Income Inequality in Latin America: A Factor Components Analysis

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Paper Prepared for the IARIW-IBGE Conference
on Income, Wealth and Well-Being in Latin America

Rio de Janeiro, Brazil, September 11-14, 2013

Session 1: Inequality Dynamics

Time: Thursday, September 12, 2:00-3:30

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Preliminary and incomplete version. Do not quote.

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1. Introduction

After a decade of increase in income inequality in the region during the 90s, most Latin American countries experienced a decreasing trend in their income inequality indicators during the 2000s. A turning point can be identified in many countries in the region, whose inequality begins to trend down in 2002 and 2003 (ECLAC, 2011). These are obviously good news after the lack of improvement in previous decades, although the position of Latin America as the most unequal region in the world still remains unchanged.

This recent decline in income inequality in the region has drawn the attention of scholars and institutions, and although the phenomenon is relatively recent, abundant previous research has addressed this question, both through country case studies and cross country analysis. This paper reviews that discussion, and aims at contributing to it, by providing a cross country study of factor decomposition of inequality for four Latin American countries (Argentina, Chile, Ecuador and Uruguay) in different points in time.

Methodologically, the paper follows a large literature on decompositions of inequality indexes by factor components (see Shorrocks, 1982; Jenkins, 1995; Lerman and Yitzhaki, 1985 for key references). We perform factor decomposition analysis for two measures of inequality: the square coefficient of variation and the Gini index. The objective is to analyze the contribution of each source of income to overall inequality in three points in time (around 1990, 2002 and 2011),

* Nincen Figueroa provided excellent research assistance for this article. The findings, interpretations and conclusions expressed in this paper are responsibility of the author and do not necessarily reflect the views of ECLAC.

as well as decompose their changes during that period, in order to compare the importance of different factors and disentangle if there is a common pattern among countries.

The exercise is performed on the basis of original income vectors compiled by household surveys, and also using ECLAC's adjusted income vectors, which are constructed in order to reach consistency with National Accounts figures. Income factors include wages, self employment income, capital income, contributive transfers and other transfers. When possible, wages are separated in their formal and informal components, defining formality as contributing to social security.

The paper is organized as follows. Section 2 presents previous evidence on the recent decline of inequality in Latin American countries and its possible explanations. Section 3 discusses methodological aspects, including the data, definition of variables and inequality measures and their decomposition. Sections 4 and 5 present our main results, and section 6 concludes.

2. The recent decline in inequality in Latin America: previous evidence

Many Latin American countries presented an increasing trend in income inequality during the nineties (table 1). In a context of market oriented reforms and moderate economic growth, distributional changes at the country level were unequalizing mainly due to the fact that individuals located at the lower tail of the distribution did not seem to have benefited from growth to the same extent as other sectors of the population during the decade (Morley, 2001; Székely, 2001). For the region as a whole, Gasparini (2003) argues that less unequal countries performed worse on average than more unequal ones during that decade. In effect, while inequality increased in Argentina, Uruguay and Venezuela, which are economies with low levels of inequality, it has not changed or even become more equal in countries with higher inequality (see for example Colombia and Mexico).

Table 1. Income inequality in Latin American countries. 1990, 2002 and 2011. Adjusted income.

	Gini index	Theil index

	1990	2002	2011	1990	2002	2011
Argentina	0.501	0.578	0.492	0.555	0.72	0.511
Bolivia	0.537	0.614	0.508	0.574	0.775	0.511
Brazil	0.627	0.639	0.559	0.824	0.914	0.666
Chile	0.554	0.552	0.516	0.647	0.674	0.541
Colombia	0.601	0.567	0.545	0.801	0.672	0.599
Costa Rica	0.438	0.488	0.501	0.346	0.44	0.474
Dom. Republic	-.-	0.537	0.558	-.-	0.569	0.603
Ecuador	0.461	0.513	0.434	0.410	0.563	0.353
El Salvador	0.507	0.525	0.454	0.513	0.527	0.372
Honduras	0.615	0.588	0.567	0.817	0.719	0.625
Mexico	0.536	0.514	0.481	0.680	0.521	0.458
Nicaragua	0.582	0.579	0.478	0.712	0.782	0.437
Panama	0.530	0.567	0.531	0.555	0.616	0.561
Paraguay	0.447	0.558	0.546	0.366	0.673	0.63
Perú	-.-	0.525	0.452	-.-	0.556	0.382
Uruguay*	0.416	0.455	0.402	0.314	0.385	0.291
Venezuela	0.471	0.5	0.397	0.416	0.456	0.275

*Data corresponds to 1992

Source: ECLAC

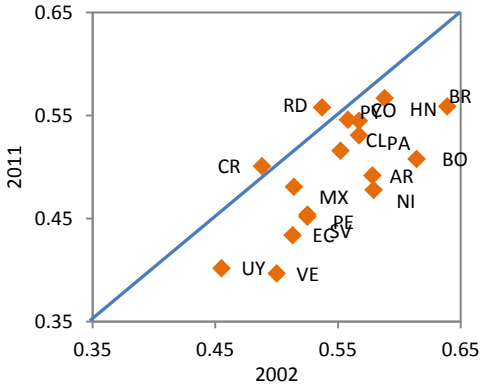
Many studies have analyzed this increasing trend during the nineties, and concluded that was mainly driven by the rising wage premium for skilled workers. A generalized increase in the demand for skilled workers, which was only partially compensated by the increase in relative supply and led to the increase in the returns to education, has been documented for several countries (see Manacorda et al, 2010; Gasparini et al, 2011; among others). As in the case of developed countries, the skill biased nature of technological change and the effects of trade liberalization were the most plausible explanations explored at country case studies. More generally, structural reforms that included commercial liberalization, financial reform, tax reform, privatizations and labor reform, were undertaken in a heterogeneous way in most countries during the nineties. The multiplicity of country experiences and the divergent results of

empirical evidence could not solve the controversy about structural reforms as a whole. Studies tend to find multiple effects of different signs on inequality (see Morley, 2001; Behrman et al, 2001; Spilimbergo, Londoño and Szekely, 1999; Londoño, 2000; Walton, 2003). On the trade openness side, the literature suggests a role in increasing inequality (see revisions provided by Talylor, 2005 and Goldberg and Pavnick , 2007). [1]

In recent years, news have changed. A turning point can be identified in many countries in the region, whose inequality begins to trend down in 2002 and 2003 (ECLAC, 2011). This configures a promising scenario, especially after the lack of improvement in distributional indicators in the previous decade. When we consider the period 2002-2011, 15 out of 17 countries in the region exhibit distributive improvements (see table 1 and graph 1). This recent downward trend is statistically significant and robust to different inequality measures (see Gasparini *et al*, 2011). The decrease in inequality took place in a context of sustained economic growth and decreasing poverty in the region. Per capita GDP increased 3.8% in annual terms between 2002 and 2010, whereas poverty incidence declined 44% in 2002 to 31% in 2010 (ECLAC, 2011). Economic growth is partly explained by the commodity export boom due to the rise of China and other Asian economies (see ECLAC, 2012).

[1] Some of these studies include Attanasio et al. (2004), Revenga (1997), Galiani and Sanguinetti (2003), Behrman and Machin (2000), Casacuberta and Vaillant (2002), Gindiling and Robbins (2001).

Graph 1. Change in the Gini index in Latin American countries.2002-2011



Fuente: ECLAC (2012)

This widespread decline in inequality has drawn the attention of researchers, and recent studies try to disentangle the causes behind this phenomenon. An inequality decomposition presented in ECLAC (2011) indicates that the demographic factor did contribute to a narrowing of the gaps between quintiles, but its effect was slight. Although the decline in the demographic dependency rate was significant, it was fairly homogeneous across all income groups, contributing little to the reduction in inequality. Income per adult, and specifically earnings, emerges as the main driver of per capita income distribution improvements. When decomposing earnings, it is basically the effect of remuneration per employed -instead of changes in the employment rate- what mainly explains the positive effect of earnings on inequality decrease, although in some countries increases in employment in the bottom quintile also exerted a significant impact.

Based on in depth analysis of four middle income countries in the region (Argentina, Brazil, Mexico and Peru), López-Calva and Lustig (2010) conclude that two leading factors account for the decline in inequality in those countries: a decrease in the earnings gap between skilled and low skilled workers, and an increase in government transfers to the poor.[2] For the earnings gap, they argue that, in the famous "race between education and technology" in Tinbergen's words (Tinbergen, 1975), the latter has taken the lead. So, while during the 90s the demand for skills

[2] Despite the more progressive pattern of public spending during the 2000s, studies coincide in the poor use of direct taxes as a redistributive tool (Breceda et al, 2009; Jiménez et al, 2010; Jiménez and Gómez Sabaini, 2012).

dominated the increasing supply, in the last years the growth in the supply for skills outpaced demand and the college premium decreased.

