SERIES

SOCIAL POLICY

Income inequality in Latin America

Data challenges and availability from a comparative perspective

Verónica Amarante

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Contents

Summary

The scope of income inequality studies is wide-ranging and includes the description of how this inequality has evolved and the understanding of its determinants and consequences, at both the micro- and macroeconomic levels. Usually, the starting point from the economic perspective relies on the measurement of income inequality, as an essential element for understanding broader inequalities in the social, political or cultural arena. The aim of this article is to discuss some of the main challenges faced by researchers today with regard to income inequality measurement in Latin America. This is not a review of methodological aspects of inequality measurement or inequality determinants, but rather a discussion of the two main approaches to summarizing the distributional problem —factor and personal inequality— and the difficulties involved, which relate mainly to data availability or quality, in measuring inequality under both approaches. The topic is especially relevant in the light of the significance of inequality in Latin America, as well as discussions concerning its recent evolution.[1]

The article has four sections. The first discusses the classic approach to income distribution, through the measurement of factor shares. Next, we turn to personal income inequality, discussing measurement issues based on household survey data. The third section discusses inequality measurement based on personal income and wealth tax data. Finally, the fourth section presents some concluding comments. Throughout, the constraints and main challenges imposed by the available data in Latin American countries are considered.

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[1]   For discussions on recent evolution of inequality in Latin America, see Cornia (2010), Lustig and López Calva (2011), Gasparini and others (2011), Birdsall, Lustig and McLeod (2011), ECLAC (2012), among others.

I.   Factor income shares

The classic approach to income distribution focused on the distribution of national income between factors of production. Basically, this considered the share of land, labour and capital associated with different social classes. A quick look at modern academic production regarding inequality issues clearly shows that this is no longer the case, as inequality is analysed mainly from a personal perspective, and mostly on the basis of microeconomic data. To understand the trajectory from one point to another, we must consider that neoclassical economics became mainstream, and arguments for focusing on factor shares on the part of post-Keynesian economists tended to fade. But even amid the current prevalence of the personal approach to inequality, some recent literature has argued for the return of factor shares to the research agenda. Three main reasons have been identified by Atkinson (2009) for studying factor shares. The first one is to connect incomes at the macroeconomic level with incomes at the household level. The second is as a source of understanding inequality in the personal distribution of income, and the third has to do with social justice in relation to the fairness of different sources of income. On this last point, the author argues that factor shares are relevant for evaluating the fairness of a particular distribution, because they provide information about wages and salaries, usually referred to as "earned income", and profits and rents, usually termed "unearned income".

One reason for the shift in interest from factor to personal distribution is that the relationship today between the shares of production factors and the distribution of personal income is more complicated than it was many decades ago, as people and households may derive income from more than one source. Moreover, there is considerable inequality within categories of income (Atkinson, 1986), Another reason that cannot be disregarded is the availability of microdata from household surveys, which lends itself to personal distribution analysis. As pointed out by Gollin (2002), factor shares were one of the few available sources of data on the size distribution of income in the early twentieth century. Countries all over the world have made major efforts to develop good quality household surveys, and have made significant improvements, as discussed in the next section. Good-quality data on factor shares, as will be discussed, are not as easy to obtain as might be expected.

Ideological reasons also played a role in marginalizing the study of factor shares, as labour's share of national income came to be seen as a particularly sensitive issue, closely related to the struggle of labour against capital and to political and social conflicts (Kuznets, 1955), The confrontational approach has been brought into the political debate, to discuss how the benefits of growth are divided between

labour and capital. Finally, economic theory has also played a role in the relative absence of factor inequality analysis. Under the extended Cobb Douglas production function, the elasticity of substitution between capital and labour is unitary, and factor shares are constant. In this tradition, constant factor shares were considered a stylized fact of most modern economies although, as discussed below, empirical evidence is not conclusive in this regard.[2]

Data for the study of factor shares come from two main sources: the System of National Accounts (SNA) and enterprise and establishment surveys and censuses. Under SNA, the nature of the economic process of income generation is reflected by the Generation of Income Account, which shows how the types of primary incomes are generated by production.[3] This account shows the distribution of value added between factors of labour and capital, and government (through taxes, less subsidies, on production and imports), It measures the balance of primary incomes, and the balancing item is operating surplus/ mixed income (see table A.1), Data from SNA can then illustrate the share of compensations of employees (wages and salaries and employers' social contributions) in value added. Theoretically, mixed income, which comes as a balancing item, includes returns on labour and capital and should be presented separately.

