The earnings share of total income in Latin America, 1990-2010

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ABSTRACT

This article analyses the share of total income represented by employment earnings in the countries of Latin America over the last two decades. It first considers the wage share of gross domestic product (GDP) and then adds in the earnings of self-employed workers. The findings indicate that both total wages and total earnings declined as a share of GDP in most of the region's countries over the period, although there were some exceptions. The reduction in earnings inequality seen over the past decade was not usually accompanied by an increase in the GDP share of earnings. This means that the improvement in personal income distribution was not matched by an improvement in functional distribution.

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I

Introduction

In recent decades, the great majority of studies on inequality have concentrated on analysing income distribution among individuals and households. Although functional income distribution has received greater attention in advanced countries over recent years, largely because of the decline in the wage share of income in those countries during the past three decades, the subject does not seem to have attracted the same interest in the countries of the Latin America region. This article argues that functional income distribution needs to be studied systematically and discusses some of the information constraints that usually hinder efforts to do so, particularly in the countries of Latin America.

The recent trend of earnings as a share of total GDP in the region's economies is analysed. The empirical evidence presented is structured around two main categories of earnings. First, information on the total wage share in the region's countries during the period from 1990 to 2011 is considered. Second, the wage share of GDP is corrected by adding self-employment earnings. Two methods are used to make this adjustment. The first is to assume, as is very commonly done in the literature, that all self-employed workers earn the average wage in the economy. The second is more rigorous and uses household survey data. The first step in this second adjustment is to use information from continuous household surveys to estimate what portion of the mixed

income of self-employed workers (both own-account workers and employers) comes from earnings. Once the self-employment earnings total has been identified, the proportion it bears to the wage total is calculated, once again from household survey information. On the basis of this ratio, the wage total identified by systems of national accounts is adjusted to obtain an estimate of total earnings as a share of GDP. On the basis of these two methodological approaches, the article presents new estimates for the volume of earnings in Latin America, while also illustrating their evolution and reflecting on the problems and constraints involved in studying functional income distribution in the region.

The article is organized as follows. First, the functional and personal approaches to studying income distribution are discussed (section II). Some issues involved in measuring the earnings share of total income are then described (section III), after which recent studies on functional income distribution are summarized (section IV). The following section discusses methodological aspects, presenting the information sources available for studies of this type in Latin America and describing the methodological options adopted in this paper (section V). Thereafter, the evolution of total wages as a share of total income in Latin America is analysed (section VI). Having highlighted the importance of self-employment work in Latin America (section VII), the article presents the results arrived at when this wage total is corrected to incorporate the earnings of self-employed workers (section VIII). Lastly, section IX contains some concluding remarks.

II

Functional and personal income distribution

The classical economists were concerned to analyse the relationship between functional income distribution and the production and capital formation process. In the now famous commentary at the start of his *On the Principles of Political Economy and Taxation*, David Ricardo argued that determining the laws that governed the division of output between workers, capitalists and

landowners was the chief problem of political economy (Ricardo, 1973). As Serrano and Medeiros (2001) argue, the idea of an economic surplus as conceived in the classical approach permeated to varying degrees into a number of the seminal works on economic development, as in the case of the well-known dual economy model propounded by Arthur Lewis (1954). Analysis of the

relationship between economic development and falling employment in traditional or subsistence activities, typically in rural areas (see Bhaduri, 1983), and indeed of the relationship between the creation of the surplus and capital accumulation from a sectoral and structural perspective (Rodríguez, 2006), entails some kind of analysis of the distribution of the surplus between the different social classes or sectors.

The classical emphasis on functional income distribution survived the marginal revolution of the late nineteenth century, albeit within a different conceptual and methodological framework whereby each factor of production (the social classes of the classical authors) appropriated a portion of output on the basis of its marginal contribution to the production process. A fundamental indicator in this school of thought is the wage share of total output in the economy. The consolidation of neoclassical economics around the mid-1950s, with its stress on analysis based on the study of economic agents' individual behaviour, led to the emphasis among mainstream economists shifting from functional income distribution to personal income distribution (Goldfarb and Leonard, 2005). At the outset, this interest in studying personal income distribution as opposed to functional distribution was resisted by post-Keynesian and neo-Ricardian economists, who argued for the primacy of the functional distribution debate not only on analytical grounds[1] but with the explicit objective of stressing the centrality of the social conflict between capitalists and workers in the development of capitalist economies.[2] They thus sought to highlight the idea that individual choices were heavily influenced by each person's position in the social stratification. The shift in emphasis towards personal distribution became patent in the 1960s and analysis of functional income distribution was relegated to the background (Atkinson, 2009).

Different historical or institutional factors drove the growing interest in personal income distribution. The complexity of modern production processes and the internal heterogeneity of the groups associated with the different factors of production help to explain why analyses of inequality have tended to centre on personal distribution. Not only can individuals and households derive income from different factors of production, but inequality can be very high within a given group (wage earners, for example). From an institutional perspective,

the consolidation of welfare States has given rise to a need for more accurate identification of the most vulnerable social groups, the main beneficiaries of public assistance, and for a more rigorous examination of income distribution within the working class. The personal approach has made it possible to analyse the impact of redistributive State action more thoroughly by using statistical information from household surveys to consider the effects of taxes and transfers on income. Thus, the growing popularity of the personal approach was also connected with the increasing use of specific surveys to collect household-level information and with methodological and technological advances in applied research.

It might also be said that analysis of the evolution of functional income distribution tended to fall out of favour because the data on the wage share of income were so stable in the period after the Second World War, and this empirical observation came to be identified as a stylized fact of capitalist economies (Kaldor, 1961). This empirical regularity would be reinforced in turn by the consolidation of neoclassical growth theory and the idea that the production potential of an economy could be captured by a Cobb-Douglas production function,[3] which implies an elasticity of substitution of 1 between labour and capital, and constant factor shares.

The subject has come back to prominence in recent years, however. In academia, a number of authors working in the post-Keynesian or structuralist tradition, or both, have systematically studied the impact of changes in functional income distribution on aggregate demand and economic growth.[4] Empirically, the assumed stability of functional income distribution was called into question by the downward trend observed in the wage share of income in virtually all industrialized countries from the early 1980s (see section III below). This new development even aroused the attention of academia, as a number of recent studies show.[5] Greater

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[1] Among other things, they pointed out the need for macroeconomic analysis to differentiate the various social classes' propensity to save.

[2] Authors such as Joan Robinson, Nicholas Kaldor and Luigi Pasinetti developed arguments along these lines.

[3] According to Paul Douglas, the division of national income between capital and labour was roughly constant for a long period. The most recent United States data are also consistent with a Cobb-Douglas production function. Despite the various changes in the economy over the past four decades, the division of income is easily explained by a Cobb-Douglas production function (Mankiw, 2007, pp. 55-58, cited in Atkinson, 2009).

[4] See, for example, Bhaduri and Marglin (1990) and Taylor (1991) on the subject of seminal contributions. For a summary of this literature, see Abeles and Toledo (2011).

[5] See, for example, Bentolila and Saint-Paul (2003); Gollin (2002); Serres, Scarpetta and Maisonneuve (2001); Feldstein (2008); IMF (2007), European Commission (2007); ILO (2008) and Ellis and Smith (2010).

interest was also shown in the subject in developing countries. In Latin America and the Caribbean, for example, the export commodity price boom gave a renewed centrality to the implications of the scale and sectoral origin of the economic surplus for the development process (ECLAC, 2012a), especially in the South American countries, and estimates of the rents associated with natural resource extraction have become an important policymaking input (Campodónico, 2008; ECLAC, 2013).

III

Measuring the earnings share of total income

The nature of the process whereby income is generated from economic activity is reflected in the income generation account of the System of National Accounts (SNA). This account shows how gross value added is distributed between workers, the owners of capital (including land and other natural resources whose rents can be appropriated by private individuals) and the government. In the 1993 revision, value added is treated as a resource in the income generation process, while remuneration for wage employees and taxes on products and production less subsidies are treated as use. The accounting balance is the operating surplus or mixed income, depending on the nature of the account. Mixed income reflects the surplus yielded by the production activities of unincorporated businesses, i.e., households.[6] It thus implicitly contains an element of remuneration for both the labour and the capital involved in the production activity being analysed. At best, the national accounts provide aggregate information on these two components of mixed income, and cannot separately identify the yield of labour and capital.[7] This is one of the main constraints on efforts to measure the wage share of income, most particularly in developing countries, where self-employment prevails. The total income of self-employed workers is usually included in this mixed income, with no distinction made between the remuneration of labour and capital.