In order to explain recent trends in skill premium in 16 Latin American countries, Gasparini and Cruces (2011) estimate the relative contribution of supply and demand factors. They show that the relative supply of skilled and semi-skilled workers has been increasing since the nineties. Both in the nineties and 2000s, returns to secondary school completion decreased, whereas returns to tertiary education were increasing during the nineties, but this trend was reversed in the 2000s. They conclude that this reversal can only partially be explained by supply side factors, and that the deceleration of relative demand played a role in the last decade. The change in labor demand trend for tertiary educated workers can be related to the boom in commodity prices that could favor the non tertiary educated labor force. They also suggest that other factors like technological diffusion or skill mismatches may also be operating, reducing labor productivity of highly educated workers. De la Torre et al (2012) also recognize the increases in skills in the labor force, but also argue that they do not appear to be a crucial factor in explaining the movements in labor income inequality. They underline the role of demand side forces appear to be playing a major role, through the increases in the relative demand for low-skilled workers.

A paper closely related to this is that of Keifman and Maurizio (2011), who decompose the Gini coefficient and its variations for five countries (Argentina, Brazil, Chile, México and Uruguay) in the region in 2003-2010. The find that changes in labour income are in all cases the single most important factor in the fall of Gini coefficients, explaining from 44 per cent of the change in Chile and up to 73 per cent of the fall in Argentina. Non contributive transfers, although being highly focused on lower income households, do not contribute significantly to the dynamics of inequality. They also find that in the four countries, incomes from formal wages are the main determinant of the distributive improvement. In contrast, incomes from nonregistered workers explain most of what happened to labour incomes in México.

The political dynamics behind this recent decline in inequality should not be left out of the story. Arguing that any economy is embedded in a political system that may amplify or reduce market inequality, Lustig (2009) proposes that the strengthening of regional democracies during the last

decade may have affected labor market institutions and redistributive polices. In his analysis of income distribution under Latin America's new left regimes, Cornia (2010) argues that new left of center governments in the region introduced economic reforms inspired by a "prudent redistribution with growth".[3] With some exceptions (Bolivia and Venezuela), these governments did not introduce radical measures altering the distribution of assets, but rather relied on managed exchange rates, neutral or countercyclical fiscal policy, reduced dependence of foreign capital, accumulation of reserves and an active role in labor and social policies. Both authors coincide that political regimes were important for the recent inequality reduction.

Based on panel estimates for 18 countries in the period 1989 to 2008, taken from SEDLAS, Lustig and McLeod (2009) also argue that political regime matters for inequality reduction. They results indicate as leftist regimes are more redistributive than non leftist ones. But they also argue that once controls for unobserved (fixed) effects and commodity price boom are introduced, inequality-reducing impact of left populist regimes in Argentina, Bolivia, and Venezuela becomes statistically insignificant. In a related paper, McLeod and Lustig (2011) compare the performance of social democratic regimes (Brazil, Chile and Uruguay) and populist regimes (Argentina, Bolivia and Venezuela) in terms of recent reduction in income inequality and poverty. They find that social democratic regimes have been more successful than left populist regimes in reducing inequality and poverty.. The governments of Argentina and Venezuela were able to reduce inequality and poverty back to their levels in the nineties, but those of Chile and Brazil were able to reduce them to their historic lows, although how exactly this was done is an open question. Terms of trade, social spending and growth had also substantial impacts on inequality and poverty reductions. Interestingly, Montecino (2011) tries to reproduce McLeod and Lustig (2011) results using data from the Economic Commission for Latin America and the Caribbean (ECLAC). He finds that, conducting the same analysis using data from ECLAC, instead of from SEDLAC, leads to the exact opposite results. Left-populist governments appear to have most effectively reduced inequality. This exercise illustrates about the sensitivity of regressions to the measure of inequality.

[3] By 2009, ten countries, accounting for two-thirds of the region's population, had left-leaning governments (McLeod and Lustig, 2011).

Robertson (2012) points out that declines in inequality took place in countries governed by diverse administrations and so there was no strict correspondence between declining inequality and the ideological profile of the government. Different redistributive policies were adopted by governments of varied ideological orientations, suggesting that the institutionalization of democratic competition in an era of economic stability induced governments to respond to the claims for social inclusion, leading to the rise of a new politics of inequality.

As the previous review shows, understanding the driving forces behind the recent evolution if income inequality in the region is not an easy task, specially due to the specificity of each country experience. This paper aims to contribute to that aim, analyzing the extent to which different sources of income have influenced overall income inequality in each country, as well as disentangling if there is a common pattern in the region.

3. Methodological aspects

3.1 Data

This study is based on household survey data Argentina, Bolivia, Chile, Costa Rica, Ecuador and Uruguay. Inequality is measured on the basis of per capita household income (on person basis), defined as disposable income, that is net market income (labor market income and capital income excluding social contributions and direct taxes) plus state cash transfers (social insurance, assistance programs, etc.). Household income is the sum of wages, self employment income, capital income, contributive transfers and other transfers (mainly non contributive public transfers and private transfers). Self employment income includes that of self employed workers and also employees. When possible, we separated wages into informal and formal wages. Informality is defined using the legalist approach, and so those salaried workers who do not contribute to the social security system are considered informal.[4]

[4] For Uruguay in 1990, it is not possible to separate formal and informal wages.

Two different income vectors are used. One corresponds to the original income vectors reported by household surveys, and the other to ECLAC's adjusted household income. Imputed rent is not included in any of the vectors. We aim to test sensitivity of our results to these adjustments. ECLAC calculates poverty and inequality indicators for the region based on an adjusted vector of incomes, following the proposal by Altimir (1987). At a first stage, income is imputed for those workers or retired who do not report incomes. The imputation is made taking into account their The adjustment consists of using specific factors for every income source, independently of the level of income of the household, 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 20% richer 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 under reporting 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. Another important aspect refers to the fact that published estimations of income inequality from ECLAC include imputed rent. In some cases, this rent is asked in the household surveys, and in other cases it is imputes as a percentage of household income.. In this study, which aims at considering the role of different sources of income, this imputed rent is not considered. This explains the difference between our estimates based on ECLAC´s adjusted income (excluding imputed rent) and the official estimates from ECLAC, as that presented in table 1 (which includes imputed rent).

3.2 Methods for inequality factor decomposition

Methodologically, the paper follows a large literature on decompositions of inequality indexes by factor components (see Shorrocks, 1982; Jenkins, 1995; Lerman and Yitzhaki, 1985 for key references). We perform factor decomposition analysis for two measures of inequality: the coefficient of variation and the Gini index. The time periods are chosen based on the behavior of income inequality. Their boundaries are defined by the turning points in the evolution in inequality. We consider 1990-2002, a period of increasing inequality, and 2002-2010, a period of decreasing inequality.

The decomposition of inequality indexes by factor sources allows a better understanding of the contribution of each factor to total inequality and its changes. Despite being a purely descriptive exercise, factor share decomposition can illustrate about the changing role of different sources of income.[5] Following Jenkins (1995), who extends the methods proposed by Shorrocks (1982) for cross sections to the analysis of trends, we can regard total inequality in a given year, *I*, as the sum of factor contributions, where each contribution depends on the incomes form a given income source:

$$I = \sum_f S_f$$

where S_f is the absolute contribution of factor f to overall inequality. Factor income source f provides a disequalizing contribution if $S_f > 0$, and an equalizing one if $S_f<0$.

The proportional or factor contribution of source f to total inequality is defined as:

$$s_f = \frac{S_f}{I}$$

where $\sum_f s_f = 1$. The component inequality weight of source f, s_f, is the covariance of this income source with total income, scaled by the total variance of income, that is:

$$s_f = \frac{\mathrm{cov}[Y_f, Y]}{\sigma^2(Y)}$$

When making factor decompositions, the selected income must be able to handle zero incomes, that is why an usual choice is the half the squared coefficient of variation, I_2. This index is relatively sensitive to inequality in the top of the income distribution when compared to other inequality indexes like the Gini coefficient.

[5] The two main strands of inequality-decomposition are summarized by Cowell and Fiorio (2010): what they call "a priori.approaches", mainly decomposition of inequality indexes by subgroup or factors, and "explanatory models", where a counterfactual distribution is specified in order to examine the influence of each potential causal factor. A less explanatory-model approach is the use of a simple regression models.

$$I_2 = \left(\frac{1}{n}\right)\sum_i \frac{\left[\left(\frac{y_i}{\mu}\right)^2 - 1\right]}{2} = \sigma^2/2\mu^2$$

In this case, the absolute share of source f in total inequality is given by:

$$S_f = \frac{\mathrm{cov}[Y_f, Y]}{2\mu^2}$$

The change in aggregate inequality can be decomposed into an exact sum of changes in the contributions of the various sources, which are the result of the correlations of that source with total income, factor shares and factor inequality. As stated by Jenkins (1995), there does not need to be a close association between sources with a large inequality contribution in a given year and sources with the largest contributions to inequality change.

