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Decomposing the Recent Inequality Decline in Latin America

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Abstract

Over the past decade, 12 of 14 Latin American countries have experienced a reduction in inequality. Based on a series of counterfactual simulations, the observed changes in inequality are decomposed in order to identify the main determinants of inequality. In contrast to methods that focus on aggregate summary statistics, the method adopted in this paper generates counterfactual distributions, so that the analysis can account for changes related to demographics, occupation, labor earnings and transfers, pensions, and other nonlabor income sources. The results show that for the majority of countries in the sample, the most important contributor to the observed decline in inequality has been the relatively strong growth in labor earnings at the bottom of the income distribution. In particular, most of the reduction in inequality can be attributed to an increase in earnings per hour for the bottom of the income distribution. The paper also contributes to the literature on inequality in Latin America by providing the Shapley-Shorrocks value of this decomposition.

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Decomposing the Recent Inequality Decline in Latin America

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1. Introduction

Inequality continues to be a pervasive characteristic in Latin America. The region registered an average Gini level of 0.52 in 2010, ranking among the highest in the world. Nevertheless, after a generalized increase in the levels of inequality in the 1990s, the region experienced a sizeable downward trend that started in the early 2000s, in tandem with a period of accelerated economic growth and poverty reduction (Figure 1). As documented in Gasparini et al. (2011), this downward trend is statistically significant, generalized within subregions of Latin America or any other country-weighting scheme, and robust to the choice of inequality indicator. However, the average regional trend reflects substantial heterogeneity between countries, with the decline being greatest in El Salvador, Argentina, Brazil, Mexico and Ecuador (Figure 2).[1]

The diversity of experiences across countries in the 2000s implies that there is no single satisfactory explanation for these trends, although the inequality literature on Latin America has highlighted a menu of possibilities. It points to improvements in earnings of the poor as well as better-targeted public transfer programs as the main drivers behind the reduction in inequality. For instance, López-Calva and Lustig (2010) found that the reduction in income inequality in Argentina, Brazil, Mexico and Peru can be attributed to two main factors: first, a shrinking wage gap between skilled and low-skilled workers contributed to an expansion in education in the last decades and second, there was an equalizing effect of government transfers, related to larger and better targeted conditional cash transfer programs in these countries. Jaramillo and Saavedra (2010) have similar findings for Peru. Other studies have pointed to demographic changes and greater female labor force participation (Gray Molina and Yañez, 2009 for Bolivia), realignments after the structural reforms of the 1990s (Ebherhard and Engel 2009 for Chile), favorable international markets with high commodity prices in the second half of the 2000s (Ferreira et al 2008 for Brazil), and a more active role in the labor market where governments took a more pro-union stance and raised minimum wages and pensions (Gasparini and Lustig, 2011).

However, these results do not give us a magnitude for the relative importance of each of these effects. Was the observed reduction in inequality mainly accounted for by the introduction and expansion of public transfers, or were changes in employment and earnings mostly to blame? Given the ongoing demographic transitions of most countries in the region, how much of the observed distributional changes were driven by the region's demographic dividend? Were the changes in labor income related to changes in the number of hours of work or in earnings per hour?

One way to answer these questions would be to use multi-year panel data that could track the life and labor histories of households over time and therefore uncover the sources of inequality

[1] Inequality experienced a statistically significant decline in nine out of 17 countries in the region for the 2006-2009 period. See Gasparini et al (2011).

reductions. Unfortunately, this type of data is not often available over long periods of time with the representativeness that would make such analysis possible. In the absence of panel data, pseudo panel methods have substantially improved and can now delve into some issues of economic mobility.[2] However, these methods are often unable to pin down results with precision, and typically do not relate the contributions of different factors to observed changes in distribution.

The objective of this paper is to quantify, based on a series of counterfactual simulations, the contributions to the observed decline in inequality across Latin American countries. In contrast to methods that focus on aggregate summary statistics, we apply a variation of Barros et al. (2006) to generate entire counterfactual distributions that help quantify the contributions to observed distributional changes that are accounted by changes in labor and nonlabor income versus those that are attributable to demographic characteristics. Moreover, in contrast with much of the literature, we perform the decompositions following every possible decomposition path, thus reporting robust Shapley-Shorrocks values for each component.

Although these decompositions do not allow for the identification of causal effects, they are a useful tool to identify empirical regularities and, as an accounting tool, can be useful to focus attention on the elements which are quantitatively more important in describing distributional changes. Moreover, this method allows us to quantify the contributions to changes in inequality using the same methodology across a number of countries, with relatively limited data requirements.

The main results from the analysis are that for most countries in the sample, the most important contributor to the observed decline in inequality has been the relatively strong growth in labor income at the bottom of the income distribution. In particular, most of the reduction in inequality can be attributed to an increase in earnings per hour for the bottom of the income distribution.