The United Nations national accounts database compiles information on main national accounts aggregates for more than 200 countries from 1970 on. The database includes Latin American countries, with data beginning at different points in time. Labour share, calculated as total compensation of employees divided by national income, can be calculated from this database, and for those countries that officially report data on mixed income, it is disaggregated. The Economic Commission for Latin America and the Caribbean (ECLAC) also compiles information from SNA, presenting data for 14 countries. In this case, mixed income is not presented separately, but is included in the operating surplus for all countries.[4] Many countries in the region disaggregate mixed income (see table A.2), although this separation is relatively recent.

Other sources of data on factor shares are calculated from enterprise and establishment surveys and censuses. The databases compiled by the United Nations Industrial Development Organization (UNIDO) and the Organisation for Economic Cooperation and Development (OECD) are an example.[5] The former includes information on production, value added, employment and wages in the corporate manufacturing sector for around 180 countries. The data measure economic activity for firms above a certain cut-off. This cut-off may vary by country, but most countries exclude firms with fewer than five employees, thereby leaving out a large part of economic activity in developing countries. As is the case in most databases that compile information for many countries, there are some compatibility issues. In this case, they have to do with the concept and valuation of value added. When data come from industrial censuses, only industrial inputs are deducted from production to obtain value added, whereas when they come from the national accounts framework, all inputs are deducted. Value added may be valued at factor prices or producers' prices. Most countries report wages and salaries (including monetary and in-kind payments and excluding contributions to social security), but some include social security contributions as well. A last source of methodological differences refers to the thresholds used to determine whether to include firms, which may be established in terms of employee numbers, sales or another measure of economic activity, and may differ between countries. The OECD database includes a smaller sample of countries, and it has the advantage that all variables are harmonized and consistency checks are carried out. A detailed description of these databases can be found in Ortega and Rodríguez (2006),

Even in countries which provide separate information for mixed income, the main difficulty for factor inequality analysis is to disentangle which part of total mixed income corresponds to labour

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[2]   Many researchers consider two thirds to be a plausible constant value for labour share.
[3]   National accounts are calculated by central banks in the Bolivarian Republic of Venezuela, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Uruguay. They are compiled by statistic institutes in Argentina, Brazil, Colombia, Mexico, Panama, Peru and the Plurinational State of Bolivia.
[4]   This information can be found in CEPALSTAT [online] www.eclac.org.
[5]   UNIDO compiles the Industrial Statistics Database (INDSAT) and OECD compiles the Structural and Demographic Business Statistics Database (SDBS).

reward, and which to capital reward. Only the former should be included in the labour share. If all mixed income is treated as labour income, it may constitute a major bias in those countries where independent employment (including both the self-employed and employers) is significant. In fact, independent work represents almost 32% of total employment in Latin America and it accounts for 22% of total household income (see table A.3), This underpins the argument that the higher labour share in rich countries as compared to poorer ones is in fact a result of the importance of independent work in poorer countries, which is not included in labour shares.

To solve this problem, it is necessary to estimate which part of mixed income corresponds to labour income, and to include this amount in the labour share, together with wages and salaries. The simplest way to perform an estimation is to treat self-employment and employers' income as equal to the average salaried wage of the economy. This solution is adopted in ILO (2011, 2013) for the estimation of the adjusted labour share for numerous developing and developed countries. For the region, this may represent a significant overestimation, however, as self-employment, which accounts for the bulk of independent work, carries a wage penalty when compared to salaried workers. A more rigorous solution would be to attempt to disentangle the labour and the capital returns portions of mixed income. Nowadays, this can be done using information from household surveys. This kind of adjustment would consist of predicting the wage that a self-employed worker in a certain sector of the economy would have earned, based on Mincer equations. The total income received by the self-employed is divided into the capital and labour components using this prediction. Where capital return is negative (very possible), all declared income is considered to be labour income.[6] Another possibility is to adopt the reverse approach, i.e. assume that the property used by the self-employed yields the same return as other property, and treat labour income as the residual, after subtracting capital income from the total income of the self-employed. The former solution is adopted by Young (1995), who imputes wages to the self-employed according to their sector, sex, age and education. Along similar lines, Gollin (2002) corrects income shares to include the labour income of the self-employed, and finds that variations in income shares between rich and poor countries are much smaller once this adjustment is taken into account.