To decompose the Gini index, we follow Lerman and Yitzhaki (1985). The Gini coefficient can be expressed in the following way:

$$G = \sum_{f=1}^{F} S_f G_f R_f$$

where F are the income sources; *Sf* is the share of source *f* in total income; *Gf* is the Gini coefficient of the income source *f*; and *Rf* is the "Gini correlation" between the income component *f* and total income.

This decomposition of the Gini coefficient by source allows for considering how changes in the size of a particular income source would affect overall income inequality. If there is a change in each person's income from source *n* equal to *eYf*, where e is close to 1, the partial derivative of the overall Gini with respect to a percentage change e in source n gives the marginal impact of this income source on overall income inequality.

$$\partial G / \partial e_f = S_f (R_f G_f G)$$

The source's marginal effect relative to the overall Gini is:

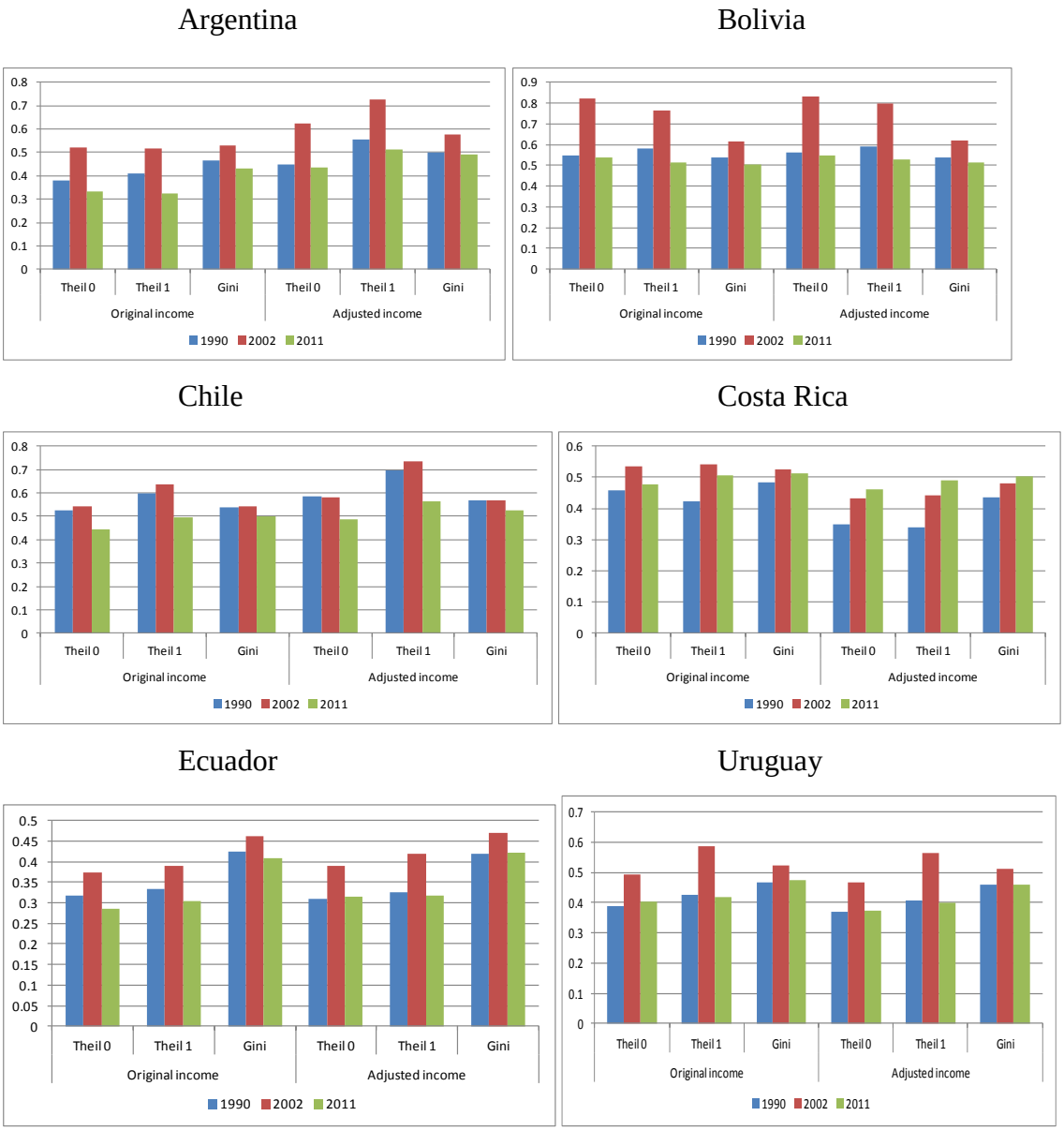
$$\frac{\partial G / \partial e_f}{G} = \frac{S_n G_n R_n}{G} - S_n$$

where a negative sign means that a marginal increase in the source is equalizing.

4. Inequality and income composition

The general pattern of increase of inequality during the nineties and decrease from 2002 on, which was previously discussed for the whole region, also reflects what happened in the countries selected for this study, except for the case of Costa Rica..In that case, the evolution of inequality between 2002 and 2011 is different whether we consider original income or adjusted one. On the basis of original income, income inequality in Costa Rica followed the same pattern that the rest of countries, with an increase between 1990 and 2002, and a decrease -of very small magnitude- between 2002 and 2011. The pattern derived from adjusted income implies an slight increase between 2002 and 2011. In the rest of countries, the decline between 2002 and 2011 is substantial, although when compared to the beginning of the period, differences are of very small magnitude. These selected countries seem to be, in general terms, in a quite similar situation in terms of inequality than that of twenty years ago. The evolution of inequality is similar between original income vectors and adjusted ones (both are considered in per capita terms and for persons), although changes seem to be amplified in the latter.

Graph 2. Inequality in selected countries. Original and adjusted income.



Source: based on household surveys, ECLAC

The structure of household income presents some differences between countries. We report the share of each income source in total household income, based on the original income vectors. For the last year of the period, wage participation goes from 66% of total income in Argentina to 50% in Bolivia. The percentage of the wage bill which goes to informal workers varies considerably by country, but is always lower that the share of informal salaried workers, as their average wage is lower than that of formal salaried workers. In Bolivia, half of the wage bill goes

to informal workers. A distinctive characteristic of households in Latin America is the importance of self employment income, given the structure of labor markets (see table A.1). By the end of the period, it ranges from 16% in Costa Rica to 39% in Bolivia. Contributive transfers represent a higher proportion of income in Argentina and Uruguay when compared to the other countries. The participation of wages increased significantly in Argentina, Chile and Uruguay in the period, whereas that of self employment income decreased in all countries except for Ecuador and Costa Rica. Results are similar when the adjusted income vectors are considered, although some patterns are changed. The main difference is the increase in the share of capital in Argentina and Chile (see table A.2).

Table 2. Income composition by source. Original income. 2011

	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers	Total
Argentina 1990	48.5	11.2	23.8	0.7	13.6	2.1	100.0
Argentina 2002	43.5	14.1	20.8	1.4	14.9	5.3	100.0
Argentina 2011	56.0	10.0	16.0	0.4	13.7	4.0	100.0
Bolivia 1990	27.1	24.9	46.5	0.4	0.3	0.7	100.0
Bolivia 2002	22.8	25.7	35.0	5.9	3.2	7.4	100.0
Bolivia 2011	24.3	25.6	39.0	1.7	3.7	5.7	100.0
Chile 1990	49.9	7.6	24.3	2.7	9.4	6.0	100.0
Chile 2002	53.2	7.4	20.1	0.5	6.8	12.0	100.0
Chile 2011	55.3	6.4	18.1	2.2	3.8	14.2	100.0
Costa Rica 1990	60.8	9.4	17.8	3.3	8.7		100.0
Costa Rica 2002	53.7	8.1	23.9	2.0	6.4	5.9	100.0
Costa Rica 2011	56.3	6.3	18.8	4.2	9.5	5.0	100.0
Ecuador 1990	41.7	18.8	30.1	3.0	2.3	4.0	100.0
Ecuador 2002	30.9	18.9	36.4	4.4	3.1	6.4	100.0
Ecuador 2011	39.6	13.4	32.0	2.2	6.7	6.1	100.0
Uruguay 1990	48.2		23.5	5.0	19.6	3.7	100.0
Uruguay 2002	43.6	5.2	18.3	3.0	23.6	6.3	100.0
Uruguay 2011	50.3	3.3	18.5	2.8	12.7	12.5	100.0

