144.7 in 1996) where collective services appear to finally promote peace rather than sustain war. The extremely tenuous nature of improvements in labor conditions can be observed in the

case of Ecuador where the labor compensation index reached 157.6 in 1997, the highest in Latin America. Since 1997, however, it has descended into conditions of political anarchy and instability of the type that has often, in Latin America, culminated in chaos.

Without in any manner or form trying to downplay significant meso reforms in the economic, political, and social, arena initiated in various Latin American countries in recent decades or years, a false sense of optimism about the future could be created if it were not pointed out that numerous mesoeconomic constitutions remain seriously defective and in need of drastic improvement. Without due vigilance and sustained efforts towards better mesoeconomic constitutions, instability and chaos could be around the corner in almost any Latin American country. The cases of Ecuador, Colombia, and more recently Venezuela, are clear reminders of the dangerous roads lying ahead.

I would do a great disservice if I failed to recognize the abysmal record of Government in most of Latin America as an institution, embodying without reservations the collective ethos needed to prevent and control chaos and instability. Casual treatment, neglect and overlooking of this deep-seated problem only would bode ill for the future. It would also divert, once again, attention away from the urgent and unsatisfied need for sustained and sustainable mesoeconomic reforms.

11. The Macro-Meso Analytical Framework: Macro and Meso Production Boundaries

The macro-meso analytical framework of this essay, which forms the foundation of the present essay, is presented next. It is true that mesoeconomics is the intermediate level linking micro with macroeconomics. Mesoeconomics, however, earns center stage. First, the value added components are the mesofoundations of the macrovariables. Second, the economic constitutions of government and other activities provide the framework within which all economic agents, in particular individuals, households and individuals can interact. Neither macro nor micro economics can exist without mesoeconomics. The three way macro-meso-micro interactions shape the structure of the economic, political and social fabric. And, these interactions, their origin, impact, nature and so forth are the central focus of mesoeconomics.

Explicitly, according to the Mamalakis (1997) theory of composite commodities and, implicitly, according to the System of National Accounts 1993 (SNA93) core, there exist macro and meso production boundaries (PB). These two types of production boundaries, and the relationship between them, are explained with the assistance of information on macro-, and goods and services value added mesocomponents of GDP, presented in tables 2-9.

TABLE 2

Macro and Goods and Services Value Added Mesocomponents of Gross Domestic Product

Macrocomponents:		(1)	(1) GDP	=	(2) C	+	(3) I	+	(4) E	-	(5) M
			⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕
Meso-components of:	Goods (tangible) Value Added	(2)	$^{GDP}V_g$ +	=	$^{C}V_g$ +	+	$^{I}V_g$ +	+	$^{E}V_g$ +	-	$^{M}V_g$ +
	Services (intangible) Value Added	(3)	$^{GDP}V_z$	=	$^{C}V_z$	+	$^{I}V_z$	+	$^{E}V_z$	-	$^{M}V_z$

Abbreviations:
GDP = gross domestic product
C = total consumption
I = gross domestic capital formation
E = exports of goods and services
M = imports of goods and services
V = value added
g = goods
z = services

The macrocomponents of GDP, namely consumption (C), investment (I), exports (E) and imports (M), are presented in the identity equation of row (1), table 2. The mesocomponents, which can be either goods (tangible) or services (intangible), are presented in the identity equations of rows (2) and (3), table 2, respectively.

As row (1), table 2, indicates, the macroproduction boundary of GDP is the sum of the production boundaries of its C + I + E - M macrocomponents. As column (1), table 2, indicates, the macroproduction boundary of GDP is also the sum of the goods (g) (tangible) and services (z) (intangible) value added (V) mesocomponent boundaries.

Furthermore, according to the theory of composite commodities, the production boundary (PB) of each macrocomponent of GDP is the sum of the underlying goods (tangible) and services (intangible) value added, mesocomponent, boundaries. Thus, $C = {}^{C}V_g + {}^{C}V_z$, $I = {}^{I}V_g + {}^{I}V_z$, $E = {}^{E}V_g + {}^{E}V_z$, and $M = {}^{M}V_g + {}^{M}V_z$. The upper left superscripts of the variables in the second part of the equations in rows (2) and (3), table 2, stand for the macrovariable, e.g. C in column (2), table 2, and M in column (5), table 2, which

embodies the respective value added components. The upper right superscripts of the same variables stand for the nature of the value added component embodied in them. This component can be either a goods (tangible), which is designated by the letter g, or a services (intangible), which is designated by the letter z.

The basic insight that emerges from table 2 is that all final macrovariables, namely GDP, G, I, E and M, embody goods (tangible) and services (intangible) value added. All final commodities, whether goods or services, are composite and multidimensional with multiple goods and services value added components.

It is fully recognized that the official estimates of national accounts variables published by ECLAC (NU, CEPAL, 1996; UN, ECLAC, 1998) are the best possible, under present circumstances and SNA93 guidelines. If better estimates could have been easily made, they would have been already available.

The actual values of GDP and its macrocomponents for Latin America, 1994, for 19 countries, are presented in table 3. The most recent available estimates of total value added, and value added by goods and services economic activities, are presented in table 4. The activities producing "goods (tangible) value added components" include (1) agriculture, hunting, forestry and fishing, (2) mining and quarrying, (3) manufacturing, (4) electricity, gas, water, and (5) construction. The activities producing "services (intangible) value added components" include (1) wholesale and retail trade, restaurants and hotels, (2) transport, storage and communications, (3) finance, insurance, real estate and business services and (4) community, social and personal services. Presented in table 4 are both the absolute values of value added components and their percentages in total value added. As seen in row (2) of table 4, goods activities generated 45.68 percent, while services activities generated 54.32 percent, of total value added. For purposes of the present study it is assumed that the percentage values contributed by the various activities listed in table 4 to total value added are, in general, the same as the percentage shares of the same activities in GDP.

On the basis of the statistical evidence presented in table 4, it can be stated that, both for GDP and total value added, 45.68 percent is contributed by goods activities and 54.32 percent is contributed by service activities. Lacking better information, it is also assumed that goods and services activities contribute the same percentage and corresponding absolute values to each macrovariable, namely C, I, E and M. Thus, in table 5, part 2, the numbers in row (2) indicate that goods-value-added always accounts for 0.4568 percent of the respective percentage value of the macrovariables given in row (1); and the numbers of row (3) indicate that service-value-added always accounts for 0.5432 percent. By multiplying the percentage values of rows (2) and (3) of table 5, part 2, with the absolute values of the macrovariables of row (1), part 1, table 5, we obtain the absolute values contributed to the respective macrovariables by goods activities (row (2)) and services activities (row (3)).

TABLE 3

MACRO PRODUCTION BOUNDARY

Gross Domestic Product and Its Macrocomponents, Latin America, 1994, 19 Countries

	(1) Absolute Values Million US$ at 1980 Prices	(2) Relative Values (% GDP)
	(1)b	(2)
(1) Gross Domestic Product[a]	952,431	
(2) Total Consumption	736,461	77.21
(2a) Private Final Consumption Expenditure[c]	680,768	71.37
(2b) General Government Final Consumption Expenditure[c]	55,693	5.84
(3) Gross Domestic Fixed Capital Formation	180,634	18.94
(4) Exports of Goods and Services	220,550	23.12
(5) Imports of Goods and Services	183,767	19.27
(6) Gross Domestic Product[a]	953,877	100.00

Sources: The figure of total GDP found in row (1), column (1) ($952,431) was obtained from (NU, CEPAL, 1996, table 1, p. 19). The figure of total consumption found in row (2), column (1) ($736,461) was obtained from (NU, CEPAL, 1996, table 24, p. 46). The figure of private final consumption expenditure found in row (2a), column (1) ($680,768) was obtained from (NU, CEPAL, 1996, table 14, p. 36). The figure of general government final consumption expenditure found in row (2b), column (1) ($55,693) was obtained from (NU, CEPAL, 1996, table 13, p. 35). The figure of gross domestic fixed capital formation found in row (3), column (1) ($180,634) was obtained from (NU, CEPAL, table 15, p. 38). The figure of exports of goods and services found in row (4), column (1) ($220,550) was obtained from (NU, CEPAL, table 17, p. 39). The figure of imports of goods and services found in row (5), column (1) ($183,767) was obtained from (NU, CEPAL, table 10, p. 40).

Notes: a. There are two values of GDP presented in this table. The first value, which is presented in row (1), column (1) ($952,431), is calculated as the sum of expenditure on final private consumption plus (+) final consumption expenditure of the general government plus (+) gross domestic fixed capital formation plus (+) change in inventories plus (+) exports of goods and services minus (-) imports of goods and services. The second value, which is presented in row (6), column (1) ($953,877) differs from the first because it excludes the change in inventories. The difference between the two values of GDP is too small to have a noticeable effect on the percentage values found in column (2).

b. Some of the numbers in column (1) have been rounded off.

c. The figures of private final consumption expenditure are overestimated and of general government final consumption expenditure are underestimated because Argentina and Brazil include the general government final consumption expenditure under private final consumption expenditure. If Argentina and Brazil are excluded from the estimates for 1994, the percentage of private final consumption expenditure in GDP falls to 64.8 and the percentage general government final consumption expenditure to GDP rises to 11.2.

TABLE 4
MESO PRODUCTION BOUNDARY

Value Added, Total and by Economic Activity, Latin America, 1994, 19 Countries

	(1) Absolute Values Million US$ at 1980 Prices	(2) Relative Values (% of Total Value Added)
(1) Total Value Added	968,427	100
(2) Total Value Added by Goods Activities	442,399	45.68
(2a) Agriculture, hunting, forestry and fishing	97,160	10.03
(2b) Mining and quarrying	44,998	4.65
(2c) Manufacturing	227,220	23.46
(2d) Electricity, gas and water	21,421	2.21
(2e) Construction	51,601	5.33
(3) Total Value Added by Services Activities	526,027	54.32
(3a) Wholesale and retail trade, restaurants and hotels	157,384	16.25
(3b) Transport, storage and communications	71,690	7.40
(3c) Finance, insurance, real estate, and business services	132,350	13.67
(3d) Community, social and personal services	164,603	17.00

Sources: All original data of the present table was obtained from (NU, CEPAL, 1996). More specifically, the figures on agriculture, hunting, forestry and fishing of row (2a) were obtained from table 2, p. 20; those of mining and quarrying of row (2b) from table 3, p. 21; those of manufacturing of row (2c) from table 4, p. 22; those of electricity, gas and water of row (2d) from table 5, p. 23; those of construction of row (2e) from table 6, p. 24; those of wholesale and retail trade, restaurants and hotels of row (3a) from table 7, p. 25; those of transport, storage and communications of row (3b) from table 8, p. 26; those of finance, insurance, real estate and business services of row (3c) from table 9, p. 27; and those of community, social and personal services from table 10, p. 30.

Gross domestic product of Latin America (19 countries) 1994, which is equal to US$ (all figures that follow are in million) (1980 prices) 952,421, is obtained as the total value added ($968,427) less imputed bank service charges ($25,487) ($968,427-$25,487=$942,940) plus import duties ($9,348) ($942,940+$9,348=$952,288). The difference between the two GDP figures, i.e. $952,421 and $952,288, is, most likely, the result of rounding of decimal numbers. The total value added figure was obtained from row (1), column (1) of the present table. The remaining figures were obtained from (NU, CEPAL, 1996: table 1, p. 19 for GDP; table 11, p. 33 for the imputed bank service charges, and table 12, p. 34, for import duties).

TABLE 5

MACRO AND GOODS AND SERVICES MESO, VALUE ADDED, PRODUCTION BOUNDARIES

Macro and Mesocomponents of Gross Domestic Product
Latin America, 1994, 19 Countries
Absolute and Relative Values

PART 1
Absolute Values, Million US$ in Constant Prices of 1980

			(1) GDP	=	(2) C	+	(3) I	+	(4) E	-	(5) M
Macrocomponents		(1)	953,877	=	736,462	+	180,634	+	220,550	-	183,767
			⇕		⇕		⇕		⇕		⇕
Meso-components of:	Goods (tangible) Value Added	(2)	435,731	=	336,428	+	82,528	+	100,741	-	83,965
			+		+		+		+		+
	Services (intangible) Value Added	(3)	518,146	=	400,061	+	98,137	+	119,795	-	99,847

PART 2
Relative Values (Percentage of GDP)

			(1) GDP	=	(2) C	+	(3) I	+	(4) E	-	(5) M
Macrocomponents		(1)	1.0000	=	0.7721	+	0.1894	+	0.2312	-	0.1927
			⇕		⇕		⇕		⇕		⇕
Meso-components of:	Goods (tangible) Value Added	(2)	0.4568	=	0.3527	+	0.0865	+	0.1056	-	0.0880
			+		+		+		+		+
	Services (intangible) Value Added	(3)	0.5432	=	0.4194	+	0.1029	+	0.1256	-	0.1047

Note: This table was prepared in the following manner. First, the absolute values of the macrovariables of row (1), columns (1)-(5), part 1, were obtained from column (1), rows (6), (2), (3), (4) and (5) of table 3. Second, the percentage values of columns (1)-(5) of row (1), part 1, with GDP equal to 1, were calculated and placed in columns (1)-(5), row (1), part 2. Third, the percentage values of goods and services value added of column (1), rows (2) and (3), part 2, were obtained from column (2), rows (2) and (3), table 4. Fourth, the percentage values of columns (2)-(5), rows (2) and (3), part 2, were obtained by multiplying the values of row (1), columns (2)-(5), part 2, by 0.4568 (the value of column (1), row (2), part 2) to obtain the values of row (2), columns (2)-(5), and by 0.5432 (the value of column (1), row (3), of part 2) to obtain the values of row (3), columns (2)-(5), part 2. Fifth, the absolute values of row (2), columns (1)-(5), part 1, were obtained by multiplying the absolute values of row (1), columns (1)-(5), part 1, by the percentage values of row (2), columns (1)-(5), part 2. Sixth, the absolute values of row (3), columns (1)-(5), part 1, were obtained by multiplying the absolute values of row (1), columns (1)-(5), part 1, by the percentage values of row (3), columns (1)-(5), part 2.

The absolute and relative values of the macro and meso variables presented in this table are likely to continuously change over time and be different among various Latin American countries. Under all circumstances, and in all countries, however, all final macrovariables, and all final commodities that make them up, are the sum of tangible-goods and intangible-service value added mesocomponents.

The absolute values of the macrocomponents of GDP94, Latin America, i.e. US$953.9 billion, are given in row 1, table 5. The absolute values of its meso, value added components, are given in column 1, table 5. The macro GDP PB, i.e. US$953.9 billion, is the sum of the meso goods PB, i.e. US$435.7 billion, and the meso services PB, i.e. US$518.1 billion. Rows (2) and (3) of columns 2, 3, 4 and 5, table 5, provide the absolute values of the mesocomponents that make up C, I, E and M, macroboundaries found in row 1, table 5, respectively.

Unlike tables 2 and 5, which disaggregate value added mesocomponents only into two groups, namely goods, which are produced by goods activities, and services, which are produced by services activities, table 6 contains the higher degree of disaggregation of five goods and four services activities and the corresponding value added mesocomponents available for Latin America which is found in table 4. Furthermore, total consumption (C) is divided into final consumption of composite goods (C^g) and composite services (C^z). It is thus possible to clearly distinguish between value added by goods (V^g) and services (V^z) activities, on the one hand, and final composite consumer goods (C^g) and services (C^z), on the other hand. Although not presented in table 6, exports and imports could also be divided into goods and services composite commodities. In contrast, rows (2)-(3d) represent goods and services value added components of GDP and its macrocomponents.

The symbols g and z are used both in table 6 and in table 2. In both instances g stands for goods and z for services. They do, however, have a different meaning in table 6 than in table 2 because they refer to different variables.

In table 2, they refer to the tangible (goods = g) or intangible (services = z) nature of the value added by the respective activity. In contrast, in table 6, g and z refer to the tangible (g = goods) and intangible (z = services) a distinguishing, mesoeconomic, characteristic which is used to classify the final composite commodities which embody both goods and service value added components as final goods and services, respectively.

Unfortunately, there are no statistics available in Latin America that would permit us to divide final consumption into that of composite goods and composite commodities.

Table 7 presents the values of the macro- and mesocomponents as a percentage of GDP. Its classification of macrocomponents is that of SNA-ECLAC found in tables 2, 3, and 5. Columns (1), (2), (3), (4), (5) and (6) stand for GDP, private final consumption expenditure (item 2a, table 3), general government final consumption expenditure (item 2b, table 3), I (item 3, tables 2, 3 and 5), E (item 4, tables 2, 3 and 5) and M (item 5, tables 2, 3 and 5). The numbers of the rows of table 10 stand for the same variables found in tables 4 and 6.

The categories of consumption in table 7 refer to private final consumption expenditure (row 1, column 2) and general government final consumption expenditure (row 1, column 3) while those of table 6 refer to final consumption expenditure on composite goods (C^g) (row 1, column 2) and services (C^z), respectively.

Lack of adequate statistics makes it unlikely that estimates can be made of the vital mesoeconomic variables of table 6 in the near future.

TABLE 6

Macro and Value Added Mesocomponents of Gross Domestic Product with Separate Treatment of Final Consumption of Composite Goods and Services and Disaggregation of Value Added by Goods and Service Activities. Basic Identities.

	(1)		(2)		(3)		(4)		(5)		(6)
(1)	GDP	=	C^g	+	C^z	+	I	+	E	-	M
	⇕		⇕		⇕		⇕		⇕		⇕
(2)	$GDP_V g$	=	$C_g V_g$	+	$C_z V_g$	+	$^I V_g$	+	$^E V_g$	-	$^M V_g$
	+		+		+		+		+		+
(2a)	$GDP_V ga$	=	$C_g V_{ga}$	+	$C_z V_{ga}$	+	$^I V_{ga}$	+	$^E V_{ga}$	-	$^M V_{ga}$
	+		+								
(2b)	$GDP_V gq$	=	$C_g V_{gq}$	+	$C_z V_{gq}$	+	$^I V_{gq}$	+	$^E V_{gq}$	-	$^M V_{gq}$
	+		+		+		+		+		+
(2c)	$GDP_V gm$	=	$C_g V_{gm}$	+	$C_z V_{gm}$	+	$^I V_{gm}$	+	$^E V_{gm}$	-	$^M V_{gm}$
	+		+		+		+		+		+
(2d)	$GDP_V gw$	=	$C_g V_{gw}$	+	$C_z V_{gw}$	+	$^I V_{gw}$	+	$^E V_{gw}$	-	$^M V_{gw}$
	+		+		+		+		+		+
(2e)	$GDP_V gn$	=	$C_g V_{gn}$	+	$C_z V_{gn}$	+	$^I V_{gn}$	+	$^E V_{gn}$	-	$^M V_{gn}$
	+		+		+		+		+		+
(3)	$GDP_V z$	=	$C_g V_z$	+	$C_z V_z$	+	$^I V_z$	+	$^E V_z$	-	$^M V_z$
	+		+		+		+		+		+
(3a)	$GDP_V zl$	=	$C_g V_{zl}$	+	$C_z V_{zl}$	+	$^I V_{zl}$	+	$^E V_{zl}$	-	$^M V_{zl}$
	+		+								
(3b)	$GDP_V zt$	=	$C_g V_{zt}$	+	$C_z V_{zt}$	+	$^I V_{zt}$	+	$^E V_{zt}$	-	$^M V_{zt}$
	+		+		+		+		+		+
(3c)	$GDP_V zf$	=	$C_g V_{zf}$	+	$C_z V_{zf}$	+	$^I V_{zf}$	+	$^E V_{zf}$	-	$^M V_{zf}$
	+		+		+		+		+		+
(3d)	$GDP_V zx$	=	$C_g V_{zx}$	+	$C_z V_{zx}$	+	$^I V_{zx}$	+	$^E V_{zx}$	-	$^M V_{zx}$

Abbreviations not previously explained:

a = agriculture, hunting, forestry and fishing
q = mining and quarrying
m = manufacturing
w = electricity, gas and water
n = construction
l = wholesale and retail trade, restaurants and hotels
t = transport, storage and communications
f = finance, insurance, real estate and business services
x = community, social and personal services

For an explanation of other symbols see abbreviations in previous tables.

TABLE 7

Gross Domestic Product, Latin America, 1994. Macro and Meso
(Value Added by Goods and Services Activities) Components. An Illustrative Example.
(Values Expressed as Percentages of GDP)

	(1)[a]		(2)		(3)		(4)		(5)		(6)
(1)	100[b]	=	71.37	+	5.84	+	18.94	+	23.12	-	19.27
	⇕		⇕		⇕		⇕		⇕		⇕
(2)	45.68	=	32.60	+	2.67	+	8.65	+	10.56	-	8.80
	+		+		+		+		+		+
(2a)	10.03	=	7.16	+	0.59	+	1.90	+	2.32	-	1.93
	+		+								
(2b)	4.65	=	3.32	+	0.27	+	0.88	+	1.08	-	0.90
	+		+		+		+		+		+
(2c)	23.46	=	16.74	+	1.37	+	4.44	+	5.42	-	4.52
	+		+		+		+		+		+
(2d)	2.21	=	1.58	+	0.15	+	0.42	+	0.51	-	0.43
	+		+		+		+		+		+
(2e)	5.33	=	3.80	+	0.36	+	1.01	+	1.23	-	1.03
	+		+		+		+		+		+
(3)	54.32	=	38.76	+	3.17	+	10.27	+	12.56	-	10.47
	+		+		+		+		+		+
(3a)	16.25	=	11.60	+	0.95	+	3.08	+	3.75	-	3.13
	+		+		+		+		+		+
(3b)	7.40	=	5.28	+	0.43	+	1.40	+	1.71	-	1.43
	+		+		+		+		+		+
(3c)	13.67	=	9.76	+	0.80	+	2.59	+	3.16	-	2.63
	+		+		+		+		+		+
(3d)	17.00	=	12.13	+	0.99	+	3.22	+	3.93	-	3.28

Notes: a. The numbers of the first row stand for the following variables: 1 = GDP; 2 = private final consumption expenditure; 3 = general government final consumption expenditure; 4 = I; 5 = E; 6 = M.

b. The variables represented by the numbers of the first column are the same as those found in table 4.

c. This table was prepared in the following manner.

First, all figures reflect percentages, with GDP being the central figure equal 100.

Second, row 1, columns (2), (3), (4), (5) and (6) give the values of private final consumption expenditures (C)(2), general government final consumption expenditure (G)(3), gross domestic fixed capital formation (I)(4), exports of goods and services (E)(5), and imports of goods and services (M)(6) as a percentage of GDP.

Third, column (1) provides the percentage values of the mesocomponents of GDP. The figures of column (1) were obtained from column (2), table (4). Fourth, the percentage values found in columns (2)-(6) and rows (2)-(3d) were obtained by multiplying the value of the row found in column (1), i.e. the

percentage value of the mesocomponent in GDP, and the percentage value of the macrocomponent found in row (1). For example, the value of 3.28% of row (6) column (3d) was obtained by multiplying the percentage value of row (3d) column (1), i.e. the percentage value added contribution of the community, social and personal services activity to GDP of 17%, with the percentage value of row (1), column (6), i.e. the percentage macrovalue of imports in GDP of 19.27%. In other words, 3.28% is 17% of 19.27%.

Fourth, in row (2) are presented the percentage values of the contribution of goods activities to the cumulative value added of the macrovariables listed in row (1). The percentage mesoeconomic, value added, contributions to the respective macrovariables of the remaining activities are as follows: row (2a), agriculture, hunting, forestry and fishing; row (2b) mining and quarrying; row (2c), manufacturing; row (2d), electricity, gas and water; (2e), construction; (3) services; (3a), wholesale and retail trade, restaurants and hotels; (3b), transport, storage and communications; (3c), finance, insurance, real estate and business services; and (3d), community, social and personal services.

TABLE 8

Macro and Goods and Services Value Added Mesocomponents of Gross Domestic Product with Consumption Divided Into Consumption-as-Consumption and Consumption-as-Investment

Macrocomponents:			(1) GDP	=	(2) ^{C}C	+	(3) ^{I}C	+	(4) I	+	(5) E	-	(6) M
			⇕		⇕		⇕		⇕		⇕		⇕
Meso-components of:	Goods (tangible) Value Added	(2)	$^{GDP}V_g$	=	$^{CC}V_g$	+	$^{IC}V_g$	+	$^{I}V_g$	+	$^{E}V_g$	-	$^{M}V_g$
			+		+	+	+		+		+		+
	Services (intangible) Value Added	(3)	$^{GDP}V_z$	=	$^{CC}V_z$		$^{IC}V_z$	+	$^{I}V_z$	+	$^{E}V_z$	-	$^{M}V_z$

Abbreviations:
GDP = gross domestic product
^{C}C= final consumption considered as consumption
^{I}C = final consumption considered as investment in human capital
C = total consumption
I = gross domestic capital formation
E = exports of goods and services
M = imports of goods and services
V = value added
g = goods
z = services

The novelty of table 8 is that it divides for illustrative purposes aggregate consumption into consumption as such (^{C}C), e.g. food, clothing and shelter, which is needed for the survival of individuals, and consumption as investment (^{I}C), e.g. education and health, which increases the income generating capacity and mobility of individuals. Both types of final consumption involve composite commodities made up of goods and services value added components. The absolute level and rate of growth of ^{C}C and ^{I}C are directly shaped by the mesoeconomic constitutions of goods and services activities creating their respective value added mesocomponents. These mesoeconomic constitutions give rise to the consumer goods (and total) output and primary incomes that serve as indicators as well as determinants of intragenerational and intergenerational mobility. Panel studies focusing on mobility need, therefore, to be two pronged. They must trace the inter-temporal expenditure-income behavior patterns of income recipients, especially households, and the output (value added) and income-generating behavior patterns of producers. The above recommendation follows not only from the ideas and relationships described by table 8, but, also, by the similar ones embodied in tables 2, 5, 6, 7 and 9.

Table 9 presents the same percentage numerical values of macro and meso components of GDP as table 7 except for consumption. In table 7 consumption is divided into private final consumption expenditure and general government final consumption expenditure. In table 9, following the schema of table 8, consumption is divided into final consumption expenditure as such, and into final consumption expenditure as investment. The two components are assumed to be equal. Similarly, total final consumption expenditure could be divided into final consumption expenditure on goods and final consumption expenditure on services. Other criteria for division could also be used. The main thesis advanced in this section remains, however, unaltered. All final commodities used to trace mobility are composite. In turn, their supply is shaped by the mesoeconomic constitutions of the various goods and services activities.

TABLE 9

Gross Domestic Product, Latin America, 1994. According to Macro and Meso-Components with Special Emphasis on Final Consumption of Composite Goods and Services and Value Added by Goods and Services Activities. An Illustrative Example.
(Values Expressed as Percentages of GDP)

	(1)		(2)[a]		(3)[a]		(4)		(5)		(6)
(1)	100 ⇕	=	38.60 ⇕	+	38.60 ⇕	+	18.94 ⇕	+	23.12 ⇕	-	19.27 ⇕
(2)	45.68 +	=	19.30 +	+	19.30 +	+	8.65 +	+	10.56 +	-	8.80 +
(2a)	10.03 +	=	3.87 +	+	3.87	+	1.90	+	2.32	-	1.93
(2b)	4.65 +	=	1.80 +	+	1.80 +	+	0.88 +	+	1.08 +	-	0.90 +
(2c)	23.46 +	=	9.06 +	+	9.06 +	+	4.44 +	+	5.42 +	-	4.52 +
(2d)	2.21 +	=	0.85 +	+	0.85 +	+	0.42 +	+	0.51 +	-	0.43 +
(2e)	5.33	=	2.06	+	2.06	+	1.01	+	1.23	-	1.03
	+		+		+		+		+		+
(3)	54.32	=	20.97	+	20.97	+	10.27	+	12.56	-	10.47
	+		+		+		+		+		+
(3a)	16.25 +	=	6.27 +	+	6.27 +	+	3.08 +	+	3.75 +	-	3.13 +
(3b)	7.40 +	=	2.86 +	+	2.86 +	+	1.40 +	+	1.71 +	-	1.43 +
(3c)	13.67 +	=	5.28 +	+	5.28 +	+	2.59 +	+	3.16 +	-	2.63 +
(3d)	17.00	=	6.56	+	6.56	+	3.22	+	3.93	-	3.28

Notes: a. The variables of all rows and columns are the same as those of table 6 except for final consumption expenditure which, for purposes of illustration, is assumed to be equally divided into final consumption expenditures on goods composite commodities and final consumption expenditures on services composite commodities.

12. Mesoeconomic Foundations of Production and Mobility. The Meso Stages of Adding Value Through Economic Transformation

> Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woolen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others that often live in a very distant part of the country! how much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen!
>
> Adam Smith, 1976: 15

Production of intermediate and final composite commodities and of such macro entities as consumption, investment, exports, and imports, involves adding value at various stages of economic transformation. The concepts of value added and adding value is at the core of economic analysis and the system of national accounts. And, as indicated by table 4, estimation of value added by economic activities is undertaken on a continuing basis in Latin America, as also throughout the world.

A central, and repeatedly stated, hypothesis of the present essay and the mesoeconomic approach is that presence or absence of mobility, poverty, growth, chaos, unemployment, and so forth, have their roots in the process of adding value by goods and service activities. Tables 2, 4, 5, 6, 7 and 8 have been constructed so that the information contained in them can be used to provide an as clear as possible picture of the nature of the process of incremental and cumulative production in Latin America. It is thereby hoped to demonstrate in which economic activities and in what form, i.e. how and why, the process of economic transformation and adding value may have been slowed down, interrupted, facilitated, accelerated and so forth.

In order to achieve this goal, I will briefly examine the mesoeconomic constitutions of the economic activities listed in tables 4, 6, and 9. I will also attempt to focus on the general principles that should guide mesoeconomic constitutions, and on

other mesotopics, that provide major insights into the nature of adding value in production and its impact on mobility. Selected economic activities and their respective constitutions will be subjected to additional analysis in subsequent sections.

12I. Mesoeconomic Constitutions of Goods Activities, That is Activities Producing Tangible Value Added Components. Mesocentrifugalization, Mesodivergence, Mesocentripetalism and Mesoconvergence.

The rate of growth of income is determined by the rate of growth of labor productivity. Per capita income is obtained by dividing total output, i.e. GDP, GNP, or some other, related, aggregate measure, by population. Even though there exist a number of measures of labor productivity, all of them can be used as indicators of per capita output and/or income growth. These aggregate, and per capita, income figures quite often conceal large income and productivity differences both within and between activities, regions and so forth (Mamalakis, 1996f).

This is particularly true in Latin America. The mesoeconomic approach can provide valuable insights into these aspects of the development process. It is, thus, possible to focus on mesoconvergence and mesodivergence as factors determining mesoconvergence and macrodivergence. National mesoconvergence exists when sectoral labor productivities within a nation tend to converge. National mesodivergence exists when sectoral labor productivities within a nation tend to diverge. International macroconvergence arises when sectoral labor productivities in various nations tend to converge. International mesodivergence arises when sectoral labor productivities in different nations tend to diverge.