The possibility of comparing factor shares over time and between countries opens up interesting research questions. One has to do with understanding the determinants of these factors and their evolution. These determinants include technology of production, institutional factors (unions, bargaining), globalization (through access to technology and capital mobility) and changes in the sectoral composition of output (ILO, 2013), Examination of the evolution of labour share and real wages can shed light on the elasticity of labour demand. Krueger (1999) shows that raw labour's share of national income has varied significantly over the twentieth century in the United States, while Jones (2003) and Bentolila and Saint-Paul (2003) show that there have been significant changes over time in the factor shares of most OECD economies. ILO (2013) underlines the contrast between the evolution of the unadjusted wage share in the long run, and the recent trend during the economic crisis. The long-term trend in the wage share was predominantly negative for the period 1980–2007, whereas it increased in 2008-2009, suggesting that in the short term the wage share is usually countercyclical, as profits were more volatile than the total wage bill. ILO also perform a shift-share analysis that shows that the structural decline in the wage share was, in most cases, due to both a shift and a share effect. But the share effect outweighs the shift effect, so declining wage shares within sectors are the main cause.

Different studies have related factor shares to macroeconomic variables. Jayadev (2007) analyses the relationship between labour share and capital mobility, and finds that capital mobility has a direct negative impact on the labour share of income in all samples and subsamples examined, except in low-income countries, suggesting that the weakened bargaining position of labour due to the removal of capital controls is concentrated in more developed economies, including middle-income ones, but is less evident in poorer ones. Rodrik (1999) finds a positive correlation between labour shares and the extent of democracy. On the relationship with GDP, evidence is mixed. Ortega and Rodríguez (2006) find a negatively significant relationship between capital shares and per capita GDP, whereas Gollin (2002)

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[6]   According to Atkinson (1986), this method was proposed by Feinstein.

and Bernanke and Gurkaynak (2002) argue that cross-national, economy-wide capital shares do not display a negative correlation with per capita income, favouring the idea of constant shares of labour across countries. Bentolila and Saint Paul (2003) show that, even in countries which are similar in terms of technologies, there are large differences in the labour share. They study the impact of factors that may affect the labour share, such as the price of imported materials or capital augmenting technical progress, union bargaining and labour adjustment costs (hiring and firing costs).

Another research question derived from the study of factor shares has to do with the complementarity between this approach and the personal one, which is affected by the problems of household surveys in terms of capturing capital income, as discussed in section II. Daudey and García Peñalosa (2007), using UNIDO database, try to relate the impact of labour share on the distribution of personal income in the economy, controlling for the size of the manufacturing sector. They argue that if capital is more unequally distributed than labour, an increase in the labour share would reduce personal income inequality. Their cross-country and panel evidence suggests that the labour share has a negative impact on the Gini index reflecting personal income inequality.

The relevance of the research question associated with the factor share approach suggests that it would be useful to reposition the topic in the agenda. In the case of Latin America, that implies correcting labour shares in order to include the labour reward for the self-employed and employees.

II. Inequality measurement using household surveys

Household surveys are the main source of information for estimating indicators of personal inequality at present. Most countries in the region have been collecting periodical household surveys since the 1980s.[7,8] Although the region has achieved significant advances in the past few decades in terms of implementing good-quality surveys, the available data is still far from ideal for comparing distributions of well-being across countries or over time, as the following paragraphs discuss. This is not limited to this region, as many of the problems are also present in developed countries. Nevertheless, these problems should be considered when discussing inequality and how to improve inequality measurement and the international comparability of inequality figures.

The relevant literature abounds with discussions on the best variable for reflecting individual well-being and thus for calculating inequality (see, for example, Jenkins and Van Kerm, 2009; Atkinson and Brandolini, 2001), Based on economic theory, it has been argued that it is consumption that corresponds to the utility function, and so distributional analysis should be based on this measure. Another argument in favour of consumption is that it captures permanent income (see, among others, Slesnick, 1993), and is better than income as a measure of well-being for poorer families (Meyer and Sullivan, 2003; 2007), The other view argues that what matters is the availability of economic resources, rather than their use (consumption or savings), and so income should be taken into account. Given that conceptual arguments may favour either consumption or income, decisions on how to measure well-

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[7]   The World Bank initiative, Living Standards Measurement Study (LSMS) —developed in the 1980s— helped to increase the capacity of statistical institutes to perform household surveys. LSMS surveys collect data on consumption, income, savings, employment, health, education, fertility, nutrition, housing and migration. In the region, they were carried in Brazil, Ecuador, Guatemala, Nicaragua, Panama and Peru. Details of this experience can be found in Grosh and Glewwe (1995) and Deaton (1997), Later, starting in 1996, the Programme for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean (MECOVI), a joint initiative by ECLAC, the Inter-American Development Bank (IDB) and the World Bank, also helped countries to generate good-quality information on living conditions in the region. Nowadays, most Latin American countries have annual data on distribution. Chile and Mexico conduct surveys every two years, whereas Guatemala and Nicaragua perform more sporadic surveys.