All that is usually considered when the earnings share of total income is analysed is the ratio of wages to total gross domestic product (GDP).[8] This ratio may be expressed at market prices or at factor cost, depending on whether taxes on products and production less subsidies are included in the GDP measurement. Taken alone, this ratio shows that the wage share varies enormously between countries, ranging from 14% in Nigeria to 59% in Switzerland, and the region's countries tends to present low values for this indicator (see figure 1).

One regularity that emerges when the wage share of GDP around the world is analysed is the positive association with a country's level of wealth. Wages represent a larger share of GDP in richer countries (see figure 2). This relationship may be deceptive, however, since the fact that the share rises with per capita GDP may be due to the greater size of the informal economy in less developed countries. Thus, there may be large biases in comparisons between different countries and time periods. Comparisons across time will be affected if, as the evidence suggests, wage incomes and self-employment incomes react differently to the economic cycle. Comparisons between countries, meanwhile, can be expected to be heavily skewed by non-inclusion of self-employment income, as this will result in underestimation of the total income share going to labour: the greater the proportion of self-employment and thence the overall earnings of these excluded workers, the greater the underestimation will be.

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[6] These are essentially self-employed or own-account workers (street vendors, for example).

[7] In some of the region's countries, such as Peru between 1950 and 1965, self-employed workers' income used to be published as part of the national accounts statistics, but the information was discontinued as national practices were adapted to United Nations proposals for standardizing systems of national accounts. See [online] http://institutodelperu.org.pe/descargas/Publicaciones/De%20otras%20entidades/DOC/1966_webb_cuentas_nacionales_del_peru.pdf.

[8] Labour force participation studies based on data from surveys of businesses or industrial censuses have a similar limitation, as they measure the activity of firms above a certain size threshold (whether of output or number of employees), so that small or family businesses are excluded (see Rodríguez and Ortega, 2006, for a detailed description of the databases in which this type of information is compiled).
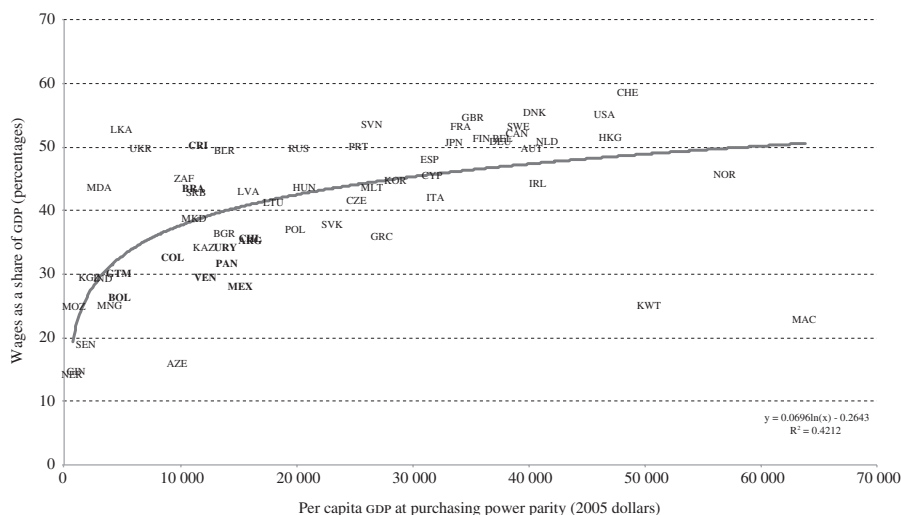
FIGURE 1

Wages as a share of GDP at market prices, around 2010
(Percentages)
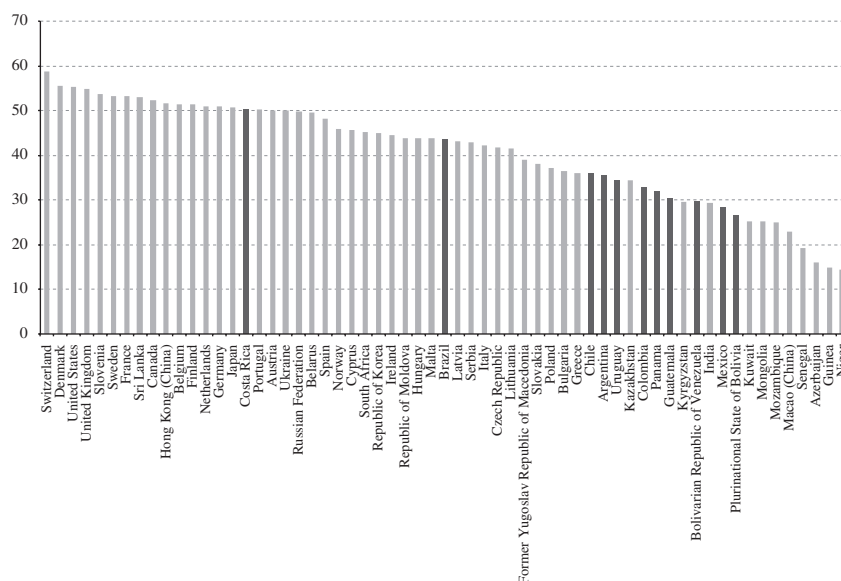
Source: prepared by the authors, on the basis of data from the United Nations Statistics Division (UNSD).

GDP: gross domestic product.

FIGURE 2

Wages as a share of GDP and per capita GDP at market prices, 2010
(Percentages)

$$y = 0.0696\ln(x) - 0.2643$$
$$R^2 = 0.4212$$

Source: prepared by the authors, on the basis of data from the United Nations Statistics Division (UNSD) and International Monetary Fund (IMF), World Economic Outlook Database.

GDP: gross domestic product.

CHE: Switzerland, DNK: Denmark, USA: United States, GBR: United Kingdom, SVN: Slovenia, FRA: France, SWE: Sweden, CAN: Canada, FIN: Finland, BEL: Belgium, LKA: Sri Lanka, JPN: Japan, DEU: Germany, HKG: Hong Kong (China), NLD: Netherlands, UKR: Ukraine, CRI: Costa Rica, BLR: Belarus, RUS: Russian Federation, PRT: Portugal, ESP: Spain, AUT: Austria, MDA: Republic of Moldova, ZAF: South Africa, BRA: Brazil, SRB: Serbia and Montenegro, LVA: Latvia, HUN: Hungary, KOR: Republic of Korea, CYP: Cyprus, IRL: Ireland, CZE: Czech Republic, ITA: Italy, LTU: Lithuania, NOR: Norway, MLT: Malta, MKD: Former Yugoslav Republic of Macedonia, SVK: Slovakia, POL: Poland, BGR: Bulgaria, GRC: Greece, CHL: Chile, ARG: Argentina, URY: Uruguay, PAN: Panama, COL: Colombia, VEN: Bolivarian Republic of Venezuela, MEX: Mexico, GTM: Guatemala, BOL: Plurinational State of Bolivia, KWT: Kuwait, MOZ: Mozambique, MAC: Macao (China), MNG: Mongolia, SEN: Senegal, AZE: Azerbaijan, GIN: Guinea, NER: Nigeria.

IV

Recent studies on the earnings share of total income and its determinants

Recent studies of functional income distribution have all identified a significant change in the last three decades. By contrast with the so-called *trente glorieuses*, the three decades of strong growth that followed the Second World War, the earnings share of total income has been falling in the countries of the Organisation for Economic Co-operation and Development. The trend is less homogeneous in developing countries and emerging economies, although the earnings share has also been dropping in most of them. Recent studies providing evidence of this are Stockhammer (2013) and ILO (2011 and 2013). These studies look at the evolution of the adjusted wage total, calculated by multiplying the average compensation of wage earners by the number of workers in the economy. Self-employed workers are thus incorporated on the assumption that they earn roughly the same as wage workers.

The drop in the earnings share of total income has not generally been due to structural changes in economic activity involving a shift from sectors with a large wage share to others with a smaller share (displacement effects). Rather, it has been due to a decline in the wage share within certain sectors (ILO, 2011). In particular, the ratio has declined considerably in financial intermediation and high- and medium-technology manufacturing, with a less pronounced drop in services, construction and low-technology manufacturing. It has also been found that the downward trend in the adjusted earnings share in developed countries has been mainly due to the declining share of low- and medium-skilled workers' earnings, while the earnings share of highly skilled workers has tended to rise (ILO, 2013).