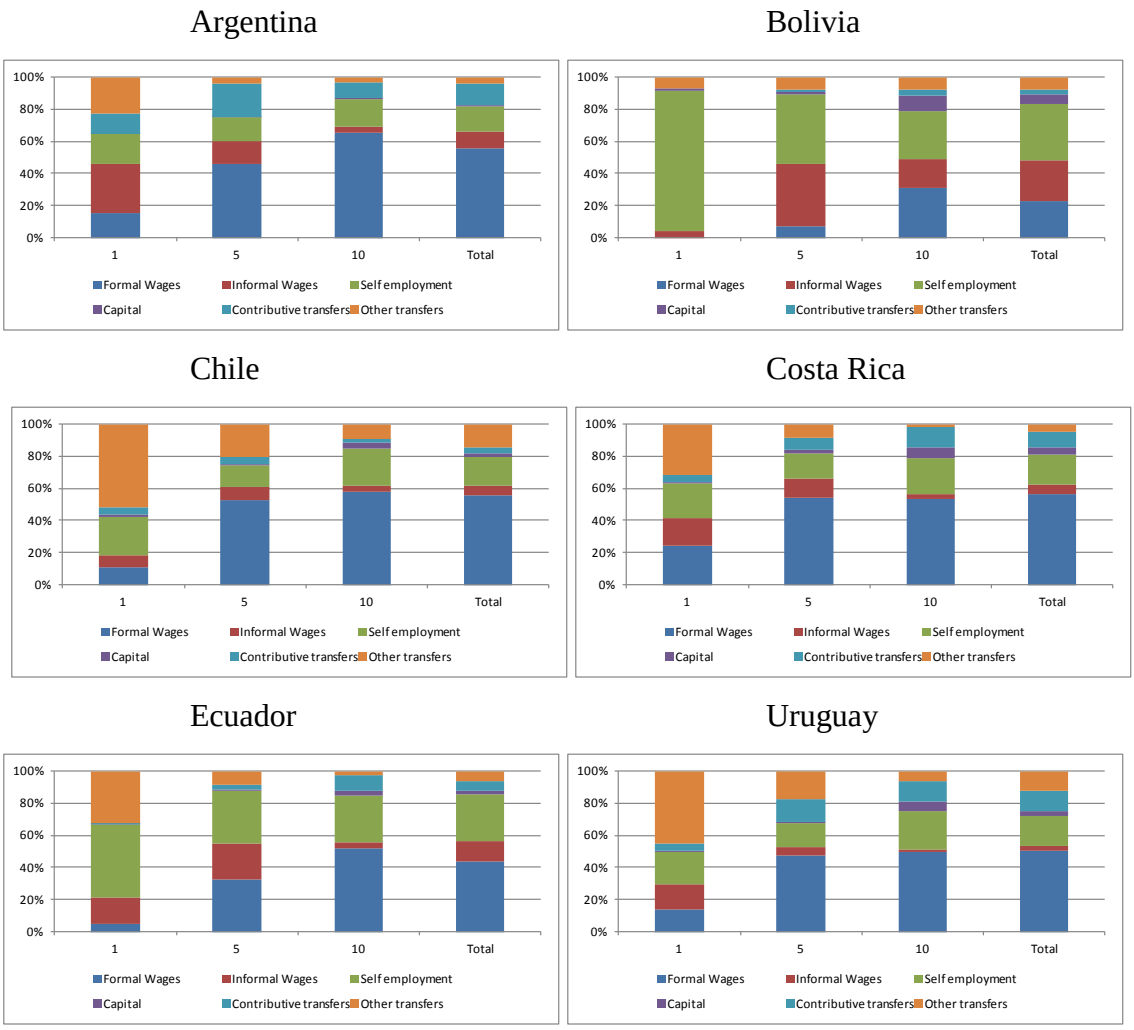
Source: based on household surveys, ECLAC

For comparative purposes, we present factor composition of income for developed countries, taken from García Peñalosa and Orgiazzi (2011) (see table A.3). The shares of labor market income are not that different between Latin America and developed countries, but the main

difference is the composition, because of the importance of self employment in the region. The shares of capital income are also similar, especially when compared to the original income vectors. Of course, this measure is probably biased due to the well known problems of household surveys to capture higher incomes (both due to truncation and under reporting), where capital incomes are overrepresented.

Income composition by decile in 2011 is presented in graph 3, based on original incomes. In general terms, the importance of informal wages is decreasing with income, except in Bolivia and Ecuador. These two countries are characterized by the big share of self employment income in the first decile. As expected, the importance of capital is increasing with income and the contrary happens with other transfers. Chile and Uruguay are the countries where other transfers represent a higher proportion of income in the first decile. The same analysis based on adjusted income is presented in Graph A.1.

Graph 3. Income composition by source and decile. Original income.2011



Source: based on household surveys, ECLAC

5. Factor inequality decompositions

In this section we analyze factor decomposition for the selected countries. For each country, we consider the decomposition of the squared coefficient of variation (SCV) and of the Gini index. We analyze decompositions based on original income. Those based on adjusted income are reported in tables A.3 and A.7. In this case results change considerably whether we use one or another income vector, as the SCV is very sensitive to higher income movements. As mentioned, the adjustment process implies imputations along the income distribution, and in the case of capital, in the upper part of the distribution. Both for the Gini and the SCV, we report the values of the index for total income and for each source, as well as the relative contribution of each

source, s_f, to total inequality. For the Gini coefficient, each source's marginal effect relative to the overall Gini is also reported. To analyze changes in inequality, the variation of absolute contributions of each source is considered for both indexes.

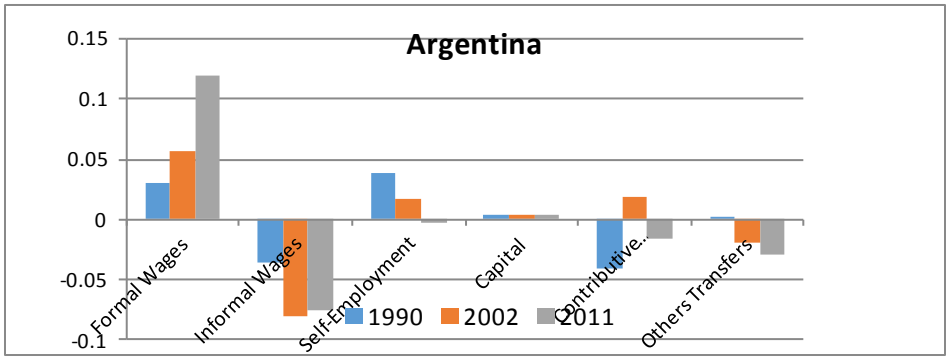
Argentina

Total income inequality remained almost constant between 1990 and 2002 when measured by the SCV, but it shows a small increase when measured by the Gini coefficient. Both inequality indexes reflect a strong decline in income inequality between 2002 and 2011. Also for both indicators, capital is the most concentrated source of income, followed by other transfers. Considering the whole period, inequality decreased for all sources except for capital, and the decrease in concentration was especially important for other transfers and wages. The relative contribution of formal wages to total inequality increased in the period, both measured through the decomposition of the SCV and the Gini, whereas that of informal wages and specially, self employment, it decreased significantly (table 3).

Table 3. SCV and Gini. Indexes and relative contributions by income source. Argentina				
	SCV		Gini	
	Index	Relative contribution	Index	Relative contribution
1990				
Formal wages	2.2	50.6	73.9	51.7
Informal wages	3.1	4.2	87.6	7.9
Self employment	3.7	37.1	89.1	27.4
Capital	17.7	2.0	99.7	1.0
Contr. Transfers	2.7	4.6	86.3	9.7
Other transfers	9.1	1.5	98.5	2.3
Total	1.4	100.0	53.3	100.0
2002				
Formal wages	2.2	42.1	77.4	50.6
Informal wages	3.2	7.9	80.9	4.9
Self employment	4.0	34.2	90.4	20.1
Capital	10.7	1.7	99.3	1.7
Contr. Transfers	3.4	10.1	90.0	19.5
Other transfers	6.0	4.0	94.3	3.2
Total	1.4	100.0	54.4	100.0
2011				
Formal wages	1.5	65.3	67.7	68.0
Informal wages	2.4	1.1	83.3	1.3
Self employment	3.0	18.0	86.9	14.7
Capital	36.6	2.6	99.9	0.7
Contr. Transfers	2.7	7.9	84.7	14.1
Other transfers	6.2	5.1	90.2	1.2
Total	1.0	100.0	44.1	100.0

The applied Gini decomposition allows to classify income sources as equalizing or unequalizing depending on the marginal impact of that income source on overall income inequality. Formal wage appears as an inequality increasing source in the three years, and its maginal effect increases by the end of the period. Informal wages on the contrary appear as an unequalizing source for the three years. Capital is an unequalizing source, but with a small marginal effect, For the other sources, the sign of the marginal effect changes in the years considered. Self employment ends as an equalizing source (of very small magnitude), whereas a similar process is followed by other transfers (graph 4).