[8]   In some countries, including Brazil and Uruguay, the first household surveys date from the late 1960s, but were discontinued for a number of years.

being have often come down to the practical matter of data availability. In the region, inequality measurement has been based on income vectors, because most regular household surveys do not collect information on consumption. Expenditure and consumption data are collected in specific expenditure surveys that most countries conduct every 10 years, with the main objective of constructing consumption baskets to calculate retail price indexes.

Although the ideal situation would be to have both income and consumption inequality measures over time, the region is at a good starting point inasmuch as income inequality can be monitored for most countries. Most measures of income inequality in the region are constructed on the basis of monthly disposable income, that is, net market income (labour market income and capital income excluding social contributions and direct taxes) plus State cash transfers (social insurance, assistance programmes, etc.),[9] Income at the household level is usually compared in per capita terms in the region, as equivalence scales are not widely used.[10] The definition of income across regional statistical offices may differ, although in general terms they try to ascribe to the recommendations of the Expert Group on Household Income Statistics (Canberra Group).

Besides quality problems that may arise at the level of primary data producers, probably the greatest limitation of household surveys is their problem with regard to capturing higher incomes. This may arise as a consequence of truncation, as richer households have a lower probability of being included in the sample, and of income underreporting, especially in the case of capital income. Underreporting of income, in turn, can occur because richer households may be unwilling to report all their income, or because they make mistakes in reporting their true income when it derives from a variety of assets. Be this as it may, the result is that top incomes are underreported in household surveys, and inequality measures could therefore be underestimated.[11] This important limitation could affect the analysis of inequality trends if there are changes in the pattern of underreporting over time or if significant changes occur in the upper part of the distribution.

Unfortunately, there is no way to satisfactorily correct for this problem. In some cases, adjustments are made to national accounts, although this may introduce new biases. As noted by Deaton (2005), there can be no general presumption in favour of either surveys or national accounts. ECLAC calculates poverty and inequality indicators for the region based on an adjusted vector of incomes, following the proposal by Altimir (1987). Strictly speaking, the process consists of two steps. In the first step, imputations are made to correct for income non-response among workers and retired people. The second step is the adjustment per se, which entails using specific factors for every income source, independently of the household's level of income, except in the case of property income. In that case, there is zero adjustment for 80% of households, and a factor higher than one for the richest 20% of households. The adjustment factors by source are obtained from dividing the total income reported for every category of income from the national accounts with those corresponding to the household survey (Bravo and Valderrama, 2011), This adjustment assumes that differences between household surveys and national accounts are due to underreporting and not to truncation, and that the quality of data from national accounts is better than that of household surveys, as it derives from an integrated and consistent accounting system. This last assumption was probably true some decades ago, when the region was just beginning to collect household surveys systematically, but its validity nowadays is less clear.

Another important aspect for comparison purposes is the fact that the ECLAC adjusted income includes imputed rent. At the country level, official and academic estimations of inequality do not

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[9]   Income is measured in gross terms in Brazil and Panama, as well as in Colombia in the case of salaried workers.
[10]   For estimations of equivalence scales for the region see Alonzo and Mancero (2011), Inequality measures from the Centre for Distributive, Labour and Social Studies (CEDLAS) of Argentina, discussed later in this document, are calculated in equivalized terms.
[11]   A detailed comparison of incomes from household surveys and national accounts for Uruguay shows that household surveys capture only 40% of housing rents going to households, and 23% of interest from household's bank deposits (Amarante and others, 2007), In the case of France, a comparison of household surveys and national accounts suggests that the Gini coefficient of household income could be underestimated by 2 percentage points due to underreporting of capital income (Atkinson and Bourguignon, 2000), Barros and others (2007) analyse underestimation of income for the National Household Survey (PNAD) in Brazil, and find that, even though household income underestimation in the household survey is high, this does not substantially affect the measurement of income inequality or of its evolution.

incorporate adjustments to national accounts figures, and this explains divergence between ECLAC and national figures on inequality.[12]

One main drawback for research purposes is that household datasets are not made available in a harmonized and comparable manner in the region. There is undoubtedly an open agenda in the region in this regard. An interesting example in that line is the Luxembourg Income Study (LIS), which has made considerable progress in cross-national consistency of household survey data for upper- and middle-income countries. LIS consists of a cross-national data archive that brings together microdata for a large number of countries (more than 30 countries with datasets spanning up to three decades), Registered researchers can access the microdata directly but remotely (by submitting commands electronically), and they can also use an online table-making tool or access summary indicators calculated on the basis of the harmonized data. At the time of writing, LIS included microdata for six Latin American countries.[13] This initiative has fostered a large number of comparative studies on poverty, inequality and social policies.