In recent years, a quite substantial literature has attempted to relate the recent evolution of the earnings share with the structural reforms implemented in the past few decades, analysing possible links with various developments such as global offshoring of production processes, labour market deregulation, the deregulation and increasing predominance of financial markets, and changes in institutions and the degree of unionization, among other things (Bentolila and Saint-Paul, 2003; Bernanke and Gürkaynak, 2002; Fichtenbaum, 2009; Gollin, 2002; Harrison, 2002; Hogrefe and Kappler, 2012; IMF, 2007; Jayadev, 2007; Rodríguez and Ortega, 2006). However, there has been little in the way of systematic approaches to the link between the evolution of functional and personal income distribution. While studies of functional distribution take a macroeconomic approach, those centring on personal distribution treat it as a microeconomic phenomenon, accounted for basically by the distribution of individuals' personal characteristics. One attempt to relate the two approaches can be found in a study by Daudey and García-Peñalosa (2007) providing econometric evidence that a low wage share of output has a negative and significant effect on personal income inequality.

For a better understanding of the determinants of income inequality and the connection between personal and functional inequality, it is first necessary to have an accurate diagnosis of functional income distribution and its evolution. There are analyses from a factorial perspective for some countries in the region, including Lindenboim (2008), Lindenboim, Kennedy and Graña (2010) and Graña (2007) for Argentina; Hernández Laos (1998) for Mexico; UNDP (2010) and Amarante and Vigorito (2011) for Uruguay; and Ministry of Planning and Cooperation (2000) for Chile. However, there is no analysis combining a comparative perspective in the region with systematic, comparable inclusion of self-employment income. The present article seeks to advance in this area, and while the matter may seem straightforward, a number of information availability problems have to be dealt with, as detailed below.

V

Methodology

1. The information available in Latin America

National accounts statistics in the region are prepared by central banks or national institutes of statistics.[9] Not all countries make disaggregated information on mixed income publicly available. In the region, this information is available for Argentina, the Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay, although in most cases only for the most recent period (usually since the last base change), while in some cases it is not disaggregated by branch of activity.[10] This information is assembled by the databases of the Economic Commission for Latin America and the Caribbean (ECLAC) and the United Nations Statistics Division (UNSD).[11]

The ECLAC data are available in CEPALSTAT, a database that includes information for recent years on 14 of the region's 18 countries (not counting Cuba or Haiti), without distinguishing mixed income, which is consolidated with the operating surplus (even in cases where the information available from the countries is disaggregated). The detail of the information available in this database is presented in table A.1 of the annex. One advantage of the database is that it holds long-term information, although in practice there are large hiatuses in the time series because of base changes or other alterations in methodology.

UNSD holds information on a great many countries, including 16 in the region, distinguishing mixed income from the operating surplus and including a breakdown of the different series by business sector.[12] However, the data cover a more limited time period, with information going back to the 1970s for just 7 of the 16 countries. The detail of the information on Latin America held by UNSD is presented in table A.2 of the annex.

This paper uses information from the CEPALSTAT database, supplemented by information from the relevant official bodies for countries not included in CEPALSTAT (Argentina, Costa Rica and Guatemala). In the case of Uruguay, where SNA information only runs up to 2005, the wage ratio was updated in line with the average nominal wage index, the employment rate and GDP at factor cost.

2. Methodologies for estimating total earnings

To avoid the biases in the measurement of the earnings share that arise when the analysis does not cover the totality of earnings but only wage income, as discussed in section III, the earnings of self-employed workers need to be estimated.

A first problem to be addressed, then, is how to separate out from the mixed income total the share deriving from the remuneration of labour and the share deriving from returns to capital. The first component should be added to wage employees' remuneration to obtain the true labour share of income generated in the economy. Different methods have been suggested for making this correction. One possibility is to carry out estimates on the assumption that self-employed workers earn roughly the average wage. Gollin (2002) makes adjustments of this type for a large group of countries, and concludes that a substantial part of the differences in the earnings share of total income between rich and poor countries is due to methodological errors caused by the non-inclusion of self-employment incomes. Studies by Stockhammer (2013) and ILO (2011 and 2013) also rely on a correction of this type. The present paper carries out estimates using two methodologies, the first of which consists in assuming that self-employed workers earn roughly as much on average as wage employees.

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[9] Institutes of statistics are responsible for gathering this information in Argentina, Brazil, Colombia, Mexico, Panama, Peru and the Plurinational State of Bolivia, while central banks do so in the Bolivarian Republic of Venezuela, Chile, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Uruguay.

[10] Some countries have information on mixed income prior to 1990 in their systems of national accounts.

[11] There are other sources of information for analysing the wage share of GDP, based not on national accounts data, however, but on business surveys or censuses. The two main databases of this type are those of the United Nations Industrial Development Organization (UNIDO) and the Organisation for Economic Co-operation and Development (OECD). Details of these databases can be found in Rodríguez and Ortega (2006).

[12] This total does not include Ecuador, whose data only go up to 1991. In the breakdown by business sector, mixed income figures are not always available.

A more rigorous solution is to try to separate the employment remuneration share from capital returns in the mixed income total for countries that calculate it separately. For this, the earnings of self-employed workers can be simulated by considering their personal characteristics and the economic sector they work in (rather than using the average wage for all of them). A solution of this type is adopted by Young (1995) for the countries of Asia on the basis of census information, on the assumption that self-employed workers earn the same as wage workers who are similar in age, sex, education level and economic sector. Even when no official information is available on mixed income, the estimate of the earnings share can be corrected. To this end, the household survey is first used to calculate the ratio between the wage total and self-employment income, and then this coefficient is applied to the wage income recorded in the national accounts.

These estimates can now be made using information from household surveys. This is the second methodological option adopted in this article. The ratio between total wage income and total self-employment income is estimated on the basis of microdata from household surveys, and this ratio is used to correct the total share of wages in GDP.

As a first step, the employment income of self-employed workers is estimated in the light of their personal characteristics and economic sector, on the assumption that their earnings are similar to those of wage employees. The procedure is to start by estimating wage equations for private-sector wage earners, using as dependent variables sex, age and age squared, years of education and binary variables distinguishing by branch of activity. The coefficients obtained in these wage equations are applied to the characteristics of self-employed workers so that the earnings of each self-employed worker included in the survey can be predicted. When these predictions for the earnings of self-employed workers are lower than the income reported in household surveys, the difference is assumed to represent returns to capital. Accordingly, the figure yielded by the prediction is taken to be the amount earned by these self-employed workers. If the earnings predicted for self-employed workers are higher than the earnings declared in household surveys, the whole of the latter amount is taken. On the basis of this new vector of self-employed workers' earnings, it is possible to establish a relationship of proportionality between the total earnings of self-employed workers and the wage total (also reported in household surveys). This ratio is applied to the SNA wage data to reach a final estimate of total earnings, which is then compared to GDP.

VI

The wage share of total income in Latin America

Information from the countries' national accounts data can be used for an initial analysis of the evolution of the wage share of national income in the region's countries. As already discussed, this is a rough approximation, as it only includes the earnings of wage workers. Again, there are large jumps in the time series for the region at points where the base year for the national accounts changes, in view of which the decision was taken to consider the continuous time series available for the countries in the period between 1990 and the latest year available (which differs by country). The ratio between remuneration of labour and GDP at factor cost is considered.[13] CEPALSTAT information is supplemented

by data from the relevant official bodies in cases where countries are not incorporated into CEPALSTAT (Argentina, Costa Rica and Guatemala). The wage share in Uruguay, for which SNA information only goes up to 2005, was updated using the average nominal wage index, the employment rate and GDP at factor cost.

Taking the latest year with information available (around 2009), the total wage share ranges from 24% in Peru to 56.7% in Costa Rica (see table 1). Analysis of the evolution of this share reveals a decline in most of the countries (8 out of a total of 12), the exceptions being the Bolivarian Republic of Venezuela, Chile, Costa Rica and Paraguay. Of the countries where there was an improvement in the period considered, Costa Rica stands out as the only one to show a steady upward trend in wages as a share of GDP. In the Bolivarian Republic of Venezuela, Chile and Paraguay, the wage share of GDP

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[13] The measurements yield larger shares at factor cost than at market prices, since the market price GDP calculation includes product and production taxes minus subsidies.

shows a decline in the last decade after rising strongly between 1990 and 2000.[14] The countries where the wage share fell between 1990 and the late 2000s followed a more heterogeneous path. In Argentina and Brazil, a drop in the 1990s was followed by a partial recovery in the 2000s. In the Plurinational State of Bolivia, the wage share improved in the 1990s and fell in the 2000s. Colombia, Honduras, Panama and Peru registered declines throughout the period (with quite sharp drops over the 1990s in the first three cases). Mexico shows almost no change between the start and end of the period, as an increase in the 1990s was followed by an almost symmetrical decline in the 2000s. Developments in all years are shown for each country in figure A.1 of the annex.