A variation of the central hypothesis of this essay is that aggregate, or macroeconomic, growth is intimately, indeed inseparably, linked to, and determined by, mesoeconomic growth and performance. In turn, mesoeconomic performance, as measured by labor productivity, is determined by the mesoeconomic constitutions which regulate all factors that shape the productivity of all inputs creating, adding, value in goods and service activities. Thus, sound national mesoeconomic constitutions facilitate and promote national mesoconvergence and macroeconomic growth, and, in turn, also global meso- as well as macro- and per capita income convergence. To the contrary, defective national mesoeconomic constitutions are responsible for national mesodivergence and aggregate stagnation as well as global meso as well as aggregate-macro and per capita income divergence. National mesoconvergence provides the necessary foundations for accelerated aggregate and per capita income growth and global macroconvergence. National mesodivergence, on the other hand, deprives an economy of the foundations needed to achieve aggregate growth and global macroconvergence.

To summarize, global convergence, or catching up, may materialize as national mesoeconomic productivities converge on a rising trend of per capita income and

productivity. Global divergence in per capita income likely occurs, in my opinion, primarily because of large inequalities in national mesoproductivities and, possibly, increasing national mesoeconomic income divergence. The convergence of country and regional incomes found in Latin America by Valentin Mari (1999) is, thus, attributed to mesoeconomic forces.

In an effort to gain a better understanding of the, often inadequate, process of economic development in Latin America and link it to the issue of mobility, I introduce at this moment the first two notions of mesoeconomic complementarities. These are the following:

1. General mesoeconomic complementarity: all value added components produced by economic activities are, to varying degrees, complementary to each other. All commodities are composite, i.e. made up of three or more value added components. As a consequence composite commodities can be produced only if, and as long as, three or more economic activities produce, or make available, through exports, imports of all necessary value added components. A detailed explanation of the existence of general mesoeconomic complementarity is found in (Mamalakis, 1997).

2. Goods and services mesoeconomic complementarity: value added components produced by goods and services activities are, to varying degrees, complementary to, and inseparable from, each other. All commodities are not only composite but are also made up of both goods and services value added components. As a consequence, composite commodities can be produced if, and only as long as, both goods and services activities produce the necessary and complementary goods and services value added components. It is elsewhere demonstrated in detail (Mamalakis, 1989; 1996j; and 1997) that it is impossible for final commodities to be produced unless they embody both goods and services value added components.

Mesoeconomic complementarity as a notion aims to emphasize the fact that economic activities tend to prosper or suffer together because of multiple two-way linkages.

It is now possible to introduce the ideas of mesoeconomic centrifugalization, which describes the phenomenon of labor and total productivity of activities moving or directed outward from the average or center, giving rise to increasing mesoinequalities, and mesoeconomic centripetalism, which describes the phenomenon of labor and total productivity of activities operating toward the average or center, thus contributing to reduced mesoinequalities.

Mesocentrifugalization assumes, however, an additional, broader meaning based on a broader notion of mesoproductivity. It describes a movement away from the moderate sustainable center. It represents the forces away from price stability towards (hyper)inflation; away from balanced budgets towards catastrophic deficits; away from

balance-of-payments equilibria and stable exchange rates towards disequilibria and free falling exchange rates; away from democracy towards authoritarianism and totalitarianism; away from coexistence between social groups towards conflict, both internal and external, "dirty" wars, ethnic cleansing and so forth. It reflects movements toward extremes of unpredictable nature and destructive capacity. Mesocentrifugalization represents a process of social, economic and political disintegration caused by a failure of society and its government to produce the collective services of freedom, equality, stability, coexistence and, in general, "democratic law and order".

In contrast, mesocentripetalism arises whenever the collective services are produced by the state in a manner that represents a movement towards the center; a movement towards economic stability, including price stability, balanced budgets, and all basic economic freedoms and rights; a movement towards political stability based on sustainable democracy; a movement towards social stability that fosters inclusion and mobility; a movement towards moderation, cooperation, compromise, harmony and tolerance.

Mesocentrifugalization is an indicator, and measure of, low and falling productivity in the public administration and defense activity. Centripetalism is an indicator, and measure of, high and rising productivity in the public administration and defense activity. Mesocentrifugalization and mesodivergence stifle natural absolute and relative mobility. Mesocentripetalism and mesoconvergence enhance absolute and relative mobility. The phenomena of mesoeconomic centrifugalization and centripetalism have shaped the destiny of most of Latin America and dominated its political, social and economic dynamics. Centrifugalization is inherently self-destructive because it violates fundamental mesoeconomic complementarities. Centripetalism has a positive impact because it respects and facilitates mesocomplementarities. Latin America's mesodynamics, which are at the core of the mobility and welfare issue, are emphasized here because they possibly provide a useful analytical framework within which all aforementioned issues can be examined.

Unfortunately, centrifugalization has been the norm, centripetalism the exception. Whenever some activities, e.g. industry, export mining, or defense, have ascended to privileged status, centrifugal forces have been unleashed giving rise to instability, chaos, social, political and economic explosion and, ultimately, even implosion. Perón's Argentina, Allende's Chile, Garcia's Peru, and Sandinista Nicaragua are extreme cases of mesoeconomic centrifugalization. Less disruptive forms of centrifugalization have afflicted Colombia, Uruguay, Venezuela, Bolivia, Guatemala, El Salvador and so forth.

Mesoeconomic centripetalism has been evident whenever governments have been successful in maintaining balanced fiscal budgets, price stability, equal treatment of households, producers and activities and so forth through sound, sustainable mesoeconomic constitutions. It has also followed mesoeconomic centrifugalization

when governments, in an effort to eliminate hyperinflation, capital flight and other destructive phenomena, have replaced populist by sound economic policies, i.e. defective by correct mesoeconomic constitutions.

Centrifugalization, as a rule, has been precipitated by defective mesoeconomic constitutions. These are described throughout this essay. Mesoeconomic centripetalism has all too often, unfortunately, been ephemeral, largely because of a macro economic bias in economic policy, i.e. one-sided emphasis on price stability, or balance of payments equilibrium and, inadequate understanding of the fundamental need to also implement sound mesoeconomic reforms. The 1990s have produced a large number of mesoconstitutional changes in Latin America replacing centrifugal by centripetal tendencies. It remains to be seen, however, whether, and to what extent, these changes are permanent, or, as in the past, ephemeral in nature. A return to meso-centrifugalization appears in August 1999, imminent in Venezuela as Hugo Chavez, its President, and the constitutional assembly dominated by him, unleashed an attack against the Venezuelan Congress and the allegedly corrupt judicial system. Protesting the unconstitutional grab for power by Chavez, who had mounted a bloody but failed coup attempt in 1992, Cecilia Costa, president of the Supreme court, resigned on Tuesday, August 24, 1999.

It is here suggested that Latin America's Achilles' heel may be found in the lack of the social ethos and political will needed to confront the destructive disease of mesoeconomic constitutions that, by violating the composite principle of justice, are centrifugal in nature. The same weakness likely afflicts Russia and many countries in transition and Africa. This has resulted at least in part from a widespread neglect of the importance of national as well as global mesodynamics.

The importance of goods activities and their tangible value added mesocomponents are revealed by the figures of table 4. Goods activities produced an incremental output (value added) amounting to US$442 billion or 45.7 percent of Latin America's GDP in 1994. Within this total, US$97 billion or 10 percent was contributed by agriculture, hunting, forestry and fishing, $44 billion or 4.7 percent by mining and quarrying, $227 billion or 23.5 percent by manufacturing, $21 billion or 2.2 percent by electricity, gas and water, and $51.6 billion or 5.3 percent by construction.

The mesoeconomic constitutions of the major goods activities are examined next.

12I-1. The Mesoeconomic Constitution of Agriculture, Hunting, Forestry and Fishing. The Need to Avoid Mesoredistribution of Agricultural Value Added to Consumers and Other Activities.

Private, state and/or mixed ownership nonfinancial corporations and occasionally NPISHs carry out this activity, which produces the "agricultural" value added component. In much of Latin America, households-producers acting as

unincorporated enterprises and earning mixed income also carry it out. These households-agricultural-producers make up a significant portion of the poor and the informal activities in rural areas.

This activity produces only agricultural, hunting, forestry and fishing value added components of composite commodities which also embody value added by other goods and services activities.

The agricultural, hunting, forestry and fishing activity has suffered from mesoeconomic constitutions imposed by the state that have kept the prices of its value added components and gross output below their free market level. This was often done in the name of justice to the consumer, i.e. artificially low, controlled prices of such final composite commodities as food. While advancing the principle of justice as fairness, and maximum short run utility, to the largest number of consumers-households, these government policies have disregarded the fundamental principle of justice as fairness to agricultural producers. Price controls at the agricultural value added and/or subsequent stages have reduced the real value added, and the underlying labor and property factor incomes, thus inflicting immense suffering and injustices upon millions of low income indigenous, female, poor, small scale farmers throughout Latin America over long periods of time.

The unfair and unjustified redistribution of value added out of agriculture to consuming households and other activities has been a damaging, destructive feature of both government and agricultural mesoeconomic constitutions in much of Latin America.

Free and competitive prices to agricultural producers are as important to Latin America as, e.g., the independence of the Central Bank and monetary policy from general government and fiscal policy. Constitutional guarantees of free prices to agricultural and other producers may be the only means of promoting the principle of justice as fairness to producers and ushering in sustained Latin American prosperity. Such a constitutional guarantee of free prices in no way would prevent government from providing assistance to agricultural families and individuals in need. It would however prevent it from tinkering with the free and competitive price mechanism and causing unnecessary pain to farmers, and creating food and related shortages to consumers.

Unless the principle of justice as freedom of prices to agricultural producers, and as equality of treatment by government (nondiscrimination) is applied to agriculture, hunting, forestry and fishing, the supply of their respective value added components is likely to fall short of the levels needed to satisfy the rising final food and other agriculture-based needs of consumers. Mobility of farmers likely will suffer. So will also suffer the mobility of household members as measured by agriculture-based composite commodities. An agricultural value-added crisis is likely to grow into an

aggregate food crisis. Mesoeconomic crises in other goods and service activities producing complementary to agriculture value added components would, then, also be likely, if not inevitable.

Violation of justice as both freedom and equality for the agricultural activity and producers has been a landmark of the 1930-1980 era of import-substitution industrialization. This was particularly true for Argentina, Chile, Mexico, Uruguay, and Venezuela.

Fortunately, however, in recent decades sound mesoeconomic constitutions of agriculture have been introduced. As a consequence, the old anemic agriculture has regained much of its inherent natural dynamism. Mobility, most likely, will be a major beneficiary.

12I-2. The Mesoeconomic Constitution of Mining and Quarrying. Volatility of Operating Surpluses and the Shock Effects of Mesodependency.

Mining and quarrying, where nonfinancial corporations dominate as producers, creates private value added components that serve as parts of almost all final composite goods and services. Households as producers-unincorporated-enterprises exist almost exclusively in small-scale mining. Large scale nonfinancial corporations dominate whenever extraction is capital intensive and risky. Wide price fluctuations are common.

As in the case of agriculture, mining produces only value added components. These are subjected to various degrees of economic transformation as they travel through multiple goods and service activities. There are few, if any, composite commodities that do not embody mining value added components.

Dependence of modern societies and most economic activities on mining value added components, such as petroleum, for their very functioning and even survival has imparted strategic importance on them. All producers and all forms of governments have attempted to create mining mesoeconomic constitutions that serve their interests.

Venezuela, Chile, Ecuador, Mexico, Argentina, Bolivia, Colombia, Peru and Brazil have repeatedly attempted to create mining mesoeconomic constitutions embodying the composite principle of justice that would be fair to both users and producers. More often than not, however, they have failed to do so both in the formulation and implementation stages. Failure to produce optimum constitutions has given rise to numerous crises in almost all countries. Riots by consumers, palace coups, debt defaults, violent political demonstrations, overthrow of governments and political, social and economic tensions and conflicts in many countries reflect the inability of their respective governments and their constituents to promulgate, continuously adjust and implement mining mesoeconomic constitutions of sustainable nature.

Since mining activities have contributed disproportionately to foreign exchange earnings, government revenues, physical investment, income and operating surpluses, volatility of their value added components has wrought havoc with macroeconomic stability and policies whenever the underlying mesoeconomic constitutions have been defective. Unfortunately, the paramount collective need for fair, sustainable, mobility- and growth-promoting mining mesoeconomic constitutions rarely has been satisfied.

Any attempt towards macroeconomic stability that is not based on solid mesoeconomic foundations in mining would be illusory in Venezuela, Ecuador, Bolivia, Chile and other mineral-type economies. Pervasive interdependence between the mining on the one hand and the governmental and all other goods- and services mesoeconomic constitutions, on the other hand, in these countries leaves little doubt that many of their problems are predominantly mesoeconomic in nature and so are the solutions.

Mesoeconomic dependence has been a central feature of mining- and agriculture-based economies. Mesodependence has taken the form of excessive dependence of central government revenues on operating surpluses of mining and agriculture, dependence of foreign exchange proceeds on mineral and agricultural exports, excessive dependence of capital inflows and servicing of foreign debt on mining exports, and excessive dependence of macrostability on mineral and agricultural mesostability. Widespread mining mesoinstability, especially of its operating surpluses, has precipitated macroinstability. Mesovolatility in mining has exacerbated both booms and busts. It also inevitably has created mesovolatility in distributional mobility by affecting such indicators as income and consumption.

Defining and preserving a fair principle of justice has been particularly difficult under conditions of mesoeconomic volatility in mining because of the conflicting perspectives and interests of producers and households throughout the economy over the intertemporal division of volatile operating surpluses among multiple claimants. Chilean economic growth has benefited since 1973 as a consequence of introduction of fair, sustainable constitutions of mining. Economic growth and mobility in Venezuela, Ecuador, Mexico, Colombia, Peru and Bolivia have suffered, however, because of inability of their respective governments to replace defective by sound mesoeconomic constitutions in mining, government and elsewhere.

12I-3. The Mesoeconomic Constitution of Manufacturing. The Twin Evils of Mesosupremacy and Mesoinferiority

Deification and glorification of manufacturing has been a trademark of Latin America during the 1930-1980(90) era of interventionist, some call it dirigista, structuralism. It has also been a major factor behind its unfulfilled growth potential.

A major characteristic of the 1930-1980 so-called era of "inward orientation" (this expression reflects a structuralist perspective) was establishment of mesoeconomic constitutions of manufacturing based on the principle of superiority of its value added. Because of this presumed superiority over all other value added components, manufacturing was given a preferential treatment that according to many was both unnecessary and counterproductive. Governments imposed mesoeconomic constitutions that violated the principle of justice as equal treatment of all producers as well as freedom and respect for free markets, private initiative, and sanctity of private property and contracts. Producers and factor services in non-industrial activities were penalized, occasionally victimized, private nonfinancial and financial corporations were displaced by state ones and price controls and regulations became a deeply embedded feature in Chile, Brazil, Argentina, Peru, Venezuela, Mexico, Uruguay and almost every other country in Latin America. A detailed examination of dominance of industry and discrimination of agriculture, mining and other activities is found in Mamalakis (1969; 1971; 1976; 1992b; and 1992a).

Since 1973 in Chile, and more recently elsewhere in Latin America, serious attempts have been made to replace defective by sound freedom- and equality-promoting mesoeconomic constitutions of manufacturing. The foundations of the new constitutions were shaped by the principles of privatization, liberalization and stabilization. The process of eliminating defective mesoeconomic constitutions is by no means complete, however. Venezuela, Brazil, Argentina, Mexico, Ecuador, Peru, Colombia, Bolivia and other countries are still struggling to formulate sound and sustainable mesoeconomic constitutions of manufacturing. Significant progress has been made, however. Spectacular increases in the quality and quantity of value added components produced by manufacturing has contributed to a boom in composite exports containing them. Mexico has come a long way in creating sound mesoeconomic constitutions in manufacturing and other activities. Exports and mobility, most likely, have benefited. In the Mercosur, however, Argentina and Brazil face major internal and external problems of inflation, unemployment and/or trade deficits because of defective, inadequately flexible, mesoeconomic constitutions of government and manufacturing.

A major lesson learned in recent years is that the neoliberal experiment of privatization, liberalization, (de)regulation and stabilization is no panacea. It does not automatically eliminate defective or guarantee sound mesoeconomic constitutions. As an example, corruption can be present with, as well as without, private, state, mixed, foreign or national ownership of enterprises. The nature of ownership does not define or determine corruption. It is the nature of the various mesoeconomic constitutions, in particular that of government, that determine it. Furthermore, while neoliberal policies correctly recognize and emphasize justice as freedom, especially in regards to producers, they contain a formidable blind spot when it comes to the dimension of composite justice as equality in the distribution of semipublic and collective services (consumption) in respect to the poor and underprivileged.

12I-4. The Mesoeconomic Constitution of Electricity, Gas and Water. The Mesoeconomic Hand of National Governments and International Organizations. National and International Mesoconditionalities: Formidable Theoretical Challenges and Implementation Risks.

Failure to establish and implement sustainable mesoeconomic constitutions of electricity, gas and water has also been responsible for inadequate mobility and growth during prolonged periods in many Latin American countries. Even in 1999, adequate constitutions for the supply of water are absent in numerous regions and areas of Latin America. Household and producer needs for electricity, gas and water remain partially unsatisfied. Consumption, investment and exports could have reached substantially higher levels had sustainable mesoeconomic constitutions led to elastic, abundant supplies of electricity, gas and water value added components and of final composite commodities embodying them.

An unfair and unsustainable redistribution of value added out of the electricity, gas and water activity into other ones, and from factors of production in it to final consumers has been at the core of the lamentable failure of the electricity, gas and water activity to rapidly increase the respective mesocomponents. On the one hand, final prices to households of electricity, gas and water often have been artificially maintained below the free market level and below the level needed to adequately compensate the labor and factor services employed by it. Final prices far too often were kept by mesoeconomic constitutions imposed by the state below the cost of production. Putting the short-term welfare of households above the need for survival and rapid expansion of the activity proved to be calamitous in much of Latin America, in particular larger cities. If mobility were to be measured by consumption of electricity, gas and water, its trajectory would display erratic, often painful patterns.

The misconceived notion of justice as maximum short term welfare of urban dwellers or other consumers of electricity, gas and water, which has been so often espoused in Latin America not only by populist but also by other presumably "non-populist" governments, shows the extent to which the notion of social justice has been misunderstood and abused. Adoption of a misconceived notion of justice from the perspective of the household, or put more bluntly, adoption of a principle of justice that favored low prices today but possibly no, or reduced, electricity, gas and water supplies to the same or other households in the future reveals an important dimension of the "destructive hand" of government and the constitutions imposed by it. In addition, the "mesoeconomic arm" of government inflicted massive suffering and pain (the degree of tolerance of Latin American populations to government mismanagement is formidable) by redistributing real value added from electricity, gas and water activities to other activities, e.g., manufacturing, trade or transportation from one set of producers to another.

It has been repeatedly stated in this essay that mobility can be advanced only if justice were applied in a manner that is fair to both consumers and producers. The principle of justice from the perspective of the producer requires, however, not only, first, that producers should not be discriminated against while consumers are favored but, also, second, that the interests of one set of producers should not be sacrificed for the interests of another. One producer should not be favored by discriminating against another. Mesoeconomic injustices arising from universal discrimination of producers can prove as disastrous to the process of creating value as those arising from favoring one group of producers while discriminating against another. The "interventionist" mesoeconomic hand of government in Latin America has been as destructive when it favored households over producers as when it favored one group of producers over another.

The case of destructive, distorted mesoeconomic constitutions of electricity, gas and water would appear to demonstrate as much, if not more so, than similar cases in other activities, that macroreform without mesoreform is illusory and impossible. Any attempts by national, international, or foreign authorities to require sound macroeconomic policies without also requiring sound mesoeconomic policies are an exercise in futility. It also demonstrates that macroeconomic conditionalities can be meaningless without parallel complementary mesoeconomic conditionalities.

Although I am convinced that mesoreforms are necessary, I am not advocating here the imposition of mesoconditionalities by such institutions as the World Bank, IMF or IDB. What I am arguing is that mesoeconomic reforms can be initiated and carried out only by national agents and through a process of an internal consensus and ethos. In absence of such originating-from-within mesoeconomic reforms, success of macroreforms will rest on precarious foundations. Support by external agencies of mesoeconomically unsupportable macroeconomic policies of stabilization will have to be carried out and justified on other grounds, political or other ones. It should, also, however, be recognized that such global mesoeconomic policies of "government" and "finance" and the global mesoeconomic constitutions from which they follow, conform to "idiosyncratic" notions of justice that most likely are unfair to consumers as well as many producers in the donor and receiving countries. Although this can hardly be seen as a consolation, this type of behavior is neither new nor confined to the global arena. In the same manner, however, that unsustainable national mesoeconomic constitutions inevitably precipitate national macroinstability, or even chaos, so will the unsustainable international mesoeconomic constitutions precipitate global instability, crises and even chaos. Whether national and domestic or international and global, blindness to and/or ignorance in recognizing, exposing and correcting mesoeconomic defects have been too responsible in precipitating recurrent upheavals to be either ignored or accepted.

12I-5. The Mesoeconomic Constitution of Construction. The Need for Neutral, Benevolent Mesoeconomic Constitutions. The Meso Political and Economic Feedbacks of Macro Fiscal and Monetary Policies.

Construction and its mesoeconomic constitution reveal another sensitive link between mesoeconomics and macroeconomics. The construction activity produces its value added components through intensive use of labor services, a large proportion of which are blue collar ones, with the assistance of nonfinancial corporations and unincorporated enterprises. The final composite commodities embodying value added components by construction are residential and nonresidential buildings and various forms of public works and social overhead investments. Few other economic activities are as intimately linked to the macrovariable of investment as is that of construction. Since also, however, almost all other economic activities also contribute value added components in the production of final, composite investment goods, cyclical fluctuations in construction reflect not only variations in investment levels but also have an impact on value added, income and employment in complementary activities.

In a way, the construction activity likely is the primary beneficiary of sound and sustainable mesoeconomic constitutions, and the first, major victim of distorted ones and the chaos frequently associated with them. Whenever sound mesoeconomic constitutions permit macroeconomic policies to achieve price stability, balance of payments equilibrium, balanced fiscal budgets and low interest rates, investment booms and construction flourishes. Open unemployment declines, and as average incomes rise, absolute and relative mobility tends to improve. Alternatively, whenever defective mesoeconomic constitutions and/or downturns in mineral or other value added components precipitate (hyper) inflation, external imbalances, fiscal deficits, and ultimately higher, often astronomically high, real interest rates, their cumulative impact is felt primarily by construction and also, to a lesser degree, all economic activities producing value added components of final investment goods. The celebrated boom-and-bust cycles of Latin America affect all macro and meso variables, but few as much as the construction value added component.

The destiny and welfare of construction, which normally has easy entry and exit thresholds for producers, is inseparably linked to the quality and sustainability of other activities and their constitutions. Beyond any own defects that it may or may not have, it is exposed to most of the shocks unleashed by other economic activities and their defective mesoeconomic constitutions. The blessings of other just constitutions tend to fall in abundance upon construction. The ill winds blowing from other unfair mesoeconomic constitutions tend to destabilize and weaken it with cumulative strength. The relentless strength of mesoeconomic forces, all of which are contained and unleashed by sectoral value added components, are most evident when converging on construction where they can bestow both extreme largesse as well as recession and extreme depressions. In no other activity are the meso feedbacks on income and employment of macro fiscal and monetary policies as powerfully evident as in

construction. The construction-meso to macro-fiscal-monetary link, which is powerfully expressed in the (un)employment statistics, has regularly emitted major political shocks throughout Latin America. The link between mesoeconomic and mesopolitical dynamics is too powerful in construction to be ignored by policy makers.

12II. Mesoeconomic Constitutions of Service Activities, That Is Activities Producing Intangible Value Added Components. The Danger of Underestimating the Importance of the Final Mesocomponent.

No private, semipublic or collective services can be produced without value added components by service activities. Neither can the macro entities of consumption, investment, exports and imports materialize without the indispensable contributions embodied in the value added components created by service activities. The intangible transformation of composite commodities associated with value added components by service activities is no less and no more important than the tangible one associated with value added components by goods activities (Mamalakis, 1998b; 1997; and 1996j).

As indicated by the information presented in table 4, out of a total GDP value of US$968 billion in 1994, in Latin America, US$526 or 54.32 percent was contributed by services. Within this total, 16 percent was contributed by wholesale and retail trade, restaurants and hotels, 7 percent by transport, storage and communications, 13.7 percent by finance, insurance, real estate and business services and 17 percent by community, social and personal services. The indisputably high contribution of service activities to income and employment at least since 1940 is documented in Mamalakis (1996j) and in the various studies cited in it.

Whether the indicator used to trace household mobility is consumption, per capita output or income (GDP divided by population), or wealth, value added by service activities is an integral part. Furthermore, in any concept of average, economy-wide labor productivity, output by service activities is as important as that by goods activities. The conditions of production and the environment surrounding the producers in service activities play a critical role in determining the level and rate of growth of final consumption, output, economic welfare and, thus, mobility.

The remarks that follow could have been made after the discussion of all services mesoeconomic constitutions. Or, they could have been incorporated in various of the sections that follow. Because of their general significance, however, I thought they would be most effective if presented at the end of the general discussion of constitutions of service activities.

It is quite difficult to distinguish economic activities according to their functions, nature and so forth. After all, each produces indispensable value added components that are embodied in the final composite commodities.

Any attempt therefore to differentiate between activities and value added components should be seen as an effort to gain a better understanding of the process of cumulative production rather than rank them in terms of importance according to one or another criterion.

All value added components can serve as intermediate inputs that are used up in production. This is true of the value added components produced by agriculture, mining, manufacturing, trade, transport, education, health or government. However, there are some services value added components which not only play a vital role as intermediate inputs but also as the critical last component, as the last incremental output, of a final composite commodity. A case in point is the trade value added component. It is generated in all stages, i.e. early, middle, or final, of the cumulative production process. However, unless the trade activity performs the last function of selling to the final consumer-user, production and welfare likely will suffer.

Furthermore, social, business and private services, including health, education and welfare, play a vital role in the last, delivery stage, where all previously produced value added components are combined to produce the composite commodities referred to as health, education, welfare and so forth. These are the composite services that serve both as an indicator, and as a determinant, of mobility. And, since in this essay, I am interested in a comprehensive, rather than partial, analysis of mobility it is important to point out the critical importance of the last stage of composite commodity production.

Unless a physician, a firefighter, a lawyer, a counselor, a welfare worker, or a policeman is well qualified to add the last value to all intermediate inputs provided by other activities, the quantity and quality of the final composite service may prove to be inadequate in satisfying the final need. Such final needs as education, health, welfare, finance, legal advice and so forth may then not be fully satisfied. Mobility ability, mobility capacity or the mobility potential likely will be below par.

Mesoeconomic regulation becomes then particularly important. Under governmental guidance, supervision and even strict controls, private, non-profit or governmental agencies must assume the function and responsibility of "guaranteeing" the quality, and quantity, of all tangible and intangible components of the final composite commodities, in particular of the last one. Thus, the quality of the mesoeconomic constitution of government that determines the quality of all other mesoeconomic constitutions is of vital importance. Once again, much remains to be improved in Latin America in this area. Unless the collective needs for transparency in delivery and exchange of all value added components are satisfied, Latin America's welfare level likely will stagnate or grow too slowly to prevent social, political and economic unrest and dissatisfaction.

These mesoeconomic issues are neither more nor less important than the macro ones. The meso aspects are complementary to the macro ones. Or, to put it more accurately, unless there is efficiency in all stages of adding value, the composite value of the final commodity will suffer. Efficiency in meso-production raises income-based mobility and final-consumption-and-output-measured mobility. It also raises the capacity of individuals and households to increase the quantity and quality of the factor services they provide to producers and thus improve their own income and income-based consumption and welfare.

12II-6. Mesoeconomic Constitution of Wholesale and Retail Trade, Restaurants and Hotels. The Mesoeconomic Principle of Inseparability of Political, Social and Economic Freedoms.

The mesoeconomic constitution of wholesale and retail trade, restaurants and hotels is important in many ways. It reveals, however, above all, the unprecedented significance of the value of a concept without which people and societies cannot live in peace and prosperity. That is the concept of freedom, of economic freedom, of the freedom to choose among products, occupations, regions, political systems and parties, to religion, to express one's opinion and so forth. Although all dimensions of freedom are important, I will focus in this section on the freedom to trade, since this is the activity being analyzed.

Although in the real world mesoeconomic constitutions of trade are associated with various degrees of freedom, it may be useful to compare the two pure cases. On the one extreme are the mesoeconomic constitutions that provide maximum freedom to households and producers to purchase, sell, transfer or, in any other form or shape, exchange products, factor services, property and so forth. It could be said that this freedom reflects both a utilitarian and libertarian perspective of justice for households-consumers and producers alike. Such freedom is vital especially in trade which is <u>par excellence</u> the activity responsible for matching the infinite needs of consumers and producers. Without mesoeconomic constitutions of both national and international trade based upon and protecting the notion of freedom of exchange, the whole process of adding value in the production of composite commodities would be slowed down or even disintegrate.

The presence of such freedom promotes competition in all markets, maximizing the benefits to consumers-buyers through lower prices and minimizing the costs of intermediate inputs and of labor and property services to producers. Competition, in turn, promotes efficiency in all stages of production. It promotes macro as well as micro efficiency and the mobility of resources. Freedom, competition, and efficiency cannot truly exist without private property rights and sanctity of contracts. Justice as freedom, and justice as market power based on private contribution rather than collective, government force that leads to privilege and inequality, are integral parts of such constitutions.

At the other extreme are the mesoeconomic constitutions that recognize no, or almost no, freedoms of either households or producers. These are constitutions based on Marxist and related ideologies that consider all, or most, fundamental freedoms, and especially those of exchange and trade, as the cause of exploitation of labor by capital (bourgeoisie), of unequal exchange, of immizerization, income inequality and destructive mobility. These are constitutions that all too often espouse the idea that trade as well as other services, are unproductive, even exploitative activities. Such mesoeconomic constitutions introduce controls of all forms of trade, replace private by state ownership of enterprises and so forth.