Even if primary data sources are not available for researchers in a harmonized format in Latin America, there are compilations of inequality indicators for the region, which are based on the harmonization of household surveys. ECLAC provides access to summary indicators from household surveys mainly through CEPALSTAT, which carries data for 18 countries in the region.[14] These indicators include inequality indexes, calculated on the basis of adjusted income and in per capita terms, as explained earlier. Socioeconomic statistics for the region, including income inequality measures, are also provided by the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), a joint initiative between CEDLAS at Universidad de la Plata and the World Bank.[15] These measures are based on original income data collected in household surveys, and are calculated in per capita and equivalized terms. Data on income inequality for the region are also included in the World Income Inequality Database Version 2 (WIID2), compiled by UNU-WIDER.[16] This is the most complete database available on income inequality, and it includes data for developed, developing and transition countries. It is based on the original compilation effort by Deininger and Squire (1996), and this version includes data for many Latin American countries. In this case, measures come from different data sources and can be based on different income or consumption variables, and so the challenge is to select good-quality comparable figures among all the data available. Each measure includes a specification of its characteristics (geographical coverage, population coverage, unit of analysis, definition of income, and so forth) and is ranked in terms of quality, according to established criteria.

A major drawback for the analysis of inequality from a broader perspective is the scarcity of systematically collected panel data. There are, however, some panel datasets which provide very useful information for the study of dynamics. Argentina uses a rotating panel, with around 25% of the sample replaced in each round. It is thus possible to observe households for four rounds (T = 4), which correspond to a total period of a year and a half (Cruces and Wodon, 2003), In the case of Chile, in 2001 a random sample from the 1996 CASEN cross section was re-interviewed, providing the second wave of panel data. In 2006 and 2009, two more waves of the panel were collected. Mexico's Urban Employment Survey has a rotating panel, in which one fifth of dwellings enter the panel and stay in it for five quarters. Brazil's Monthly Employment Survey (PME) also includes a rotating panel, in which respondent households are surveyed once per month for four consecutive months, rotate out of the sample for eight months, and then rotate back in for four final months (Duryea and others, 2007), The Bolivarian Republic of Venezuela's Household Survey also has a rotating panel. Every six months, one sixth of the sample is replaced by a new set of households from the same sampling cluster. This feature enables researchers to produce panel data for those dwellings remaining in the sample for up to six observation data points (Fields and others, 2007). Peru's National Household Survey has also included a

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[12] An exception was the case of Chile until 2012, where the official figures on poverty and inequality were calculated using ECLAC adjusted household data.
[13] The regional data sets included in LIS are: Brazil (2006), Colombia (2004, 2007, 2010), Mexico (1984, 1989, 1992, 1994, 1996, 1998, 2000, 2002, 2004), Peru (2004) and Uruguay (2004), See [online] http://www.lisproject.org.
[14] See [online] http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp.
[15] See [online] http://sedlac.econo.unlp.edu.ar/esp/.
[16] See [online] http://www.wider.unu.edu/research/Database/en_GB/database/.

rotating panel since 1998. Panel data is also available for Nicaragua (1998, 2001 and 2005) and Peru (1991 and 1994) as part of the LSMS initiative.[17]

In OECD countries, panel surveys are extensive. Some of the most famous long-running surveys are the United States Panel Study of Income Dynamics (PSID) since 1968, the German Socio-Economic Panel (GSOEP) since 1984 and the British Household Panel Survey (BHPS) since 1991. There are also panel surveys in Australia, Canada, the Netherlands, New Zealand, Sweden and Switzerland. Finally, a well known initiative is the European Community Household Panel (ECHP), a panel survey in which a sample of households and persons were interviewed year after year for eight waves (between 1994 and 2001).[18] The original sample included 60,500 households in 12 member States.[19] The standardized questionnaire covers income, health, education, housing, demographics, employment characteristics, and so forth, and enhances cross-country comparability. Access to the anonymized data is provided through research contracts to universities, research institutes, national statistical institutes and central banks in the European Economic Area.

Panel surveys can be informative with regard to the intergenerational transmission of inequality and poverty, as well as for studies on inequality of opportunity. They are also very helpful for understanding the dynamics of income among different socioeconomic groups. Ideally, this kind of research requires large and representative samples and repeated observations over a long period of time. The more waves of data that are available for each generation, the better for estimating intergenerational transmission processes (Jenkins and Sielder, 2007), In the region, not only are panels not widespread, but the window of observation of available data covers less than two generations, as the panel data discussed earlier cover very short periods. In general terms, these short-run panel data can be used to study labour market mobility or transitions in and out of poverty, but are not suitable for analysing intergenerational mechanisms.