If the countries are classified into three groups, distinguishing (i) those with a wage share of up to 35%, (ii) those with a share of between 35% and 45% and (iii) those with a share of over 45%, the country ranking proves fairly stable, since Mexico and Peru are in the first group, Argentina, Colombia and Paraguay in the second and Brazil, Costa Rica and Honduras in the third

in all three years. The other countries either do not have information for all three years or change their position in the ranking in one of them (see table A.4).

The evolution of the wage share of income depends on differences in real wage and labour productivity growth. Figure A.2 of the annex compares changes in real wages and labour productivity in the region's countries. In the 1990s, productivity grew by more than real wages in Argentina, the Bolivarian Republic of Venezuela, Chile, Guatemala, Panama, Peru, the Plurinational State of Bolivia and Uruguay, which explains why the wage share fell there in that period, and by less in Colombia, Costa Rica and Paraguay, which explains why the wage share rose there. In Brazil, Mexico and Nicaragua, they grew at a similar pace, and as a result there were no significant changes in functional income distribution in those countries over the period. In the 2000s, real wages grew faster than labour productivity in Argentina, the Bolivarian Republic of Venezuela, Brazil, Colombia and Costa Rica, which accounts for the rise in the wage share over the period. The opposite held true in Chile, Guatemala, Mexico, Panama, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

A very important change in the region's social indicators has been a shift away from the worsening trend in personal income inequality that was seen to a

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[14] The specific years the table 1 data relate to for each country are presented in table A.3 of the annex. The differences are determined by data availability.

TABLE 1

Wages as a share of GDP at factor prices

	Wages as a share of GDP			Change in the wage share of GDP		
	Around 1990 (a)	Around 2000 (b)	Around 2009 (c)	1990-2000 (b)-(a)	2000-2009 (c)-(b)	1990-2009 (c)-(a)
Argentina	44.7	40.5	42.9	-4.2	2.4	-1.8
Bolivia (Plurinational State of)	38.2	41.9	34.5	3.8	-7.4	-3.6
Brazil	53.5	47.1	51.4	-6.3	4.3	-2.1
Chile	38.7	46.5	45.4	7.8	-1.1	6.7
Colombia	41.4	36.2	36.1	-5.3	-0.1	-5.3
Costa Rica	48.3	50.6	56.7	2.3	6.1	8.4
Guatemala		36.3	32.8		-3.5	
Honduras	54.8	47.5	47.4	-7.3	-0.1	-7.4
Mexico	32.3	34.5	32.2	2.2	-2.3	-0.1
Nicaragua	59.6	56.2		-3.4		
Panama	58.6	40.6	35.2	-18.0	-5.4	-23.4
Paraguay*	43.4	59.0	47.2	15.7	-11.9	3.8
Peru	28.7	27.0	24.0	-1.8	-3.0	-4.7
Uruguay		47.4	45.8		-1.6	
Venezuela (Bolivarian Republic of)	31.1	35.6	33.5	4.5	-2.1	2.4

Source: prepared by the authors, on the basis of information from CEPALSTAT, the National Institute of Statistics and Censuses (INDEC) of Argentina, the Central Bank of Costa Rica, the Bank of Guatemala and the Central Bank of Uruguay.

* In Paraguay, the 1990 figure is 50% below the average for the indicator in 1991-2009. Including it hugely distorts the evolution of the time series, so the decision was taken to start the analysis for that country in 1991.
GDP: gross domestic product.

greater or lesser degree in virtually all the Latin American countries during the 1990s. After rising for a decade in most of them at that time, inequality indicators began to decline in many cases in 2002 or 2003, depending on the country (see ECLAC, 2012a and 2012b). The various studies agree in identifying the role of the labour market in this overall decline in household income inequality, since income from the labour market has become less unequal, driving the decline in inequality.[15] However, as is revealed by the foregoing analysis and illustrated in figure 3, the greater homogeneity of earnings, which occurred in a context of rising incomes, has not been

matched by a greater share for wages in total GDP. Income inequality fell between 2002 and 2009 in all the Latin American countries except Costa Rica, but only in Argentina, Brazil, Costa Rica and Uruguay did the wage share of total GDP rise.[16] Distributive improvements at the household level have not usually been matched by a more egalitarian share-out in terms of appropriation by capital and labour. One theory is that this might be because the income figures on which personal distribution indicators such as the Gini coefficient are based do not fully incorporate property income in practice owing to issues of data capture. If this is so, it might be said that total wages have been distributed more equitably overall in the last decade, without significant changes (or indeed with greater concentration in asset-owning sectors) in the distribution of the economic surplus generated in the region.

[15] One of the main limitations of household surveys is that they struggle to capture incomes properly at the top of the distribution. One option that has gained ground in recent years is the incorporation of other sources of data into the analysis, especially income and wealth data from fiscal records (see Piketty, 2003; Atkinson and Piketty, 2007 and 2010). Studies of this type have been carried out for some countries in the region (see Alvaredo, 2010; Alvaredo and Londoño, 2013; Burdín, Vigorito and Esponda, 2014). Traditional inequality estimates from household survey data have also been corrected using national accounts data (see Yamada, Castro and Bacigalupo, 2012).

[16] Figure 3 does not include Guatemala, since the latest Gini index figure available for the country is from 2006.

FIGURE 3

The wage share of GDP and the Gini index, 2002-2009
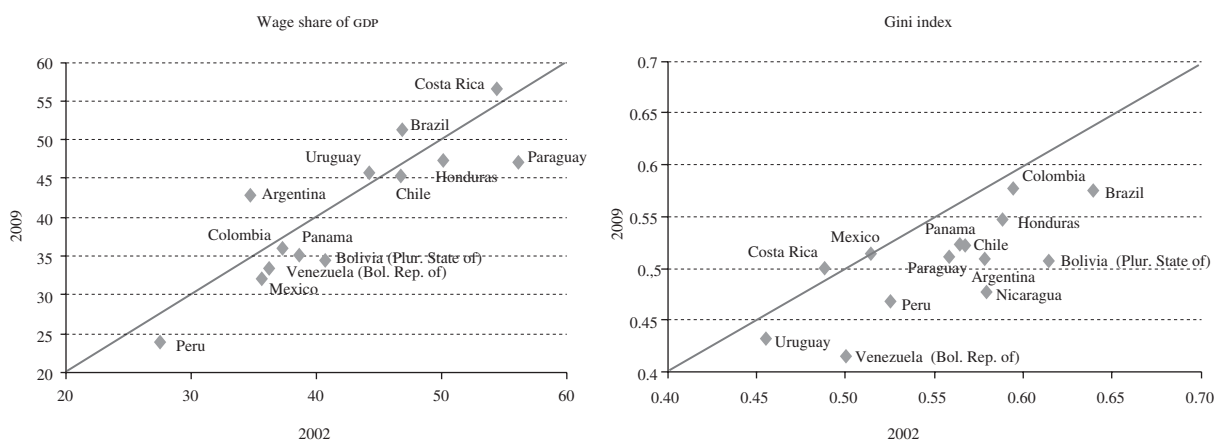
Source: prepared by the authors, on the basis of information from CEPALSTAT, the National Institute of Statistics and Censuses (INDEC) of Argentina, the Central Bank of Costa Rica and the Central Bank of Uruguay.

GDP: gross domestic product.

VII

The scale of self-employment in Latin America

One of the distinctive features of labour markets in Latin America is the scale of self-employment, which encompasses own-account workers and employers. Self-employment accounts for a very large proportion of total employment in the region: almost 32% on average in the countries considered, ranging from 22% in Argentina to over 49% in Colombia around 2011. The share of wage employment has increased in the last decade from 59.8% to 63.7% of total employment in the region, and there has also been a small increase in the wage share of per capita household income (see table 2).

The income reported by self-employed workers represents a very substantial proportion of total per capita household income (about 31% in the region). Theoretically, given the nature of the activities involved, some of this income is payment for labour and another part is returns to capital. As explained earlier, this income is not included in the wage share reported in the national accounts, and this is a major limitation, especially when it comes to comparing countries with different degrees of development. Two adjustments to traditional estimates of the earnings share designed to incorporate self-employed workers' incomes will now be presented.