Rarely has either one of these extreme mesoeconomic constitutions of trade reigned in Latin America. Cuba may be the most representative case of the Marxist variance, and Chile since 1973 the closest paradigm of the libertarian, neoconservative approach. From Independence to 1930 the trend was towards freedom of trade. From the Great Depression of the 1930s, freedom of trade in most shapes and forms was constrained, limited, in many instances, even totally prohibited. Justice as freedom was viewed all too often as an impediment to the development of the Latin American periphery. Trade as a "protected" activity, however, earned fabulous protection and inflation rents. It is in my opinion, profoundly distorted mesoeconomic constitution, was both a symptom and a cause of a decadent, unsustainable model of protectionist, interventionist, statist approach that fostered sectoral conflicts and social disharmony of monumental proportions. The pervasive, frontal attack of the notion of justice as fairness to any type of producer, be it private, national, foreign, or state, was so destructive, that it ultimately became self-defeating. It has been largely, but by no means totally, abandoned in recent decades in much of Latin America as well as in most of the former Soviet Union and Eastern Europe.

The gradual adoption of the principle of justice as freedom to producers and consumers alike and the liberalization of trade in Chile since 1973 and subsequently in much of Latin America except Cuba represents a movement towards sound, sustainable mesoeconomics of trade. The road, however, to such a constitution is not easy. Imperfections and defects in other mesoeconomic constitutions emit shocks that all too often force governments to sacrifice the principle of liberty and freedom of trade in the name of social justice as defined by special interests and mesoeconomic pressures.

It is ironic that in Latin America, where the collective need for freedom is so vital for its sustained social, political and economic prosperity, it has been so profoundly attacked, vilified or neglected by both the Extreme Right and the Extreme Left. Even presumably "democratic" political regimes unleashed frontal attacks against economic freedoms during the 1930-1973(90) era of protectionism and interventionism. The social, political and economic price that almost all Latin American countries have paid for violating political, social and economic freedoms has, however, been so profound, so

steep, that constitutional, effective guarantees are a precondition of sustained development.

In the section on mesoeconomic constitutions of goods activities I introduced the notions of general mesoeconomic complementarity and goods and services mesoeconomic complementarity. Now, I would like to introduce the third notion of

3. The mesocomplementarity between political, social and economic freedoms. According to this principle of freedom complementarities, composite commodities and their value added components cannot be efficiently produced unless government produces all basic political, social and economic freedoms. Furthermore, the hypothesis is advanced that each set of freedoms, namely political, social and economic, cannot be efficiently produced unless all other sets are also produced. Political, social and economic freedoms are inseparable and unamenable to ranking. They are neither superior nor inferior to each other. They are equal and complementary.

No mesoeconomic constitution can be sound, sustainable and benevolent, unless it is a reflection of, and embodies, to the extent appropriate to its idiosyncratic nature, all political, social and economic freedoms. The process of adding and exchanging-trading values by economic activities and economic agents requires equal access to the complementary social, political and economic freedoms. There is, thus, essentially only one, inseparable collective need for freedom. And, it includes, the separately defined, but not separately surviving, needs for political, social and economic freedoms. Thus, a benevolent mesoeconomic constitution of government must be based upon, embody and advance the principle of inseparability of political, social and economic freedoms. Only then would the activities of wholesale and retail trade, restaurants and hotels be able to efficiently produce on a sustainable basis their respective value added components. And, only then, would it be possible to satisfy the composite principle of justice that facilitates, if not guarantees, natural mobility and generalized prosperity.

This activity is carried out by nonfinancial corporations, which have been primarily private ones, and households operating as unincorporated enterprises. The informal segment has had a large capacity to absorb labor. Furthermore, this activity has displayed a formidable mesoeconomic dynamism in overcoming mobility obstacles created by the state. Adam Smith's beneficial effects of the invisible hand have been most evident in its informal and liberated segments.

12II-7. Mesoeconomic Constitution of Transport, Storage and Communications. The Need for Mesoeconomic Transparency, Sovereignty, Management and Coordination.

As in so many other categories in the system of national accounts, the seventh one is characterized by the presence of subactivities with separate mesoeconomic characteristics. The transportation activity is normally regulated by a constitution that

differs from those regulating storage and communications. The brief treatment found in this section will, therefore, out of necessity, focus on major mesoeconomic dimensions that can shed light into the issue of mobility and overall growth in Latin America. It cannot be an exhaustive analysis. Nonfinancial corporations and households as incorporated enterprises have been the producers in this activity.

Justice as freedom, on the one hand, and as equality, on the other hand, plays an important role here. In the communications activity, freedom plays a defining role. Mesoeconomic transparency cannot exist without freedom of speech, freedom of the press and so forth. The degree to which one mesoeconomic constitution respects or violates the rights embodied in another constitution also cannot be determined without maximum freedom to create and exchange information and knowledge. Mesoeconomic sovereignty, thus, cannot be defined and protected without a free and transparent communications activity. Most, or at least many, economic activities attempt to expand their own sovereignty, i.e. the space over which they have dominant rights, through collusive arrangements with government and even other activities. At least one of the functions of the communications activity is to provide maximum information about the nature as well as changes of the various mesoeconomic constitutions, thereby exposing lack of transparency and sovereign transgressions.

Illicit payments by nonfinancial corporations to government employees-officials or by nonfinancial to financial corporations and so forth, all of which are an integral segment of the so fashionable issue of corruption, reflect a breakdown in the communications activity. The collective, semipublic and private needs for information then remain partially unsatisfied. The constitution of the communications activity itself is, also, then defective. The notion of justice as freedom, and maximum supply, of truthful information is partially, sometimes even totally, missing. A defective communications constitution fails to prevent or control other defective mesoeconomic constitutions. Lack of transparency, then, permeates all mesoeconomic constitutions. Mesoeconomic transgressions of sovereignty initially precipitate failures in selective activities. Ultimately, they push economies over the cliff into generalized chaos. Chile, Bolivia, Argentina, Nicaragua, Peru, and Brazil have been exposed to such chaotic conditions. Attack of the communications activity has come both from the Left and the Right.

Information is a mesoeconomic phenomenon. Information is of value to all economic agents. Information creates power for consumers-households and producers alike. Information is an output of the communications activity in cooperation with all economic agents. The degree to which all society members cooperate with government and the communications activity in producing accurate information and exposing misinformation is an important indicator of civil society development.

Control over the communications activity dominates societies afflicted by defective economic constitutions. Corrupt governments and activities rely on

"misinformation" to maintain and promote their own interests and those of special groups. This is the reason why so many Latin American governmental and communications constitutions have attacked social, political and economic freedoms under a variety of excuses, social justice being one of them, as already discussed previously.

With the exception of Cuba, where justice as freedom is not one of the principles of the constitution of government, Latin America has experienced a significant, though not yet sufficiently satisfactory, progress in its communications activity. Violations of the principle of justice as freedom have been so pervasive in the past that all economic agents need to recognize its importance and work on its preservation. The important collective need for a continuously free flow of accurate information pertaining to all aspects of life needs to reach significantly higher levels of satisfaction if sustainable development and relative mobility are to be achieved. Success in satisfying this need heavily depends on the quality of the value added component produced by the communications activity.

The communications activity also plays, or can play, an important role in promoting justice as equality. Mobility has suffered in Latin America as a consequence of the unequal, discriminatory treatment by government of women, the poor, indigenous and rural populations and so forth. By exposing injustices arising from unequal treatment and by promoting the need for equal social, economic and political rights for the poor, the communications activity could greatly advance mobility in all its forms.

The transportation activity is another mesoeconomic branch that has shaped growth of per capita income and mobility. Without efficient transportation of people and composite commodities, neither meso nor macro growth can reach its potential levels. Although, once again, justice as freedom has provided an enormous stimulus to the transportation activity in Chile and elsewhere in recent decades, many mesoeconomic constitutions still hinder rather than stimulate it. Excessive government ownership and regulation of major segments of the transport activity has contributed to its well known underinvestment and backwardness. The rural hinterland and urban misery belts have survived with informal nets of transportation. Prevailing mesoeconomic constitutions have, in most instances, failed to stimulate the spread of the modern integrated transportation revolutions. Urban sprawl, rapid population growth, rural-urban migration, artificially low fuel prices, defective regulatory environments and recurrent chaotic political, social and economic conditions have been well known obstacles to the formulation and implementation of just (to the consumer-user and producer-supplier) efficient constitutions.

Inadequate respect of the principle of justice both as freedom and as equality has led in much of Latin America to a transportation activity that is splintered and plural. Unequal transport systems reflect and reinforce inequalities in primary, disposable,

adjusted disposable and total incomes. Furthermore, inequalities are sustained because of lack of freedoms or, unequal freedoms.

Coordination of mesoeconomic constitutions is, therefore, a vital instrument in poverty alleviation and mobility enhancement. This coordination is critical in the issue of justice. It is imperative that the constitutions are coordinated in promoting justice as freedom to producers in all activities, and in promoting justice as equality to all producers in all activities and to all consumers at all income, educational, ethnic, and other strata. Unequal freedom means no freedom to many. As such it is an unacceptable mesoeconomic principle of composite justice. Equal freedoms are necessary but not sufficient elements of benevolent mesoeconomic constitutions. Public, semipublic and even private needs in the areas of transportation, communication and even storage, may have to be satisfied on the basis of strict equality, i.e. giving to the excluded poor at least as much as to the better off middle and upper classes. What may even be needed is "inverse inequality", i.e. an unequal distribution of in-kind transfers "favoring" the excluded poor. "Inverse distributional inequality" would aim at integrating the excluded by increasing their skills and their potential contribution to output. The principle of justice as inequality in transfer-based consumption would be the noblest of all principles as the state attempted to raise their income-generating capacity through in-kind transfers of private, semipublic and collective commodities based on their, and the society's need, to have them incorporated, to make them mobile, socially, politically, economically.

Mesoeconomic management and coordination of the composite notion of justice would lead to the balance and complementarity in freedom and equality necessary for macroeconomic management and coordination.

The storage activity is complementary to the transport, communications and many other ones. A benevolent mesoeconomic constitution of storage would add a vital building block towards a modern Latin American economic edifice.

12II-8.Mesoeconomic Constitution of Finance, Insurance, Real Estate and Business Services. Meso Inefficiency, Inflation and Insolvency-Corruption Risks and Related Mesoeconomic Crises.

The present activity is an agglomeration of a variety of separate and distinct subsectors. These include finance, which is dominated by financial corporations, and insurance, real estate and business services, where producers are both nonfinancial corporations and households as unincorporated enterprises.

It has been repeatedly argued that there exist no activities and no meso value added components that are superior or inferior. They are all equally important in guaranteeing that composite commodities satisfying a society's and individual's composite needs are produced. In that respect, the value added components produced

by the finance, insurance, real estate and business services activity, provide an irreplaceable building block of the Latin American economic and, specifically, mobility, edifice and architecture. Thus, all crises are composite, aggregate, as well as mesocrises. Whenever public discourse selects the financial crisis as the source of the aggregate crisi(e)s, it assigns a unique role and responsibility to it. Such discourse on financial crises is preeminently mesoeconomic in nature because it focuses attention on the value of the incremental and cumulative output of the financial activity. We turn now to an examination of this financial output value and the forces that either facilitate or undermine its production.

Few crises have roiled national economies and the global exchange and trade system as much as the financial ones. Furthermore, few crises have caught the interest of policymakers and the imagination of scholars and pamphleteers as much as the financial ones. A recent, highly informative study by the United Nations (1999), titled *Toward a New International Financial Architecture*, articulates widespread opinion that a new financial architecture is needed to prevent future crises and control their often devastating effects. In addition, few crises have weakened the natural processes of relative and absolute mobility within and between generations as much as the financial ones.

In order to understand and determine recurrent national and international financial crises, to develop sound mesoeconomic financial constitutions, or, as the UN so aptly put it, *Financial Architectures*, and formulate sound policies, it is necessary to first understand the nature, structure, role and functions of the financial activity.

In the present section I will analyze the financial sector by using the Mamalakis theory of services (1989; 1996; 1997; and 1998b) and, in particular, the Mamalakis theory of financial services, financial intermediaries and interest rates (1987) in an effort to identify the idiosyncratic characteristics of the financial activity, to determine the origins of financial crises and suggest remedial strategies – financial architectures.

As suggested by Begg, Bournay, Neale and Wright (1996: 456), the Mamalakis theory promises to provide a bridge between the theory of finance and financial services, on the one hand, and the system of national accounts, on the other hand. It is, therefore, used here because of its potential capacity to identify the nature, origin and likely cures of domestic and global financial crises. It is by no means, however, a panacea. The ongoing national and global crises, financial and otherwise, are so complex in nature that even if it were assumed that the correct approach is utilized in analyzing them, additional research will be needed to examine unresolved issues and new problems.

It is necessary, however, at this moment to reiterate the fact that both absolute and relative mobility are closely linked to, and affected by, the performance of the financial activity.

The Mamalakis theory (1987) of the financial activity accepts the fact that its gross output, or revenue, is allocated into (a) purchases of intermediate inputs and (b) value added. The financial activity adds value by providing unit-of-account, instruments-of-transactions and store-of-wealth services both to lenders and borrowers of financial capital. These three are considered as proxies for the general financial intermediation service. Financial producers generate revenues, however, not only by selling financial but also ancillary services and even goods. In this section, the focus is on the role of the financial activity as a producer of the financial services needed for the production of composite commodities. Success or failure of the financial activity in providing financial services is considered as the determinant of financial prosperity or crisis. The link between financial services and absence or presence of financial crises is described in the sections that follow.

According to the Mamalakis theory (1987) of financial services, financial charges, and interest rates, charges on the loans extended by the financial activity include (1) a payment to cover the interest received by the lender to the bank, the depositor. This is the pure interest payment denoted by i_1. Next, (2) it includes a payment for the commodity- type services produced and sold by the financial activity. This will be denoted by i_2. This is the sum of value added and the cost of intermediate inputs needed to produce the financial intermediation service. Third, there is a charge to cover the inflation risk, i.e. to maintain the real value of financial capital deposited with and lent out by the financial activity. This will be denoted by i_3. And, finally, there is a charge, a premium, to cover the risk of unilateral transfers, or the mesodefault risk (Mamalakis, 1987: 185-188; 1992). This will be denoted by i_4. The charge for the meso, or unilateral transfer, risk aims to guarantee the integrity of the financial system and activity by generating enough revenue from solvent borrowers to cover losses from insolvent ones. "Insolvency" is defined here to include all types of nonpayment from outright fraud to unprofitable investments due to market changes.

Thus the gross revenues, or output charges, by the financial activity would include, excluding for a moment repayments of debt or amortization, (1) a pure interest charge, i_1, e.g. 3%, (2) a cost of financial services charge, i_2, e.g. 3%, (3) an inflation risk charge, i_3, e.g. 3%, and (4) a unilateral transfer, meso, or nonpayment, risk charge, i_4, e.g. 3%, for a total of 12%. The magnitude of i_4 would depend on the creditworthiness of the borrowers.

A financial crises can arise, first, because of an abnormally high pure interest charge. This is very unlikely, however, since pure interest rates, which are determined in England, the United States, Japan, Germany and other developed economies, have been very low at, or below, 3%. Second, financial crises can emerge because of exorbitant charges for the financial intermediation services. A mark-up in excess of 5% (3% can be considered normal) can be the result of inefficient monopolistic practices by financial corporations. Extremely high labor costs have given rise to abnormally high

service charges in much of Latin America. This has been particularly true in the case of state-owned financial corporations in Brazil, Argentina, Chile, Venezuela, Peru and so forth. Under free and competitive market conditions, such service charges would tend to fall as more efficient financial corporations replace less efficient ones.

Third, a financial crisis can develop as inflation and the related inflation risk rise to stratospheric levels. A number of scenarios can precipitate a crisis. A very common one results from the inability of the financial activity to maintain the real value of the financial capital flowing through its markets by charging an inflation premium that accurately corresponds to the inflation risk. As an example, if the rate of inflation and the corresponding risk of inflation are 100%, but interest rate ceilings are 20%, the financial activity is unable to recover 80% of the inflation risk. To the extent that it is unable to protect its depositors-lenders against the inflation risk, it will be unable to perform its key store-of-wealth intermediation function, will decline, and possibly even disintegrate. Distorted mesoconstitutions of finance imposed by government lead to financial disintermediation and, ultimately, aggregate stagnation. Crises caused by high inflation risks and lack of protection against them have repeatedly afflicted Latin America during the 1930-1980 era of government intervention and protectionism.

Another scenario involves, often nominally exorbitant, charges for inflation risks in line with the actual risk. A financial crisis is likely to arise in this case because of the unequal degree of inflation in different markets and the inability of some producers to raise their product prices sufficiently to pay the average inflation risk premium. We can say that financial crises precipitated by high inflation risk premiums can only be prevented, and its long-term effects be controlled, by preventing inflation and eliminating the inflation risk. As I will again point out in a subsequent section of this essay, the inflation risk has inflicted, and will continue to inflict, intolerable damage on all households and producers in Latin America and especially on the process of mobility. Tolerating high inflation risks is tantamount to adopting unsustainable, destructive mesoeconomic constitutions of finance. In the scenario of high inflation risk but low inflation risk premiums, the financial activity becomes an agent of destructive, and unsustainable (only irrational wealth owners would accept continuous deprivation of their wealth) redistribution of wealth. As inflationary holding gains and losses emerge, the mesoeconomic constitution of finance degenerates into one that also inflicts capital holding losses on lenders, who become involuntary donors of unilateral, unrequited transfers, and enriches borrowers, who become involuntary recipients of unilateral transfers, through holding or capital gains.

Financial crises likely will be with us as long as inflation risks are high. Also, sound mesoeconomic constitutions of finance likely will degenerate into destructive mesoconstitutions of "finance-and-unilateral-transfers" whenever they are unable to protect the financial activity and the holders of its liabilities, primarily depositors, against the inflation risk. Recent attempts at privatization, liberalization, deregulation and, above all, stabilization have had as their specific goal elimination of inflation and

the inflation risk, and accordingly, restoration of sound, inflation-risk free, mesoeconomic constitutions of finance.

It may be added that existence and acceptance of the inflation risk creates enormous injustices by violating the "takings" clause for households and producers alike. It violates justice as equality by "taking" from lenders (owners of debt, bank depositors) and "giving" to borrowers (issuers of debt) on an unrequited, unilateral, involuntary basis. It also violates justice as freedom since households and producers become involuntary participants in the process of losing or gaining wealth. The notion of "desert" in the compensation of property services loses meaning inducing a parallel deterioration in the efficiency of this factor market.

The well-known and documented capital flight out of Latin America in excess of $500 billion provides strong proof that the financial activities and their financial constitutions are burdened by unacceptably high inefficiency and inflation-unilateral-transfer risks. Capital flight out of Russia, which is also estimated in excess of $500 billion, economies in transition, Africa and many Asian countries formerly denoted as "tigers", is also to a large extent the result of high inflation, inefficiency, and, as we will see next, insolvency, including corruption, risks. This trillion dollar capital flight out of high inflation risk to low inflation risk countries such as the United States has covered large USA current account deficits in the balance of payments and has contributed to a high exchange value of the U.S. dollar.

The inefficiency, inflation and insolvency-corruption risks, which are all mesoeconomic in nature, define the constitution of the financial activity. A financial constitution is sound if it can prevent and/or minimize the inefficiency, inflation and insolvency-corruption risks. A constitution loses its nature as a sound, purely financial one, when it fails to protect the financial activity and its bona fide financial partners from excessive, uncontrollable, unmanageable inefficiency, inflation and insolvency risks.

The fourth, insolvency-corruption risk, arises as a consequence of all types of unilateral transfers afflicting the financial activity, excluding only those caused by inflation. The insolvency-corruption risk can be present even if there is no inflation, even if a country displays high saving and investment rates, even if there is full "employment" and rapid rate of growth of labor "productivity" and "output". However, the insolvency-corruption risk can also be present in economies that suffer from macroinstability in the form of inflation, fiscal deficits, deficits in the current account of the balance of payments and open unemployment.

The insolvency corruption risk arises when the financial activity performs not only the financial intermediation but also the wealth redistribution function. The wealth redistribution function can, and has taken, numerous forms. Politicians, as in the case of South Korea and Indonesia, receive bribes by nonfinancial corporations as a

compensation for "forcing" financial corporations to extend partially or totally non-repayable "loans" to the bribing corporations. Another practice, which is common in both Latin America and elsewhere, is bribery of officials of financial corporations by clients to extend "loans" to the clients that do not meet minimum credit and solvency standards. Equally common is the practice by conglomerates of forcing financial corporations under their ownership and/or control to divert funds to their unprofitable, insolvent and even nonexistent corporations. South Korea, Indonesia, Thailand and other countries have experienced such corruption patterns. Another very dangerous scenario involves the assumption by the financial activity of the insolvency risk inherent in speculative stock, real estate, foreign exchange, derivative and other related activities. While speculative booms temporarily conceal the magnitude of the "speculative default-insolvency risk", tight monetary policy and other events ultimately expose, can even magnify, this risk. The longer the speculative boom, the higher the related speculative-insolvency risk. And the higher the probability that the financial system will be burdened by it when the burst speculative bubble bankrupts speculators and the value of their assets held as collateral by banks falls short of their liabilities to the banks. Land, housing, stock market, foreign exchange, derivative and other speculative activities and their inherently high insolvency risks have led to panics, depressions, financial collapses and so forth in Japan, Brazil, Russia, Chile, Mexico, the United States, South Korea, Thailand and many other countries. All these have been meso in nature and require meso cures to be prevented and/or controlled.

The literature is saturated with descriptions of high insolvency-corruption risk "financial crises" in Russia, economies in transition, Brazil, Mexico, Venezuela, South Korea, Indonesia, Thailand and even the United States - the loan and savings association debacle. There is no intention or capacity to deal with all these cases in the present paper. I will, therefore, confine myself to the examination of selected general issues which, by linking meso with macro dimensions, can improve our understanding of and provide cures for both meso financial and macro instability crises.

As previously mentioned, such macro indicators as price stability, general government budget surpluses, and high savings and investment rates can conceal, for a time, the presence of high, unsustainable, insolvency risks in the financial activity and financial corporations. A common pattern emerges throughout Russia, Latin America, Africa, and economies in transition, Asia and even, to a lesser degree, in advanced, developed countries. Insolvency risks are passed on by producers in manufacturing, mining, public utilities and all other activities to the financial activity which voluntarily or forcibly continues to finance unprofitable or even imaginary investments. The financial activity becomes the cumulative depository of all insolvency risks associated with investment mistakes or frauds in other economic activities. Collapse of the financial activity due to the assumption of a disproportionate share of all other meso risks would not only expose these meso risks but also precipitate liquidation of these inherently insolvent corporations.

In much of Latin America, but in particular in Argentina, Brazil, Chile, Peru, Mexico, Colombia, Venezuela, Bolivia, Uruguay, and Nicaragua, financial mesoeconomic constitutions were created between 1930 and the 1980s by governments to provide not only credits but also non-recoverable unilateral transfers to inherently inefficient and insolvent enterprises owned and/or controlled by the state, or by privileged national and foreign private interests "connected" to the state.

As we have seen in Brazil, Mexico, Chile and so many other countries, assumption of these meso risks by the financial activity precipitates both a financial and a macroeconomic crisis. The magnitude, duration and impact of each crisis depends on the magnitude of the combined meso insolvency risks and the proportion transferred to the financial activity.

The most widely accepted "remedial" strategy is to prevent a financial collapse by transferring the cumulative insolvency-corruption risk from the insolvent financial activity to the general taxpayer or to foreign creditors or taxpayers who write off their bad loans to the national or foreign financial corporations. To a lesser extent, financial corporations have been selectively liquidated, sold off, or merged with sound ones. The only long run solution is to eliminate the insolvency-corruption risk from all activities.

All forms of insolvency risks likely violate the composite principle of justice as either freedom or equality from the perspective of households and producers alike. The corruption risk destroys the very concept of "desert" as compensation in both labor and property factor services markets. Resources are "earned" by agents who do not deserve it since they do not contribute anything positive. Justice as freedom and equality is violated in both commodity-output and factor services markets. This underlying justice crisis, or crisis of injustices of corruption, speculation, fraud and so forth, undermine the credibility of many markets, deprive innocent property owners of their financial as well as nonfinancial wealth and precipitate meso as well as macro output, employment, price, foreign exchange, confidence and other crises.

Although, as already stated, high "insolvency-corruption" risks can and have precipitated numerous "financial" crisis, they are far more than that. They are an indicator of both a societal crisis and a governmental crisis. They can make, unless they are eliminated, any form of government unsustainable. High insolvency-corruption risks have led to the downfall of the Suharto regime in Indonesia, changes in ruling parties in South Korea, a corruption-ridden "democracy" in Russia, a sui generis democracy in Peru and so forth. High inflation and insolvency-corruption risks are a solid indicator of the failure of government and its mesoeconomic constitution to produce collective services embodying the notion of justice as fairness to both households and producers that is based on the principles of freedom and equality. A new financial architecture free of these destructive risks is, thus, inconceivable without new governmental and other mesoconstitutions and architectures. No financial crisis

can be prevented and its effects mitigated unless the underlying, unfair, mesoeconomic constitutions of government and other activities are reformed and transformed into sound, just, sustainable ones.

Attempts by OECD Governments, the IMF, World Bank and the IDB to prevent the inevitable consequences of such crises may be seen as positive to the extent that they avert the feared return, e.g. in Russia, to totalitarianism or, e.g. in Brazil, to authoritarianism. Unless, however, a sound, and viable system of justice permeates both the financial and all other constitutions, these measures will be palliatives rather than cures, able to delay but not prevent political and strategic changes of unpredictable direction and consequences.

The preceding discussion has hopefully made it clear that the financial activity plays a vital role in creating relative and absolute mobility of households, individuals and producers by facilitating to movement of resources from less to more efficient uses. To the extent, therefore, that absolute and, above all, relative mobility of households and producers has been less than optimum in Latin America, part of the explanation has to be sought in the nature of the financial mesoeconomic constitution of each country, the interactions between these constitutions in Latin America, and the interactions between these constitutions with those of the developed countries, the economies in transition and the international financial organizations and constitutions. These constitutions and the interactions among them determine the size of the inefficiency, inflation and insolvency-corruption risks at the national and international level.

Both the inflation and the insolvency-corruption-unilateral transfer risk violate the right to private property. The utilitarian, contractarian, libertarian, communitarian and sectoral coalitions and clashes perspectives regard the right to private property as a vital foundation of an efficient, stable, and sustainable mesoeconomic financial constitution. Without the right to private property, the financial activity will be unable to perform the store-of-wealth function. Without the store-of-wealth service, money and capital markets cannot perform efficiently and mobility suffers in all its forms.

There is, therefore, in my opinion, a collective need for a store-of-wealth service. There is a collective need for the preservation of the real value of both labor and property income generated by producers and received by the suppliers of factor services. Labor income earned by an individual becomes property income unless it is consumed at the same time it is earned. An injustice is, therefore, committed if labor income loses its real value between the time it is earned and the time it is consumed. An injustice is committed if part of the real value of labor income is involuntarily transferred from the individual that earned it to an individual that borrowed it or to the government-producer that issued the store-of-wealth instrument held by the labor household. There exists a fundamental collective need to eliminate both the inflation and the insolvency-corruption risks, or the involuntary unilateral transfers, that violate

the right to private property and the principle of justice as desert-compensation in labor and property services markets.

Even if utility of the largest number of individuals were to increase, even if the redistribution of wealth were to benefit the least fortunate, even if there were a minimal interference by the state, lack of the store-of-wealth service would wreak havoc with social order that is needed to carry out a sustainable happy way of life according to either the utilitarian, contractarian, libertarian, communitarian or composite principles or notions of justice.

12II-9. Mesoeconomic Constitution of Community, Social and Personal Services. Mesovalues, Mesocomplementarities and Mesodynamics.

Building a just society requires as much an effort to create a free society as it does to mold an equal society. The mesoeconomic constitutions of community, social and personal services are vitally important in creating this benevolent composite, free and equal, just society. Within it, natural mobility over a lifetime or between generations could mitigate the adverse vision associated with snapshot inequalities revealed by various indicators.

Community, social and personal services are truly complementary in nature. Some satisfy personal needs, others semipublic and collective ones. Each of these service activities produces only the value added component that identifies the final composite service as community, social and personal. Each final service contains goods and service value added mesocomponents. This fundamental mesoeconomic complementarity suggests that these final services can be successfully produced only as long as all mesoeconomic constitutions are just according to the composite principle of justice advanced in this essay.

Defining and measuring the value of the incremental and cumulative output of community, social and personal services is important in judging and managing their respective mesoeconomic constitutions. Here, the issue is not only whether these value added components are produced under technologically efficient conditions, i.e. minimizing the cost of production per unit of output, but also whether they are produced under economically efficient conditions, i.e. produce maximum consumer or societal welfare at the lowest cost of production.

In the case of business services, economic efficiency is achieved as long as all markets are free and competitive and private property and the sanctity of contracts are respected.

In the case of community and social services the cost side can easily determine their value, but not from the output side since consumers do not directly buy them and producers do not sell them. Measuring the degree to which educational, social security,

welfare and other services satisfy the corresponding needs of the households and individuals is not easy. Giving university fellowships may increase university enrollments. However, if students need not attend classes and professors need not teach them, and if movement from one year to another and graduation are "automatic", it would hardly be appropriate to label these as educational services satisfying educational needs. Although the above example may appear extreme, it is hardly atypical or imaginary. Not only in Latin America but also elsewhere, it is not unusual for "employees" to receive compensation without producing much, or anything, or not even being present on the job. Holding simultaneously more than one or two full time "jobs" in government agencies or state-owned enterprises is not unheard of or even regarded as dishonest or unfair. It simply reflects the power of "connections". And, as said, it is a phenomenon hardly uncommon in the recently discredited Asian "tigers" and "miracles" as well as in the Latin American bureaucracies and state-owned enterprises. Chile's post-1973 experiment in establishing meritocracy in the production of semipublic and collective services has survived the return to democracy. It still carries, however, the stigma of having been implemented by a military authoritarian regime. It is also deeply resented by those who were dismissed and those who aspired to secure, but unproductive, jobs in the state apparatus.

It has been very hard in Latin America to convince politicians, dictators and all others determining employment patterns in the public and even certain segments of the private and privatized sectors that providing "compensation", desert, to those that do not deserve it, except in the sense that they are politically connected, that is those that contribute nothing to output, is not fair. It violates the principle of equality by making unilateral transfers in violation of any civilized concept of justice. And it violates justice as freedom because some have "free access" to the pool of unilateral transfers while other ones are excluded.

Mesoeconomic constitutions of community and social services can be benevolent and sustainable only to the extent that they pass the principle of justice from the consumer as well as the producer side. There must be an output of semipublic and collective services that is of value to their users, i.e. satisfies their respective needs. In addition, however, mechanisms need to be established guaranteeing that this mesoeconomic output value is absorbed and used by the targeted consumers, that there is indeed a satisfaction of needs. In the case of education, even the best teachers may not be able to train students unwilling to learn. In this instance, justice would be carried out only as long as the output is effectively used by the students to augment their human capital. Quasi private market incentives may have to be incorporated in the mesoeconomic constitutions of health, education, welfare, public administration and so forth to guarantee that students actually learn and teachers actually educate them. The student fellowships mentioned earlier should be withdrawn if the recipients do not satisfy strict progress criteria.