As mentioned earlier, most regional inequality measures are based on disposable income. There are studies for specific countries comparing gross and disposable income. These comparisons allow researchers to assess, for example, the redistributive impact of direct taxes, and can be very informative for policies. Unfortunately, this kind of comparison is very information-intensive, as it usually involves turning to the tax/contribution codes for different countries in order to reconstruct gross income, which is not usually reported in household incomes. Again, there is scope for the region to advance in that line more systematically.

A related interesting example is the Euromod, a multi-country tax-benefit microsimulation model for the European Union that supports comparable calculation of the impacts of taxes and benefits on household income.[20] Euromod was constructed between 1998 and 2001 by a consortium of academic and research institutes, and now includes 27 countries. The model can be used to quantify the effects of existing policies as well as to evaluate the effects of tax and benefits reforms, using static microsimulations. It is also a suitable platform for simulating behavioural effects of reforms, derived from changes in work or consumption incentives. Microdata can be accessed for academic and non-profit use, under a clearly established set of conditions. Statistics on inequality and poverty indicators before and after taxes and benefits, as well as income components by decile groups, are available online.

Recently, a number of initiatives have included analysis of the effects of taxes and benefits in distributional terms for different countries, developing microsimulation models for the region. An example of an attempt at a multi-country model is the project "Fiscal Schemes for Inclusive Development", sponsored by the United Nations Development Programme (UNDP) and the International Development Research Center (IDRC), which ran from mid-2009 to mid-2011. As part of that project, models for Brazil, Chile, Guatemala, Mexico and Uruguay were developed, with the

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[17] This is not an exhaustive record. At the national level, other panels exist covering specific areas or populations, usually designed for specific purposes, and whose results can not necessary be generalized.

[18] See [online] http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/echp.

[19] The first wave included data for Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, United Kingdom. Later on, Austria and Sweden were added.

[20] See https://www.iser.essex.ac.uk/euromod.

objective of promoting the use of microsimulation models in the region. More details on this experience can be found in Uzua (2012), More recently, the project "Commitment to Equity" (CEQ) was designed, also with the aim of analysing the impacts of taxes and social spending on inequality and poverty. The project has a detailed guide on how to define income concepts, as well as the indicators for reflecting distributional impact (Lustig and Higgins, 2012), At the time of writing, distributional analyses had been developed for Argentina, Brazil, Colombia, Mexico, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay, and work in progress for Chile, Costa Rica, El Salvador and Guatemala.[21]

A final issue regarding inequality measurement using household surveys relates to the distribution of wealth. This approach implies shifting attention from a flow variable —income— to a stock variable, wealth. Most common definitions of wealth include all material assets that can be sold in the marketplace, and exclude debts.[22] In some cases, pension rights are also included. Wealth is, then, a good indicator of capacity to access resources, inasmuch as financial and non-financial assets can be bought and sold. It is also a source of generating income, and a powerful means of intergenerational transmission, through inheritance. Moreover, the possession of certain types of assets may be associated with power or social status, and so the pattern of wealth holdings reveals a great deal about both economies and societies (Davies and Shorrocks, 2000), On empirical grounds, proxies for household wealth can be constructed on the basis of wealth and estate tax records, investment income tax data, and special household surveys of assets and debts (sometimes called financial surveys), When information is based on surveys, the high skewness of wealth distributions makes sampling error important. As in the case of capital income discussed above, non-sampling error may also be relevant due to underreporting, especially of financial assets. This has led to the over-sampling of wealthier households in many surveys designed especially to measure household wealth. This practice is undertaken in consumer finances surveys in Canada, Finland, Germany, Spain and the United States. Deriving estimates of wealth distribution from sample surveys is not free of difficulties (see Davies and Shorrocks, 2000).

Although wealth surveys are relatively new, various developed countries have data for multiple years. Some of these data have been harmonized by the Luxembourg Wealth Study (LWS) Database, developed by the LIS Data Center.[23] New joint efforts to expand and improve wealth data and comparability have been recently carried out by the Household Finance and Consumption Network. This network was established in 2006 and is formed by survey specialists, statisticians and economists from European national central banks (which are usually responsible for wealth surveys), as well as national statistical institutes. HFCN conducts the Eurosystem's Household Finance and Consumption Survey (HFCS), which collects household-level data on finances and consumption. The dataset for the first wave of the survey, corresponding to surveys carried out during 2010/2011, was released for researchers in April 2013.[24]