TABLE 2

Wage and self-employment work and incomes

	Around 2000				Around 2011			
	Total employment share		Household income share		Total employment share		Household income share	
	Wage workers	Self-employed	Wage income	Self-employment income	Wage workers	Self-employed	Wage income	Self-employment income
Argentina	72.0	26.8	42.4	30.3	76.9	22.4	49.8	25.1
Bolivia (Plurinational State of)	32.1	47.5	41.5	27.7	41.3	40.8	46.8	37.3
Brazil	62.8	31.1	35.4	20.7	68.4	28.7	42.4	19.4
Chile	74.4	24.1	46.4	29.9	77.4	22.3	52.8	26.3
Colombia	49.4	45.6	45.2	27.8	46.0	49.5	44.0	29.7
Costa Rica	71.6	26.5	64.9	19.8	75.9	22.8	62.8	17.3
Guatemala	47.0	38.8	38.2	45.8	51.4	35.0	32.5	42.1
Honduras	49.6	41.2	45.5	29.0	43.7	45.7	47.4	28.5
Mexico	66.1	26.6	46.7	28.4	73.0	22.1	49.7	13.6
Nicaragua	52.3	35.1	50.7	40.8	48.9	39.3	50.4	38.2
Panama	62.7	32.3	60.3	24.5	67.5	28.7	54.5	28.9
Peru	40.5	44.0	39.4	29.8	44.9	42.9	42.5	31.1
Paraguay	44.8	45.2	42.9	37.8	52.9	39.5	47.0	41.7
Uruguay	72.7	25.7	42.1	16.1	71.9	26.8	46.5	16.3
Venezuela (Bolivarian Republic of)	56.4	41.9	45.5	39.1	57.2	41.9	52.3	27.9
Latin America	59.8	33.4	45.4	31.7	63.7	31.6	46.2	30.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of continuous household survey data.

VIII

Reestimation of the labour share including self-employment income

As detailed in subsection V.2, two adjustments were made to estimate the earnings share of GDP. The first is the more current in the literature (being similar, for example, to that used in ILO, 2013) and consists in imputing the average wage estimated from SNA data to all self-employed workers and adding this amount to SNA-reported wages and salaries.[17]

The second option, detailed in subsection V.2, is more rigorous and consists in using information from household surveys to estimate the ratio between total wages and total self-employment income, and then correcting the wage share of GDP on this basis.

Wage equations were estimated for the totality of wage employees in the economy, with sex, age and age squared, years of education and binary variables distinguishing branches of activity being taken as the dependent variables.[18] Setting out from the coefficients estimated in these equations, an earnings prediction was made for each of the self-employed workers (both own-account workers and employers) included in the household surveys. When the predicted earnings of self-employed workers proved lower than the income reported by them in household surveys, returns to capital were assumed to make up the difference. Accordingly, the figure yielded by the prediction is taken to be the amount earned by these self-employed workers. If the earnings predicted are greater than the earnings declared in household surveys, the whole of the latter amount is taken as the earnings of the self-employed workers. The result of following this criterion was that the predictions were used for only 41% of own-account workers (taking the average across the countries for the years considered), although for employers the predictions

were used 71% of the time. This outcome is reasonable, as it presumably reflects the greater importance of returns to capital among employers. A new earnings vector was thus estimated for each of the self-employed workers included in the household survey. The ratio between the wage total given by the survey and the earnings total estimated by this methodology was then calculated. This ratio was applied to the wage total reported in the SNA for each country and year, and total earnings were thus estimated (i.e., wage income plus self-employed workers' earnings) and measured against GDP. Table 3 compares the three results: the wage share of GDP according to the SNA, the correction arrived at by assuming that self-employed workers earn roughly the average wage, and the more detailed correction made using the methodology explained above.

In all cases, the adjustment made by imputing average wages leads to a large overestimation of total earnings in the region's countries. In the cases of Honduras (2010), Paraguay (2001) and the Plurinational State of Bolivia (2000), the result is that earnings amount to almost 100% of GDP measured at factor cost. When the estimates are carried out by the second method, the finding is that a substantial proportion of self-employed workers, and own-account workers in particular, declare lower earnings in surveys than would be expected from the predictions based on their personal characteristics and branch of activity.[19] This income gap relative to wage workers indicates that simply imputing average wages produces a substantial bias. On average, this second method of estimation increases the size of wage earnings by 25 points.

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[17] Specifically, what is added is the product of the average wage multiplied by the number of self-employed workers in the country. The estimates for the self-employed worker total come from continuous household surveys and CEPALSTAT.

[18] The results of these estimates are available from the authors on request.

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[19] A limitation of the adjustment methodology used in this study is its assumption that wage workers and self-employed workers pay similar amounts of social security contributions and taxes and that the proportions contributing are likewise similar (given that a ratio obtained from the net incomes reported in household surveys is applied for most of the countries) to a variable (the wage total) that includes contributions.

TABLE 3

Total wages and estimated total earnings as shares of GDP

		Wages/GDP	Earnings/GDP Estimate 1	Earnings/GDP Estimate 2
Argentina	2000	40.5	54.4	45.7
	2006	41.5	54.2	48.7
Bolivia (Plurinational State of)	2000	41.9	100.1	56.9
	2007	34.5	70.9	47.0
Brazil	2001	47.7	68.2	56.9
	2009	51.4	70.6	59.7
Chile	2000	46.5	61.3	54.9
	2009	44.5	58.1	52.8
Colombia	2000	36.2	68.3	41.2
	2009	44.5	58.1	52.8
Costa Rica	2000	50.6	69.8	55.8
	2010	56.9	73.8	65.0
Guatemala	2003	35.5	61.3	46.6
	2007	33.5	53.7	44.4
Honduras	2010	47.5	93.1	65.5
Mexico	2000	34.5	48.2	45.6
	2008	31.4	41.1	36.2
Panama	2000	40.6	54.4	47.8
	2009	35.2	49.2	40.6
Paraguay	2001	58.5	116.7	84.3
	2007	47.2	87.7	68.0
Peru	2000	27.0	55.1	35.9
	2009	23.3	46.0	31.3
Uruguay	2000	47.4	63.6	57.0
	2010	45.8	62.0	54.3
Venezuela (Bolivarian Republic of)	2000	35.6	56.4	46.5
	2010	38.4	58.2	44.5

Source: prepared by the authors, on the basis of information from CEPALSTAT, the National Institute of Statistics and Censuses (INDEC) of Argentina, the Central Bank of Costa Rica, the Central Bank of Uruguay and continuous household surveys.

GDP: gross domestic product.

Estimation by the second method yields a substantial increase in the earnings share over the SNA figures, which only include wages, but the results are lower than those produced by imputing the average wage. This new estimation, which is considered the best for the purposes of this paper, reflects the volume of earnings, which range from 31% of GDP in Peru to 65% in Costa Rica. Taking the average for all the countries considered, the earnings share increases by 10 percentage points over the figure for wages alone.

Changes in the earnings total are fairly similar across the board, although greater in countries where there is more self-employment, such as Colombia.

The household survey information can be used to analyse the distribution of the total earnings estimated by the second methodology in accordance with worker characteristics, taking the sum of wage incomes and the new own-account worker earnings vector from the household survey, by worker education level and sex. Where education levels are concerned, the distribution evinces great stability across countries, with over half of all earnings being generated by workers with complete or incomplete tertiary education (see figure 4). Women generate an average of 35% of all earnings in the region's economies, and their share has been rising in most of the countries analysed (see figure 5).

FIGURE 4

Shares of total earnings by education level, around 2000 and 2009[a]
(Percentages)
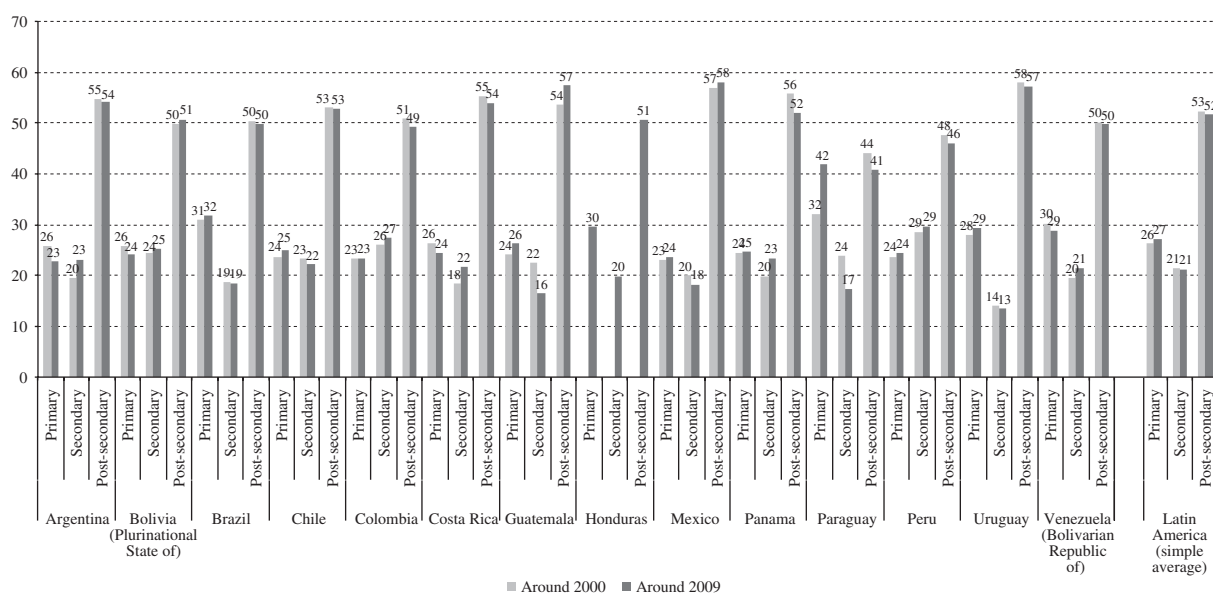
Source: prepared by the authors, on the basis of continuous household survey data.