Graph 4. Marginal effects on Gini coefficients by sources. Argentina



Source: based on household surveys, ECLAC

Changes in inequality between 1990 and 2002 were of very small magnitude. The analysis of changes in inequality in the whole period 1990-2011 and between 2002 and 2011 shows that the decrease in aggregate inequality was accounted mainly by a fall in the contribution from self employment income and informal wages (table 4). The two indexes differ in relation with formal wages, which did not contribute to lower inequality according to the Gini decomposition. The role of other transfers is equalizing only in the last period 2002-2011.

Table 4. Variations in absolute contributions to inequality indexes. Argentina

	Variation in absolute contribution to SCV						
	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002	-0.002	-0.120	0.052	-0.042	-0.005	0.077	0.036
2002-2011	-0.429	0.046	-0.101	-0.306	0.002	-0.064	-0.007
1990-2011	-0.432	-0.074	-0.049	-0.348	-0.003	0.013	0.029
	Variation in absolute contribution to Gini						
1990-2002	0.011	0.000	-0.015	-0.037	0.004	0.054	0.005
2002-2011	-0.103	0.024	-0.021	-0.045	-0.006	-0.044	-0.012
1990-2011	-0.092	0.024	-0.036	-0.081	-0.002	0.010	-0.007

Bolivia

Income inequality follow a similar pattern in Bolivia as in the rest of countries: it increased between 1990 and 2002, and decreased between 2002 and 2011. Capital income is the more concentrated source, followed by formal wages. Between 1990 and 2011, concentration decreased for informal wages and other transfers, and increased for formal wages (table 5). In the beginning of the period, self employment income explained around half of total inequality. The

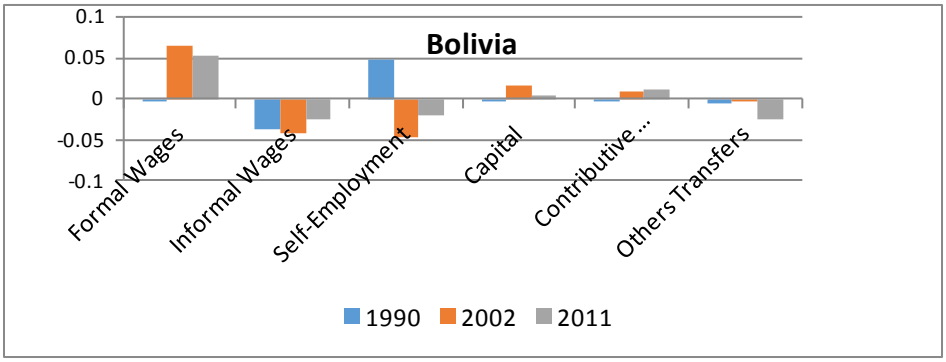
change in relative contributions differs according to the index considered. The Gini decomposition indicates that the contribution of self employment income decreased significantly (from 53 to 36%), whereas the CV decomposition does not show this evolution.

Table 5. SCV and Gini. Indexes and relative contributions by income source. Bolivia

	SCV		Gini-	
	Index	Relative contribution	Index	Relative contribution
1990				
Formal wages	2.7	17.1	83.6	26.4
Informal wages	3.9	32.8	81.9	19.8
Self employment	2.6	49.7	78.2	53.3
Capital	11.6	0.2	97.4	0.3
Contr. Transfers	6.0	0.1	96.4	0.0
Other transfers	6.0	0.2	94.9	0.2
Total	1.7	100.0	55.0	100.0
2002				
Formal wages	4.3	28.9	92.9	29.0
Informal wages	3.1	21.3	80.8	19.5
Self employment	2.4	21.7	75.4	34.1
Capital	12.0	20.3	98.3	5.8
Contr. Transfers	7.5	2.2	98.2	4.3
Other transfers	5.8	5.6	93.3	7.3
Total	1.8	100.0	60.2	100.0
2011				
Formal wages	3.0	18.6	87.0	30.0
Informal wages	2.2	11.3	79.8	23.3
Self employment	3.4	64.2	74.7	36.5
Capital	9.1	1.5	97.3	2.0
Contr. Transfers	7.3	2.9	97.6	4.7
Other transfers	3.9	1.5	87.6	3.4
Total	1.6	100.0	52.0	100.0

Again, formal wage appears as an inequality increasing source, whereas informal wages and self employment income (in 2002 and 2011) on the contrary, are equalizing sources. The marginal effect of the other income sources is very small, although other transfers increase their equalizing effect by the end of the period (graph 5).

Graph 5. Marginal effects on Gini coefficients by sources. Bolivia



In this case, decompositions of SCV and Gini show different patterns for the last period. In the first period, the increase in income inequality was driven by formal wages, capital and other transfers. The decrease in inequality between 2002 and 2011 is explained, according to the Gini coefficient, by the by the effects of self employment income.

Table 6. Variations in absolute contributions to inequality indexes. Bolivia

	Variation in absolute contribution to SCV						
	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002	0.16	0.25	-0.16	-0.44	0.37	0.04	0.10
2002-2011	-0.26	-0.24	-0.21	0.62	-0.35	0.00	-0.08
1990-2011	-0.10	0.01	-0.37	0.18	0.02	0.04	0.02
	Variation in absolute contribution to Gini						
1990-2002	0.052	0.029	0.009	-0.088	0.033	0.026	0.043
2002-2011	-0.082	-0.018	0.004	-0.015	-0.024	-0.002	-0.026
1990-2011	-0.029	0.011	0.012	-0.103	0.009	0.025	0.017

Chile

Both the CV and the Gini coefficient indicate that inequality increased between 2002 and 2011 in Chile, although results are different for the period 1990-2002. The CV shows an increase in inequality, whereas the Gini coefficient (using original income vectors) remains almost unchanged. As in other countries, capital income is the most concentrated source of income, followed in this case by informal wages and contributive transfers. For the whole period 1990-

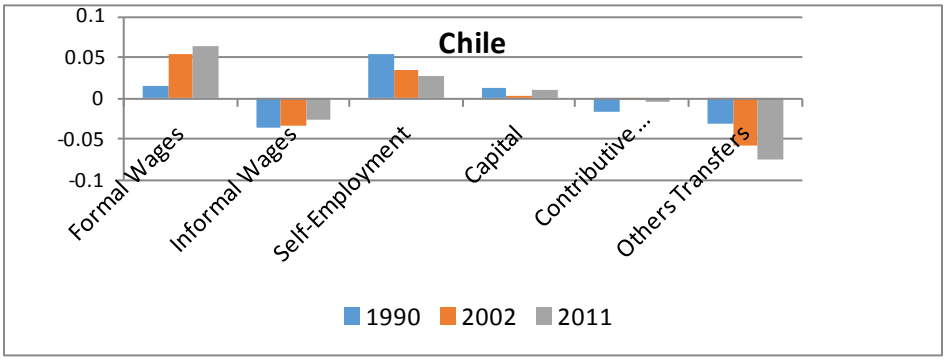
2011 all income sources except for contributive transfers, show lower inequality indexes (table 7). The contribution of formal wages to inequality increased in the period whereas that of self employment and contributive transfers decreased.

Table 7. SCV and Gini. Indexes and relative contributions by income source. Chile

	SCV		Gini-	
	Index	Relative contribution	Index	Relative contribution
1990				
Formal wages	2.1	36.5	70.9	50.1
Informal wages	4.6	3.8	89.0	4.6
Self employment	4.9	49.1	89.3	30.1
Capital	11.8	5.0	98.7	4.0
Contr. Transfers	3.3	3.2	88.9	7.3
Other transfers	3.9	2.4	80.0	4.0
Total	1.7	100.0	53.3	100.0
2002				
Formal wages	3.0	49.5	73.7	53.2
Informal wages	4.8	2.2	88.5	5.0
Self employment	6.2	33.0	89.7	23.1
Capital	23.0	0.8	99.6	0.8
Contr. Transfers	4.1	2.0	92.6	7.0
Other transfers	5.8	12.6	74.2	11.0
Total	2.3	100.0	52.9	100.0
2011				
Formal wages	2.1	57.1	69.9	61.1
Informal wages	4.6	2.9	91.6	4.1
Self employment	4.3	27.4	89.0	21.3
Capital	9.2	4.4	98.1	3.2
Contr. Transfers	5.1	1.6	95.7	3.3
Other transfers	2.7	6.6	75.2	7.0
Total	1.5	100.0	49.8	100.0

The marginal contributions of different income sources indicate that both formal wages and self employment income are unequalizing, but the magnitude of their effects has evolved differently, showing an increase in the case of formal wages and a decrease in that of self employment income. The marginal effect of informal wages is equalizing, as well as that of other transfers (mainly non contributive), whose magnitude increased in the period (graph 6).