"Desert" assumes a dual meaning in the sphere of collective and semipublic services. On the one hand, it will stand for a reward, compensation (desert) to the student who proves that he/she has been educated, rehabilitated and so forth, and, on the other hand, it will reflect compensation in the form of income for labor services delivered (desert) by a teacher, social worker, judge, or police officer as measured by the "impact" of their services. A just delivery of such semipublic and collective services would exist only to the extent that mobility of the recipients improved as measured by such indicators as educational achievements, income earned, quality of job and so forth and by providing higher compensation to better teachers and other providers. Measuring the value of these semipublic and public services specifically in terms of improved mobility as measured by income-generating capacity would go a long way in establishing just consumption and production systems.

Thus, it would not be sufficient to provide equal semipublic and collective services or even to satisfy the "inverse distribution inequality" principle discussed earlier. Justice would be carried out only to the extent that the actual benefits from the services as measured by "results", i.e. specific indicators, were higher for the poor, needy, and women than for the rich or middle class individuals. "Desert", then, would reflect value in terms of achievement, outcome and impact. It would measure productivity revealed by mobility of the targeted cohort. Desert would also reflect variations in labor compensation as a consequence of unequal productivity. Mesoeconomic efficiency in activities producing the last value added component of community and social services would be indispensable in achieving both macro and micro-efficiency and consumer as well as producer mobility.

Recurrent "macro" crises in Latin America, Asia, the economies in transition, and so forth, can be traced to the underlying meso crises and the distorted mesodynamics in the delivery of semipublic and collective composite services.

Formulation of just and sustainable mesoeconomic constitutions is a particularly challenging undertaking in this activity because it includes as producers not only nonfinancial corporations and households in their capacity of unincorporated enterprises but also NPISHs and government. Since the competitive mechanisms determining prices in free, private markets are absent in the semipublic and collective services markets, the risk of serious imbalances between their mesovalue as measured by the "intangible output impact", on the one hand, and, as measured by the input cost side, on the other hand, is very high. Consumers-households have traditionally ended up receiving much less than what they deserve (desert) in terms of quality and quantity of semipublic and collective services produced and needs satisfied for the taxes and other contributions made by them to government and NPISHs. Mesoeconomics is, in my opinion, to a large extent the new architecture capable of tackling and solving these problems. It is the approach able to fill the enormous knowledge gap between micro and macroeconomics responsible for recurrent crises and policy failures.

The final composite commodity called education is made up of the value added, i.e. the incremental output of the educational activity, and intermediate consumption (inputs). When we refer to the need of a positive, growth promoting educational mesoeconomic constitution, we refer exclusively to the constitution shaping the educational value added component. The incremental as well as cumulative value added must grow fast enough and be distributed fairly enough - a supply side argument - to satisfy the need-demand for composite educational services by the children of the already rich, the already educated, of those who can afford (pay for) these services, and as well by the children of the poor and by the poor themselves. In Latin America, the mesoeconomic constitutions have not been compatible either with a fair distribution of the total output of composite educational commodities among individuals and other agents, or with a fast enough growth in the quantity and quality of collective services (C) needed by producers to create the desirable level of mesocomponents of final production and consumption of the composite commodity of education.

12III. Selected Dimensions of Mesoeconomic Policies Capable of Preventing and Controlling Crises and Promoting Mobility

There exists a collective need for sound and sustainable mesoeconomic constitutions in all goods and services mesoeconomic activities. Without such constitutions, neither monetary, nor fiscal, nor foreign exchange policies can be successful. Such sound mesoeconomic constitutions would exist as long as they embody the universal principle of composite justice advanced in this essay. This principle is satisfied whenever the financial constitution is capable of preventing, or at least minimizing, the inefficiency, inflation and insolvency-corruption risks. It is also satisfied whenever all mesoconstitutions prevent unmanageable inefficiency, inflation and insolvency corruption risks.

Mesoeconomic constitutions would be efficient if they can prevent both inefficiency and insolvency-corruption risks. Few, if any, Latin American countries have been able to create and sustain mesoeconomic constitutions that prevent these risks. Furthermore, according to the mesoeconomic approach and the theory of sectoral clashes and coalitions, the financial mesoeconomic constitutions in all Latin American countries have failed to provide on a sustainable basis the unit-of-account, the medium-of-exchange and, the store-of-wealth services needed for an efficient allocation of resources and the efficient functioning of labor, property, intermediate and final commodity markets.

Mesoeconomic coordination and surveillance of financial, government and other constitutions, which will be further elaborated in subsequent sections, is necessary if future Latin American or global crises are to be prevented or controlled. Surveillance is necessary in order to prevent sound and sustainable constitutions in agriculture, mining, transport, storage, health, education and other activities from degenerating into

malfunctioning ones by permitting unsustainable inefficiency, inflation and insolvency risks. Surveillance should aim at, and guarantee, that services provided by the financial to the nonfinancial activities are strictly financial and exclude unilateral transfers imposed, sanctioned or tolerated by the state. The financial activity should facilitate the allocation of labor and property resources to the most efficient activities and enterprises. Such resource mobility would enhance both absolute and relative mobility of households/individuals as measured by consumption, income and wealth criteria.

Mesoeconomic crises of high intensity and frequency materialize because of the existence of defective mesoeconomic constitutions.

Mesoeconomic conditionality exists when either internal or external financing of an economic activity is conditional upon reform of its mesoeconomic constitution that is perceived as unsustainable, or even kleptocratic. Financial mesoconditionality exists whenever an infusion of reserves into the financial system is made under the condition that financial corporations establish strict policies of limiting or totally eliminating their exposure to inefficiency and insolvency-corruption risks. Nonfinancial conditionality exists whenever credits to nonfinancial corporations are made under the condition that such corporations limit or eliminate their exposure to inefficiency and insolvency-corruption risks.

The prospects of preventing future financial and macroeconomic crises increase in proportion to the degree of implementation of financial and nonfinancial mesoeconomic conditionalities. The likelihood of future crises increases whenever lack of these conditionalities increases the inefficiency, inflation and insolvency-corruption risks to crisis levels.

Mesoeconomic contingency financing exists if mesoeconomic constitutions of the financial activity contain plans for providing emergency financing to specific economic activities. Such mesoeconomic contingency financing would promote mobility and growth as long as it provides emergency financing to activities moving from defective, high risk constitutions, to sound, low risk ones.

Mesoeconomic coordination exists when the collective services of public administration and defense produced by the state alone, or in cooperation with private agents, lead to the establishment and implementation of mesoeconomic constitutions in goods and service activities that are in harmony rather than in conflict with each other. Mesoeconomic coordination is needed to prevent the existence and spread of inefficiency, inflation and insolvency-corruption risks from one activity to another.

Both the financial and nonfinancial mesoeconomic architectures-constitutions need to be coordinated to prevent the birth and spread of mesoeconomic risks.

Mesoeconomic surveillance exists when the collective services of public administration and defense embody surveillance of the mesoeconomic constitutions of goods and service activities in a manner that promotes their harmonious coexistence and prevents as well as controls conflict. Mesoeconomic surveillance is needed in order to prevent the presence of lasting inefficiency and any form of insolvency-corruption risks, their spread to other activities and, the assumption of such risks by the financial and public administration and, defense activities.

Imperfect financial markets exist whenever all or some of the financial unit-of-account, instrument-of-transactions and, store-of-wealth services have not been produced in the quantity and quality needed to satisfy the financial needs of the transacting agents of a society (Mamalakis, 1987).

Mesoeconomic imperfections in the flow of information exist if the information in respect to the structure of mesoeconomic constitutions of the goods and services activities is incomplete or inaccurate. Information is no more and no less important than any other dimension of production, and "information" meso-output is as important as any other meso-output.

Mesoeconomic boom-and-bust cycles emerge when some mesoeconomic value added (sub) components go out of control, i.e. diverge from their normal, sustainable level, during the economic upswing and/or downswing due to defective mesoeconomic constitutions.

Mesoeconomic volatility refers to the volatility of the value added mesocomponents of goods and services activities. Mesoeconomic volatility is associated with as well as reflects the volatility of the components of sectoral value added. Thus, value added volatility is a function of the volatility of compensation of employees, operating surplus, consumption of fixed capital and, indirect taxes less subsidies.

Mesoeconomic contagion exists when the existence of a high risk mesoeconomic constitution in one activity creates the perception of high risk in another, otherwise low risk, mesoeconomic constitution of an economic activity.

There is a global need for new financial mesoeconomic constitutions involving a "comprehensive reform of the financial system geared to prevent costly crises and to manage them better if they occur (UN, ECLAC, 1999: 12)."

Immediate action is required from the major developed countries, the developing economies and, the countries in transition. There is a national and international collective need for a global financial mesoeconomic constitution which is based upon sound and sustainable mesoeconomic financial constitutions in industrial, developing and, transition economies.

New global mesoeconomic financial constitutions should include IMF "contingency funds to assist countries now experiencing crisis or contagion and others that could become victims of world financial crisis in the future (UN, ECLAC, 1999: 13)." "Contingency financing" should "be made available before international reserves are depleted, should become a stable feature of the new international financial order and...the availability of funds should be guaranteed without delay when needed (UN, ECLAC, 1999: 13)."

Financial mesoeconomic constitutions in developing and transition economies are not sufficiently advanced to meet the rapidly changing needs associated with globalization. They embody inadequate components of "management of international liquidity, financial supervision and regulation (UN, ECLAC, 1999: 11)."

This "systemic deficiency" in global and national financial constitutions increases the likelihood of recurring crises in the future in Latin America and elsewhere. In the present essay, a systemic deficiency in a financial constitution is said to exist if it is unable to detect, prevent and control inefficiency, inflation and insolvency-corruption risks. Efficiency in management of international liquidity, financial supervision and regulation is to be measured specifically in terms of preventing these mesoeconomic risks.

Financial mesoeconomic constitutions can preserve financial liquidity by establishing a central bank that serves as a lender of last resort. Central banks have, however, lost their ability to maintain price stability and serve as lender of last resort whenever they pursued policies of mitigating the impact rather than preventing high inefficiency, inflation and insolvency-corruption risks in some, or all, economic activities.

Current account deficits, overvalued or grossly undervalued exchange rates, high ratios of short-term debt to reserves and high ratios of short-term and portfolio capital inflows to exports or GDP are part of defective and malfunctioning financial, governmental and other mesoeconomic constitutions permitting excessive levels of inefficiency, inflation and insolvency-corruption risks.

Introducing free exchange rate regimes can eliminate defects of mesoeconomic constitutions caused by defective exchange rate regimes, such as those embodying quotas, differential rates and other controls. However, neither a free exchange rate nor any other exchange rate regime can by itself correct other mesoeconomic defects. Furthermore, the use of exchange rate regimes, such as currency boards, to force governments to introduce sound, sustainable mesoeconomic constitutions may involve high social costs, such as unemployment and economic stagnation for prolonged periods of time, and may be self-defeating. They may also unjustifiably tarnish the "reputation" of a regime whenever its "failure" is caused not by any intrinsic

inadequacy but by the persistence of defective and in-need-of-correction mesoeconomic constitutions of one or more goods and service activities. No exchange rate regime in, and by itself, can prevent the multiple forms of inefficiency, inflation and insolvency-corruption risks. However, to the extent that some exchange rate regimes give rise, strengthen, or sustain, such risks, their modification or abandonment could be a precondition for establishing meso-risk free constitutions.

A major subconstitution of the international trade constitution is the one referring to foreign exchange regimes. These subconstitutions can vary over time, and between nations, depending on whether they embody regimes of totally free exchange rates, currency boards or intermediate regimes such as crawling pegs, exchange rate bands and dirty floats.

The exchange rate subconstitutions can affect social and economic mobility through their impact on the mesoeconomic constitutions of goods and service activities.

Whenever there is inflation, constitutions of fixed exchange rates can lead to an artificial increase in the real cost of domestic value added, mesocomponents, to an artificial decrease in the real cost of imported mesocomponents, and, by inducing deficits in the trade of mesocomponents, lead to unsustainable balance-of-payments disequilibria. The demise of the foreign exchange constitution of fixed exchange rates then becomes inevitable.

Even with free exchange rates, trade and current account disequilibria may not dissipate if distorted mesoeconomic constitutions continue to prevail in one or more goods and service activities.

Repeated failures of almost all exchange rate regimes in Latin America to prevent and control trade, current account and capital account crises stem from the all-too-often overlooked fact that one or more domestic mesoeconomic constitutions are defective, unsustainable and incompatible to each other and the prevailing exchange rate regime. Solutions are sought from new foreign exchange regimes that cannot be delivered by them. The defects of mesoeconomic constitutions cannot be corrected by foreign exchange regimes. They can only be alleviated by a foreign exchange regime. As long as mesoeconomic constitutions that harbor, create and strengthen inefficiency, inflation and insolvency-corruption risks persist, foreign exchange, financial and, other types of crises will be inevitable.

13. Mobility, Government Consumption and the Production of Collective Services

According to the composite theory of justice presented in this essay, a central function of government is to produce the collective services of public administration and defense that promote the common good, the summum bonum. Thus, the existence of government and the participation of the state as an agent incorporated within the

government, is justified by its function as a producer. In no economic, social or political analysis can we ignore or deny the fundamental fact that government is the indispensable producer of collective services and that without an efficient government, i.e. an efficient mesoeconomic constitution of government, other semipublic or private commodities and their value added components cannot be efficiently produced. Thus, government is indispensable as the producer of the final value added component of what is commonly referred to in the SNA as government consumption or the production of collective services.

My concern in this essay is to determine the role of collective services produced by the public administration and defense activity in determining such measures of economic welfare as mobility, equality, poverty and so forth. Has the production of such collective services been adequate? Can the quality of such collective services be improved? Do we have, or can we develop, measures of the quantity and quality of collective services produced that go beyond the SNA cost of a production one?

How should collective services be distributed? What distribution of collective services is fair? What criteria should be used to determine distributive justice in respect to collective services? How does the distribution of collective services affect relative and absolute mobility of households and/or producers as measured by the criteria of private income, private consumption, semipublic consumption, entrepreneurial income or some other one? All aforementioned questions have a normative element. They also suggest additional questions.

Is there an ideal mesoeconomic constitution of government that gives rise to the promulgation and implementation of an ideal output and distribution of collective services (government consumption)? How is an ideal distribution of either private income or private consumption or intermediate consumption achieved by, or linked to, the mesoeconomic constitution of government? Is it possible that different criteria may have to be used in obtaining ideal distributions of income, private consumption, semipublic consumption (services) or collective consumption (services)?

Next we come to the positive questions in respect to the fair distribution of collective services. What is the distribution of collective services in Latin American countries? Is the distribution of collective services (consumption) equal or unequal? Is it possible to differentiate between groups or categories of collective services and their distribution? What factors have shaped the prevailing mesoeconomic constitutions of government and the principles of justice embodied in them?

In the sections that follow an attempt will be made to answer some of the above questions. Since it is, however, impossible to answer all of them, I will focus on the questions and answers most closely related to mobility, the composite theory of justice and the mesoeconomic approach used, in a complementary to macro and micro analysis, throughout this essay.

13I. Production of the Collective Service of Public Administration and Defense

General government final consumption expenditure (G) as a percentage of total Latin American GDP in 1994 was 11.2. This figure excludes Argentina and Brazil that do not publish separate statistics for private final consumption expenditure and general government final consumption expenditure. Furthermore, excluding Argentina and Brazil, general government final consumption expenditure in Latin America in 1994 was US$55.7 billion. This is hardly an insignificant figure. All figures of this section were either provided by ECLAC or were calculated on the basis of information provided by ECLAC.

The above value of general government final consumption expenditure is estimated from the cost side. In other words, in 1994, US$55.7 billion (see table 3) was the sum of value added and intermediate consumption (purchases) by the public administration and defense activity. We do not know how much the public administration and defense activity spent on intermediate inputs (consumption) and how much on value added, i.e. compensation of employees and consumption of fixed capital.

As a starting point, I would like to raise the following question. Can the existing figures of the percentage value of general government final consumption expenditure in GDP provide us with insights in respect to its impact on mobility and welfare? Let us look at the figures.

Excluding Argentina and Brazil, the share of G in Latin American GDP has increased from 8.6% in 1970, to 10.5% in 1975, 10.8% in 1980, reaching a peak value of 11.9% in 1984 and 1986, and then falling to 11.2% in 1990-1 and 1993-4 and 11.1% in 1992.

The average figure of G for Latin America conceals significant differences between nations and periods. In Nicaragua, G increased from 7.0% of GDP (percentages are always in respect to GDP unless stated otherwise) in 1970 to 19.7% in 1980, 48.4% in 1987, subsequently falling to 36.4% in 1990, and 19.5% in 1994. This enormous increase in government consumption was primarily the result of increased expenditures associated with the production of the collective service of defense by the Sandinista Government against the Contra insurgents supported by the United States.

I single out the case of Nicaragua because it is representative of similar historical instances of internal and external warfare elsewhere in Latin America. In such instances, government consumption has risen because the conflict-related cost of producing the collective service of defense increased. Although few countries have experienced spectacular, Nicaragua-type increases in the military conflict-related cost of producing collective services, significant war related increases in G have been common

in Bolivia, Chile, Colombia, El Salvador, Guatemala, Haiti, Honduras, Panama, Peru, the Dominican Republic, Uruguay, Venezuela, Argentina and Brazil.

In the case of Nicaragua, the increase in military expenses and the corresponding rise in the G share in GDP have been associated with a decline in per capita income, increased poverty, downward mobility, an exodus of upper and middle income households, and widespread devastation. In Nicaragua, the regime in power aimed at overthrowing and dismantling a "corrupt bourgeoisie" and replacing it by a new socialist-communist political order. Elsewhere in Latin America, however, increased costs of producing the collective service of defense have been primarily associated with efforts of prevailing political elites in systems ranging from democracies to brutal dictatorships to suppress uprisings by Marxist groups such as the Centero Luminoso one in Peru.

It can be argued that Latin American mobility and economic development would have experienced more favorable levels if government had allocated fewer resources in the production of the collective service of defense and more in the production of the collective services of public administration. Or, it could be hypothesized, as it is so often done, that governments have been forced to allocate an inordinate quantity of resources towards the collective service of defense because too few resources were allocated towards the production of the collective service of public administration.

The above argument could be restated as follows: Latin American mobility and development have suffered because prevailing mesoeconomic constitutions of government have distributed its resources inefficiently, allocating too few resources towards the production of the collective services of public administration, and too many towards the production of the collective service of defense.

The arguments presented in the preceding paragraphs would be valid only to the extent that the collective services produced by the public administration activity served the common good, the summum bonum, by promoting the human, political, social and economic rights of all members of the society. In other words, it is the quality of the collective services produced by the public administration activity that greatly determines the value of both its incremental (value added) and cumulative (gross) output.

There exists no evidence that relative mobility has increased as a consequence of a strong military or increased military expenditures. To the contrary, even though statistical evidence is not available, it can be argued that increased military costs have been the consequence of social, political and economic rigidities that fostered dissatisfaction and unrest which prevailing political institutions could neither prevent nor control.

This brings me back to the mesoeconomic dimension of government consumption that focuses on the difficult to measure aspect of value. It is argued here that too few resources have been allocated by governments in Latin America to produce, through public administration, collective services that promote social, political and economic rights and justice. Defense of the human, social, political and economic rights of all Latin Americans, of all Chileans, Colombians, Bolivians, Guatemalans and so forth, is necessary, if justice as equality in the distribution of G is to be attained.

Few mesoeconomic constitutions play as important a role in shaping mobility as that of government. The relationship between government consumption and mobility can be examined from macro, meso and micro economic perspectives. The nature of the mesoeconomic constitution of government may, however, determine its macro impact as well as the micro behavior of households and producers alike.

Thus, government consumption epitomizes what can be referred to as the mesoeconomic dimension. The emphasis here is on the *value* of government consumption, the *value* of the output of the public administration and defense activity, the *value* of the collective services produced by the public administration and defense activity (a) on the one hand, to providers of labor services, i.e. households, to providers of property services, i.e. non-financial corporations, financial corporations, general government, households and NPISHs, and to the provider of government services, i.e. general government, and (b) on the other hand, to producers of outputs and buyers of input services (generators of income), i.e. non-financial corporations, financial corporations, general government, households and NPISHs. It may be noted that the terms "government consumption," "output of the public administration and defense activity," and "collective services produced by the public administration and defense activity" are synonyms and are, therefore, used interchangeably.

The value of collective services can also be examined through macro, meso, and micro analysis, and thereby be linked to the issues of distributional mobility and social and economic justice in Latin America.

First, there is the issue of the cumulative value of the composite commodity (the sum of value added and intermediate consumption, or gross output, of the public administration and defense activity) called government consumption that needs to be ascertained. The value of government consumption, which, along with private and semipublic consumption, investment, exports, imports and gross (net) domestic (national) product, makes up the macrocomponents in the system of national accounts, is currently measured only from the cost side. It is the sum of the costs of value added and intermediate consumption by the public administration and defense activity. Unfortunately, because collective services are not sold by public administration and defense in the collective market, and consumers do not buy them with cash in the collective market at a price intended to cover their cost of production, we do not have a measure of the value of government consumption from the demand or output side. We

do not have an objective measure of the output value of collective services to households and producers. We infer the output value from the input costs.

According to macroeconomic analysis, government consumption is important because it creates demand, income, and employment, and possibly increases mobility, through its input expenditures, i.e. through outlays on value added (primarily compensation of employees) and intermediate inputs (consumption).

According to mesoeconomic analysis, government consumption is important because, and to the extent that, it determines the value of the collective services produced by public administration and defense. The value of government, or collective, consumption is determined by the satisfaction that members of the society enjoy when their collective needs, including that for mobility, are satisfied.

Second, there is the value of the incremental output, i.e. value added, by the public administration and defense activity that needs to be determined. Once again, we do not have a cash market price and quantity of output that can be used to provide an "objective", tangible, market-exchange-based measure of the output value. The challenge here is to measure the value (productivity) of the employees of the legislative, executive and judiciary branches of government. This is a mesoeconomic issue since it pertains to the value added component of the composite commodity generally described as collective services, which is produced by the public administration and defense activity. Much recent research is focusing on the causes of low, inadequate levels of value-productivity of the three branches of government, and on the formulation of corrective public policies. Longitudinal surveys of households, producers and other cohorts should include questions generating information with respect to the degree of satisfaction of collective needs, including those related to mobility, such as freedom(s), equality of treatment, and so forth. Mesoeconomic analysis of the value of the incremental output of the public administration and defense activity focuses on the supply side, i.e. the ability of this activity to produce an output (value added) that satisfies the collective needs of society members.

The microeconomic approach is important because it assesses the efficiency of the individual production units within public administration and defense, e.g. of various units of the armed forces, of the courts, and of local, regional and federal governments. It is also important because it focuses on the individual household and producer, and the degree to which their collective needs, e.g. safety and protection against crime, are satisfied. The microeconomic approach thus focuses on the demand for cumulative and incremental collective services by individual household and producer units and the supply of such services by individual production units within the public administration and defense activity.

The public administration and defense activity is responsible for the promulgation and implementation of the mesoeconomic constitutions of agriculture,

mining, industry, finance, transportation, education, health and so forth, which embody the principles and rules that determine the creation (production) and use of their value added components. Government can use principles and establish rules that are universal to all, or unique to specific, mesoeconomic constitutions.

Although always important, the central question in respect to the relationship between government and mobility is not so much whether government or private enterprises or NGOs should be the producers of private and semipublic commodities. Instead, it is whether the mesoeconomic constitutions created by government are based on principles, and embody the rules, needed by all producers to give rise to value added components permitting a rate of growth in the production, and a pattern of distribution, of final private, semipublic and collective commodities that satisfy human needs in Latin America in a manner that is socially, politically, and economically sustainable.

The mesoeconomic approach is, possibly, best understood as an attempt to determine the actual "value" of government consumption (C), i.e. collective services, produced by the state, to define and possibly measure the difference (unmet) between the actual (portion of collective needs satisfied) and the desired (total collective needs) value required for sustainable, political, social and economic development and thus to identify the origin, causes, and potential cures of the difference between the actual (positive element) and the ideal desired (normative element) of not only the primary (mesoeconomic) constitution of government, but also of the derived (mesoeconomic) constitutions of agriculture, industry and services. More so than either macro or microeconomic analysis, the mesoeconomic approach attempts to point out that there is a *value* difference between, on the one hand, good, right, or correct, mesoeconomic constitutions, and, on the other hand, bad, wrong, or incorrect, ones.

It is hypothesized here that we can measure the cost of distorted, or inadequate, mesoeconomic constitutions of government, agriculture, industry, services, and other activities in Latin America since Independence and, in particular for recent periods, in terms of foregone income, social, political and economic exclusion (ostracism) and instability, and lack of social, political and economic mobility.

This brings us to the need for mobility, which is both a private-micro and a collective-macro one. Individual and collective dynamism, progress and change are based, facilitated by, and reflected in, the degree of mobility. Since all needs, and the commodities satisfying them are composite, the need for mobility in terms of consumption, or income, can only be satisfied through corresponding final composite commodities cumulatively produced through agricultural, industrial and service value added components.

Household and individual mobility patterns are, therefore, a reflection of producer (production) mobility patterns. Social, economic and political mobility

patterns of households and individuals are derived from, and a reflection of, the mobility dynamism, or lack thereof, in the production of the ever-changing value added components of composite commodities by agriculture, industry, services, and other activities. Ultimately, therefore, the mesoeconomic constitutions of activities producing value added components of composite commodities determine, as well as reflect, household and producer mobility. They determine the degree of household mobility in demanding consumer commodities from, and offering factor services to, producers, on the one hand, and the degree of mobility of producers in offering their value added components and composite commodities to households and other buyers in need of them and, demanding-utilizing the factor services supplied by households and others, on the other hand.

Unless Latin American mesoeconomic constitutions are continuously improved, and, as a consequence, absolute (increased productivity and output) and relative (distributional) mobility of producers is attained, inequalities and rigidities in the living standards of households may continue displaying undesirable magnitudes.

Even though comprehensive, reliable longitudinal and comparative statistical information is missing, it is still widely recognized and admitted that major segments of the Latin American population, possibly in recent years a minimum of 150 million, are poor and excluded from sharing the economic welfare gains since Independence, after 1930, or, more recently, since 1990. To a significant extent, prevailing poverty and exclusion are caused by, and reflected in, a low quantity and quality level of collective services produced by the state and their unequal distribution. In Latin America, the contractarian principle of justice as fairness has been violated whenever collective services were produced largely, if not exclusively, for and by the middle classes and the rich. Discrimination against the poorest, the suffering, indigenous groups and urban marginals in the distribution of collective services has unfortunately been the rule rather than the exception in much of South and Central America. Such discrimination has undoubtedly reduced both the absolute and relative mobility of the poor. It may also have been responsible for the inability of Latin American countries to join the club of developed nations. Without relative mobility, there may be no sustainable development.

The degree to which the distribution of collective services has been unfair according to the contractarian principle of justice may have been reduced substantially in recent years and decades, as a consequence of concerted efforts by national governments and such agencies as the Inter-American Development Bank and the World Bank. However, much more needs to be done to achieve equal benefits from collective services by the poor. Justice as equality in sharing the benefits from collective services has been as important as it has been elusive in Latin America.

According to the utilitarian approach, government consumption would be just if the collective services produced by the state had reached a level and had been

distributed in a manner that created the maximum utility for the largest number of Latin American individuals and households.

The utilitarian principle of justice does not seem to have been applied or satisfied in Latin America either before or after 1930 during the periods that authoritarian dictatorships or totalitarian governments suppressed basic freedoms and human, political, social and economic rights for large segments of the population.

According to the social contract approach, government consumption would be just if the collective services produced by the state were distributed equally among individuals and households. However, an unequal distribution of state produced collective services would also be considered as fair if it favored the least advantaged--the poorest Latin American individuals and households. A distribution that favored the rural poor, indigenous populations, female headed households and urban marginals would pass the contractarian justice as a fairness criterion.

According to the composite theory of justice, the distribution of government consumption would have been fair if it provided equal rights, freedoms and benefits to the poor and the rich and, if it increased the output-contributing and income generating capacity of the poor in a manner eradicating absolute poverty and increasing their relative mobility. Available evidence suggests that the level and distribution of government consumption-collective services has failed the principles of the composite theory of justice.

13II. Transition from Interventionist to Liberal Constitutions of Government

In recent years we have witnessed a major shift in economic ideologies and public policy in Latin America. Structuralist mesoeconomic constitutions, which embodied and implemented a principle of justice based on government intervention, state sovereignty, state ownership of enterprises, and unequal treatment of activities, have been abandoned or transformed.

Liberal mesoeconomic constitutions, which embody, and implement the principle of justice, on the one hand, as maximum freedom of households and other agents, as consumers and providers of factor services, and of producers, as sellers of products and buyers of factor services, and, on the other hand, as equality, i.e. the equal, or minimally unequal, treatment of households, enterprises and nonprofit institutions alike, have been introduced, to varying degrees.

During the age of import-substitution industrialization, discriminatory patterns of household and producer mobility in both product and factor markets were introduced. Interventionist mesoeconomic constitutions of government, created on the one hand, various degrees of discrimination against agriculture-, export-trade-, and finance-based producers, and against households with factor services employed by

these producers, and one the other hand, various forms of privileged treatment of dominant industry, government, and state-owned, or controlled producers, in various activities, and of the households with factor services employed by these producers.

Producers and households linked to neglected, or discriminated against, agriculture, trade and finance, frequently suffered both absolute and relative (unless they were already at the bottom) downward mobility, while producers and households linked to privileged industry, government and state-owned enterprises experienced, at least in the short- and medium-term, both absolute and relative upward mobility. As indicated elsewhere (Mamalakis: 1996f), Latin America experienced during its 1930-1980 structuralist era of development the same snapshot patterns of consumption and/or income inequalities, as during the preceding 1830-1930 era of liberalism.

13III. The Monetary Mesoeconomic Constitution and the Goal of Satisfying the Collective Need of Price Stability

The collective service of price stability has rarely been efficiently produced in Latin America. It is hypothesized here that the public administration and defense activity has totally failed to produce the collective service of price stability if the rate of inflation, as measured by the consumer price index, has exceeded 100% per year.

Accordingly, it is argued that there has been a complete failure to produce the collective service of price stability in Argentina as recently as 1990 when the annual rate of inflation (all figures below refer to annual rates of inflation unless stated otherwise) was a disastrous 1,191.0%, in Bolivia, where the average annual rate of inflation was, during 1985-1989, 268.8%, reaching 8,171% in 1985, in Brazil, where the inflation rate was an average 383.3% during 1985-1989, 2,489.1% in 1993, and 929.3% in 1994, in Chile, which experienced phenomenal inflation rates during the 1970-1973 Allende Presidency, in Nicaragua, where the inflation rate was a catastrophic 33,547.6% in 1988 and 13,490.2% in 1990 and an average of 1,674.4% during 1985-1989, in Peru, which experienced a calamitous inflation rate of 7,674.6% in 1990 and an average of 371.8% during 1985-1989, in Uruguay, which suffered an inflation rate of 129.0% in 1990, and in Venezuela which experienced an inflation rate of 103.2% during 1996 (all figures of the rate of inflation as measured by the consumer price index have been obtained from UN, ECLAC, 1998a, Table A.3, p. 17 or were provided directly by ECLAC).