[a] The bars show the percentages of total earnings accounted for by workers with complete primary, secondary and post-secondary education, respectively. For the first period, the years other than 2000 are 2001 for Brazil and 2003 for Guatemala. For the second period, the years other than 2009 are 2006 for Argentina, 2007 for the Plurinational State of Bolivia, 2008 for Mexico and 2010 for Costa Rica, Guatemala and Uruguay.

FIGURE 5

Shares of total earnings generated by women, around 2000 and 2009[a]
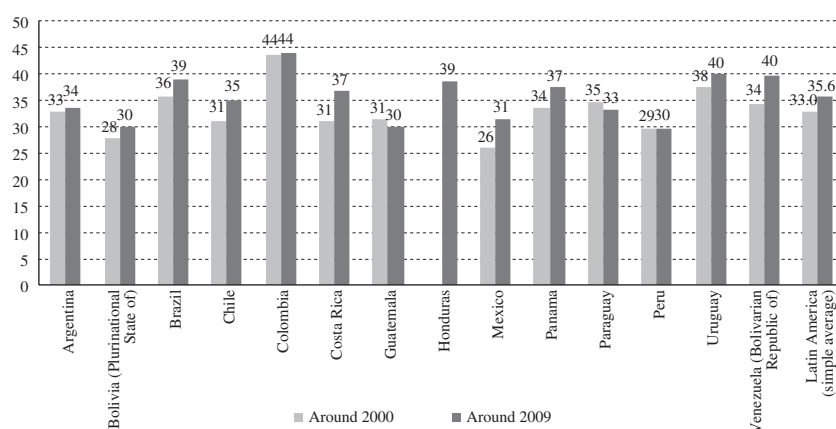*(Percentages)*

Source: prepared by the authors, on the basis of continuous household survey data.

[a] The bars show the percentages of total earnings accounted for by workers with complete primary, secondary and post-secondary education, respectively. For the first period, the years other than 2000 are 2001 for Brazil and 2003 for Guatemala. For the second period, the years other than 2009 are 2006 for Argentina, 2007 for the Plurinational State of Bolivia, 2008 for Mexico and 2010 for Costa Rica, Guatemala and Uruguay.

IX

Concluding remarks

Analysis of income distribution currently centres on inequality between households and individuals, with a particular focus on the microeconomic fundamentals of its evolution. This article has argued that it is important to retain the functional perspective and seek to comprehend the reality by considering and relating the two approaches. Integrating functional income distribution into research agendas is a challenge in the region, partly because of the limitations of the information available. Doing so, however, can reveal new facets of the distribution situation in the region. The decline in income inequality between households that the region has been experiencing for a decade has not been matched by improvements in the share of the proceeds of growth appropriated by workers.

ANNEX

TABLE A.1

Information available at ECLAC

Country	Period	RL	OS	CFK	GDPfc	(T-s)xm	GDPmp
Bolivia (Plurinational State of)	1988/2008						
Brazil	1970-1975-1980-1985[a] 1990/2009						
Chile	1960/1985 1985/1996 1996/2006 2003/2009 2008/2010						
Colombia	1970/1994 1994/2000 2000/2010						
Costa Rica	1970/1991						
Ecuador	1970/1989						
Honduras	1950/1995 1996/2000 2000/2011						
Mexico	1970/1980 1980/1988 1988/2003 2003/2011						
Nicaragua	1994/2011						
Panama	1960/1970 1970/1980 1980/1996 1996/2011						
Paraguay	1970/1991 1991/2007						
Peru	1991/2010						
Uruguay	1971/1983 1983/1988						
Venezuela (Bolivarian Republic of)	1970/1984 1984/1997 1997/2011[b]						

Source: prepared by the authors, on the basis of CEPALSTAT information.

[a] Hyphens do not denote a range of years but are only separators for the years for which information is available.
[b] There are no data for 2010.
Note: RL: remuneration of labour; OS: operating surplus; CFK: consumption of fixed capital; GDPfc: gross domestic product at factor cost; (T-s)xm: taxes on production and imports less subsidies; GDPmp: gross domestic product at market prices.

TABLE A.2

Information available at UNSD

Country	Period	RL	MI	OS	CFK	(T-s)xm	GVAbp
Argentina	1993/2007	■		■		■	■
Bolivia (Plurinational State of)	1970/2011	■		■		■	■
Brazil	1992/2003	■	■	■		■	■
	1995/2009	■	■	■		■	■
Chile	1974/1985	■		■	■		■
	1985/1998	■		■	■	■	■
	1996/2009	■		■	■	■	■
	2008/2010	■		■	■	■	■
Colombia	1970/1995	■		■	■		
	1992/2005	■		■		■	■
	2000/2010	■		■		■	■
Costa Rica	1970/1993	■		■	■	■	■
	1991/2010	■		■	■	■	■
Ecuador	1970/1991	■		■		■	■
Guatemala	2001/2010	■		■		■	■
Honduras	1992/2006	■		■	■	■	■
	2000/2010	■		■	■	■	■
Mexico	1988/2004	■		■	■	■	■
	1993/2004	■		■	■	■	■
	2003/2010	■		■	■	■	■
Nicaragua	1994/2007	■		■		■	■
Panama	1989/2000	■		■		■	■
	1996/2010	■		■		■	■
Paraguay	1994/2010	■	■	■	■	■	■
Peru	1970/1998	■		■	■	■	■
	1991/2010	■		■	■	■	■
Dominican Republic	1991/2005	■		■	■	■	■
Uruguay	1997/2005	■		■		■	■
Venezuela (Bolivarian Republic of)	1970/1984	■		■	■	■	■
	1984/2002	■		■	■	■	■
	1997/2010	■		■	■	■	■

Source: prepared by the authors, on the basis of data from the United Nations Statistics Division (UNSD).

Note: RL: remuneration of labour; MI: mixed income; OS: operating surplus; CFK: consumption of fixed capital: (T-s)xm: taxes on production and imports less subsidies; GVAbp: gross value added at basic prices.

TABLE A.3

Actual years for country data in table 1

	Around 1990	Around 2000	Around 2009
Argentina	1993	2000	2007
Bolivia (Plurinational State of)	1990	2000	2007
Brazil	1991	2000	2009
Chile	1990	2000	2009
Colombia	1990	2000	2009
Costa Rica	1991	2000	2009
Guatemala	…	2001	2009
Honduras	1990	2000	2009
Mexico	1990	2000	2009
Nicaragua	1994	2000	n/a
Panama	1990	2000	2009
Paraguay[a]	1991	2000	2009
Peru	1990	2000	2009
Uruguay[b]	n/a	2000	2009
Venezuela (Bolivarian Republic of)	1990	2000	2009

Source: prepared by the authors.

[a] In Paraguay, the 1990 figure is 50% below the average for the indicator in 1991-2009. Including it hugely distorts the evolution of the time series, so the decision was taken to start the analysis for that country in 1991.

[b] The information from the Central Bank of Uruguay runs up to 2005, so the ratio was updated using the evolution of the average nominal wage index, the employment rate and gross domestic product (GDP) at factor cost.

TABLE A.4

Country ranking by wage share of GDP

Wages/GDP	Around 1990	Around 2000	Around 2009
Up to 35%	Peru, Mexico, Bolivarian Republic of Venezuela	Mexico, Peru	Plurinational State of Bolivia, Guatemala, Mexico, Peru, Bolivarian Republic of Venezuela
35%-45%	Argentina, Plurinational State of Bolivia, Chile, Colombia, Paraguay	Guatemala, Argentina, Bolivia, Colombia, Panama, Bolivarian Republic of Venezuela	Argentina, Colombia, Panama
Over 45%	Brazil, Costa Rica, Honduras, Nicaragua, Panama	Brazil, Chile, Costa Rica, Honduras, Nicaragua, Paraguay, Uruguay	Brazil, Chile, Costa Rica, Honduras, Paraguay, Uruguay

Source: prepared by the authors.

GDP: gross domestic product.