Graph 6. Marginal effects on Gini coefficients by sources. Chile



Source: based on household surveys, ECLAC

The decomposition of changes in the inequality coefficients shows a similar pattern that in the case of Argentina (table 8). Informal wages and especially self employment income have contributed significantly to the decrease of inequality in the period. In the case of informal wages, their contribution to the reduction in inequality takes place from 2002 on. Formal wages contribute to higher inequality in the whole period and by sub-period, with the exception of the result for SCV in 2002-2011. The contribution of capital in the whole period is inequality reducing, mainly because of its behavior in the first sub period. As in the case of Argentina, other transfers have contributed to the reduce in inequality from 2002, although their effect in the whole period is inequality increasing.

Table 8. Variations in absolute contributions to inequality indexes. Chile

	Variation in absolute contribution to SCV						
	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002	0.56	0.50	-0.02	-0.09	-0.07	-0.01	0.25
2002-2011	-0.80	-0.29	-0.01	-0.35	0.05	-0.02	-0.19
1990-2011	-0.24	0.22	-0.02	-0.44	-0.02	-0.03	0.06
	Variation in absolute contribution to Gini						
1990-2002	-0.004	0.014	0.002	-0.038	-0.017	-0.002	0.037
2002-2011	-0.031	0.023	-0.006	-0.017	0.012	-0.020	-0.023
1990-2011	-0.035	0.037	-0.004	-0.055	-0.005	-0.022	0.014

Costa Rica

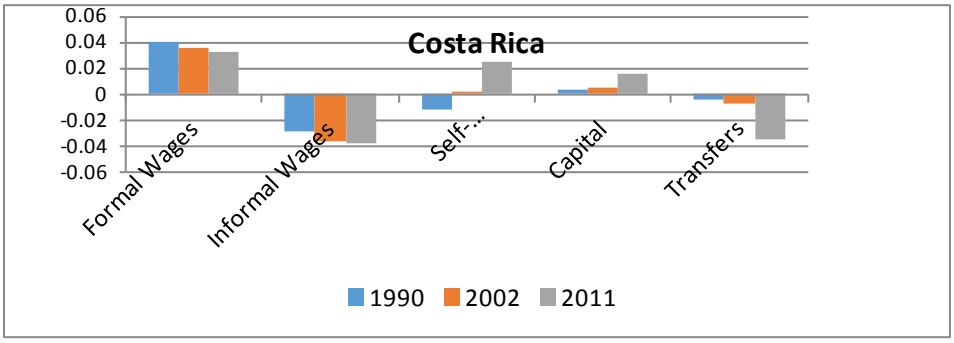
The main source explaining inequality in Costa Rica is formal wage, followed by self employment income. Between 1990 and 2002 inequality indexes increased for formal wages. Although self employment income did not increase its concentration, its contribution to total inequality grew, whereas that of formal wages decreased. For the period 2002-2011 contribute and non contributive transfers can be separated, showing an increase in the contribution of the former to total inequality.

Table 9. SCV and Gini. Indexes and relative contributions by income source. Costa Rica

	SCV		Gini	
	Index	Relative contribution	Index	Relative contribution
1990				
Formal wages	1.6	63.0	67.3	64.8
Informal wages	3.6	7.6	87.8	7.2
Self employment	2.9	15.7	86.7	17.1
Capital	2.2	4.5	82.8	3.5
Transfers	4.2	9.1	92.5	7.4
Total	1.2	100.0	52.8	100.0
2002				
Formal wages	0.6	39.1	71.9	56.2
Informal wages	0.0	2.1	87.5	5.3
Self employment	0.7	44.0	85.1	24.8
Capital	0.0	3.0	85.2	2.3
Contr. Transfers	0.1	4.8	95.4	6.1
Other transfers	0.1	7.0	91.8	5.2
Total	1.6	100.0	54.6	100.0
2011				
Formal wages	0.5	33.6	67.4	58.1
Informal wages	0.0	1.2	87.4	2.9
Self employment	0.7	46.4	87.7	23.0
Capital	0.1	6.5	96.4	5.2
Contr. Transfers	0.2	11.9	94.2	10.1
Other transfers	0.0	0.4	79.9	0.7
Total	1.5	100.0	51.4	100.0

The decomposition of the Gini coefficient shows that the marginal effect of formal wages and capital is unequalizing, as well as that of self employment in the last decade. The magnitude of the marginal effects of formal wages is smaller by the end of the period. Informal wages and transfers are equalizing sources (graph 7).

Graph 7. Marginal effects on Gini coefficients by sources. Costa Rica



The increase in inequality in between 1990 and 2002 is mainly explained by the contribution of self employment income, both formal and informal wages contribute to lower inequality in that period. In the following decade, the reduction in inequality is mainly explained by the effect of both formal and informal wages. In this period, the contribution of self employment income is different depending on the index considered, it contributes to inequality reduction in the case of the Gini coefficient.

Table 10. Variations in absolute contributions to inequality indexes. Costa Rica

	Variation in absolute contribution to SCV					
	Total	Formal Wages	Informal Wages	Self employment	Capital	Transfers
1990-2002	0.39	-0.14	-0.06	0.51	-0.01	0.08
2002-2011	-0.06	-0.11	-0.01	0.01	0.05	0.00
1990-2011	0.33	-0.24	-0.07	0.52	0.04	0.08
	Variation in absolute contribution to Gini					
1990-2002	0.018	-0.035	-0.009	0.045	-0.006	0.023
2002-2011	-0.032	-0.008	-0.014	-0.017	0.014	-0.006
1990-2011	-0.014	-0.044	-0.023	0.028	0.008	0.016

Ecuador

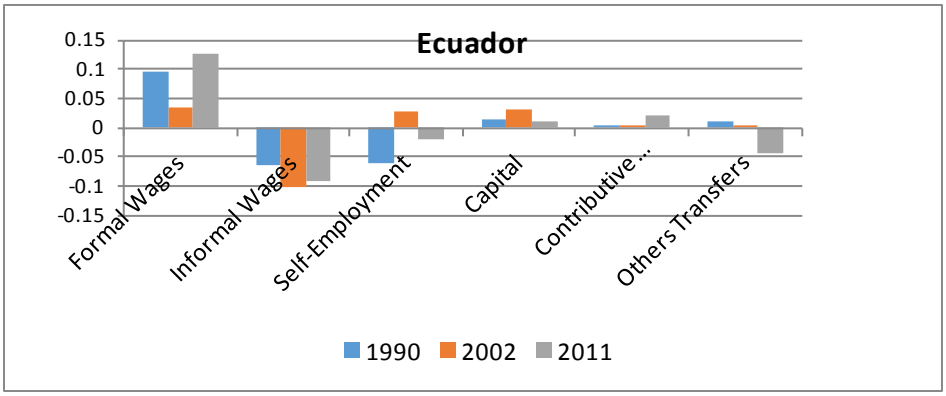
As in other countries, capital and contributive transfers are the sources which exhibit higher concentration by the end of the period in Ecuador. Formal wages explain more than half of total inequality according to the Gini decomposition, although the SCV shows a more unstable pattern. The contribution of informal wages to total inequality has decreased in the period, whereas that of contributive transfers has increased.

Table 11. SCV and Gini. Indexes and relative contributions by income source. Ecuador

	SCV		**Gini-**	
	Index	Relative contribution	Index	Relative contribution
1990				
Formal wages	2.3	50.1	78.2	50.2
Informal wages	2.6	10.2	79.6	13.4
Self employment	2.2	21.3	73.9	24.7
Capital	9.5	8.0	97.8	4.4
Contr. Transfers	6.6	1.8	97.1	2.3
Other transfers	8.5	8.7	97.4	5.0
Total	1.3	100.0	47.0	100.0
2002				
Formal wages	2.8	19.0	82.9	56.2
Informal wages	2.5	3.7	75.9	5.3
Self employment	3.2	36.7	80.3	24.8
Capital	23.2	30.5	98.6	2.3
Contr. Transfers	16.8	7.4	97.4	11.3
Other transfers	5.1	2.7	94.2	0.1
Total	1.9	100.0	53.3	100.0
2011				
Formal wages	1.9	39.2	79.7	54.2
Informal wages	2.5	2.3	79.6	5.0
Self employment	2.8	37.4	77.3	27.9
Capital	8.3	3.0	98.6	2.9
Contr. Transfers	5.2	6.8	96.3	7.9
Other transfers	7.5	11.1	83.2	2.2
Total	1.3	100.0	49.5	100.0

As in other countires, the marginal effects of formal wage are unequalizing. The same happens with capital and contributive transfers, although the magnitude of their impact is considerably smaller. Informal wages are an equalizing source of income, and the same happens with self employment income, except in 2002, and with other transfers by the end of the period.