The complete failure of the public administration and defense activity of most Latin American countries to produce the collective service of price stability is further revealed through the examination of the average and annual inflation rates of Latin America and the Caribbean combined. The average rate for 1985-1989 was 229.8, and the annual rates between 1990 and 1994 ranged between a low 199.7% in 1991 and a calamitous 1,191.0% high in 1990.

During the aforementioned periods the monetary mesoeconomic constitutions failed to either prevent or control rampant inflation and financial and economic crises. These defective monetary mesoeconomic constitutions weakened, sometimes even destroyed, the mesoeconomic constitutions of some or most of other goods and service activities. When crisis or chaotic conditions of inflation in excess of 100%, 1,000% or even 5,000% prevail, mobility as an issue is ignored or neglected. It becomes irrelevant. High rates of inflation so profoundly weaken a country's social, economic and political fabric that focus shifts to short term survival and damage control issues, with long-term topics of mobility and inequality losing in importance.

A partial failure to produce the collective service of price stability exists when inflation ranges between 10% and 100%. Within this range the seeds of crisis are sown. And they can be either contained or explode. It is at this range that monetary mesoeconomic constitutions can lose control over the monetary base, the supply of money and the rate of inflation. It is within this range that inflation becomes endemic and potentially accelerates. It is in this range that interest in the issue of relative and absolute mobility wanes, if it has at all previously existed.

In the so common to Latin America boom and bust cycles, it is during the boom phase that inflation accelerates to two digit levels. Or, alternatively, inflation decelerates to below 100% levels when draconian measures are introduced to move out of the three-digit inflation range and escape from the chaos of hyperinflation. Argentina, Bolivia, Brazil, Chile, Nicaragua, Peru, Uruguay and Venezuela have had instances of partial failure to produce the collective service of price stability both before and after instances of complete failure to achieve price stability.

Countries that have on occasion partially failed to produce the collective service of price stability but have managed to prevent an acceleration of inflation and descent to chaotic hyperinflation include Barbados, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Paraguay, the Dominican Republic and Trinidad and Tobago. Most of these medium or small scale countries have been successful in producing the collective service of price stability over prolonged periods, lapsing into partial failure under unusual circumstances of world inflation, warfare or cyclical shocks.

The collective service of price stability is said to be successfully produced if and when the rate of inflation is at the one digit level and close to zero for a long period of time, i.e. when memories of past and angst of future inflation do not influence decision making. It may be premature to state that as of 1999 some Latin American countries have achieved the goal of price stability. Certain countries have had, however, periods of price increases below 10% per year. Panama has had an inflation rate below 3% throughout 1985-1997. Countries with less than 10% inflation rates include Argentina (1993-7), Barbados (1985-97), Bolivia (1993-97), Brazil (1996-7), Chile (1994-7), Costa Rica (1993), El Salvador (1996-7), Guatemala (1995, 1997), Haiti (1985-9), Honduras (1992),

Jamaica (1997), Nicaragua (1997), Paraguay (1996-7), Peru (1997), Dominican Republic (1991-3, 1995-7), Trinidad and Tobago (1990-2, 1994-7), and Venezuela (1982-3, 1985).

The economic systems of the Latin American countries experiencing complete failure in the production of the collective service of price stability were intrinsically unfair and unjust in the sense that the collective need of price stability failed to be satisfied. No other income group suffers as much from inflation as the truly poor.

No other phenomenon may be as detrimental to natural mobility of both households and producers as inflation. And no other economic circumstance may be as conducive to natural two-way mobility, i.e. both upward and downward, as price stability. Efficient financial mesoeconomic constitutions cannot be established unless there is price stability. Without a stable absolute price level, relative prices lose their function of directing inputs and outputs to their most efficient uses. Unless therefore there exists a monetary mesoeconomic constitution that directs the Central Bank to have as its primary, and only objective, price stability, poverty, social rigidity and, inequality will persist in Latin America. Although any explanation of an apparent low mobility in Latin America ever since Independence is composite emphasizing its multiple underpinnings and causes, none of them, I believe, can be held as responsible as unbridled inflation. Suffice it to mention, however, that price stability is a necessary but by no means a sufficient condition for natural mobility.

14. Investment and Mobility. Macro-Meso Complementarity and Meso-investment Risks

There is another fundamental complementarity that provides a cornerstone to the present multifaceted, multicorner, essay:

4. The macro-meso complementarity: macro variables are an aggregation of meso value added components-variables without which they cannot exist. Furthermore, meso value added components exist because they are part of the composite commodities which, when aggregated, make up the GDP, C, I, E, and M, macrovariables.

Although this macro-meso link and complementarity applies to all aforementioned macrovariables, it is uniquely relevant to investment and the capital formation process involving machinery and equipment, residential and nonresidential construction, overhead investment and all other forms of investment or capital composite commodities.

As is the case of all macrovariables, I, is made up of value added components by all goods and service activities. Both consumer and investment commodities are composite, made up of goods and service value added components. However, a fundamental fact is normally ignored in macroanalysis. Investments are <u>not</u> made in

consumer or capital goods producing industries. Investments are made in the goods and service activities that produce value added components that make up both consumer and capital composite commodities. In other words, investments are always meso, or sectoral, in nature. Mesoinvestments determine mesoproductivities in both goods and service activities. These, in turn, do determine the capacity of the economy to produce enough mesocomponents to increase consumer and capital commodities production in equal or changing proportions, e.g. with or without an increasing investment coefficient.

There exists no such economic architecture where there is one set of goods and service activities producing value added components only for consumer composite commodities and another set of goods and service activities producing value added components for only capital composite commodities, even though there may exist a necessary degree of specialization in some advanced or final mesoactivities. Steel, wood, petroleum, paper, trade, transport, finance, storage and other services end up as value added components in both consumer and capital composite commodities.

What is argued here is that without freedom and equality in all markets, i.e. unless the principle of justice as fairness involving freedom and equality in the composite form advanced in this essay is satisfied, investments in some or all goods and service activities are going to lead to low and/or only slowly rising labor or total productivities. This will be the case because mesoinvestments likely will be made in activities with high insolvency, corruption and unilateral transfer risks and be inherently unprofitable or less profitable than under free and competitive market conditions and under conditions of equal, nondiscriminatory treatment by government.

In other words, mesoinvestment misallocations due to "insolvency-risk" distortions become a cause of stagnation, inflation (expenditures exceed revenues), balance-of-payments disequilibria and so forth. Macro price stability becomes a victim of mesoinvestment policies embodying unsustainable insolvency risks. Absolute and relative mobility, full employment and the balance of payments also suffer as investments are directed towards the production of value added components that are of a quality too inferior to make the composite commodity embodying it competitive or, where there exists no marketable production at all.

The history of Latin America is replete of instances with high-risk investments, or no investments, because of high insolvency risks created by faulty government policies. Such policies have taken the form of protecting and subsidizing state, national or private nonfinancial and financial corporations, accepting lack of transparency in corrupt practices by conglomerates, and, in general, practices condoning or carrying out investments with high insolvency risks.

As an example, during the era of import substitution industrialization, investment in privileged activities, such as industry, was artificially high, while

investment in neglected activities, such as agriculture, was artificially low. Widespread bottlenecks in the supply of agricultural, mining, services, and even industrial mesocomponents were the direct consequence of induced low, artificial, high risk, distributional patterns of investment. These bottlenecks inhibited mobility both by creating low and distorted flows of compensation (income) of factor services (low and artificial income-measured mobility) as well as low and distorted consumer, capital, and export goods output (low and artificial private, semipublic and collective-consumption-based mobility).

In recent years, neoliberal policies have attempted to reduce, even remove, not only the insolvency but also the inflation and inefficiency risks of mesoinvestments through mesoeconomic constitutions promoting freedom and equality-based justice through privatization, liberalization, (de)regulation and stabilization. Unfortunately, even privatization and liberalization do not necessarily either prevent or eliminate private corruption, or guarantee low or non-existent insolvency risks. Panics, devaluations, renationalizations, trade wars and other imbalances have afflicted Argentina, Chile, Peru, Brazil, Mexico, Venezuela, Colombia and so forth because investments in all of them have been exposed, in spite of the neoliberal policies, to high insolvency risks. In turn, these insolvency risks have persisted or resurfaced because of the macrobias in analyzing investment. This macrobias has attracted attention away from the fundamental need to create, maintain, coordinate and continuously adjust mesoeconomic constitutions that minimize all forms of mesoinvestment insolvency risks and promote maximum, profitable investments in all economic activities.

The transition to neoliberal mesoeconomic constitutions established fair incentives to many, though hardly all, producers. Informal producers still suffer from inadequate access to social overhead investment and semipublic and collective services.

Thus, in the process of economic development, the mesoproductivities of investments are more important than the magnitude of investment as a percentage of GDP. The average and marginal saving propensities and investment coefficients can be high, i.e. 20-40%, but due to high or extremely high (from 7 to 12 or higher) capital output ratios, which are the inverse of the mesoproductivities used in this essay, the rate of growth of output can be very low or even zero. Stated differently, even with price stability, even with high saving and investment ratios and coefficients, even with significant capital inflows, a national and global financial and total economic crisis can be imminent, if mesoinvestments are afflicted by high, temporarily concealed, insolvency-corruption-unilateral transfer risks. Such high meso-investment risks precipitated the crises of the 90s in Japan, South Korea, Thailand, Indonesia, Mexico, Brazil, Venezuela, Colombia, Nicaragua, and were behind the implosion of the "lost decade" of the 1980s in Latin America. The traditional, very dangerous, macrobias in investment and growth analysis of Latin America, Russia, Asia, the economies in transition and Africa, will continue to endanger national and global stability, unless complementary mesoeconomic investment analysis prevents formulation and

implementation of mesoeconomic constitutions fraught by high inefficiency, inflation and insolvency-corruption-unilateral transfer risks.

Even at this moment, much of Latin America is at risk of crisis due to the presence of high mesoinvestment risks. Argentina, Brazil, Venezuela, Colombia and Ecuador are likely candidates for crises precipitated by mesoinvestments exposed to high risks. It may be added that mesoinvestment distortions likely will be even worse under high inflationary conditions.

Sustainable growth in income and mobility can be achieved only if governmental and other mesoeconomic constitutions permanently prevent all excessive mesoinvestment risks, whether inefficiency, inflation or other insolvency-corruption risks. Unfortunately, past experience does little to support optimism about the future. Absolute and relative mobility likely will, therefore, also undergo cyclical turns and twists.

Some of the aforementioned points are further elaborated in the following paragraphs.

Physical investment, which has been denoted by I, contributes to labor productivity increases, i.e. to per capita income growth. This investment, which in the System of National Accounts (SNA) is denoted as gross fixed capital formation (GFCF), creates employment. By reducing or eliminating unemployment, i.e. reaching the macroeconomic goal of full employment, investment creates the competitive labor market forces that link wage earnings to labor productivity and move household-individual income (compensation for factor services) above the minimum subsistence, poverty, level.

The notion of generalized household mobility thus becomes effective once full employment is reached and market forces can guide household factor services towards their most productive uses. The essence of this macrofoundation of mobility is demand-linked. As long as aggregate demand, which is propelled not only by investment, but also by the consumption and export components, creates a labor demand that exceeds labor supply, one of the major conditions for generalized mobility exists.

Little, if anything, found in the preceding two paragraphs is new. Even though what follows may not be novel, it is neglected and not fully understood. As illustrated by column (3) of tables (2) and (5), and column (4) of tables (6), (7), (8) and (9), the value added components of the multiple goods and service activities provide the mesoeconomic foundation of the macro investment component of GDP. As previously pointed out, investment is made up of value added components created by agriculture, mining, industry and services. The value and productivity of investment is, therefore, determined by the *value*, the *quality* of its mesocomponents, which are either

domestically produced or imported. This brings us to a central point of the mesoeconomic approach. Although the absolute, macroeconomic quantitative value of investment is determined by savings, its qualitative value, which determines its contribution to output is directly shaped by the *quality* of its intermediate, value added mesocomponents, and indirectly by the quality of factor services embodied in them. Transformation and modernization of the economy, which is propelled by investment, is a function of the speed and quality of transformation and modernization of its mesocomponents produced by agriculture, mining, industry and services. There does not exist, and has never existed, a capital goods producing sector that is separate and independent from agriculture, mining, industry, and services producing its vital mesocomponents.

If there exists a *crisis* in an activity producing the investment mesoecomponents, it will inevitably show up as a corresponding crisis in aggregate investment. And vice versa, a *crisis* in aggregate investment can, one way or another, be traced to a crisis in one or more of its mesoecomponents.

The hypothesis advanced here is that aggregate investment in Latin America has not reached the quantity and quality needed to eradicate poverty, to increase intra and intergenerational mobility, and to generate sustainable economic development, because the mesoeconomic constitutions determining the value added mesocomponents, which are found in Tables 2 and 4-9, have too often been unfair to both households and producers. These mesoeconomic constitutions of the various goods and service activities have been unfair because they have treated both households and producers unequally and have violated the principles of both freedom and equality. They created unfair patterns of exchange in many factor, i.e. labor and property, and product markets by violating private property, sanctity of contracts, freedom of entry and exit, equal treatment and other basic rights of households and producers. As a consequence, demand and supply conditions in both output and input markets have failed to generate sustainable investment levels. Mesoinvestment risks perennially displayed unacceptably high levels.

15. Imports, Exports and Mobility, Mesoglobalization and Meso- and Composite-Comparative Advantage

One of the most powerful developments in the world in recent years has been the phenomenon of globalization. Globalization, obviously, has many dimensions and depending on the perspective, both positive and negative repercussions.

What I want to emphasize here is the mesoglobalization, or the phenomenon of global markets of the meso, or value added, components produced by economic activities. True globalization of trade involves freedom in importing and exporting any value added component and producing composite commodities with any value added component combination. True mesoglobalization is synonymous with mobility of value

added components, whether they are produced by goods activities, e.g. agriculture or manufacturing, or service activities, e.g. trade, transport or finance, either nationally or abroad.

Mesoglobalization exists, and can be successful, only as long as it embodies the composite theory of justice advanced in this essay. Thus, mesoglobalization is based upon and promotes justice as freedom for households and producers to participate in all input and output markets. Having access to all composite commodities increases consumer welfare, i.e. commodities embodying the least expensive combination of nationally produced and imported mesocomponents. Indeed, the essence of globalization is the ability of consumers to choose composite commodities on the basis of the most efficient combination of mesocomponents embodied in them rather than on the basis of their national or foreign origin. Mesoglobalization is associated with the freedom of trade in value added components and gives rise to the fundamental:

5. Fifth, mesocomplementarity between nationally produced and imported value added components of composite commodities. According to this complementarity, national and international welfare, efficiency and mobility cannot be maximized unless there exists complete freedom, and equality, in the exchange and in the trade, of nationally and foreign produced value added components. However, this complementarity can also be defined in a strong version. This states that production of composite commodities can be efficient only with free and equal trade because there always exist imported mesocomponents that are less expensive than nationally produced ones as measured by the value of exports required to pay for them.

Mesoglobalization also promotes producer welfare because it permits producers to enter the markets of mesocomponents in all corners of the globe in an effort to deliver and/or obtain the least expensive ones. Mesoglobalization cannot exist, however, unless all producers have equal, and as I said, free access to all mesocomponent markets. Justice, then, is also defined as desert, merit, worth, where the most efficient producers of value added components and the factor services utilized by them, receive the higher compensation they deserve (desert) merit by being more efficient than other ones.

This brings us to the sixth mesocomplementarity, which is a reformulation of the fifth one:

6. Sixth, export-import mesocomplementarity. According to this complementarity, nationally produced value added components are complementary in production with imported ones. As a consequence, they cannot be exported as an ingredient of a composite commodity unless they are joined by an imported component. As an example, a personal computer can be exported by Mexico, Chile, or Guatemala, i.e. enjoys a competitive export price, only if its chips can be imported. Exportable value added components can be created only as long as complementary

imported value added components, which are less expensive than nationally produced ones, are available. Producers can take advantage of, and survive in the era of globalization, by producing the least expensive mesocomponents, by producing composite commodities with the least expensive combination of national and imported mesocomponents, and last, but not least, by having access to the most efficient labor and property factor services.

As already mentioned in this essay, justice as freedom, and, thus, freedom in consumption and production, is no panacea. There is also a need for high quality factor services and these cannot be available unless semipublic and collective services (consumption) are produced and distributed in a manner that all individuals can acquire the skills needed to make them nationally and internationally competitive, and all money, capital, and, in general, property markets are free of the inflation and insolvency-corruption-unilateral transfer risks.

The law of comparative mesoadvantage and the parallel law of comparative composite mesoadvantage, fundamentally determine international trade, and its export and import components. The law of comparative mesoadvantage states that an economy will specialize in the production of those value added components that it can produce more efficiently, i.e. at a better quality and at a lower cost, than other countries. The law of comparative composite mesoadvantage states that an economy will specialize in the production of the composite commodities that have a combination of value added components that is less expensive, i.e. more efficient, than those achieved in other countries.

The process of globalization is thus a process of mesoglobalization and mesospecialization where each country takes advantage of, and promotes, both its comparative mesoadvantage and comparative composite mesoadvantage. The ability to gain from the process of globalization is determined by the ability of a country to achieve dynamic mesocomparative advantages of both the single and composite type through the mesoeconomic policies presented in this essay. Globalization in its mesoform both promotes, and is based upon, household and producer mobility. The mobility of households and producers in producing mesocomponents, i.e. in creating and maintaining comparative mesoadvantages will determine the ability of households-consumers to increase their absolute and relative mobility as measured by the various consumption and income indicators.

Because each and every meso value added component can be part of a composite commodity that is tradable, the distinction between tradable goods and nontradable services value added is meaningless both analytically and empirically when it refers, as it does, to the incremental output, or value added, of goods and service activities (Mamalakis, 1997). When it refers to composite commodities the distinction between tradable and nontradable is tautological because it refers to the noncontestable fact that all value added components, i.e. goods- and service-ones, are part of composite

commodities that are subjected to final use either within a country or abroad. Mesocomponent tradability always exists. But it does not guarantee composite commodity tradability.

16. The Composite Theory of Justice and Mobility

What is this "composite" theory of justice advanced in this essay? What is new in this theory? How does the "composite" theory of justice differ from the utilitarian, contractarian, libertarian and communitarian theories of justice? Is the "composite" theory of justice simply an economic or a more comprehensive theory of justice? Is the theory of justice based on some general principles, i.e. is it rule-based, or is it based on "results" achieved irrespectively of the means, i.e. results-based or act-based?

First of all, the theory is denominated as composite because it focuses not only on one indicator of justice, e.g. income, or just one dimension, e.g. consumption, or just one characteristic, e.g. redistribution of consumption, but on the whole process that creates and distributes economic, i.e. costly and useful, goods and services that determine welfare, well-being, satisfaction or even happiness and utility of people.

Second, and this is an extension of the first point, justice is composite in the sense that it can be judged by using a variety of indicators. These include a variety of consumption concepts: private, semipublic and collective consumption, separately, as a cumulative total or, in various combinations; a variety of income concepts: labor and/or property; or alternatively, primary, disposable, adjusted disposable and total income.

Third, and once again, this is an extension of the preceding two points, it differs from the alternative theories of justice, which focus on only one or a few, not clearly defined indicators, by raising the bar in claims made about general theories of justice. Not only does it challenge alternative theories of justice to clearly define the indicators, criteria, or measures used by them, but furthermore, aims to demonstrate, that in a "process-type" rather than a "snapshot-type" of justice, numerous indicators become relevant in defining justice.

Is it possible that a libertarian perspective can be valid or more appropriate than other ones when the ideal constitution for the creation of income by producers is formulated? Is it possible that a utilitarian perspective, on the other hand, is ideal or more appropriate than other ones when the constitution for the distributional (distribution) pattern is determined, after and once income is created? Is a communitarian perspective possibly more relevant or appropriate than either a libertarian or utilitarian one when the distribution of collective services is determined? Is the contractarian the most appropriate theory of justice when the constitution for the distribution of semipublic educational, health, and social security services is formulated? The answer provided by the composite theory of justice is yes, in the sense that, even though freedom and equality are equally important and complementary,

different weights may be assigned to them at different production, distribution, and accumulation, stages in an effort to promote the common good, to provide maximum welfare for all.

Fourth, the theory is composite in that it advances the hypothesis that in defining justice it is necessary to inquire whether its principles are, can be, or should be the same when the different stages of (1) production, (2) primary income generation, (3) primary distribution, (4) secondary distribution, (5) tertiary distribution, (6) quartic or total distribution, (7) consumption and (8) accumulation and so forth are considered. It may be possible that some general principles, such as freedom and equality, need to be satisfied in all stages of utility, welfare, or satisfaction creation. Or, it may be possible that the concepts of freedom and equality can be interpreted in different ways depending on the stage at which commodities are created or the form of use or consumption of these commodities.

Fifth, the theory is composite because it explicitly separates welfare and justice (a) from the perspective of the individual and household as an entity deriving utility, satisfaction, welfare or happiness by satisfying its needs through consumption, and (b) from the perspective of the producer who derives utility, satisfaction, happiness and welfare from producing the value added components of the composite commodities used to satisfy the needs of individuals and households. In addition, it is necessary to point out that the present theory of justice is also composite in the sense that it claims that a household derives satisfaction, on the one hand, from consumption that satisfies its needs, and, on the other hand, from earning income as a compensation (desert, merit, worth) for labor and property services offered to, and used by, producers in creating value. The type and degree of satisfaction generated from consumption, on the one hand, and income creation, on the other hand, may not be the same. Furthermore, consumption without previous income creation may sometimes satisfy, other times violate, the principles of justice associated with, or providing, the maximum incentives to some or all producers.

The sixth point is that the composite theory of justice is indispensable in the analysis of mobility of households and producers as measured by indicators in their snapshot variety or in a longitudinal perspective or form. Since mobility is a concept involving movement in one form or another within or between generations, and, furthermore, clearly distinguishes between snapshot and lifetime or permanent income, it can hardly be analyzed by any theory of justice that is not composite in the sense of examining the impact of such general principles as freedom and equality not only on welfare-consumption-income, at a moment in time, e.g. today or tomorrow, but also over one or more generations, or over a lifetime. The composite theory of justice advanced in this essay clearly demonstrates that applying the principle of equality indiscriminately on consumption, i.e. by not separating types of consumption at a moment versus over a lifetime, can actually reduce both, and thereby reduce consumption-derived welfare.

Seventh, not only is mobility analysis inseparable from the theories of justice but, furthermore, the composite approach to mobility requires and benefits from a composite theory of justice. Furthermore, all theories of justice could benefit from considering the issue of mobility, and their validity and applicability could be judged and tested in respect to household and producer mobility as determined by various principles of justice.

Eighth, all aforementioned points converge on the issue of public policy. Public policy formulation and implementation requires explicit consideration of the multifaceted, multidimensional, composite notion of mobility, and of the related, inseparable notion, of composite, multifaceted notion of justice.

Ninth, this analysis of justice and mobility would not be complete if it did not emphasize once again the point that value is created by both goods and service activities, that the producers operating in, and creating value in, the various activities are not the same, i.e. households, financial and nonfinancial corporations, government and NPISHs are not equally important in all activities in adding value, and that, therefore, the principles of freedom and equality may be applicable to different degrees and in different combinations in different activities.

Tenth, the theory is composite and flexible in assigning equal weights to freedom and equality as foundations of justice. However, it clearly also states that these are complementary, thus advancing the principle of the

7. Seventh, complementarity between freedom and equality. This principle states that equality is the key principle in government consumption, i.e. in the production of collective services. Freedoms must be produced equally for all, by the government-state. And households and producers must be treated equally by the government-state. Furthermore, however, the state-government must promote equal freedoms. In that sense, the state-government can promote welfare, justice and mobility by maximal emphasis on the complementary freedom-equality principles. Maximum freedom of choice and action of individual, households and producers in commodity, value added and input markets, as well as in their use of leisure time, can only be achieved through maximum equal treatment by, or maximum equal access to, collective services produced by government state.

Eleventh, the composite theory of justice and the underlying mesoeconomic approach, emphasize that freedom and equality must be the principles of justice embodied in all mesoeconomic constitutions of the goods and service activities producing value added components for the final composite commodities described as private, semipublic or collective consumer ones, or as investment-capital, export and import ones.

The composite collective services-commodities cannot exist without, and independently from, its goods and services mesocomponents. These, in turn, cannot be efficiently produced unless their respective mesoeconomic constitutions have been promulgated and implemented by the government produced collective services in a manner that clearly reveals the sacrosanct nature of justice based on the principle of freedom- equality complementarity. Only then can the also complementary, reinforcing, household-producer mobility and welfare be promoted. The household consumes each and all value added components of a composite commodity. Thus, its welfare is determined by the quality and quantity of these value added components produced by the goods and service activities. In turn, and as already noted, producer efficiency in these activities is determined by the extent to which the composite theory of justice based on the complementary freedom-equality principles is part of the respective mesoeconomic constitutions.

Twelfth, the composite theory of justice aims to bring the economic development discourse and the related issues of economic distributive justice, poverty, inequality and mobility towards the center, away from the simplistic, extreme, monodimensional approach of modern, rational expectations-based, macroeconomics that has, according to many, become irrelevant by ignoring the vital mesoconnections between household private, semipublic and collective consumption and the layers of producers in the goods and service activities described in the SNA and the present essay. The mesodynamics emphasized in this essay encompass all parts of the economic organism and reveal how it works--something modern macroeconomics fails to do. However, as I already mentioned, mesodynamics, though indispensable, are nevertheless, complementary, not a substitute to macrodynamics. They try to enrich it, not replace it.

Thirteenth, the composite theory of justice hopes to clearly demonstrate the fundamental importance of the

8. Eighth complementarity between production and distribution. Unless justice as freedom and equality is applied to all incremental stages of adding value, total production that can be distributed will suffer. Furthermore, however, unless justice as equality and freedom is also satisfied at all levels and forms of distribution, the incremental process of adding value and production will also suffer. Without production and creation of value there can be no distribution of income. Without a fair distribution of income and consumption, production will suffer.

Fourteenth, although there are numerous additional dimensions of the composite theory of justice, I would like to conclude with the

9. Ninth complementarity between consumption and income. No society can survive if it adopts a system of justice delinking consumption from income. If households can consume without previously earning income as a reward (desert, merit, worth) and compensation for their supply of factor services, their supply of factor

services will dry out. Similarly, if producers can receive "income" without an entrepreneurial contribution to production (their services can be considered as a category of labor services), i.e. as a unilateral transfer, production will collapse because entrepreneurial services will also dry out. With justice as desert for factor services being abandoned as a principle guiding economic and social behavior, factor markets, and consequently output markets will collapse. This would be the epitaph of generalized corruption.

My conception of justice as composite in nature would generate universal support. Actual as well as potential producers would develop a desire to act in accordance to the liberty and equality (nondiscrimination) principles of justice in production because they would benefit from the helping and guiding hand of government. Informal producers would support the basic structure of the Latin American societies that eliminates the barriers between the informal and formal segments of production through universal protection of property rights and duties, contract rights and duties and, collective services that promote freedom and equal treatment of all social agents in input and output markets. National producers would support the social structure because it does not favor either foreigners or the state or any other producers connected to the state on the basis of kinship, race, religion, party affiliation or any other criterion.

17. Conclusion

In order to reveal the multiple dimensions of social, political and economic mobility, longitudinal studies of the type described by Medina (1998), will be needed both for households and producers. Panel studies of the changes in living patterns and mobility of particular groups of households would need to generate information about changes in their consumption of private, semipublic and collective commodities and their primary, disposable, adjusted disposable and, total income. Furthermore, panel studies of the changes in the production standards of producers would need to generate information about changes in output and input market climates.

Longitudinal studies would be particularly helpful if they could generate information about changes in the consumption of semipublic and collective services by various household and producer cohorts. Panel studies would improve public policy formulation by generating information about the level and changes in unmet private, semipublic and collective needs of both households and producers.

To the extent that living patterns and mobility of households, as measured by consumption and income, are derived from the dynamism and health of producers, longitudinal studies generating information about their production standards as shaped by the stability of the political, legal, and regulatory environment, could enhance public policy formulation.

It has been hypothesized that unfair government policies (mesoeconomic constitutions) in respect to both households and producers have deprived Latin American economies of the dynamism needed to overcome their poverty, inequality, and lack of mobility problems. These problems could, however, be solved by government policies (mesoeconomic constitutions) that are just to both households and producers. Understanding the complexity of this challenge would be a step in the right direction.

A bill of mobility rights or conditions for households and producers could possibly lead to as well as affect an improvement in the quality of collective services produced by the state. It could also narrow the gap between the actual and desired mesoconstitutions of government.

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Poverty, Growth and Distributional Mobility in Jamaica

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1. Introduction

For the purposes of this paper, I take distributional mobility to be associated to changes in income. That is to say, these concepts are not synonymous but a change in one usually implies a change in the other—particularly over the medium to long term. Relative distributional mobility, then, could be measured, or reflected in, the share of the population changing income deciles during a particular period of time.

While mobility may be an important feature of the development process, it is important to keep in mind that high mobility is not necessarily related to improvements in welfare or the distribution of income, and indicators of high mobility (as the term is used in this paper) cannot be used for inferences regarding welfare, growth, or income distribution. One example will suffice to illustrate.

It concerns what, in a rather clumsy translation into English, might be called "the great circulation of estate."[i] In the first half of the 17th century, the King of Sweden carried out a massive redistribution of land—particularly as a reward for services rendered during the Thirty-Year War (1618-1648). Most of this land was given to the lower strata of the nobility. Hence, land distribution in Sweden changed dramatically in just a few decades: while the nobility held about 20 percent of available land in 1600, its share had increased to a remarkable 75 percent 50 years later. As agriculture was virtually the only productive activity in 17th century Sweden, this implied a massive transfer of wealth to the nobility (particularly from the peasants); moreover, since most of the land was given to the lower strata of mobility, the redistribution triggered a rapid upward social movement of those strata: a substantial part of the wealth of the current Swedish nobility can be traced back to this redistribution.

However, after the abdication of Queen Kristina in 1648, voices were raised for the reclamation of land. Following the Riksdag in 1680, King Charles XI proclaimed most of the earlier transfers void and initiated a large-scale repossession of land from the nobility. In 1700, as a result, land in Sweden was roughly equally divided between the King, the nobility and peasants. Table 1 summarizes the distribution of land before and after this process.