FIGURE A.1

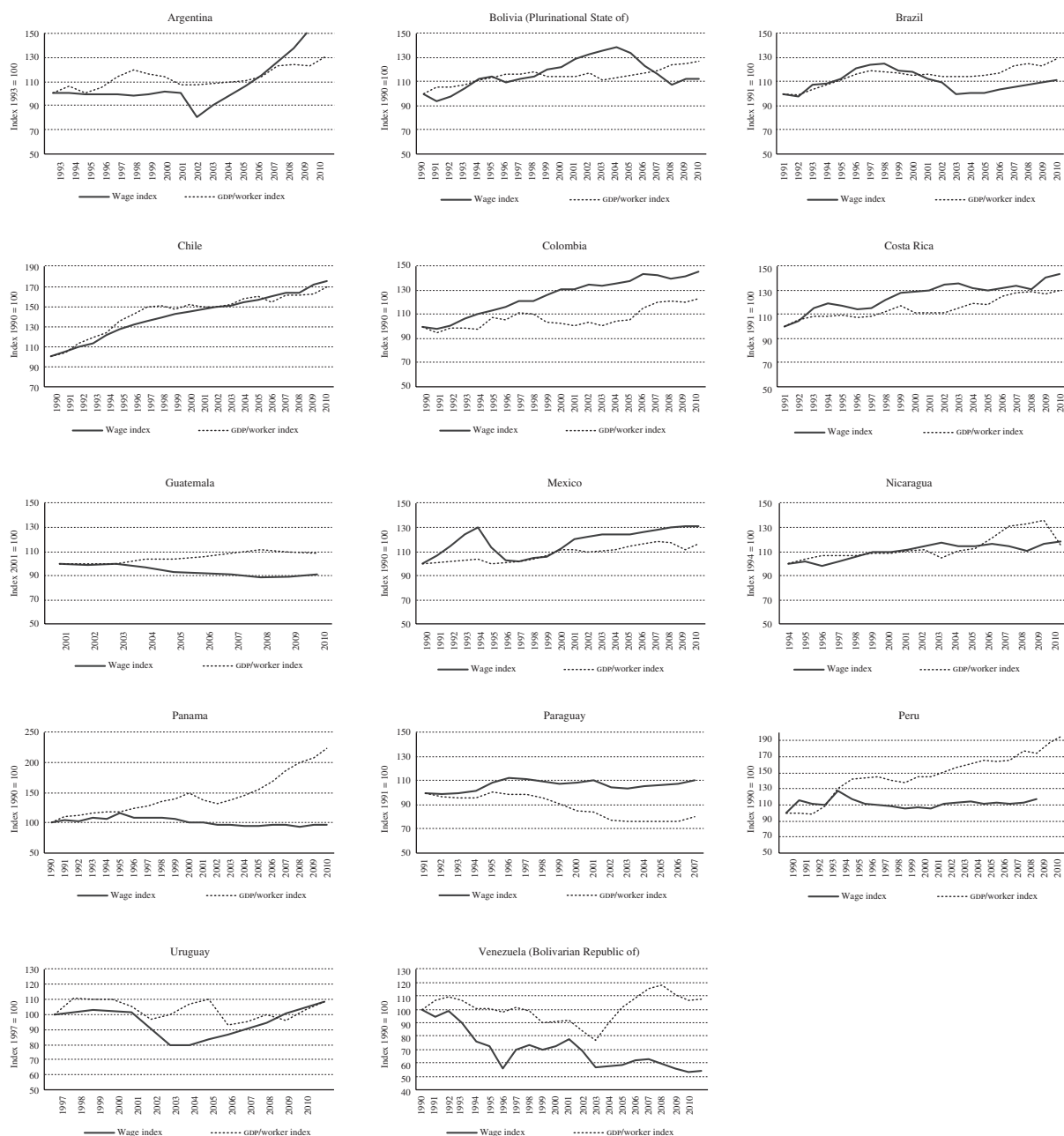## Latin America (15 countries): wages as a share of GDP
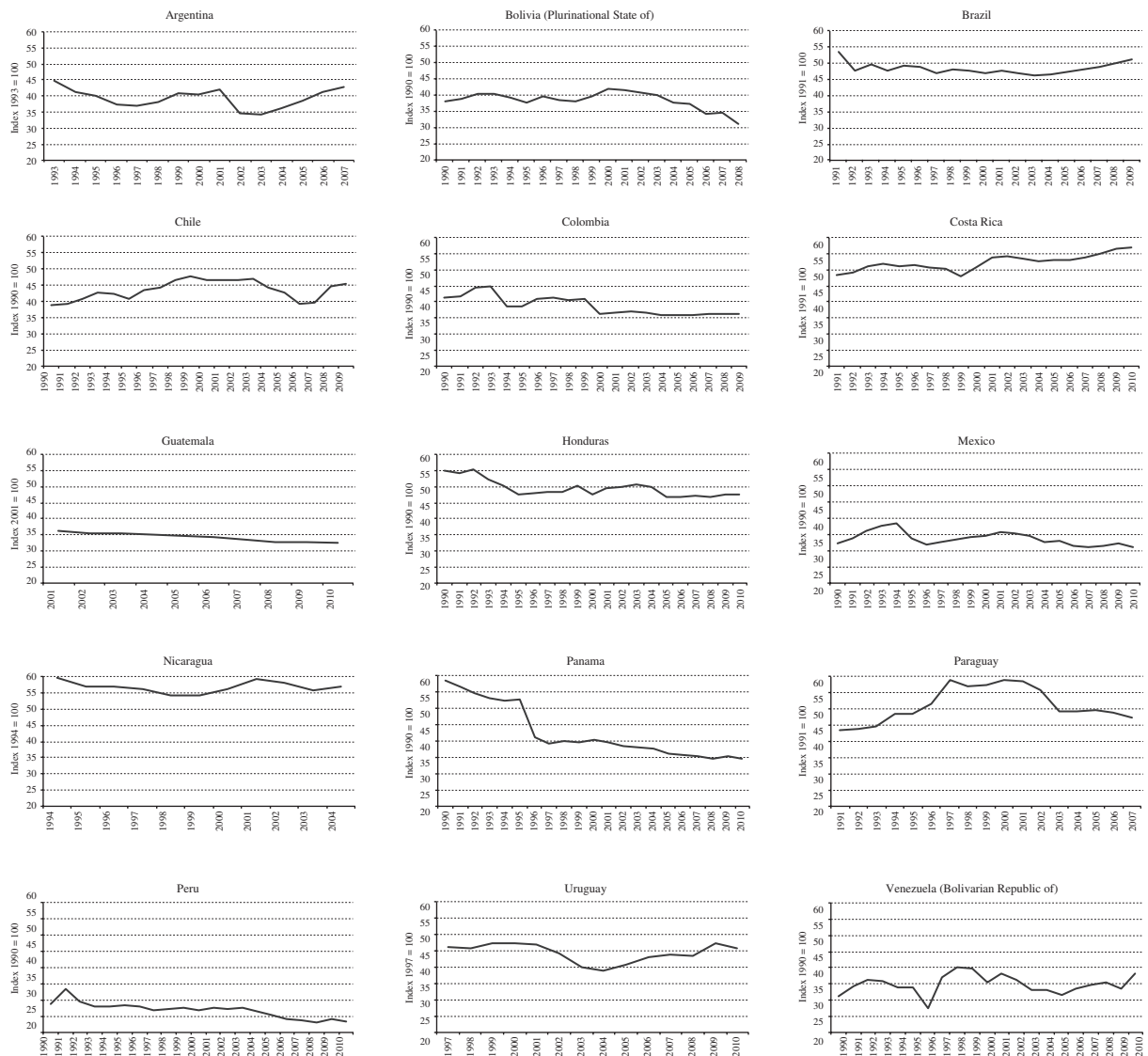
Source: prepared by the authors, on the basis of information from CEPALSTAT, the National Institute of Statistics and Censuses (INDEC) of Argentina, the Central Bank of Costa Rica, the Bank of Guatemala and the Central Bank of Uruguay.

GDP: gross domestic product.

FIGURE A.2

Latin America (14 countries): real wages and labour productivity, 1990-2010

Source: prepared by the authors on the basis of information from CEPALSTAT, the National Institute of Statistics and Censuses (INDEC) of Argentina, the Central Bank of Costa Rica, the Bank of Guatemala and the Central Bank of Uruguay.

GDP: gross domestic product.

Bibliography

Abeles, M. and F. Toledo (2011), "Distribución del ingreso y análisis macroeconómico: Un repaso de la literatura y de los desafíos de política económica", *Distribución del ingreso. Enfoques y políticas públicas desde el Sur*, M. Novick and S. Villafañe (eds.), Buenos Aires, United Nations Development Programme (UNDP)/Ministry of Labour, Employment and Social Security of Argentina.