Graph 8. Marginal effects on Gini coefficients by sources. Ecuador



Source: based on household surveys, ECLAC

The increase in inequality in 1990-2002 is mainly accounted by the change in the contribution in self employment income and capital. The following decrease in inequality between 2002-2011 mainly driven by changes in the contribution of self employment income and that of capital income, and to a lesser exent, of informal wages. The role of capital income is higher under the SCV, as expected due to the higher concentration of this source in the upper part of the distribution. The decrease in informal salaried workers that takes place in that period implies a small equalizing contribution of this source, as happened in Argentina and Chile. By the end of the period, inequality is higher than in 1990, and different sources show different contributions to this change. Formal wages, self employment income and contributive transfers have contributed to higher inequality, whereas informal wages and to a lesser extent capital and other transfers have had an equalizing role in the whole period.

Table 12. Variations in absolute contributions to inequality indexes. Ecuador

	Variation in absolute contribution to SCV						
	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002	0.61	-0.29	-0.06	0.42	0.48	0.12	-0.06
2002-2011	-0.61	0.15	-0.04	-0.21	-0.54	-0.05	0.09
1990-2011	0.00	-0.14	-0.10	0.21	-0.06	0.07	0.03
	Variation in absolute contribution to Gini						
1990-2002	0.063	-0.058	-0.014	0.094	0.023	0.006	0.011
2002-2011	-0.038	0.090	-0.024	-0.072	-0.030	0.022	-0.024
1990-2011	0.025	0.033	-0.038	0.022	-0.007	0.028	-0.013

Uruguay

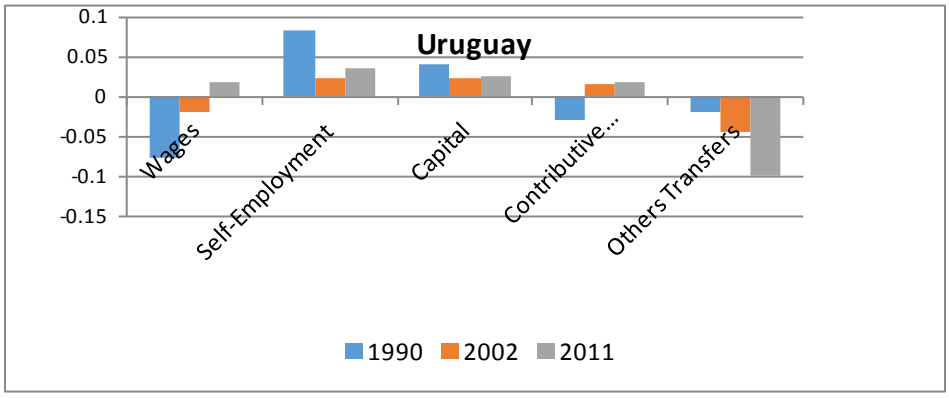
As in the other countries, more than 70% of inequality is explained by labor market income, mainly wages. The contribution of informal wages to total inequality is in this case very small. Self employment income and contributive transfers have a significant relative contribution to total inequality. Between 1990 and 2002, the main change relates to the increase in the contributions of wages and contributive transfers, whereas the contribution of self employment decreased in the decade. In the following decade, the contribution of formal wages goes up again, whereas that of contribute transfers decreases.

Table 13. SCV and Gini. Indexes and relative contributions by income source. Uruguay

	SCV		**Gini-**	
	Index	Relative contribution	Index	Relative contribution
1990				
Wages	1.4	34.3	58.9	40.6
Self employment	2.9	39.2	85.2	31.9
Capital	6.7	13.7	97.1	9.1
Contr. Transfers	2.2	11.2	79.1	16.6
Other transfers	4.5	1.5	88.3	1.8
Total	1.1	100.0	42.5	100.0
2002				
Formal wages	1.8	40.1	69.9	45.8
Informal wages	3.8	1.8	88.8	0.7
Self employment	3.2	25.0	86.4	21.1
Capital	10.8	11.1	98.1	5.7
Contr. Transfers	2.4	20.7	81.8	25.0
Other transfers	2.9	1.2	83.2	1.7
Total	1.1	100.0	47.1	100.0
2011				
Formal wages	1.5	46.5	64.7	53.4
Informal wages	6.1	2.3	92.1	0.1
Self employment	3.0	26.1	85.9	21.9
Capital	10.3	11.7	97.5	5.7
Contr. Transfers	3.0	10.9	87.2	15.9
Other transfers	1.8	2.5	61.1	3.0
Total	1.0	100.0	41.1	100.0

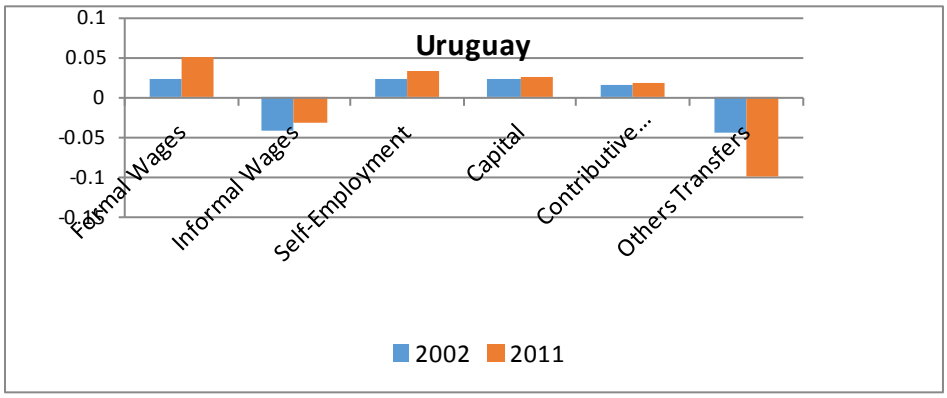
Wages are an equalizing force in 1990 and 2002, but turn into an unequalizing one in 2011. This is mainly due to the effect of formal wages, as the marginal effect for informal wages indicate it is an equalizing source. The marginal effect of self employment income shows this is an unequealizing source, although its importance decreased between 1990 and 2002. The unequalizing effect of capital also decreases during the period. An important change refers to the increase in the size of the equalizing marginal effect of other transfers in the period.

Graph 9a. Marginal effects on Gini coefficients by sources. Uruguay



Source: based on household surveys, ECLAC

Graph 9b. Marginal effects on Gini coefficients by sources, with formal and informal wages. Uruguay



Source: based on household surveys, ECLAC

The increase in inequality in 1990-2002 is mainly accounted by changes in wages. Self employment and capital income contributed to lower inequality in that period. For the second period, 2002-2011, it is possible to separate formal and informal wages. The decrease in total inequality is mainly accounted by the changes in contributions of contributive transfers, followed by self employment income. Formal wages contribute to higher equality in this period, as well as other transfers. For the whole period, the slight decrease in inequality is accounted by the effects of self employment income and to a lesser extent capital, as wages had an inequality increasing effect.

Table 14. Variations in absolute contributions to inequality indexes. Uruguay

	Variation in absolute contribution to SCV						
	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002	0.042	0.043		-0.037	-0.012	0.047	0.000
2002-2011	-0.060	0.004	-0.003	-0.009	-0.004	-0.052	0.004
1990-2011	-0.014	0.047		-0.046	-0.016	-0.005	0.005
	Variation in absolute contribution to Gini						
1990-2002	0.08	0.11		-0.13	-0.02	0.12	0.00
2002-2011	-0.14	0.01	0.00	-0.03	-0.01	-0.13	0.01
1990-2011	-0.06	0.12		-0.15	-0.03	-0.01	0.01

5. Final comments

In general terms, aggregate inequality trends followed a similar pattern in the countries considered in this paper: an increase during the nineties and a decrease between 2002 and 2011. The decomposition of changes in inequality by income source does not show clear cut evidence for the first decade, when countries seem to follow different patterns. The decrease in inequality in the last decade is associated in all countries to a decrease in the contribution of self employment income and informal wages (in this last source the exception is Bolivia). Formal wages continued their inequality increasing contribution in most countries (except Bolivia and Costa Rica). Contrary to what happened during the nineties, contributive transfers have contributed to lower inequality in the last decade, and the same happened with other transfers.