Table 1

Distribution of Land in Sweden. Percent of Total Arable Land

	1600	1650	1700
The King	30	15	33
The Nobility	20	75	33
Peasants	50	10	33

Source: Ohlmarks and Bæhrendtz (1981), p. 251

What is the point of this example? First, since Sweden in the 17th and 18th century was an agrarian society, in which fertile land was a relatively scarce resource, there was a close correlation between wealth and possession of land. If we use the classic division of Swedish society into the four estates—men of the church, the nobility, burghers and peasants—and define mobility in terms of the number of people changing estates, the 17th century was surely a time of intense mobility—up and down—in Swedish society. Third, the example shows how mobility may be affected to a large extent by government policies;[ii] this is a point I will return to in the main text. Finally, and this is the point I want to make, increased relative mobility is not anything desirable *per se*, neither from a distribution perspective, nor from the point of view of growth: it depends entirely on how such mobility affects poverty (in the first case) or incentives (in the second).

This paper deals with distributional mobility in Jamaica from the perspective of poverty. This has some important implications. In particular, I concentrate on the possibility of upward mobility by the poorer strata in society; second, I view growth as being a fundamental prerequisite for that to happen. I try in Section 2 to identify some important elements of Jamaican poverty to see whether the poor in Jamaica can be defined as having an intrinsically lower mobility than the more well-to-do. In Section 3, I try to link policies, growth, poverty and mobility. Section 4 assesses briefly data availability and offers some concluding remarks.

2. Poverty in Jamaica

Approximately 34 percent of the population have incomes below the officially recognized poverty line of J$4,151 per annum (about US$116). However, Jamaica, as most Caribbean countries, shows a consistently higher rank for the UNDP's Human Development Index than for per capita income, suggesting that these countries allocate a larger share of income to health and education expenditures than do other countries in the same income rank. Table 2 shows some social indicators for Jamaica and other Caribbean countries in the lower middle-income group.

If we take as the point of departure the idea that there is a (negative) correlation between per capita income and poverty indicators, Jamaica scores quite well, even when compared to other Caribbean countries. Thus for instance, Jamaica has a lower

level of poverty (as reflected in a head count) than Belize, even though the latter has a per capita income which is 70 percent above that of Jamaica's. Also, infant mortality in Jamaica is considerably lower than that in Belize and the Dominican Republic and even marginally lower than that in Trinidad, even though Trinidad's per capita income is more than twice that of Jamaica's.

Table 2

Socio-Economic Indicators. Most Recent Estimate

	Belize	D.R.[a]	Guyana	Jamaica	T.T.[b]
Per capital income (US$)	2,700	1,600	690	1,600	3,870
Poverty (Head Count)	34.6	20.6	43.2	34.2	21.2
Poverty (depth)[c]	12.5	n.a.	16.2	10.6	7.3
Primary school enrollment (%)	99	81	90	100	88
Public expenditure on health	6.1	2.0	3.4	3.0	2.6
Life expectancy (years)	75	71	64	74	73
Infant mortablity[d]	35	40	59	12	13
Gini coefficient	n.a.	0.49	0.402	0.379	0.418

Sources: World Bank (1996); WDI (1998); Deininger and Squire (1996); Boyd (1988)

[a] Dominican Republic

[b] Trinidad and Tobago

[c] Percentage of poverty line that is needed to eradicate poverty

[d] Per 1,000 live births

This suggests that poverty is a matter not only of growth and a high level of income but also of government policies. Indeed, distributional mobility and poverty is closely linked. Not in the sense that low mobility inevitably causes high poverty or vice versa, but in the sense that the same government policies that affect distributional mobility also affect poverty. A major task is to identify these policies and their impact.

In the short run, the government may view the level of income (or the rate of growth) as given; to fight poverty, it has to redistribute existing income. The trend in income distribution, then may be one indicator of the government's willingness to specifically address the problems of the poor. Table 3 shows how the distribution of income has changed in Jamaica since the mid-1970s.

Table 3

Expenditure Inequality in Jamaica, 1975-93. Quartiles.

Year	Gini	Quart 1	Quart 2	Quart 3	Quart 4	Ratio[a]
1975	44.52	4.10	13.10	27.30	49.70	12.12
1988	43.16	5.41	15.19	29.68	50.97	9.40
1990	41.79	5.98	15.86	30.31	51.63	8.63
1991	41.11	5.83	16.04	30.96	52.54	9.00
1992	38.48	6.49	17.16	32.62	54.88	8.45
1993	37.92	6.82	17.87	33.29	54.80	8.03

Source: Deininger and Squire (1996)

[a] Quart4 as a multiple of Quart1

A word of caution is that the 1975 and 1988 figures are from Household Budget Surveys, while the 1990-93 figures come from World Bank LSMS-surveys; they may thus not be entirely comparable.[3] However, note that the figures relate to expenditures rather than income, so activities in the informal sector may be captured here as well.

In any case, the Gini-trend is clearly negative: the distribution of income has improved considerably since the mid-1970s. As can be seen from the last column in the Table, this has been attained by improving incomes of the poorest quartile. Redistribution à la Robin Hood has not played a major role: the share of expenditure of the richest quartile has increased from less than half of total expenditure in the late 1970s to over 55 percent of total expenditure in 1993. As I have argued in another paper (Danielson 1998), this suggests that the strategy has been to finance social services targeted to the poor by relatively neutral taxes; this also accounts for the relatively decent score for Jamaica on social indicators.

To be able to devise a reasonable poverty alleviation strategy one must know why the poor are poor. We know that the major causes differ between continents: people are poor in many African countries because of low-fertile land; in Asia, because of lack of land; and in part of Latin America because the available land exhibits a very skewed distribution. Inasmuch as the causes seem to differ, however, there are also a number of common denominators: poor households are more often than not rurally based, poorly educated and, without access to credit. The available data for Jamaica do not contradict that, although the survey I rely on here does not report on land distribution or the location of the poor.[4] Table 4 provides some of the available data.

Table 4
Characteristics of Poor and Rich Households

	Q1	Q2	Q3	Q4	Q5
Household Characteristics					
Female headed households (%)	44.1	46.9	46.4	41.0	38.9
Household Size (mean)	6.0	5.2	4.3	3.6	2.5
Number of Children (<15yrs)	2.63	2.04	1.48	1.09	0.59
Highest Education[a]					
Primary	59.6	51.0	49.9	45.0	31.2
Secondary	40.4	48.0	48.6	52.5	52.6
Tertiary	0.0	1.0	1.5	2.5	11.8
Employment					
Unemployment	9.5	15.6	14.3	15.3	9.2
Labor force participation rate	72.3	67.0	66.3	71.3	72.9

Source: World Bank (1996)
[a] Head of household

We know from other sources (such as Boyd, 1988) that the poor are predominantly rural based. The table shows that the mean size of the household is also larger for the poorer quintiles and, consequently, that the number of children is larger in poorer families. Contrary to the situation in many other countries, however, female-headed households are not significantly poorer in Jamaica.

As for education, the situation in Jamaica resembles the one in other countries: almost sixty percent of the household heads in the poorest quintile has, at most, primary education, while well over half of the household heads in the two richest quintiles have at least secondary education. To the extent that it is possible to draw policy conclusions from these meager data, one would be that the private returns to education seem quite high and that universal access to education of reasonable quality would be one avenue out of poverty.

The data for unemployment and labor force participation confirm the suggestion that poor households are based in rural areas: unemployment in the poorest quintile is as low as in the richest quintile, and labor force participation in the poorest quintile is significantly higher than in the middle-income quintiles. The poor, then, have some land and often complement that income by working for wages on plantations. People in Quintiles 2 and 3, by contrast, are often based in urban areas (at least partly), earning an income in the informal sector as street vendors, higglers, or in the urban, formal sector. (The large proportion of labor working in the informal sector may account for the low official labor force participation ratio.)

The data in Table 4 is complemented by some economic data in Table 5. There are several noticeable features here. First, the share of food in the consumption basket is higher for the poorer quintiles: while the poorest households spend around two-thirds of their income on food, the richest quintile spend over half of its income on non-food items. Second, the traded goods sector is much more important for poorer households: the poorest quintile earn over ten percent of total income from the traded sector. Since the poorest quintile earn about 6.5 percent of total income, it relies disproportionately on the tradeable sector. By contrast, the richest quintile—which earns about 45 percent of all ncoime—spends less than a third of all income on tradeables.

Table 5

Economic Characteristics of Households

	Q1	Q2	Q3	Q4	Q5
		Consumption			
Food	67.4	63.1	61.1	58.9	49.2
Non-Food	32.6	36.9	38.9	41.1	50.8
		Income			
Traded	10.5	15.8	20.5	22.0	31.3
Nontraded	5.3	10.3	16.7	22.7	45.2
		Expenditure			
Traded	5.4	10.3	15.7	22.8	45.7
Nontraded	3.7	7.1	12.0	20.1	57.1
Total	6.5	10.8	15.2	22.3	45.2
IE-ratio traded goods[a]	1.94	1.53	1.31	0.96	0.68
EI-ratio nontraded goods[a]	1.43	1.45	1.39	1.13	0.79
		Nutritional Status			
Mildly malnourished (%)	14.3	5.0	5.6	5.6	6.8
Severely malnourished (%)	0.2	0.3	1.1	0.4	0.5

Source: World Bank (1996)

[a] Ratio of income to expenditure

Another way to see the dependence of the poorer strata on the traded sectors is to examine the rows labeled "IE-ratio". Here, the ratio of income to expenditure is shown for traded and non-traded goods. The three poorest quintiles have IE-ratios for traded goods which exceed the IE-ratio for nontraded goods, while the reverse is true for the two upper quintiles. Consequently, a change in the real exchange rate will have immediate consequences for income distribution. In particular, a real devaluation will tend to favor the poorer segments of the population as this tends to increase the relative price of tradeables and, the poorer strata earn more from tradeables than they spend on it. Finally, it is quite remarkable that there is virtually no sign—barring the proportion of mildly malnourished in the poorest quintile—of nutritional status varying with income: 5-6 percent of children in all income categories are mildly malnourished and the cases of severe malnourishment does not appear to be related to income level, either.

To summarize: the poor in Jamaica have several distinguishing features. First, they tend to live in rural areas and have access to land or wage labor opportunities. Consequently, unemployment is relatively low among them. Second, they are relatively dependent on tradeables—both for production and consumption, but more so for the

former. Third, about two-thirds of the budget of the poor is devoted to food, so changes in food prices—by, for instance, subsidies or taxes—have a direct and significant impact on the poor. Fourth, while the poor tend to have larger families than the nationwide average, female-headed households do not tend to be poorer than the average. This is, perhaps, an indication that women have relatively good access to the labor market. Finally, poor household heads tend to have a significantly lower level of education than their richer counterparts. From the available data, this would seem to be a major lesson as it points to high private returns from primary and perhaps secondary education.

3. Socio-Economic Mobility, Distribution, and Growth

As I noted in the introduction, mobility may be measured by the frequency with which a random individual or household changes step on the socio-economic ladder. This raises several questions regarding how households should be classified, which time frame is used, what is the counter factual against which to evaluate actual events, and so on. As I shall discuss later on however, a strategic issue is how we picture the ladder: what dimensions does it have? It is quite common to reduce the ladder to one dimension—income—and to treat issues of mobility as simply one in which someone increases earnings faster than the neighbors (relative mobility) or faster than the rest of the world or faster than in the past (absolute mobility). Such an approach not only ignores important aspects of social dynamics, it may actually be misleading, because it masks the mechanisms leading from changed income to higher mobility.

Before I turn to issues of dimensioning the social ladder however, it isuseful to consider another aspect of mobility: income distribution and its dynamics over time. The text-book view of income distribution over time tends to be discussed in terms of Kuznets' inverted U-curve. Briefly, this states that if income inequality is charted over a growth process[5] it will tend first to increase and then to decrease. The standard interpretation of this result is that at low levels of income, equality is high because everyone lives close to the subsistence minimum. As income grows, it typically does so in "growth poles" which increases inequality. Eventually, the benefits from the growth poles trickle down, so inequality decreases once again.

While this process may well contain more than a grain of truth—although there is considerable debate concerning its usefulness—it should be realized that all countries do not necessarily follow the same U-curve. Some countries manage to keep income inequality relatively low throughout the development process, while others find it difficult to reduce inequality even as income has reached high levels. One relevant question here is: what is the role of the government?

From a policy perspective, several important factors have to be treated as given when addressing issues of inequality, particularly for two of the most important determinants: regional differences, and the level of income. The government can, however, influence inequality, particularly by (i) changing the size of the state sector

where wage dispersion is typically lower than in the private sector; and (b) by changing the volume of transfers. The World Bank (1994) attempts to distinguish the importance of "given" factors from those that the government can influence. The results are in Table 6.

Table 6

Decomposition of Income Inequality.Gini Points Divergence from OECD Inequality.

	Socialist	Africa	Asia	Latin America and the Caribbean
Social Choice	**-13.0**	**+11.0**	**+3.0**	**+8.1**
State Sector	-15.6	+2.3	+2.0	+0.4
Size of transfers	+2.8	+8.7	+8.1	+7.7
Asia dummy	n.a.	n.a.	-7.1	n.a.
"Given" factors	**+4.4**	**+7.3**	**+5.9**	**+8.1**
Regional inequality	+0.3	+1.5	+0.8	+2.6
Income level	+4.1	+5.8	+5.1	+5.5
Unexplained	+2.2	+2.8	+0.9	+1.8
Actual difference	-6.4	+21.2	+9.8	+18.0

Source: World Bank (1994)
Note: A negative sign indicates that a given element reduces inequality in the region compared to the OECD

The actual difference in income inequality between the OECD and Latin America and the Caribbean is that the latter has, on average, higher inequality corresponding to 18 Gini-points. Approximately half of this can be explained by intra-national differences, and the lower income level in Latin America. The remainder is explained to a large extent by the lower size of transfers in Latin America. Put another way: if all countries follow Kuznets-curves, and if their different position can be explained by regional inequality, it would be possible for countries in Latin America and the Caribbean to reduce income inequality by increasing government transfers. In addition, the large value of this coefficient indicates that inequality may be quite responsive to government transfers.[6] The point I would like to make here, however, is this: while increased transfers may decrease the Gini-coefficient, it does probably not increase the possibility for upward mobility on the socio-economic ladder. Transfers increase the consumption possibilities and welfare of the recipients, but they do not in any fundamental way increase upward mobility. Indeed, if transfers are targeted to the poor they may even serve to decrease mobility by creating "poverty traps".

Table 7

Distribution of Benefits of Public Sector Output

	Q1	Q2	Q3	Q4	Q5
		Education			
Primary	31.0	26.8	20.6	15.4	6.2
Secondary	10.2	14.8	24.8	29.9	20.4
Vocational	6.2	31.0	22.1	28.9	11.7
			Health		
Hospital	19.1	17.5	23.0	22.6	17.7
Health center	25.2	30.4	15.6	17.7	11.1
			Public Utilities		
Sewer connection	10.6	8.4	20.3	23.6	37.1
Water connection[a]	5.8	9.1	20.7	25.3	39.1
Water connection[b]	28.7	27.9	17.0	17.5	8.9
Electricity connection	11.6	15.7	21.6	24.1	27.0
Per capital expenditure	4.8	9.4	14.6	22.1	49.1
			Public sector employment		
Share of jobs	4.4	6.4	16.3	24.6	48.3
Share of income[c]	2.0	4.9	15.0	25.2	52.9

Source: World Bank (1996)

[a] Indoor

[b] Public standpipe

[c] Income from public sector as percentage of total income

Consequently, while pro-poor transfers may increase the possibilities of a decent life for those in the poorest quintile, other measures are required to increase flexibility in the economy. Table 7 shows how the benefits from the public sector are distributed among the different income groups. In terms of a static framework, the data in Table 7 suggest that public expenditures on primary education, health centers, and public standpipes are directed to the poor, while indoor water connections, electricity connections, and expansion of public sector employment is not. Secondary education, vocational training, hospitals, and sewer connections are mainly benefiting the middle income quintiles. However, if we also take into account the distribution of the tax burden to finance public expenditures, it is clear that the poorest quintile benefits—with the exception of public sector jobs—from the provision of public services.[7]

The data in Table 7, however, provide only a static picture. The issue here is inherently dynamic. As noted above, the output from the public sector depicted in Table 7 alleviates poverty; it does not eradicate it. Viewed as an isolated feature, social sector expenditures provides a temporary relief from certain aspects of poverty. However, to eradicate poverty (i.e., to increase absolute, upward mobility) sustained growth is necessary—and that growth needs to provide benefits to the poor.

One important feature of the Jamaican economy which hampers growth is the lack of land. It is impossible to follow the time-honored strategy of land redistribution for increasing growth simultaneously with an improved income distribution. This is the fundamental reason why Arthur Lewis (1950) proposed "Industrialization by Invitation" as the proper development strategy for Jamaica—or, indeed, for any small, land-scarce, low-income country. While such a strategy may have its virtues in terms of economic growth—one arguably successful example is the Puerto Rican "Operation Bootstrap"; but cf. also Lewis (1963)—it is, from a distributional perspective, questionable, which the Jamaican experience shows.[8]

Poverty and low upward mobility are inextricably linked in Jamaica with a two-way causality. Poverty forces people to eke out a living on the infertile slopes and, low incomes prevent people from undertaking necessary investments to enhance mobility. Low mobility, on the other hand, means that the opportunities for escaping poverty are scarce. Given that poverty can only be eradicated through economic growth and, that poverty is perpetuated through low mobility, it is clear that the sensible development strategy should focus on increasing flexibility and growth simultaneously. However, it seems as if three sets of problems stand in the way.

First, the macroeconomy is clearly out of balance. The fiscal gap is large and growing, the external position is unbalanced and weakened by a substantial external debt, and inflation remains high despite a consistently strict monetary policy. The government views inflation as the major problem and has chosen to attack it through high rates of interest. The other side of the coin is of course that domestic investors suffer, this in turn slows growth. While no easy solutions seem to exist, one should perhaps question the wisdom of inflation targeting in an economy where two-thirds of the weight in the consumer price index (which is used to calculate inflation) is food.[9] As noted above, it is difficult to address issues of poverty without growth (and per capita incomes are now falling for the third successive year) and while the government seems to rely on the notion that macro stabilization is a necessary prerequisite for successful growth, the literature from other parts of the world does not provide convincing arguments in favor of that position.[10]

Second, labor markets are deficient, both in terms of information and in terms of flexibility. Jamaica is an extremely open economy—so open that some studies, e.g., World Bank (1996), question whether any production is nontradeable—and as such needs to be able to adapt rapidly to changing circumstances in the world economy. In particular, if Jamaica is choosing a development strategy which is demand-driven, labor market flexibility is important.[11] Major problems are on the rise: persistent unemployment (even if this has been less pronounced in recent years thanks to large emigration); an awkward wage-setting system leading to protracted wage negotiations; erratic development in wages (the increases of which are mainly compensation for past inflation); poor management; and, lack of coordination between the several trade unions which disrupts labor market functioning.

Third, while as noted above, Jamaica scores high on social indicators, those figures mask underlying problems. Thus, while primary school enrollment is universal approximately one-quarter of the adult labor force is effectively illiterate. Moreover, these problems disproportionately affect the poorest strata. Approximately three-quarters of the poorest students attend all-age schools while less than one-third of the wealthy do. Approximately half of those leaving Grade 9 in all-age schools are functionally illiterate. Furthermore, the escalating debt burden has put increasing pressure on the government to cut non-interest expenditures and, in this process the social sectors have not been spared. The problem of uneven quality of social services feeds back into the problems associated to the labor market and, ultimately, into the problem of income distribution and mobility. Even though there are indications that the government realizes that,[12] the budget allocations do not indicate a determined and consistent effort to address the problem. Thus, for instance, very few (less than 2 percent) of the poorest students make it to tertiary education, yet per capita expenditures on tertiary education is some 15-25 percent higher than per capita expenditures on primary education.

In a sense, therefore, the government's hands are tied: to receive resources from abroad—from international financial institutions, from bilateral donors, and from private capital markets—the government must stick to a set of policies that is perceived as credible. However, this policy focuses on short-term macroeconomic indicators that are inexpensive to monitor, particularly inflation. Fighting inflation is the very antidote to growth. Therefore the policy necessitated by Jamaica's unsustainable external position may also be detrimental to growth. The strategy adopted by the government is basically the one usually associated with the IMF/World Bank adjustment programs and, often captured in the (rather cynical) phrase "short-term pain for long-term gain". How short the short term is, however, is seldom known. For Jamaica, it has lasted now for at least six years.

4. Concluding Remarks: Poverty Alleviation or Poverty Avoidance?

The problems of stagnation, low mobility, and poverty are intertwined. The government addresses these issues in a roundabout, or indirect, way: by restraining demand, the economy will stabilize and growth will resume more or less automatically. This, it seems, is expected to solve the problem of poverty through a trickle-down process.

Mobility may in this analysis prove to be an important concept. As noted above, the Jamaican government addresses the poverty problem mainly by pro-poor action through social sector output. Such a strategy may increase the welfare of the poor (by providing health facilities, clean water and, access to primary education) but it is questionable to what extent poverty per se is attacked; the government seems to be

engaged in poverty alleviation rather than poverty avoidance. To address the latter, one would have to focus on growth, the fruits of which reach the poor.

A serious lacuna, at least as far as Jamaica is concerned, is that we do not know very much about how and why people move into and out of poverty. The data that exist suggest that the poor in Jamaica are: 1) mainly based in rural areas, 2) work in sectors that produce tradeables (mainly on own plots or as wage labor in plantations), and 3) benefit substantially from government-sponsored social programs. We also know that government policies are the most effective short-term instrument for affecting the distribution of income and thus poverty. However, the macroeconomic environment establishes constraints on government actions, particularly in an economy as small and open as Jamaica's.

One can expect that our knowledge of the importance of mobility (and the links between mobility, poverty and income distribution) will improve drastically in the next few years. The Jamaica Statistical Office (SIOJ) and the World Bank are currently undertaking annual surveys within the World Bank's Living Standards Measurement Survey (LSMS) project. The LSMS are linked to the Labor Force Surveys produced annually by the SIOJ, and several interesting conclusions are emerging from this project (cf. World Bank 1996c), even though the available panel data set is too small for reliable conclusions. In particular, the available data substantiate some of the inferences in this paper, particularly those regarding private rate of return to schooling (cf. King, Rosenzweig and Wang, 1991), and the fact that some social sector actions may alleviate, rather than eradicate poverty (cf. Baker and Grosh, 1994; Grosh, 1992).

Let me finally return to the point made in the introduction. Mobility across income classes may be an important indicator of flexibility in the economy and just as unemployment in the US and in Europe exhibit different characteristics (unemployment periods in Europe are typically longer) and thus have different causes, so may countries that show markedly different data for distributional mobility need to address their problems of poverty using different strategies. It is important to keep in mind, however, that distributional mobility may reflect structural change in the economy as much as it reflects government policies. Therefore, the concept—at least as far as it is used and as I have used it in this paper—should be used with caution, and only when complemented with standard analysis of poverty.

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Endnotes

* The analysis and results in this paper are preliminary and part of a larger research project on poverty, income distribution and economic reforms in Jamaica. Petra Menander has, in the usual fashion, assisted me with comments, ideas and down-to-earth matters.

1 Traditionally, Swedish society in the 17th and 18th centuries is divided into four estates: the nobility, men of the church, burghers, and peasants.

2 In the example, the government affects mobility by changing property rights in relation to land. One can easily think of other ways, though land reforms (if successful) seem to be one of the most efficient means for redistributing wealth.

3 Although Deininger and Squire (1996) ranks all these estimates as "reliable"; as far as I know, the LSMS was constructed from the HBS which means that some measure of consistency should be attained.

[4] What we know (from World Bank, 1996: p.166) is that approximately 70 percent of the poor live in rural areas while approximately 55 percent of the total population is rurally based.

[5] Kuznets' findings were based on a cross-section sample, but several text book authors do not see a problem in interpreting these results in a time-series frame.

[6] The major reason why transfers appear so efficient for reducing inequality is, of course, that they are paid for out of taxes and thus work both by increasing the incomes of the poor and reducing incomes of the rich. This holds as long as both taxes and subsidies are neutral or progressive. As argued in Danielson (1998), the major feature of the social security system in Jamaica is that taxes appear to be more or less neutral (from the point of view of distribution), and that most transfers are directed to the poor.

[7] However, it should be noted that the drastic reductions of the public sector realized in the 1980s and early 1990s, mainly hurt the poorer groups in society as low-level servants were retrenched. Consequently, an analysis of the distribution of public sector jobs over quintiles may well have looked differently for the early 1980s. On the other hand, the strategy for the public sector now is to keep it small and efficient so it is unlikely that the early 1980 situation will ever be repeated.

[8] As Danielson (1993) argues, the incentives schemes that were devised in the 1970s to attract foreign capital were extremely costly and led to an inflow of short-term capital and mostly "foot-loose" industries. Moreover, incentives were so generous, and gains distributed so lop-sidedly, that the lower strata of the population reaped only marginal, if any, benefits.

[9] The analysis in Danielson (1998a), while relating specifically to the situation in Tanzania, is clearly valid here.

[10] See, for instance, Mosley et al. (1995); Danielson (1998b); World Bank (1994a); Botchwey et al. (1998).

[11] I use the term "demand-driven" in a rather loose sense to make a distinction from a development strategy that is based on exploitation of domestic natural resources such as bauxite or agricultural produce. The demand-driven strategy focuses on the provision of light manufacturing goods and services to advanced countries, particularly the US.

[12] Cf. World Bank (1996a, b).

Income Mobility: Types, Effects, and Policy Implications

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Summary

This paper argues that it may be misleading to claim that mobility in general is always a positive development. Mobility is important because some forms of it may play a favorable role, in terms of compensating for excessive income inequality, encouraging fast output growth, easing social tensions, and increasing political stability. However, some types of mobility have historically been the result of successful rent seeking (particularly in Latin America). High rates of some types of mobility may come together with high inequality (as either cause or consequence). Short-term mobility may be associated with undesirable short-run macroeconomic fluctuations, and therefore with transitions in and out of unemployment. Structural change may provoke one-off mobility, which, even if it rewards elastic responses to price signals in competitive markets, may not be useful for policy purposes because of its one-off character. In terms of generating incentives, intergenerational mobility may take too long, even under the most favorable assumptions on time preferences and altruistic attitudes. Not all types of mobility compensate for high inequality. 'Absolute mobility', as defined by Fields and Ok (1996), may also be misleading because an increase in aggregate output may not constitute a Pareto improvement, if it worsens inequality. Out of five types of mobility examined by this paper, there is only one that unequivocally fulfils all the positive tasks expected from it. This mobility is market-driven, economically efficient, and medium-term, and it relies on the presence of a good educational system and on competitive markets free from rent seeking.

In Chile, large inequalities coexist with fast growth. There is little evidence of mobility, apart from one-off. The educational system tends to reproduce inequalities, rather than contributes to diminish them. Since the 1970s (and with a different emphasis after 1990), some progress has been made in several areas, including education and the control of excessive rent seeking. Some one-off mobility followed the free-market, open-economy reforms of the 1970s and 1980s. However, there is little intergenerational, lifecycle, and market-driven (or economically efficient medium-term) mobilities. On the positive side, employment has been increasing at a fast rate, but there is no guarantee that the macroeconomic cycle has disappeared for the foreseeable future. This paper's policy recommendations point towards making education generally accessible and its quality less uneven, towards further controlling rent seeking, towards generating new opportunities for employees' training and in the countryside, and towards improving the amount and quality of both the qualitative information and statistical data which are periodically collected by official and other agencies.

1. Introduction

It may be wrong to assume that mobility increases social welfare, always and everywhere. Income mobility and distributional mobility are complex processes. Fast growth under conditions of high inequality may provoke both favorable and unfavorable outcomes, in terms of social welfare, social unease, and political stability. Possibly only some of the resulting mobility should be welcome. This paper argues that, out of five different types of mobility, obeying distinct causes and provoking diverse consequences, possibly only one of them is capable of compensating for high inequality, encouraging fast growth, reducing social unrest, and increasing political stability. The discussion is illustrated with examples from the Chilean experience, and concludes by offering a number of policy recommendations.

When is more mobility preferable to less mobility? A society without mobility is identified with inherited privilege, or with inherited positions of 'underdogs'. Mobility is often perceived as one of the features that contribute to define modernity. However, more mobility is not preferable to less mobility, if mobility is a random event, and most members of society are risk averse. But mobility may not be random. A more dynamic society will result if, for example, a higher probability of upward mobility is positively associated with the amount of work effort, and a higher probability of downward mobility is positively associated with the absence of this effort. On the other hand, more mobility has historically been associated with better opportunities for rent seeking, such as in late medieval and Counter-Reformation ('Golden Age') Spain, or during most of Spanish America's history, both in colonial times, and during the import substitution period (Roberts and Araujo, 1997). Another complication is that, in most societies, some individuals are more likely to be affected by mobility, random or not, than others. The length of the period during which mobility is expected to have occurred, or not occurred, is also important.

2. Why should we be concerned with mobility?

Concerns with income mobility are related to concerns about economic efficiency, social unrest, and political stability. These are the same reasons why we are interested in income distribution. For a number of reasons, economic growth is faster under conditions of lower income inequality (Birdsall and Londono, 1997). Other things being equal, a more equal pattern of income distribution should reduce social unease, and therefore it should increase political stability. Maybe, high income inequality may be compensated, or the negative effects of inequality may be made less harsh, by greater mobility. Maybe less inequality and more mobility go hand in hand. Birdsall and Graham (no date, p. 2) suggest that, in Latin America, 'one plausible explanation for continued voter support for reform despite persistent inequality, for example, is enhanced mobility'. Bjorklund and Jantti (1997) show that, as compared with the United States, 'Sweden has both less income inequality and greater intergenerational mobility' (p. 1017), and cite previous work by other authors in support of the view that 'economic equality in a country tends to be associated with higher social mobility' (p. 1017).

In Latin America, for all their merits in other areas (including, at least in some countries, the alleviation of absolute poverty), recent programs of structural adjustment, or the introduction of free-market, open-economy policies in the 1980s and 1990s, have so far failed to improve income distribution. This is a particularly serious problem since the region has traditionally suffered from one of the worst patterns of income distribution in the world. In the past, concerns with equality have led to economic populism, with possibly counterproductive results with regard to income distribution (Dornbusch and Edwards, 1991). Thus, if nothing can be done about equality, maybe at least something can be done about mobility? In some very poor countries, particularly in Africa, anecdotal evidence suggests that ordinary people are keener to accept inequality, if they also perceive that there is a possibility of mobility.

More mobility and less inequality do not always go together. In England, for example, fast upward mobility is associated with the Thatcher era, which is also associated with worsening inequalities. However, there are other mobility associations that are more positive. Under favorable conditions, even highly stratified and rigid societies may grant upward mobility to the best among their members, as was the case with the extraordinary amounts of mobility provoked in England by the Second World War. Mobility is at the root of the American Dream. It is the force that makes possible for migrants to new lands to re-invent themselves and to start new lives. New mobility follows after social, economic, technological, or institutional revolutions. If Latin America is adopting free-market, open-economy reforms along the lines of the United States development model, then why should mobility along American Dream lines be denied to the Latin American peoples?