Alvaredo, F. (2010), "The rich in Argentina over the twentieth century", *Top Incomes: A Global Perspective*, A. Atkinson and T. Piketty (eds.), Oxford University Press.

Alvaredo, F. and J. Londoño (2013), "High incomes and personal taxation in a developing economy: Colombia 1993-2010", unpublished.

Amarante, V. and A. Vigorito (2011), "Los futuros posibles de la desigualdad de ingresos", *La aventura uruguaya. ¿Naides más que naides?*, R. Arocena and G. Caetano (eds.), Montevideo, Debate.

Antras, P. (2004), "Is the U.S. aggregate production function Cobb- Douglas? New estimates of the elasticity of substitution", *Contributions in Macroeconomics*, vol. 4, No. 1, Harvard University.

Atkinson, A. (2009), "Factor shares: the principal problem of political economy?", *Oxford Review of Economic Policy*, vol. 25, No. 1, Oxford University Press.

Atkinson, A. and T. Piketty (2010), *Top Incomes: A Global Perspective*, Oxford University Press.
_____ (2007), *Top Incomes over the Twentieth Century: A Contrast between Continental European and English-Speaking Countries*, Oxford University Press.

Bentolila, S. and G. Saint-Paul (2003), "Explaining movements in the labor share", *The B.E. Journal of Macroeconomics*, vol. 3, No. 1, De Gruyter.

Bernanke, B.S. and R.S. Gürkaynak (2002), "Is growth exogenous? Taking Mankiw, Romer, and Weil seriously", *NBER Macroeconomics Annual 2001*, vol. 16, Cambridge, Massachusetts, National Bureau of Economic Research.

Bhaduri, A. (1983), *The Economic Structure of Backward Agriculture*, Academic Press.

Bhaduri, A. and S. Marglin (1990), "Unemployment and the real wage: the economic basis for contesting political ideologies", *Cambridge Journal of Economics*, vol. 14, No. 4, Oxford University Press.

Burdín, G., A. Vigorito and F. Esponda (2014), "Desigualdad y sectores de altos ingresos en Uruguay: Un análisis en base a registros tributarios y encuestas de hogares para el período 2009-2011", *Documento de Trabajo*, No. 06/04, Montevideo, Institute of Economics, University of the Republic.

Campodónico, H. (2008), "Renta petrolera y minera en países seleccionados de América Latina", *Project Document*, No. 188 (LC/W.188), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).

Daudey, E. and C. García-Peñalosa (2007), "The personal and the factor distributions of income in a cross-section of countries", *The Journal of Development Studies*, vol. 43, No. 5, Taylor & Francis.

ECLAC (Economic Commission for Latin America and the Caribbean) (2013), *Natural Resources within the Union of South American Nations. Status and Trends for a Regional Development Agenda* (LC/L.3627), Santiago, Chile.
_____ (2012a), *Structural Change for Equality: An Integrated Approach to Development* (LC/G.2524(SES.34/3)), Santiago, Chile.
_____ (2012b), *Social Panorama of Latin America 2011* (LC/G.2514-P), Santiago, Chile. United Nations publication, Sales No. E.12.II.G.6.

Ellis, L. and K. Smith (2010), "The global upward trend in the profit share", *Applied Economics Quarterly*, vol. 56, No. 3, Duncker & Humblot.

European Commission (2007), *The Labour Income Share in the European Union*, Brussels, Directorate General for Employment, Social Affairs and Equal Opportunities.

Feldstein, M.S. (2008), "Did wages reflect growth in productivity?", *NBER Working Paper*, No. 13953, Cambridge, Massachusetts, National Bureau of Economic Research.

Fichtenbaum, R. (2009), "The impact of unions on labor's share of income: a time-series analysis", *Review of Political Economy*, vol. 21, No. 4, Taylor & Francis.

Goldfarb, R.S. and T.C. Leonard (2005), "Inequality of what among whom?: Rival conceptions of distribution in the 20th century", *Research in the History of Economic Thought and Methodology*, vol. 23, Part 2, Emerald.

Gollin, D. (2002), "Getting income shares right", *Journal of Political Economy*, vol. 110, No. 2, Chicago, University of Chicago Press.

Graña, J.M. (2007), *Distribución funcional del ingreso en la Argentina: 1935-2005*, Buenos Aires, University of Buenos Aires.

Harrison, A. (2002), "The World Bank: structure and policies: Christopher L. Gilbert and David Vines (eds.), Cambridge University Press", *Journal of International Economics*, vol. 57, No. 1, Amsterdam, Elsevier.

Hernández Laos, E. (1998), "Políticas de estabilización y ajuste y distribución funcional del ingreso en México", *Revista Comercio Exterior*, Mexico City, Banco Nacional de Comercio Exterior.

Hogrefe, J. and M. Kappler (2012), "The labour share of income: heterogeneous causes for parallel movements?", *The Journal of Economic Inequality*, vol. 11, No. 3, Springer.

ILO (International Labour Organization) (2013), *Global Wage Report 2012/2013. Wages and Equitable Growth*, Geneva.
_____ (2011), *Global Wage Report 2010/2011. Wage Policies in Times of Crisis*, Santiago, Chile.
_____ (2008), *World of Work Report 2008. Income Inequalities in the Age of Financial Globalization*, Geneva.

IMF (International Monetary Fund) (2007), *Annual Report 2007*, Washington, D.C.

Jayadev, A. (2007), "Capital account openness and the labour share of income", *Cambridge Journal of Economics*, vol. 31, No. 3, Oxford University Press.

Kaldor, N. (1961), *Capital Accumulation and Economic Growth*, MacMillan.

Krueger, A. (1999), "Measuring labor's share", *NBER Working Paper*, No. 7006, Cambridge, Massachusetts, National Bureau of Economic Research.

Lewis, W.A. (1954), "Economic development with unlimited supplies of labour", *The Manchester School*, vol. 22, No. 2, Wiley.

Lindenboim, J. (2008), "Distribución funcional del ingreso, un tema olvidado que reclama atención", *Problemas del Desarrollo. Revista Latinoamericana de Economía*, vol. 39, No. 153, Mexico City.

Lindenboim, J., D. Kennedy and J.M. Graña (2010), "El debate sobre la distribución funcional del ingreso", *Desarrollo Económico*, vol. 49, No. 196, Buenos Aires, Institute of Economics and Social Development.

Ministry of Planning and Cooperation (2000), *Estudio sobre la distribución del ingreso: Estructura funcional en 1987-96 y proyecciones*, Santiago, Chile.

Piketty, T. (2003), "Income inequality in France, 1901-1998", *Journal of Political Economy*, vol. 111, No. 5, Chicago, University of Chicago Press.

Ricardo, David (1973), *Principios de economía política y tributación*, Madrid, Editorial Ayuso.

Rodríguez, O. (2006), *El estructuralismo latinoamericano*, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).

Rodríguez, F.R. and D. Ortega (2006), "Are capital shares higher in poor countries? Evidence from industrial surveys", *Wesleyan Economics Working Papers*, No. 2006-023, Middletown, Wesleyan University.

Serrano, F. and C. Medeiros (2001), *Economic Development and the Revival of the Classical Surplus Approach*, Cape Town.

Serres, A., S. Scarpetta and C. Maisonneuve (2001), "Falling wage shares in Europe and the United States: how important is aggregation bias?", *Empirica*, vol. 28, No. 4, Springer.

Solow, R.M. (1958), "A skeptical note on the constancy of relative shares", *The American Economic Review*, vol. 98, No. 4, Nashville, Tennessee, American Economic Association.

Stockhammer, E. (2013), "Why have wage shares fallen? A panel analysis of the determinants of functional income distribution", *Conditions of Work and Employment Series*, No. 35, Geneva, International Labour Organization (ILO).

Taylor, L. (1991), *Income Distribution, Inflation, and Growth: Lectures on Structuralist Macroeconomic Theory*, Cambridge, Massachusetts, The MIT Press.

UNDP (United Nations Development Programme) (2010), *Human Development Report 2010. The Real Wealth of Nations: Pathways to Human Development*, New York.

Yamada, G., J. Castro and J. Bacigalupo (2012), "Desigualdad monetaria en un contexto de rápido crecimiento económico. El caso reciente de Perú", *Documento de Discusión*, No. 12/01, University of the Pacific Research Centre.

Young, A. (1995), "The tyranny of numbers: confronting the statistical realities of the East Asian growth experience", *The Quarterly Journal of Economics*, vol. 110, No. 3, Oxford University Press.