In Latin America, wealth surveys are almost non-existent. The exception is the Household Financial Survey conducted by the Microdata Centre of the University of Chile for the country's central bank. Information is available for three rounds: 2007, 2008 and 2009.[25] In Uruguay, the Central Bank, jointly with the University of the Republic and the Ministry of Economic Affairs, is running a similar survey that collects information on wealth (assets and debts) in 2013. The lack of wealth data means that studies on wealth distribution virtually do not exist in the region (Amarante and others, 2012), even though it would be reasonable to assume that household wealth should be an even more important resource in Latin America, given the limited access to the credit market and the weakness of the social safety net, as stated by Torche and Spillerman (2008), This study explores available information on

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[21]   See [online] http://www.commitmentoequity.org/.
[22]   The concept of augmented wealth proposed by Wolff (1996) includes human capital or other comparable measures of future earnings possibilities.
[23]   LWS includes datasets from 12 countries: Austria, Canada, Cyprus, Finland, Germany, Italy, Japan, Luxembourg, Norway, Sweden, the United Kingdom, and the United States. See [online] http://www.lisdatacenter.org/our-data/lws-database/.
[24]   This first wave includes data from Austria, Belgium, Cyprus, France, Germany, Greece, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. See [online] http://www.ecb.int/home/html/researcher_hfcn.en.html.
[25]   See [online] www.efh.cl.

wealth distribution in Latin America. Its analysis focuses on house ownership, land holdings and capital assets, and is based mainly on data collected by household surveys.

Clearly, wealth distribution needs to be considered in the region in order to deepen our understanding of inequality. To advance in that direction, the region needs to generate data on wealth. The development of wealth surveys seems an interesting avenue, where much can be learned from the experience of developed countries. Broadening the scope of measurement from income to wealth would provide grounds on which to discuss alternative policies. Whereas the discussion on policies for income redistribution focus on public transfers and rent taxation, as well as labour market institutions, the thinking about wealth redistribution touches upon a broader set of policies (including credit, property rights and estate taxes), where interventions often involve greater difficulties in terms of political economy.

III. Data from fiscal administrations

Given the limitations of household surveys for capturing higher incomes, researchers have looked for other sources of data to study the upper part of the distribution. A successful road has been the consideration of data from personal income and wealth statistics, compiled by fiscal administrations. The pioneering work by Piketty reconstructing the long-run distribution of top incomes in France (Piketty 2003) has been followed by extensive literature conducting comparative studies of top incomes using tax records.[26] Compilations of many of these studies are provided in Atkinson and Piketty (2007, 2010).[27]

The study of top incomes is important for various reasons. One is that the evolution of top income shares is relevant in budgetary terms, as they concentrate the tax capacity which may be exploited for redistributive purposes. It is also relevant for its potential impact on overall national and global inequality, as pointed out by Atkinson and Saez (2011), Moreover, a command of very large resources may foster abilities to influence political, economic and cultural institutions. The role of elites and the perspectives from the sociological and economic literature are reviewed in Jiménez and Solimano (2012).

Data from fiscal administrations are available for longer periods for countries with income or property tax. The data, in the form of tabulations for early years and microdata for recent ones, may be used to analyse changes in the upper tails of the income and wealth distributions from a historical perspective, considering structural changes. The traditional measures include the upper income share of a particular top percentage (usually 0.01%, 0.1%, 1% and 5% of the upper part of the distribution), Given that changes in top income shares can impact overall inequality, Atkinson (2007) proposed a correction for the Gini coefficients calculated on the basis of household surveys that do not include top incomes. If the top group has share S of total income (which can be calculated on the basis of tax data), the Gini coefficient of the whole economy, G, can be approximated by: $G = G^*(1-S) + S$, where G^* is the coefficient for the rest of the population, usually that captured by household surveys. An illustration of this correction is provided by Alvaredo (2010) for the United States and Argentina.

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[26] See Lindert (2000) and Morrison (2000) for reviews of previous estimations of top income shares combining tax shares and national accounts.

[27] The major part of the data constructed has been complied as part of The World Top Incomes Database, a joint initiative of Alvaredo, Atkinson, Piketty and Saez. This database includes data for Argentina and Colombia (whereas there is work in progress for Brazil, Chile and Uruguay), For details see [online] http://topincomes.g-mond.parisschoolofeconomics.eu/.

Inequality studies based on top incomes have some limitations, which have been acknowledged by Atkinson and others (2010), First, top income shares are silent about what is happening at the bottom of the distribution. Second, the problems concerning the definition of income or the unit of observation, also apply to this kind of study. Third, studies based on tax records may be biased because of changes in tax legislation that affect the definition of taxable incomes or the incentives for taxpayers to report their income in their tax declarations.