3. Is mobility always a favorable development?

Possibly not. Possibly, a society with at least some income or distributional mobility is better than an absolutely rigid society. However, income mobility is not always and automatically 'a favorable development'. Assume a society formed by three households, headed by Alice, Betty, and Carol, respectively. Their respective incomes are 1, 2 and 3, which is represented by the vector (1, 2, 3). Then, assume that there is a one-off income mobility, such that Alice's income increases from 1 to 3, and Carol's income falls from 3 to 1. The new distribution vector is (3, 2, 1). Has social welfare increased, diminished, or remained constant? Social welfare may have increased if, for example, the new income distribution pattern is more conducive to faster economic growth. Or if the new pattern is sanctioning ability and willingness on the one hand, and failure on the other hand, to follow market signals, and the relative prices are reflecting adequately social scarcities. Or if leisure, as opposed to income, is more important as an argument in Carol's than in Alice's household utility function. But none of these conditions may apply, which means that this one-off mobility has led to a welfare loss. Moreover, there may be contradictions, in the sense that some of these conditions may be suggesting that social welfare will be

enhanced by pattern (1, 2, 3), which favors Carol, and other conditions, by pattern (3, 2, 1), which favors Alice.

If household A moves from, say, Quintile 2 to Quintile 3, by definition this needs one or more compensatory movements, with a net effect such that another household, B, has to move from another quintile to Quintile 2 (the number of households in each quintile must always be the same). For an unequivocal improvement in social welfare, not only the upward mobility benefiting A, but also the possibly downward mobility affecting B, must both be 'favorable developments'. If not, at least the improvement for A should be greater than the deterioration for B, so that B can be compensated by A, but this raises awkward questions of interpersonal or interhousehold utility comparisons. Mobility may be either up or down, and the downs are more damaging for those who do not have any form of sheltering, protection or insurance against them.

In Latin America, and if not anymore, at least until very recently, for centuries upward mobility has been associated with taking advantage of old and new opportunities for rent seeking (Roberts and Araujo, 1997). In Chile, despite privatization and market liberalization, new opportunities for rent seeking have appeared in the 1980s and 1990s (Hojman, 1996a, 1996b).

4. Can high mobility compensate for high inequality?

The short answer is 'probably not', or 'not always', or 'not in general'. Only some particular, highly specific classes of mobility can compensate for high inequality (five different types of mobility are examined in Section 6). In general, high mobility cannot compensate for high inequality. On the contrary, high inequality may be a necessary condition for high mobility, or high mobility may be a necessary condition for high inequality (Galor and Tsiddon, 1997). Or, mobility and inequality may be related to each other in a purely definitional way, which, implicitly or explicitly, excludes the possibility of causal links between them (Shorrocks, 1978). As a matter of definition, 'all countries have less inequality when a longer accounting period is used, and taking mobility into account reduces the amount of inequality when a multiple-year perspective is used' (Gottschalk, 1997, p. 38). This is because 'those occupying the highest and lowest positions in the income hierarchy rarely remain there forever' (Shorrocks, 1978, p. 377).

Moreover, mobility and inequality may be related to each other, with the 'wrong' sign, in a more fundamental or structural, rather than a purely definitional, way. For instance, in the Galor and Tsiddon (1997) model, mobility and inequality move together, following the different phases of a cycle of technological progress. In periods of major technological inventions, both inequality and mobility increase, in favor of the highest-ability, best qualified individuals, who both generate the technological breakthroughs and benefit from them. In contrast, during periods of technological diffusion, the new inventions become generally accessible, and both mobility and inequality decrease. This, or similar theoretical models seem to have

been at least partly confirmed by recent empirical evidence (Gottschalk and Smeeding, 1997).

5. 'Absolute mobility' and Pareto improvement

The Fields and Ok (1996) concept of 'absolute mobility' is formed by the sum of two aspects: the transfer of income between households, and the change in general well-being that results from aggregate economic growth (or contraction). A particular problem with this approach is that any identification of aggregate output growth with 'absolute mobility' ignores distributional issues, and the negative consequences of worsening inequality. For example, assume that aggregate output has grown from a total of 6 units in Period 1, with a distribution pattern (3, 2, 1), to a total of 9 units in Period 2, with a distribution pattern (6, 2, 1). There has been a positive amount of Fields and Ok 'absolute mobility' (3 units, 9 minus 6). However, there are possibly several important, and mostly unfavorable, consequences for the economy and society, provoked by the transition from the distribution vector (3, 2, 1), to the vector (6, 2, 1). These differences are likely to include growth rates, savings rates, human capital investment, health outcomes, demographic patterns, effectiveness of the tax system, social cohesiveness, political stability, and even group identities (Birdsall and Londono, 1997; Birdsall and Graham, no date; Wilkinson, 1996; Hojman, 1993, 1996a, forthcoming 1999a).

The Fields and Ok approach suffers from the same limitations as any other attempts at applying the notion of Pareto improvement to this discussion. Pareto improvement occurs when someone has been made better off, without anyone else having been made worse off. But the notion of Pareto improvement cannot be assimilated to the Fields and Ok concept of 'absolute mobility' caused by aggregate output growth. We cannot talk of Pareto improvement to describe the change from vector (3, 2, 1), to vector (6, 2, 1). In terms of absolute income, Alice is better off by 3 units, and the absolute incomes of Betty and Carol have not changed. However, for all the reasons mentioned in the previous paragraph, conceivably Betty and Carol may both be worse off in Period 2 than in Period 1.

Moreover, the new situation may have been made even worse, by the presence of rich-to-poor demonstration effects and imitation attitudes. In all unequal societies, from advanced industrialized or post-industrial ones, to developing ones, the poor tend to imitate the consumption patterns and lifestyles of the rich. For example, in high inequality England every woman aspires to get married in a wedding as similar as possible to the royal wedding between Charles and Diana. In low inequality Norway, desirable weddings are inspired in the much cheaper peasant traditions of the 19th century 'national romantic' style. Having a 'proper' wedding is more expensive, and more damaging to and/or difficult for the poor, in England than Norway.

In Chile, other things being equal, and after controlling for absolute income, high inequality makes child mortality among the poor worse, possibly because there

is a negative relationship between the desirability of a consumer good due to rich-to-poor demonstration and imitation effects (the degree of 'visibility' of a consumer good), and the effectiveness of that consumer good in improving child survival chances. Compare cars, holidays abroad, expensive-label clothing, colour television, or other household electronics goods, with food, heating, over-the-counter medicines, or visits to the doctor (Hojman, forthcoming 1999a).

6. Different types of income mobility

No serious analysis of mobility in developing countries can be undertaken, unless a clear distinction is drawn between five different types of mobility. These different types are always present simultaneously, and it may be very difficult to distinguish in practice each one of them from the others. However, they are not only conceptually different, but also different in both their causes and their consequences. These five types of mobility are: intergenerational; short-term (or dependent on the macroeconomic cycle); lifecycle; one-off (or provoked by structural change); and medium-term (or economically efficient and market-driven).

6.1. Intergenerational Mobility

Intergenerational mobility is associated with (the absence of) transmission of advantages and disadvantages from parents to their children. Thus, a high degree of intergenerational mobility is 'positive', or 'favorable', in those individuals' earnings would depend on their own achievements, rather than on inherited privilege or inherited disadvantage. A high rate of intergenerational mobility is largely the result of an open, fair, high-quality educational system. Low intergenerational mobility is typically associated with inherited privilege and inherited disadvantage ('Why do doctors' children become doctors? Why do manual workers' children become manual workers?'). In terms of dealing with inequality-provoked social unease, and of increasing political stability, intergenerational mobility is possibly useless, and certainly not a substitute for other, shorter-term forms of mobility. It is unlikely that a high level of intergenerational mobility, no matter how high, will ease social tensions in a highly unequitable society, not even under the most favorable assumptions about discount rates and altruistic attitudes. In any case, it is also unlikely that a high level of intergenerational mobility will be present in such a society. Almost as a matter of definition, unequitable societies do not have open, fair, and high-quality educational systems, and therefore they cannot have high rates of intergenerational mobility. In this sense, intergenerational mobility is a consequence, rather than a cause of the processes that we are interested in this paper. In terms of diagnostics, there is no need to bother with intergenerational mobility, because looking directly at the educational system will provide all the answers. In terms of policy, any direct attempts at changing other aspects of society, rather than at increasing intergenerational mobility, will be easier and more rewarding.

In Chile, the educational system has traditionally been a vehicle for the reproduction of inequality (Hojman, 1993). The norm has been huge differences in

access to education and in educational quality. Despite substantial increases in average schooling in recent decades, and some correction for the most extreme quality gaps during the 1990s, immense differences persist (see references in Section 8). As expected, there is little intergenerational mobility, although some may have been caused recently by fast economic growth.

6.2. Short-Term, Macroeconomic-Cycle Mobility

Short-term, macroeconomic-cycle mobility is 'negative'. Both social welfare and the rate of long-term output growth are likely to be higher, without the uncertainty and instability associated with short-term fluctuations, and without this short-term mobility. Short-term income mobility is typically a consequence of the macroeconomic cycle. Possibly the most characteristic form of this type of mobility is represented by transitions in and out of unemployment. These temporary income fluctuations are not desirable, or popular among their victims. Short-term cyclical mobility does not increase social welfare. A particularly negative expression of this problem appears when low permanent incomes come together with sharp temporary fluctuations. Those workers with the lowest skill levels, and the lowest earnings, may be precisely those with the shortest employment spells. This type of short-term mobility is not only thoroughly undesirable, but also difficult to avoid. However, some of its most negative effects can be minimized in, for example, societies with high levels of lifecycle mobility (as explained in Section 6.3).

In Chile, aggregate output and employment have been expanding at a fast rate since the mid 1980s. However, the unemployment rates affecting the young are much higher than those applying to the rest of the population. The young also suffer from high rates of political disaffection. For example, they massively failed to register for the December 1997 congressional elections, despite the fact that registration is compulsory and penalties high.

6.3. Lifecycle Mobility

High rates of lifecycle mobility (most of the poor are young, and many - or at least some - of the young are poor; most of the rich are old, and most of the old are rich) are typical of high-income, full-employment societies in advanced stages of their demographic transitions. Possibly the best examples are the Scandinavian countries. These societies also tend to be ethnically homogeneous. In some societies that are ethnically heterogeneous, high rates of lifecycle mobility may be observed among some of their ethnic groups (usually the most privileged ones), but not in the other groups. In the presence of high lifecycle mobility, every waiter or waitress seems to be also a young university student who is doing waiting as a part-time job. In contrast, in societies with low levels of lifecycle mobility, such as the Latin American ones, waiters and waitresses may be old, because they are, or will have been, employed as such for the whole length of their working lives. University students tend to be rich and do not need to wait at tables (Lam and Schoeni, 1993). It is likely that a high rate of lifecycle mobility plays a positive role in easing any social tensions

provoked by income inequalities, and in generating political stability. Additionally, it is possible that societies with high lifecycle mobility are also low inequality societies, because income differences between households tend to depend at least partly on the age composition of the household.

Nothing of this is very useful in policy terms for developing countries, which are unlikely to fulfil the required labour market (i.e., full employment), demographic, ethnic and educational conditions usually associated with high lifecycle mobility. However, the Chilean situation is not as unfavorable as in most Third World countries. Unemployment is low, the demographic transition is fairly advanced, and ethnic differences (or their negative effects) are small. Unfortunately, as mentioned before the educational system tends to reproduce inequalities, rather than contribute to eliminate them.

6.4. One-Off Mobility

One-off structural change provokes one-off mobility. This type of mobility is different from that caused by macroeconomic cycles, in the sense that it is not normally reversible. One-off mobility has been generated in Latin America during the 1990s by the creation of new markets, by the liberalization of old markets, and by processes of privatization. In general, this type of one-off mobility is positive in terms of social welfare, because it rewards those who follow the new market signals and it punishes those who ignore these signals. However, there are several questions that still remain unanswered. Are relative prices conveying the adequate market signals? Are markets competitive? Are any instances of market failure dealt with swiftly and adequately? Are any new, emerging instances of rent seeking being kept under control? Even if satisfactory answers are given to all of these questions, the one-off nature of this type of mobility makes it an unlikely tool for policy purposes.

One-off mobility due to structural change has been particularly relevant in Latin America since the beginning of the debt crisis in the early 1980s. In the 1980s and 1990s, structural adjustment and structural change provoked many instances of one-off mobility, both upwards and downwards. Chile is no exception.

6.5. Market-Driven, Economically Efficient Medium-Term Mobility

The final type of mobility is a repeated, medium-term mobility which is both market-directed (or market-driven) and economically efficient. This is the only form of mobility that unequivocally fulfils the combined purposes of facilitating economic growth, easing social tensions, increasing political stability, and compensating for high inequality. Under the appropriate conditions, this mobility will also be compatible with, or functional to a whole range of policy instruments. This type of mobility is repeated, as opposed to one-off. A household may benefit from it again and again, moving gradually up the income distribution pyramid, from percentile to percentile, or decile to decile. This mobility is medium-term, as opposed to year-to-year. More precisely, it is permanent rather than temporary, provided that the

household continues fulfilling the conditions that made it possible in the first place. Differently from short-term macroeconomic-cycle mobility, it is not an accident that fate inflicts upon helpless victims. It is also medium-term as opposed to long-term, or intergenerational, because incentives that require waiting for too long are not good incentives. This type of mobility is market-directed, in the sense that it is entirely a reward for following the market signals being conveyed by the price system, when relative prices correctly reflect social scarcities (1). This mobility is not only optimal in static terms, but also in dynamic terms: it is economically efficient in the sense that it creates the most favorable conditions for fast growth in aggregate output. This type of medium-term mobility, just like intergenerational and lifecycle mobility, requires a good educational system. Individuals need to be educationally qualified, if they are going to be prepared to take advantage of the new market opportunities as they arise. This mobility results from the appropriate policies. New policies generate new incentives, which themselves change attitudes (Hojman, forthcoming 1999b).

In Chile there is very little of this market-driven, economically efficient mobility. However, some of the evidence, albeit incomplete, seems to be promising more of it in the future (see Section 8).

7. Chile: income distribution

The distribution of household income by deciles in Chile, between 1987 and 1996, is presented in Table 1. This is after income tax, but before value added tax, and it includes all anti-poverty subsidies. The picture that emerges is one of fast growth of absolute income, combined with large income inequality (and also other inequalities, Hojman, 1993). The inequality pattern is remarkably constant over time, although not completely rigid. Average real income grew by 55% between 1987 and 1996. In 1987, the ratio between the top decile income and the bottom decile income was 24.2 times. In 1996, the same ratio was 24.3 times (2). During the period 1987-1996, the real income of the bottom decile increased by 50%, and that of the top decile, by 54%, suggesting that there has been some comparative improvement, albeit marginal, for the middle deciles, at the expense (relatively speaking) of the top and the bottom of the pyramid. Deciles 3 and 4 improved by 61%, decile 6 by 60%, and decile 7 by 58%.

Table 1

Chile, household income by deciles, 1987 to 1996
(thousand pesos of November 1987, per month)

Decile	1987	1990	1992	1994	1996
1	14	16	20	19	21
2	24	28	33	34	37
3	31	37	42	43	50
4	38	45	51	54	61
5	46	54	62	65	72
6	55	64	70	76	88
7	67	78	88	93	106
8	92	96	110	120	140
9	133	144	159	175	199
10	339	385	437	461	521
Total	84	95	107	114	130

Source: calculated from CEPAL (1997), which is itself based on the CASEN surveys, and EIU data.

This remarkably stable income distribution pattern has been generated by the combination of a number of factors, some of them of an equalizing nature, and others the opposite (3). Fast economic growth has been highly labour intensive, gradually eliminating the large pockets of unemployment which were widespread in the mid 1980s. About 1.1 million new jobs were created between 1987 and 1994, a remarkable achievement in a total labour force of about 4 to 5 million (Hojman, 1996a). Total participation in the labour force (men and women) increased from 51% of the economically active population in 1986, to 55% in 1994. The population has been getting older and the dependency ratio has been falling. Favorable external accounts have helped to appreciate the currency. Real appreciation in relation to the US dollar was over 30% during the period (Hojman, 1995). This has worked to the benefit of the lower rather than the upper deciles, because the consumer basket of the former is comparatively biased in favor of tradables and against non-tradables. At the time of this writing (November 1998), both the fast, labour-intensive economic growth, and the currency appreciation, are at least partially (and temporarily) under threat from the crisis in Asia. Opening the economy and technological progress have increased the demand for, and the rewards to, skilled personnel, in relation to unskilled workers. Female participation in the labour force has increased, which helped the lower deciles in the 1970s and 1980s (women were taking jobs that men did not want, or for which men were not wanted), but more recently female participation has been helping the upper deciles, since only high productivity female employees can afford expensive private child care arrangements. Since the 1970s, or even before, there has

also been a substantial increase in formal education. In particular after 1990, several subsidies to the poor (either via cash, or housing, health, and education) have been increased.

With the poverty line at about 40,000 pesos at November 1987 prices, those below the line were about 40% of the households in 1987, but only about 20% in 1996 (Table 1). Thus, households in decile 3, for example, were poor in 1987, but not in 1996. These people can now afford to satisfy their basic needs. However, it does not seem that this has been enough to make them 'happy'. Even if their aspirations have remained the same, members of these households are now even further apart from the 'average Chilean'. In 1987, decile 3 was 53,000 pesos away (84,000 minus 31,000) from the average income. By 1996, the gap had increased to 80,000 (130,000 minus 50,000), in pesos of constant value. The gap has increased, not only in relation to the average income, but also in relation to the median. The median is important, because it determines key political processes in a democracy. In 1987, the median income was about 50,000 pesos, and the gap with respect to decile 3, about 19,000 pesos. In 1996, the median income was about 80,000 pesos, and the gap in relation to decile 3 had increased to about 30,000 pesos. So, households in decile 3 are no longer poor, but the gap in relation to the 'average Chilean' (either in terms of arithmetic mean, or median) is worsening. Furthermore, aspirations may have been increasing. Large rich-to-poor demonstration and imitation effects may have been at work, inflating the number, and the seriousness, of those expectations that remain unsatisfied. Thus, it is not surprising that much low income Chileans are being affected by feelings of increasing alienation in relation to the economy and the polity. In the December 1997 congressional elections, nearly 40% of the voters, many of them young people, either failed to register or spoiled their votes.

8. Chile: mobility

If the income distribution picture is, if not dismal, at least not very good, the mobility one is not much better. In the absence of longitudinal data or individual case stories, Tables 2 and 3 offer some evidence of monthly earnings differentials, and their evolution between 1986 and 1992 (Table 2), and of hourly wage rate differentials, and their evolution between 1993 and 1997 (Table 3), according to occupational category. Because the periods involved are not very long (especially 1993 to 1997), we may assume that there was little occupational mobility in each table. Most people were in the same occupational category in 1986 and in 1992, and in the same occupational category in 1993 and 1997 (comparison between the two tables is not possible, because there is no information about hours worked for the first period). If this assumption is accepted, it follows that Tables 2 and 3 are the closest approximation that we have, to a longitudinal study.

Table 2

Chile, monthly earnings index, by occupational category, 1986 and 1992 (each year average = 100)

Occupational category	1986	1992
Average	100	100
Managers (*administradores y gerentes*)	419	515
Professionals and technicians (*profesionales y técnicos*)	178	168
Administrative employees (*trabajadores administrativos*)	91	88
Salesmen and women (*vendedores*)	115	114
Skilled white-collar (*trabajadores especializados: empleados*)	105	103
Skilled blue-collar (*trabajadores especializados: obreros*)	63	67
Unskilled workers (*trabajadores no especializados*)	51	53
Workers in personal services (*trabajadores en servicios personales*)	50	51

Source: Ramsden (1998)

The most notorious characteristic of Table 2 is the large increase in the relative earnings of managerial personnel, from 419% of the average in 1986, to 515% of the average in 1992. This was at the expense of practically everyone else, apart from some categories at the bottom of the pay scale. It is possible that this improvement at the top reflects, not only rewards to human capital, but rather a combination of rewards to human capital, rewards to property, rewards to entrepreneurial skills in short supply, and maybe even a gradual monopolization of the economy. Table 3 shows a similar process, except that the beneficiaries are now both managerial personnel, and professionals (possibly highly qualified), mostly at the expense of categories of less skilled (but not unskilled) workers: technicians, skilled workers (possibly blue-collar), and machine operators. Both between 1986 and 1992, and between 1993 and 1997, the data show a relative improvement of substantial size, for those at the top of the pay scale.

Table 3

Chile, index of hourly wage rates, by occupational category, 1993 and 1997 (each year average = 100)

Occupational category	1993	1997
Average	100	100
Managerial personnel (*personal directivo*)	428	445
Professionals (*profesionales*)	209	234
Technicians (*técnicos*)	160	156
Administrative employees (*personal administrativo*)	116	118
Personal services and security (*trabajadores en servicios personales y de proteccion*)	68	67
Salesmen / women in established commerce (*vendedores en locales*)	79	77
Skilled workers (*trabajadores calificados*)	101	92
Machine operators (*operarios de máquinas e instalaciones*)	97	90
Unskilled workers (*trabajadores no calificados*)	72	73

Source: Ramsden (1998)

Intergenerational, lifecycle, and medium-term mobility are hampered because traditionally, the Chilean educational system has acted more as a tool for the reproduction of inequalities, than as an instrument of mobility (Arancibia, 1994; Larranaga, 1994; Lehmann, 1994; Sancho, 1994; Aedo, 1998; Sanchez, 1998). All studies consistently report large gaps in performance at school examinations, according to whether children come from state or private schools. Performances in Spanish and Mathematics among state school children tend to be about or slightly over 50%, whereas for private school children they can be as high as 80 to 85%. As could be expected, there is a strong degree of association between parents' income and the type of school their children attend. Some recent reforms offer some hope for the future (Cox, 1997; Hojman, forthcoming 1999b). Unfortunately, there have also been some steps backwards, such as the recent move to downgrade the teaching of economics in secondary schools (*El Mercurio*, 1998). Some so-called educational 'experts' in official agencies insist on providing less vocational education than required, even against the market evidence of strong demand by employers, and against the preferences explicitly expressed by parents and children (Caceres and Bobenrieth, 1993; Arancibia, 1994).

There is some evidence of the development of a new entrepreneurial middle class, which suggests the presence of market-driven medium-term mobility. However, characteristically those who tend to benefit are highly skilled individuals, professionals who already have university degrees (Montero, 1997). This mobility favors only entrepreneurs or the self-employed, but there is no evidence that it

reaches employees. It is possible that, as the free-market, open-economy policies take hold, and they and their effects mature, there will be a constant stream of gradual creation of new markets. This new market creation would play a role analogous to that played by technological progress in the Galor and Tsiddon (1997) model. Following medium-term cyclical patterns, those directly involved in the creation of new markets would be rewarded with higher incomes and upward mobility. However, this would increase overall inequality, rather than diminish it. On the other hand, although the general picture is that liberalization has diminished the opportunities for rent seeking, new rent seeking possibilities have appeared, favoring, for example, some farmers, textile manufacturers, the national airlines, or even middle class 'specialists' engaged in the poverty-alleviating industries (Hojman, 1996a, 1996b). And, as mentioned before, unemployment may increase, at least on a temporary basis, as a result of the crisis in Asia, and undesirable short-term mobility with it.

Possibly one of the most interesting developments in the next few years is that, gradually, high earners and very high earners will tend to receive their income, more and more from the returns of financial investments, rather than as salaries or profits. These people (in the top decile or deciles) earn so much already that they are saving quite a lot (at the same time as they also spend quite a lot). As their financial investments, and the respective returns from them, continue increasing, they will tend to prefer leisure to labour more and more. This will create new opportunities in the labour market, and new opportunities for upward mobility, for others (in middle or higher, but not in the top, deciles).

9. Policy implications

The previous discussion suggests that several policy measures should be implemented as a matter of urgency. It is necessary to devote further efforts towards controlling rent seeking, so that upward mobility becomes increasingly market-directed, i.e., it rewards those who follow market signals in competitive markets. The educational system should be further modernized and democratized. Good quality education should be made available to everyone, and not only to the children of high income parents. Upward mobility should be possible also for good employees, rather than only for entrepreneurial employers or the self-employed. Shop-floor based, company-specific, evening and weekend training programs should be introduced. But some employees will inevitably be better off in educational-institution based, evening and weekend training programs, which should also be made available. In order to help low earners to cope with undesirable short-term mobility, unemployment insurance systems, which do not discourage labour force participation, should be designed and introduced.

For low income households in the countryside, agro-industrial options should be offered. The best options are possibly labour intensive (in the late 1990s, but maybe not ten or twenty years later). These options should be technologically flexible, so that they provide room for the gradual substitution of capital for labour as

the latter becomes relatively more expensive. However, they should not be 'technologically intermediate', since this may lock producers into rigid, backward production straitjackets. If possible, there should be no, or few scale economies. Unconventional experiences such as that of *Fundación Chile*, which played a key role in the development of salmon farming and forestry in the 1980s and early 1990s, should be encouraged.

There are huge information gaps afflicting any effort at learning more about mobility. It is not enough to be able to say that some mobility has taken place. This is better than nothing, but it is not very good if we are unable to identify precisely the characteristics of this mobility. What does it respond to? Who benefits? Why some and not others? Will it occur again if and when the same conditions apply again? Resources should be invested in longitudinal studies, and in individual case stories, both of ordinary people, and of 'success' (and 'failure') stories. New, appropriate survey questions should be added to the old surveys (What was your father's job? What do your grown-up children do? How much schooling, and how good, for the younger? What were you doing five, ten, twenty years ago?). New, purpose-designed surveys should be started. Much more effort and money should go towards monitoring school quality, monitoring rent seeking, monitoring subsidies, and monitoring key sectors of the population such as women. Efforts should be devoted towards linking income-and-expenditure surveys, with surveys of political attitudes. There should be surveys of consumer attitudes, especially geared towards identifying rich-to-poor demonstration and imitation effects. More should be learned about the macroeconomic cycle, and about its effects on employment / unemployment spells differentiated according to absolute income levels.

Statistics by themselves are not enough. Statistical data need theory, in order to be able to interpret and understand them. Both qualitative research methods, and surveys, should explore ways of identifying the household-specific values of structural parameters of the relevant functions, and the household-specific size of actual responses to inequality, with a view to eventually relating these numerical estimates to qualitative answers to questions on social and political attitudes.

Notes

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(1) Freer markets provoke more repeated mobility, only if the product cycles are short, frequent and independent from each other, there are no entry barriers, and the technologies are such that scale economies and scope economies are not important. But this is a particular case, which requires strong assumptions. In the absence of

these assumptions, and of adequate government regulation, markets tend to become oligopolistic or monopolistic.

(2) This latter figure has been calculated using the raw CEPAL data, in units of pesos at November 1996 prices. The respective value from Table 1 is slightly higher, because of rounding errors introduced by consumer price index deflating and by using thousands of pesos, instead of peso, units.

(3) For an explicit model addressing a situation in some respects similar in Taiwan, see Bourguignon et al (1998).

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Panel Surveys For The Study Of Living Conditions: Benefits And Limitations

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Summary

For social programs aimed at improving people's living conditions to be implemented, monitoring mechanisms need to be devised so that they can track changes in living standards. Longitudinal studies are the right mechanism for generating information on developments in dynamic phenomena, especially when the objective is to study changes in the living patterns and social mobility of particular social groups. In the countries of Hispanic America there are a number of programs designed by government agencies and international organizations that aim to improve the welfare of families living in extreme poverty. Current information systems, however, are not able to provide data on population cohorts of a type that enables policies to be monitored on a longitudinal basis. Panel surveys offer the prospect of a mechanism capable of generating data on changes in income, employment, poverty and income distribution, among the many economic phenomena whose development it would be helpful to monitor. This work contains some reflections on the benefits and limitations of panel surveys in relation to cross-sectional studies, and on other alternatives that are used to generate information on groups of households and individuals.

Keywords: Panel designs; sample; rotation; overlap; errors; social mobility; monitoring; dynamics; longitudinal studies; cross-section.

Introduction

In the face of rapidly changing economic and social conditions, a great many policy researchers, designers and evaluators are looking for ways to understand and measure changes in the behavior of a given set of variables that are closely related to changes in the economic cycle and to the actions taken by governments to improve people's living standards.

Statistical agencies, therefore, are required to take regular measurements of such population parameters as may be of interest. To evaluate the effect of policy initiatives on the living standards of families, or to be able to judge the social mobility of a given population cohort, these agencies need to carry out longitudinal studies and to use statistical instruments that enable groups of people to be monitored over time so that it is possible to observe what alterations occur in their level of education, role in the labour market, economic perceptions and access to basic goods and services and to the public and private transfers that household members receive, and how poverty levels and income concentration change.

To meet this objective, the statistical instruments used need to be capable of generating successive measurements on a single set of observations. The option that emerges in response to the requirements set forth is that of panel surveys. From the point of view of sampling, what is meant by a panel is a sample where observations and measurements are carried out on an unchanging group of elements on two or more successive occasions, the object being to evaluate changes occurring in the level of a variable or to calculate the mean behavior of some characteristic of interest to the researchers. It should be pointed out that it is only by means of longitudinal studies that changes occurring in a given parameter within a population can be measured, the causes giving rise to it be explained, and the relationships that exist between the variables studied be brought to light. In fact, information about the gross change underlying a net change in the value of an indicator can only be explained by means of panel samples (Kish, 1979).

Consider a case where, on the basis of two independent investigations, it is concluded that the incidence of poverty has risen from 6% to 12%. Given this evidence, the researcher is unable to state whether the rate estimated from the sample being analyzed is 6%, 12% or some other intermediate value. Given these two measurements, in fact, the researcher would be able only to measure the gross change in the value of the indicator. It is only by means of panel studies that individual changes in the poverty situation of households can be ascertained, and the same holds for evaluating the effect of programs on living standards and determining the dynamics of the inter-relationships between variables that explain household income formation and the ability of households to satisfy a set of basic needs (Ashenfelter, Deaton and Solon, 1986).

Again, some experts (Raj, 1979) consider that continuous surveys are cheaper than one-off ones, as well as enabling up-to-date information to be obtained on trends in whatever process is under consideration. Nonetheless, making the decision to choose between a panel survey or a continuous one with partial overlap is not easy, due mainly to the fact that surveys normally pursue a number of objectives, which inevitably means that there are different optimum designs that cannot easily be harmonized into a single sample size (Medina, 1998). Furthermore, the correlations that are seen between the values of a variable at different moments in time produce contradictory results in the variance of the estimators. As will be seen further on, in a situation where differences (d) need to be calculated between two successive samples, the total overlap option tends to reduce the variance of **d**, but increases that of the sum of the parameters or the average of the two.