Table 15. Variations in absolute contributions to Gini

	Total	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers
1990-2002							
Argentina	0.011	0.000	-0.015	-0.037	0.004	0.054	0.005
Bolivia	0.052	0.029	0.009	-0.088	0.033	0.026	0.043
Chile	-0.004	0.014	0.002	-0.038	-0.017	-0.002	0.037
Costa Rica	0.018	-0.035	-0.009	0.045	-0.006	0.023	
Ecuador	0.063	-0.058	-0.014	0.094	0.023	0.006	0.011
Uruguay	0.042	0.043		-0.037	-0.012	0.047	0.000
2002-2011							
Argentina	-0.103	0.024	-0.021	-0.045	-0.006	-0.044	-0.012
Bolivia	-0.082	-0.018	0.004	-0.015	-0.024	-0.002	-0.026
Chile	-0.031	0.023	-0.006	-0.017	0.012	-0.020	-0.023
Costa Rica	-0.032	-0.008	-0.014	-0.017	0.014	-0.006	
Ecuador	-0.038	0.090	-0.024	-0.072	-0.030	0.022	-0.024
Uruguay	-0.060	0.004	-0.003	-0.009	-0.004	-0.052	0.004

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Annex

Table A.1. Employment by category and employment rate.

	Salaried (formal)	Salaried (informal)	Total salaried	Self employed	Others	Total	Employment rate
Argentina 1990	73.6%	26.4%	63.5%	20.89%	15.62%	100%	51.4%
Argentina 2002	59.0%	41.0%	67.1%	21.94%	10.94%	100%	42.3%
Argentina 2011	73.1%	26.9%	70.5%	17.89%	11.59%	100%	55.1%
Bolivia 1989	46.1%	53.9%	48.2%	37.89%	13.92%	100%	53.0%
Bolivia 2002	30.9%	69.1%	28.2%	35.63%	36.21%	100%	73.9%
Bolivia 2009	43.0%	57.0%	36.5%	32.93%	30.55%	100%	72.5%
Chile 1990	81.1%	18.9%	66.3%	22.87%	10.87%	100%	46.1%
Chile 2002	80.5%	19.5%	67.9%	20.36%	11.77%	100%	49.7%
Chile 2011	84.2%	15.8%	72.0%	20.28%	7.75%	100%	50.7%
Costa Rica 1990	79.9%	20.1%	65.7%	19.55%	14.71%	100%	54.1%
Costa Rica 2002	78.2%	21.8%	64.0%	20.75%	15.27%	100%	55.0%
Costa Rica 2011	82.4%	17.6%	68.5%	18.92%	12.62%	100%	54.8%
Ecuador 1990	58.2%	41.8%	54.4%	29.54%	16.05%	100%	56.3%
Ecuador 2002	47.3%	52.7%	53.8%	29.56%	16.61%	100%	59.9%
Ecuador 2011	61.0%	39.0%	50.2%	34.51%	15.24%	100%	58.8%
Uruguay 1990			67.2%	17.85%	14.95%	100%	51.4%
Uruguay 2002	81.2%	18.8%	60.5%	24.34%	15.12%	100%	49.3%
Uruguay 2011	85.7%	14.3%	64.7%	20.61%	14.66%	100%	60.7%

Table A.2. Income composition by source. Adjusted income. 2011

	Formal Wages	Informal Wages	Self employment	Capital	Contributive transfers	Other transfers	Total
Argentina 1990	38.2	1.8	39.5	5.3	6.7	8.4	100.0
Argentina 2002	30.7	10.6	35.0	9.4	10.5	3.9	100.0
Argentina 2011	45.0	8.0	26.7	7.7	10.0	2.6	100.0
Bolivia 1990	23.2	21.7	49.2	5.2	0.2	0.4	100.0
Bolivia 2002	21.9	24.8	34.6	8.1	3.4	7.1	100.0
Bolivia 2011	24.3	25.6	39.0	1.7	3.7	5.7	100.0
Chile 1990	38.7	6.1	31.8	7.2	9.3	7.0	100.0
Chile 2002	41.8	6.2	33.8	1.7	5.9	10.6	100.0
Chile 2011	49.4	5.6	27.3	4.9	2.7	10.0	100.0
Costa Rica 1990	59.2	9.2	21.9	2.4	7.3		100.0
Costa Rica 2002	57.2	9.1	22.1	1.6	10.0		100.0
Costa Rica 2011	57.6	6.6	17.6	4.6	8.9	4.7	100.0
Ecuador 1990	42.1	19.1	29.8	2.9	1.8	4.3	100.0
Ecuador 2002	31.0	19.4	37.1	4.2	3.8	4.5	100.0
Ecuador 2011	39.6	13.4	32.0	2.2	6.7	6.1	100.0
Uruguay 1990	48.4		23.8	4.9	19.2	3.6	100.0
Uruguay 2002	41.9	5.4	18.2	5.6	22.8	6.1	100.0
Uruguay 2011	52.5	3.8	19.7	2.9	13.2	7.9	100.0

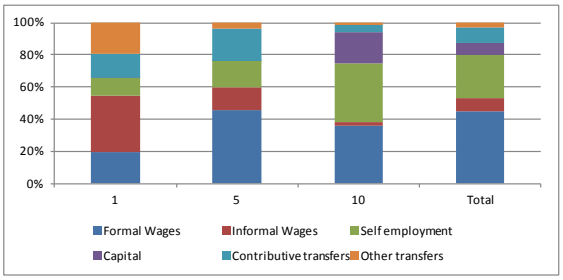
Table A.3. Income composition by source in developed countries

	Total	Wages	Self employment	Capital	Other
US 2004	100%	75%	5%	5%	16%
UK 2004	100%	66%	8%	4%	23%
Canadá 2004	100%	69%	7%	3%	21%
Germany 2004	100%	63%	8%	4%	25%
Norway 2004	100%	63%	6%	5%	26%
Sweden 2004	100%	63%	2%	3%	31%

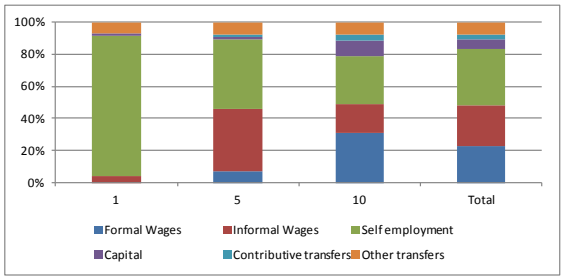
Source: García Peñalosa and Orgiazzi (2011)

Graph A.1. Income composition by source and decile. Adjusted income. 2011

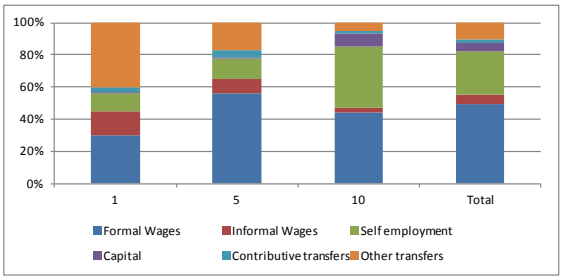
Argentina



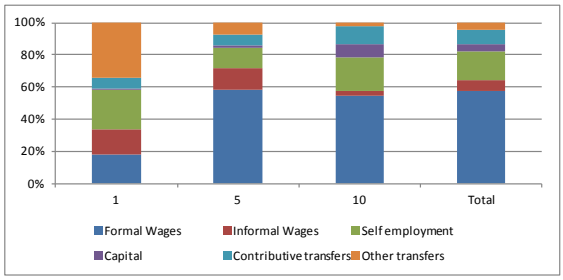
Bolivia



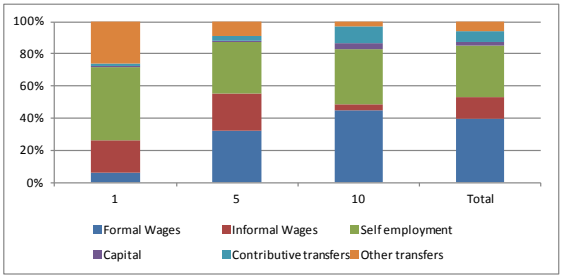
Chile



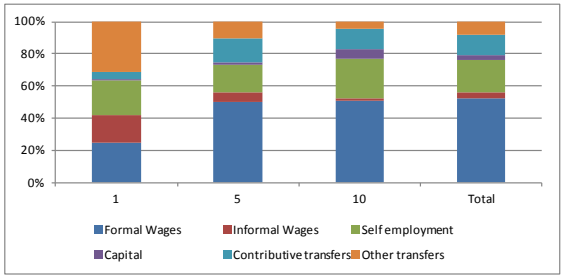
Costa Rica



Ecuador



Uruguay



Source: based on household surveys, ECLAC