Although this line of research has made very significant advances for understanding inequality evolution in the long run, there may be some caveats in relation to its potential for the region, where taxation systems are very weak and large parts of the population are engaged in informal economic activity. Nevertheless, it is a promising research avenue, as shown by the works of Alvaredo (2010b) for Argentina, Alvaredo and Londoño (2013) for Colombia, and López and others (2013) for Chile. Incorporating information about richer households may help to enhance our understanding of inequality dynamics in the region.

IV. Final comments

In the past few decades, the region has made major progress in terms of data collection for monitoring inequality and poverty. Nevertheless, significant challenges remain. Factor shares receive very little attention in modern inequality analysis and the personal income approach tends to prevail, fostered by the availability of data. The available data on factor shares has some limitations for analysing inequality. For example, the labour shares available in international databases and based on the SNA framework do not include self-employment income. This may lead to major underestimation for the region, and it may be a misleading indicator of wage dynamics over the cycle. To solve this problem, estimates that are consistent and comparable both over time and across countries should be constructed. This would allow a better understanding of the determinants of factor shares, and would support progress in the study of the relationship between personal and factor inequality. The study of factor shares is also an important element for understanding inequality.

With regard to household surveys, rising demand for data to monitor poverty and inequality has led to an improvement in survey quality, including sample sizes and coverage. One main drawback for research purposes is that household datasets are not made available for research in a harmonized and comparable manner in the region. The examples of such initiatives in developed countries illustrate its potentialities and the importance of overcoming this limitation.

More complex limitations refer to the absence or scarcity of longitudinal data in the region, as well as of wealth surveys. Longitudinal data are essential to understand the intergenerational transmission of poverty, whereas wealth surveys can help to overcome the significant problem of underreporting of higher incomes in household surveys. Finally, analysis based on tax data is a promising research avenue for the region, although its limitations must be kept in mind.

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Annex

TABLE A.1.
GENERATION OF INCOME ACCOUNT

Code	Transaction and balancing items
B.1	**Value added**
D.1	**Compensation of employees**
D.11	Wages and salaries
D.12	Employers' social contributions
D.2	**Taxes on production and imports**
D.21	Taxes on products
D.211	*VAT*
D.212	*Taxes and duties on imports excluding VAT*
D.213	*Export taxes*
D.29	Other taxes on production
D.3	**Subsidies**
D.31	Subsidies on products
D.39	Other subsidies on production
B.2	**Operating surplus** *(balancing item)*
B.3	**Mixed income** *(balancing item)*

Source: United Nations, *System of National Accounts (SNA) 1993*, paragraph 7.3, New York, 1993.

TABLE A.2.
COUNTRIES WITH INFORMATION ON MIXED INCOME IN THE REGION

Country	Period
Argentina	1993-2007
Brazil	2000-2009
Chile	(2003, 2008 and 2009)
Colombia	2000-2010
Guatemala	2001-2010
Honduras	2000-2011
Nicaragua	1994-2000
Panama	1996-2009
Paraguay	2001-2010
Uruguay	1997-2005
Venezuela (Bolivarian Republic of)	1997-2011

Source: Prepared by the author, on the basis of data from central banks.

TABLE A.3.
SELF-EMPLOYMENT IN LATIN AMERICA: IMPORTANCE IN EMPLOYMENT AND INCOME

	Percentage of total employment		Percentage of per capita household income	
	2000	2011	2000	2011
Argentina	26.8	22.4	22.3	18.0
Bolivia (Plurinational State of)	47.5	40.8	46.6	40.6
Brazil	31.1	28.7	21.0	17.6
Chile	24.1	22.3	19.5	17.3
Colombia	45.6	49.5	31.7	35.4
Costa Rica	26.5	22.8	22.3	16.1
Dominican Republic	45.4	47.0	38.0	41.4
Ecuador	36.4	38.4	39.0	33.1
El Salvador	36.5	34.6	30.2	28.6
Guatemala	38.7	35.0	43.6	32.8
Honduras	41.2	45.7	38.4	33.8
Mexico	26.6	22.1	21.3	12.1
Nicaragua	35.1	39.3	33.4	41.2
Panama	32.3	28.7	30.6	25.2
Peru	44.0	42.9	33.8	34.6
Paraguay	45.2	39.5	38.1	37.5
Uruguay	25.7	26.8	15.2	14.9
Venezuela (Bolivarian Republic of)	41.9	41.9	35.2	29.1
Latin America	33.4	31.6	25.8	22.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis on household surveys conducted in the respective countries.

Note: includes employees.

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