To resolve this conflict, suppositions have to be formed about the behavior of the variables being looked at and an attempt made to offer solutions on the basis of sample designs with partial overlap. The question that has to be answered is which sample design is best suited to meet the specific objective with the required accuracy on a given budget. It is on this basis that the choice has to be made between a panel survey or a cross-sectional one.

Calculating a Parameter at Different Points in Time

When dealing with phenomena that are linked to economic developments, statistical agencies very often seek to find out how the level of an estimator changes over time as a result of planned policy actions or because of unexpected changes in the movement of the economic cycle.

When this is the case, and researchers wish to study, for example, the change in the open unemployment rate between the times **our$_1$** and **our$_2$**, the following different methods can be used to design and select a sample of **n** units with the objective of measuring the level of unemployment at each survey operation and/or the change in the value of the estimator between the two measurements.

> Using the same sample on both occasions. In this case, the panel design being used would be one in which the observations selected in the period t_1 were the same ones as would be studied at the time t_2. This option is also known by the name fully overlapping samples or fixed sample design.
>
> A second option would involve selecting two independent samples of size n_1 and n_2 respectively. In other words, the percentage of overlap between the observations would be zero.
>
> As a third option, a sample of size **n** could be selected for the time t_1, maintaining **m** units of the first sample for the time t_2; in other words, **n–m** observations would be eliminated and the same quantity then added so that the same sample size (**n**) was maintained. In this situation, we would be dealing with two samples with partial overlap, the exact configuration being dependent on the specific objectives of the research. This technique is also known as sample rotation, sampling on successive occasions with partial replacement of units (Yates, 1949), and time series sampling (Hansen *et al.*, 1953).

In general it may be said that each of the options referred to has its own advantages and disadvantages, which means that the researcher needs to take a clear position as regards the objectives of the survey; in other words, a decision has to be taken as to whether greater accuracy is to be sought for the estimator that measures change by sacrificing the reliability of individual estimates, or whether conversely greater priority is to be given to single measurements, even though the results produced for the difference between successive observations thereby become less trustworthy.

The statistical implications for calculating the difference in the level of employment **(our$_1$ - our$_2$)** are different in all the cases. If option i) were chosen, it would be possible to measure individual changes in the employment circumstances

of the active population, as well as the gross difference in the level of the estimator. A great deal has been written, however, about some of the drawbacks that may arise when working for long periods with panel samples in continuous surveys. Among the arguments put forward against this practice are the high costs entailed by a program of this nature due to the physical mobility of families, and the possible contamination of answers as respondents become weary and unwilling to take part in different interview stages. This situation clearly increases errors of calculation, while if the time that passes between measurements is considerable, the response rate will tend to drop, which must undoubtedly have an adverse effect on the reliability of the research results.

When the degree of overlap is total; i.e., when $n_1=n_2=n$ and $P_1=P_2=1$, the variance of the difference between two identical samples can also be regarded as the difference of two measurements on a single sample carried out at different times.

If we define the estimator of change in the mean at times t_1 and t_2 as $\grave{U}d = (x - y)$, and assuming that the samples are the same, the expression to obtain the estimator of the variance would be:

$$\grave{U}Var(\grave{U}d)=(x/n - y/n)=1/n\ (S_x^2 + S_y^2 -2S_{xy})=1/n(S_x^2 + S_y^2 - r_{xy}\ S_x\ S_y) \qquad (1)$$

where r_{xy} is the coefficient of correlation between the measurements carried out on a single variable at two points in time.

Recasting expression (1) when the variances are equal $S_x^2= S_y^2$ we find that:

$$\grave{U}Var(\grave{U}d) = (2/n)\ S^2(1- r_{xy}) \qquad (2)$$

Using expression (2), we can deduce that the statistical advantage of estimating **d** using a panel sample, as against independent measurements, is given by the presence of the factor $(1- r_{xy})$. The coefficient of correlation measures the reduction in the variance of the estimator due to the overlap between the observations, and insofar as r_{xy} ® 1 the variability of the difference will stand at the level $2/n\ S^2$.

When the primary objective of the research is to study the change in "status" of an observation in relation to a particular characteristic, it is suggested that the same sample be used in the different measurements, as the positive correlation in the observations generally helps to reduce the variance of the estimator (Kish, *op. cit.*). This situation very often obtains in social mobility studies and in programs aimed at evaluating economic and social policies, when the objective of the study is primarily to ascertain the effect of some policy on the living standards of families.

For studies on social, economic or labour mobility (linked with welfare and income distribution), panel surveys have considerable advantages over cross-sectional studies and time series data, especially when the results come to be analyzed, if econometric methods are used. One of the advantages of panel samples becomes clear when it is observed that if a number of measurements are available on a single unit or individual, the degrees of liberty increase and the level of multicolinearity decreases between the explanatory variables, giving considerable improvements in the estimators of parameters obtained from econometric models. Again, a number of authors maintain that a more important aspect is the fact that longitudinal studies can be used to analyze a variety of economic phenomena which cannot be evaluated using time series data and data obtained from cross-sectional studies, and claim that the use of panel samples also enables estimation biases to be reduced (Hsiao, 1986). In Ashenfelter *et al. (op. cit.)* it is stated that there are certain economic phenomena which can only be evaluated using panel samples, the examples given being studies on living standards and income dynamics and the evaluation of social programs.

A study carried out by Freeman and Medoff (1981) refers to the problems that arise when the dynamics of the labour market are analyzed using cross-sectional studies, and there is an abundance of research that ascribes huge advantages to panel samples, although without ignoring the limitations these place on econometric analysis, especially in the case of non-linear models (Hsiao, *op. cit.*).

From the point of view of sampling theory it is important to bear in mind that although the same units of observation are retained in a panel study, the attitudes and answers of the respondents may have changed, and this will undoubtedly introduce further biases into the result arrived at for the difference (d), not all of which can be identified and evaluated.

In order to reduce the operating costs that the mobility of respondents entails for surveys, some longitudinal research projects have opted to maintain in the sample panels of housing units or compact segments which can be even more stable than housing units. Despite the advantages of this option, it is recognized that housing units and compact segments have lower levels of correlation than those obtaining in families, although without losing sight of the fact that this drawback only affects that proportion of units in which a change takes place between two consecutive survey readings, so that the implications in terms of estimator error are not substantial. Furthermore, studies show a high likelihood of the new occupants of housing units having a significant degree of correlation with the previous family, which should help to ensure that this circumstance does not impinge too much on the level of estimation error.

In cases where the aim is to calculate the average behavior of a phenomenon over a given period of time, it is clear that the best option will be to select independent samples, since the positive correlation found between the variables

when a panel study with total or partial overlapping is used would affect the level and variance of the estimator.

In this case the coefficient of correlation in (2) would be zero, as the covariance between the two measurements would be nil. The expression for the variance of the difference (**d**) is then given by:

$$\grave{U}Var(\grave{U}d) = S_x^2 / n_x + S_y^2 / n_y \qquad (3)$$

and when the variances are equal in the two measurements $S = S_x^2 = S_y^2$ it is found that:

$$\grave{U}Var(\grave{U}d) = S^2 (1/n_x + 1/n_y) \qquad (4)$$

When the sample sizes remain constant $n=n_x=n_y$, (4) becomes:

$$\grave{U}Var(\grave{U}d) = (2/n)\, S^2 \qquad (5)$$

In the case of option iii), where there is a percentage of overlap between two consecutive samples the expression for the variance given in (2) becomes:

$$\grave{U}Var(\grave{U}d) = (2/n)\, S^2(1- r_{xy}\, P_m) \qquad (6)$$

where $P_m > 0$ represents the proportion of the sample that is overlapping. From this expression it can be deduced that in the case where $r_{xy} > 0$ the gain in accuracy will be proportional to the product that is formed by considering the correlation between the observations and the proportion of overlap ($r_{xy}\, P_m$), and the maximum gain will obviously be obtained in the case where $P_m=1$ and $r_{xy}= +1$, which is equivalent to the situation of working with the same group of observations; i.e., with total overlap.

The effect of partial overlap ($1-r_{xy}P_m$) on the variance of the difference estimator will be proportional to the proportion of overlap observed P_m. Nonetheless, if the aim is to calculate the sum of two means, the effect is exactly the opposite: i.e., the factor ($1+r_{xy}$) is obtained for total overlap and ($1+r_{xy}P_m$) for partial overlapping.

The literature on the subject says that working with overlapping samples is appropriate in those cases where the objective is to obtain an estimate for the relative mean of a given variable at the time the measurement is carried out; in other words, the change in a characteristic within a given population. It can also be used, however, to compare the means of two different characteristics. In periodic surveys that generate time series, in fact, it is worth working with samples of a constant size and with partial overlaps, since in this situation the gains produced by

the correlation between the observations are associated with the proportion of overlapping observed and are directly proportional to P_m.

In the particular case of surveys that study levels of employment and labour force utilization, overlapping the sample also has effects on the value of the estimator and its variance. If one wished to follow changes in the open unemployment rate (our), and this was analyzed using independent samples, the changes in the level of the estimator would be influenced both by variations in the variable and by the effect of the framework employed and the use of a new sample.

When working with panel designs, a decision has to be made on the optimum percentage of overlapping to be maintained if the objective is for the survey to be used to measure the differences between two or more consecutive findings. The fraction of the sample to be replaced on each occasion will depend on the aims of the research, and on the degree of correlation that exists between the observations in the successive measurements, which is generally positive and cannot be determined arbitrarily without examining the relationship between the variables and clearly deciding upon the objectives of the research. If the degree of association between the measurements is very high, only a small fraction can be retained if this is not to have a negative impact on the quality of the results. In general, some experts recommend reinstating more than 50% of the units of the first survey for inclusion on the second occasion (Raj, *op. cit.*).

The objectives to which a design with full overlap is best suited are totally distinct from those best served by a system of independent samples, which means that a balance needs to be sought between these two alternatives. A survey that uses overlapping samples should seek to:

> Maintain a proportion of overlap P_m that is as high as possible in order to maximize the accuracy of the estimators of change on successive occasions, if it is this that is set as the prime objective of the research.
>
> Try to keep the proportion P_m as low as possible if the aim is to prevent the sample being contaminated by aberrant observations or the unwillingness of interviewees to take part in the survey.

Before discussing the different alternatives used to design surveys with overlapping samples, reference will be made to the variants that are possible when the option known as partial overlap is applied.

Clearly, the most common choice is to retain an overlap proportion $P_m > 0$ between two consecutive samples. It is also possible, however, for the sample used on the second occasion (n_y) to be a subset of the first (n_x), so that $n_x > n_y = n_m$. In this situation, note that $P_y = 1$ but $P_x < 1$. Accordingly, the variance of the difference **d** may be expressed as:

$$\grave{U}Var(\grave{U}d) = S^2/n_x + S_y^2/n_m - 2\,S_{xy}/n_x = S_y^2/n_m + (S_x^2 - 2r_{xy}\,S_x\,S_y)/n_x \qquad (7)$$

When $S_y^2=S_x^2=S^2$, then (7) becomes:

$$\grave{U}Var(\grave{U}d) = S^2\,[1/n_m + (1 - 2r_{xy})/\,n_x] \qquad (8)$$

The situation referred to has practical consequences since in the case where $(S_x^2 - 2\,r_{xy}\,S_x\,S_y) < 0$ observations that do not form part of the overlap $(n_x - n_m)$ will increase the variance. Likewise, when $S_x^2 = S_y^2$ and $r_{xy} > 0.5$ the increase in the sample n_x, over and above the overlapping, will reduce the gain that might have been obtained due to the positive correlation between the units that form part of the overlapping.

Additionally, it may happen that the mean of a sample is analyzed in relation to the mean of a subset, which is often done when the aim is to compare a population with one of its subclasses (for example, those in a situation of concealed unemployment with the total of the unemployed). This situation arises when two variables are equal ($X_i = Y$) and have a perfect correlation ($r_{xy}=1$), then:

$$\grave{U}Var(\grave{U}d) = S^2(1/n_m - 1/n_x) = S^2/n_m\,(1 - n_m/n_x) = S^2/n_m\,(1 - P_x) \qquad (9)$$

When faced with this situation many researchers and users become confused because they calculate the variance of the difference as if two independent estimations were involved, without realizing that there is a high degree of positive correlation between the variables since the field of study analyzed is a subset of the reference population. It is clear that the variance of the difference estimator falls in a proportion P_x which identifies the percentage of overlap between the two samples.

The number of overlapping observations **nm** does not result in the variance increasing since the difference between $(n_x - n_m)$ accounts for a substantial proportion of this. In practice, it is normal to see falls in the variance of differences due to the correlation that exists between the overlapping units, as the sign of the covariance between the variables is negative, while the correlations are positive (Kish, *op. cit.*). For example, if the objective is to measure the unemployment situation of the active population on the basis of two continuous surveys, where the correlation of the unemployment situation of the labour force is r=.75, then the difference between $(our_1\text{-}our_2)$ on the basis of a survey with total overlapping would be affected by the factor (1-.75)=0.25, while in the case of partial overlapping P_m=.50 the adjustment factor for the variance would be (1- .5*.75)=0.625.

Some statistical procedures have been developed with the aim of finding efficient methods for calculating the change in the level of the estimator beyond simply comparing the two means. Due to the correlation that exists between the observations, each element in the sample that belongs to the overlap proportion $\mathbf{P_m}$ contributes in a lesser proportion to forming the variance of the estimator in **(1-r)**, in relation to the elements that are situated outside the overlapping proportion; i.e., in the subset $\mathbf{(1- P_m)=Q}$. In algebraic terms the minimum variance of the difference estimator is obtained when there is a decrease in the weightings of the proportion $\mathbf{(1- P_m)}$ in the factor **(1- r)** and the expression for obtaining the difference estimator with minimum variance is:

$$\grave{U}D(\grave{x} - \grave{y}) = [P_m/(1- Qr)](x_{px} - \grave{y}_{py}) + \{[Q\ (1-r)] / (1- Qr)\}(x_{Qx} - \grave{y}_{Qy}) \qquad (10)$$

In expression (10) $(x_{Qx} - \grave{y}_{Qy})$ represents the difference between the means in the proportion of the sample Q and the first part is weighted by $\mathbf{P_m}$ and the second by **Q(1- r)** while both are relativized by dividing them into **(1- Qr).**
The weighted variance of the differences is obtained by:

$$\grave{U}Var(\grave{U}D)= [(1-r) / (1-Qr)]\ 2S^2/n \qquad (11)$$

The factor in brackets shows the reduction in variance due to the overlapping of the sample, and is interpreted as the effect of correlation on the variance of the weighted difference, while (1- Pr) is the effect on the unweighted difference.

Continuing with the example of changes in the labour force employment situation, consider r =.75 and P =.5; then the simple unweighted mean reduces the variance by (1- .5*.75) = 0.625, while the effect of the weighted estimate is (1-.75) / (1- .5*.75) = 0.25/0.625 = 0.4. In this case the weightings would be 0.5/0.625=0.8 in the overlapping proportion P=0.5, and 0.5(1-.75)/0.625= 0.125/.0625=0.2 in the non-overlapping proportion Q.

Finally, the difference between the variance of the weighted estimators as against the unweighted ones is given by:

$$[(1-r)/(1-Qr)]/(1-Pr)= (1-r)/ (1-r + PQr^2) \qquad (12)$$

From expression (12) it can be deduced that when the correlation r between the observations is large and the overlap proportions P and Q are moderate, the term $\mathbf{PQr^2}$ is very different from **(1- r)**. In the case being analyzed, with values defined for r=.75 and P=0.5, we find that (1-.75)/(1-.75 + .25*.5625)=0.64, which is equal to the quotient between the values of the variances calculated previously (.40/.625=0.64).

Some Sample Rotation Systems

When the decision is made to work with a system of overlapping samples, one question that frequently arises in practice is what percentage of the sample should be retained for a future survey. There is no single all-embracing answer to this question, as the proportion of the sample to be retained will depend on the objectives of the survey process.

Sample rotation can be carried out in different ways. In Binder and Hidiroglou (1988) the following alternatives are mentioned:

With one level of sample rotation
With one semilevel of sample rotation; and
With multilevels of rotation

The method of carrying out sample rotation with one level is interpreted as follows. Suppose that the sample consists of **n** elements that are to be surveyed on different occasions; then **(1-p)n** elements (0£ p £ 1) may be present in the sample for the period t_1 and may also be retained for inclusion at time t_2. The rest of the observations (**pn**) will be replaced with an equal number in order to make up the required size of sample (**n**).

This is the system used for the Labour Force surveys carried out by Statistics Canada, employing a rotation system that involves replacing one sixth of the households each month. Thus, the sample is made up of six panels each of which remains in operation for six consecutive months and is then replaced by another one of the same size.

As an example of surveys with one semilevel of sample rotation we may cite the experiment carried out by Hansen *et al.* (1955) and introduced into the Current Population Survey (CPS) held monthly by the Bureau of the Census in the United States of America. Under this system, units remain in the sample for a number of consecutive occasions then are not used for some periods, after which they are surveyed again on a set number of occasions. A generalization of this procedure was developed by Rao and Graham (1964) as follows. Let N and n be the size of the population and the sample respectively; a total of n_2 1 observation units will remain in the sample for r periods ($n=n_2r$), be left out m times and be used again on a further r occasions, after which they will be left out another m times, the cycle being repeated for a set number of rounds.

In the particular case of the approach followed by the United States Bureau of the Census, the sample is composed of eight rotation panels. Thus, a given rotation group will remain in the sample for four consecutive months, be left out for eight months and then participate again on another four occasions. This system of rotation is known as **4-8-4** and has the characteristic that in any one month 75% of

the sample is common to the previous month's, so that there is a 50% overlap between two consecutive years in relation to the same month the previous year.

The procedure described can obviously be varied. For example, for a quarterly survey it may be that each basic unit remains in the sample for six quarters so that the overlap between two consecutive measurements is 83%.

In previous paragraphs it has been pointed out that when basic units remain in the sample for a long time, biases may be introduced into the answers given by respondents. The work done by Bailar (1975, 1978 and 1979) for surveys of the active population in the United States, and the research done by Pearl (1979) in relation to consumer expenditure surveys in the same country, are examples of analyses that have been carried out to evaluate the bias in the value of estimators when samples are designed with overlaps.

The fact that the units of a sample have different values depending on the number of times they have been surveyed introduces what is known as rotation group bias, it being understood that if there were no bias in any of the individual surveys each rotation panel would have the same value as was expected in the level of the variable under analysis.

In Sánchez C. (1984) an expression is given for calculating an index for each rotation group on the basis of the following expression:

$$I_{rogr} = (A_{rogr} / \bar{A}) * 100 \qquad (13)$$

where:

I_{rogr} » Index of the rotation group.

A_{rogr} » Number of people in a given rotation group.

A » Number of people in all periods of the sample that have the attribute concerned.

To exemplify the use of this indicator, Sánchez C. *(op. cit.)* uses Bailar's data (1979) to show how the index is used in the analysis of unemployed men, utilizing the Standing Employment Survey of the United States of America.

Thus, I_{rogr1}=105.9 and I_{rogr7}=95.5 would indicate that the estimate for the men covered on the first occasion is 5.9% higher than the mean estimated over all the periods of the survey. Likewise, the measurement carried out in rotation group 7 is 4.5% below the mean. According to the conclusions reached by Bailar *(op. cit.)*, this index can be used to demonstrate the way the rotation bias affects the level of the estimators, something that it may be possible to correct for by means of moving average techniques which can be used to carry out seasonal adjustment of the observations, although they can never eliminate it completely.

The results of the research did not bring clearly to light the problems that gave rise to the differences, but the following are cited as probable causes: interview biases, the fact that interviewing is carried out by telephone, changes in the questionnaire and the rotation groups of the sample, among others.

Repeat Samples and Continuous Surveys

The use of repeat samples is an option for studies that carry out field work in a set space of time. There are in fact authors who defend the advantages of carrying out a number of minor surveys on successive occasions, but opinions still differ and it is not possible to produce a universal recommendation on this issue, so particular solutions need to be applied depending on the objectives of the research.

Among the benefits associated with continuous surveys are the ability to improve the accuracy of estimators and/or reduce the operating costs involved in carrying out field work, as financing can be obtained as and when needed and the work of information gathering thus carried out uninterruptedly. By contrast, carrying out a large-scale survey over a short time period requires all the operating machinery to be very finely adjusted, particularly as regards the stage of designing questionnaires, drafting manuals and training interviewers, so that biases in information gathering are kept to a minimum. Likewise, operating costs can be substantially higher, and the entire budget needs to be available to ensure that the research will be completed.

Perhaps one of the greatest advantages associated with repeat samples is the ability to generate information on temporary variations in the value of estimators. They also make it possible to identify and quantify the seasonal and recurrent trends of a time series and to discern irregular variations in the trend of the indicator that are due to unlooked-for fluctuations in the economic cycle.

Surveys of this type are appropriate for the design and evaluation of policies only to extent that the authorities and economic agents have the ability to react to changes in the level and trend of the indicator. This means that before a survey with these characteristics is designed, it is necessary to have a firm idea of what these data are wanted for and whether policy designers have the ability to react when there are monthly variations in the level of unemployment, for example, and take appropriate measures to influence the rate of open unemployment in the following period.

The evidence suggests that the latter is not very feasible and that the information collected each month tends to be consigned to time series databases to enable models to be produced and calculated so that the future behavior of the indicator can be forecast. This approach can thus entail high operating costs without the information actually being used for decision-making in the short term.

Again, it is also affirmed that aggregation of the sample in repeat surveys can lead to better estimates than are obtainable from a single survey. On this subject, Kish *(op. cit.)* believes that *"selecting time segments from an entire period on the basis of probability enables statistical inferences to be drawn on the basis of the mean of an average situation in the period"*. Otherwise, an inference drawn on the basis of a "typical" segment requires suppositions to be made about the stability of the phenomenon being studied, which may mean ignoring seasonal, recurring and irregular variations in the variables that are being measured. Repeat surveys, by averaging the different measurements in an appropriate way, can add observations to enable inferences to be drawn, improving the accuracy of the estimator.

Estimation Methods in Panel Surveys

The procedures used to estimate parameters of interest to researchers on the basis of data generated by panel surveys are very important for obtaining a realistic view of the changes in different variables.

It is important to stress that both measurements obtained by panel surveys and those generated using cross-sectional data or derived from designs that use overlapping samples are subject to errors of measurement and non-sampling errors that affect the reliability of estimators. Nonetheless, any given type of error has different implications for the accuracy of results. Accordingly, we may identify two major methods that are commonly applied (Binder and Hidiroglou, *op.cit.*): the classical procedure and the time series procedure. In the classical method (Jesenn, 1942, Tikkiwal, 1979 and Wolter, 1979) the succession of observations y_{ti} formed by measuring certain parameters of interest $\{\grave{U}_q\}$, such as the mean or total of the variables, are regarded as being fixed in time, and it is supposed that they are related in some way to the values obtained in the previous measurements $y_{t-1,i}$ in the same unit within a certain structure of correlation that is determined by analyzing the observations.

The problem of sampling on successive occasions was first considered by Jesenn (1942) in an analysis of data from a farm survey. In the situation being looked at in this investigation, out of a sample of n=900 observation units that was used in a survey conducted in 1938, 450 were retained for use in the 1939 round and a similar number were selected independently in order to keep the original sample size, so that the 1939 sample may be regarded as a subsample of the original sample.

Again, estimation procedures based on the time series philosophy treat the parameter q_t as a random variable whose value changes over time as the result of a stochastic process (random shocks) (Blight and Scott, 1973 and Jones, 1980). Under this view, the estimation methods employed need to take into account the way observations correlate to one another, and the existence of different components of the time series (trend, recurring effect, seasonal and irregular component).

Following Hansen *et al.* (1953) and the work of Ashenfelter *et al.* (*op. cit.*), some results are given below in relation to errors of measurement and the optimum proportion of overlap in surveys that incorporate rotation panels into their design.

Consider a situation where it is decided to carry out two successive surveys to measure changes in a given parameter of interest. In this case, let n be the total size of the sample on both occasions and p the proportion of the sample that will be kept active between the two investigations. Let

x_1» be the mean in period 1 of the np households that belong to the proportion of overlapping households;

x_2» be the mean in period 2 of the np households that belong to the proportion of overlapping households;

y_1» be the mean in period 1 of the n(1-p) households that belong to the old sample;

y_2» be the mean in period 2 of the n(1-p) households that belong to the new sample;

S_1 **and** S_2» be the standard deviation of the sample in periods 1 and 2 for the variable being looked at;

r » be the coefficient of correlation between the two consecutive measurements for the variable being looked at.

If the primary objective of the investigation is to estimate the population means m_1 and m_2 and the difference between these values (m_1-m_2), then the sampling errors can be expressed as linear combinations of the parameters estimated, as shown below:

$$\grave{U}m_1 = a_{11}\,x_1 + a_{12}\,x_2 + b_{11}\,y_1 + b_{12}\,y_2 \qquad (14)$$

$$\grave{U}m_2 = a_{21}\,x_1 + a_{22}\,x2 + b_{21}\,y_1 + b_{22}\,y_2 \qquad (15)$$

$$\grave{U}D_m = (m_1 - m_2) = a_{31}\,x_1 + a_{32}\,x2 + b_{31}\,y_1 + b_{32}\,y_2 \qquad (16)$$

To ensure that the results are reliable the estimators need to be unbiased and the sampling error as small as possible. On the supposition that $a_{12} = b_{12} = 0$ the implication is that the estimator $\grave{U}m_1$ would have to be calculated after the second survey was carried out. Thus, given a certain percentage of overlap $p > 0$, the values of the **a**'s and **b**'s will not depend on the weighting factors selected.

On the basis of the above, the expressions for estimating m_2 and $\grave{U}D$ are:

$$\grave{U}m_2 = \{[rp(1-p)] / [1-(1-p)^2 r^2]\} [(S_2/S_1)(y_1-y_2)] + [p/1-(1-p)^2 r^2)] + \\ + \{(1-p)[1-(1-p)^2 r^2]\}/[(1-(1-p)^2 r^2] y_2 \quad (17)$$

$$\grave{U}D_m = \{(1-p)[1-(1-p)^2 r^2\} / [(1-(1-p)^2 r^2](y_2-y_1) + \{p/[1-(1-p)^2 r^2]\}(x_2-x_1)$$

$$+ [r\,p\,(1-p)] / [1-(1-p)^2 r^2] \{(y_2-y_1)(S_2/S_1) - (y_2-x_2)(S_2/S_1)\} \quad (18)$$

In expressions (16) and (17) it is vital to determine what value of **p** is most suitable and best able to minimize calculation error; likewise, it is necessary to know the coefficient of correlation (**r**) between the measurements effected and the individual estimators for the variable concerned. It should be recalled that the value of **r** and the standard errors quotient (S_1/S_2) changes for each variable, which means that it is very difficult to find an optimum value for **p** which meets a number of the objectives of a multi-purpose survey.

If it should be necessary to calculate the value of $\grave{U}D$ and the variances $S_1=S_2$ are equal, the variance of the difference estimator is obtained by means of:

$$s_{Dm}^2 = 2(1-r)\, s_2 /n[1-(1-p)r] \quad (20)$$

On the basis of (20) it is found that when $r > 0$ the optimum design is obtained by overlapping the entire sample; in other words, when $p=1$, which means that in the second round the same households are visited as in the first round, so that the minimum value of the difference variance is:

$$s_{Dm}^2 = [2(1-r)\, s_2 /n] \quad (21)$$

which only depends on the sample size, the coefficient of correlation between the successive measurements and the sample variance of the estimator for the variable concerned. Clearly, where a complex sample design is concerned the design effect (deff) will need to be considered, because the minimum value of the expression (21), which is for a simple random selection system, increases where the deff > 1.

When working with two independent samples the efficiency of the estimator falls due to the fact that the correlation between the measurements carried out on any given variable is not considered in this situation. As for designs with partial overlap, the important thing is to determine the extent of efficiency loss in the value of the sampling error estimator s_{Dm}^2 as the overlap proportion **p** changes. The work of Ashenfelter *et al.* (*op. cit.*) includes a table that shows how the standard error of the estimator changes as a function of different combinations in the values of p and r. Thus, it is affirmed that in cases where half of the sample selected is

retained for a second survey (p= 50%), the loss of efficiency in the value of (21) will never exceed 30%. Likewise, another table is given with varying accuracy for the second survey to estimate the parameter m_2, and the following expression is proposed to calculate the variance:

$$s^2_{m2} = S^2_2/n \{[1 - r^2 (1-p)]/[1 - r^2(1 - p)^2]\} \quad (22)$$

In the event that the variances of the variable concerned in subsequent measurements are equal, the optimum design is obtained when the overlap proportion **p** is equal to:

$$p = 1 - [1 - (1-r^2)^{1/2}]/r^2 \quad (23)$$

Some Conclusions

i) Panel or longitudinal surveys are very useful for designing and determining policies, and for evaluating programs that have an effect on people's living standards. In fact, for research whose purpose is to evaluate the change in the situation of an indicator within a social group between two consecutive points in time, longitudinal studies are the most appropriate mechanism, although they are not error-free.

ii) Data obtained using panel studies have some important advantages for the identification and assessment of econometric models, but they also have certain processing limitations, particularly in the case of non-linear models. In any case, the most important thing is to realize that data derived from panel surveys require special processing, and to analyze them use needs to be made of statistical methods that take account of the structure of correlation between the variables studied and the colinear relationship between the indicators that will be used to specify and assess econometric models.

iii) For economic studies that deal with dynamic characteristics of individuals, the best option is to study changes in phenomena by means of longitudinal studies.

iv) From a practical point of view, panel surveys can be very expensive, especially in situations where the observation units included in the sample are highly mobile. In these circumstances, non-response rates tend to rise, with adverse effects for estimation error and of course the quality of the results. The advantages and disadvantages of panel studies should not be considered in absolute terms, and need to be balanced against one another in practice.

v) When the objectives of the research include a desire to calculate the change in the level of a variable, overlapping sample designs represent an alternative to longitudinal studies. In this case the crucial question that has to be answered is what

proportion of overlap is to be used for optimum results, and the response must be closely tied in to the objectives of the survey, the correlation between the measurements made and the use that it is proposed to make of the data collected.

vi) The variance of a difference estimator to measure change is lower in panel studies, but this in turn increases the variability of a sum or average estimator, and it is consequently very important to relate the objectives of the research to the indicators that the researchers wish to analyze and the methods of calculation being used.

vii) Overlapping or partial rotation panel estimators have some significant advantages over full panel studies, and the fact that they are used in the national survey programs carried out by statistical offices in the region shows that from a practical point of view they are very widely accepted as a way of obtaining data on changes in certain economic phenomena, particularly as regards the level of employment and unemployment; nonetheless, they do have limitations where the study of dynamic processes is concerned.

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