The rest of the paper is organized as follows: Section 2 describes the evolution of inequality across countries in our sample, highlighting the similarities and differences in outcomes in the initial and end periods. Section 3 describes the decomposition methodology, followed by a description of the data in Section 4. The results are presented in Section 5, highlighting similarities and differences across countries. Finally, Section 6 concludes.

[2] See Lanjouw et al (2011) for new pseudo panel methods to analyze income mobility.

2. Methodology

The forces behind inequality reduction

Household per capita income can be thought of as the sum of individual income sources divided by the number of household members. How have each of those sources changed over the last decade? First, there have been important demographic changes, as the youth bulge has become economically active. As a result, dependency ratios have declined. The share of adults (members 15 years old or more) per household has grown in all the countries analyzed. In terms of the demographic impact on inequality, the share of adults per household has increased proportionally faster at the bottom of the income distribution for most of the countries, particularly, Paraguay, Peru, Chile and Brazil (Figure 3).

Beyond demographic effects, the growth in labor income over the last decade has been heterogeneous, depending on the growth of employment and earnings. Figure 4 shows that the share of adults with positive labor income for the poorest 20 percent for the region (population-weighted average of the countries) has slightly declined. However, this reflects declines in the shares of employed adults[3] in Brazil, Chile, Ecuador and Mexico. In contrast, there has been a strong increase in the share of employed adults at the bottom of the income distribution in Central American countries such as Costa Rica, Honduras, El Salvador and Panama that reflects in the unweighted average for the Latin America and Caribbean (LAC) region.

In cases where the share of adults with positive labor earnings did increase, this has mainly been related to an average increase in female labor income. Moreover, female participation in the labor market has been skewed towards the bottom of the income distribution, except for Argentina, Brazil and Mexico (Figure 5).

Table 2 suggests that on average the number of hours worked did not change much. The number of hours worked fell slightly in most of the countries, and the changes are very similar among the poorest and the richest as well as among men and women. However, in six of 14 countries, there was an increase in the number of hours worked for women at the bottom of the income distribution. With regard to labor income per hour, there was an increase for most countries in the sample, with the exception of the Dominican Republic, El Salvador and Mexico - as could be expected given the effects of the crisis. The most affected segment of the population in those three countries was male workers in the top quintile, rather than male workers in the bottom of the income distribution.

An alternative explanation for the observed changes in income inequality has to do with growth in transfers. For example, Figure 6 shows that public and private transfers have increased in several countries over the last decade. The question is how important these changes have been to

[3] In this paper, employed adults refer to the population age of 15 or higher with positive earnings.

the reduction of inequality. Table 3 suggests that the share of transfers in total household income of the poorest 20 percent of the income distribution has almost tripled for Latin America-increasing from an average of 7 percent of total household income in 2000 to 20 percent at the end of the decade. This is especially stark in the case of Brazil, where the share of transfers in total household income of the bottom 20 percent of the distribution has gone from 3 percent to 24 percent over the last decade. However, there is also wide variation in the region, with a declining share observed in El Salvador, potentially due to declines in private remittances.

Table 4 shows that the share of pensions in household income increased across the region on average. Importantly, the percentage of people receiving pensions has increased throughout the region, most dramatically in Ecuador and Panama. In all the countries, pensions make up a greater share of total household income at the top end of the distribution. For instance, in Colombia, while pensions make up only 0.3 percent of total household income for the poorest 20 percent, they account for nearly 10 percent for the richest 20 percent. The reduction in inequality could be attributed to the expansion of non-contributory pensions, particularly in countries such as Argentina, Chile and Panama. Perhaps the starkest example is Argentina, in which the share of pensions in total household income increased from 7 to 12 percent among the poorest 20 percent of the population during the last decade. These expansions also had strong gender dimensions, as women are more likely to have interrupted labor histories, implying that under previous contributory pension regimes they were typically not eligible to receive benefits. Table 5 shows that for all the countries, women above 64 years old at the top quintile of income had substantial gains in terms of receiving pensions. The same is not true for women at the bottom of the distribution in Brazil, Costa Rica, Dominican Republic, Ecuador, El Salvador and Uruguay.

In summary, each of the forces described above could have led to the observed reductions in inequality over the last decade. The next question is how large was the contribution of each of these forces, and what is the relative importance of each within countries relative to the region as a whole.

Decomposing the changes in inequality

In order to decompose the contribution of each factor to inequality reduction, we follow an extension of the accounting structure proposed by Barros et al. (2006) and begin with the household per capita income identity:

$$Y_{pc} = \frac{Y_h}{n} = \frac{1}{n}\sum_{i=1}^{n} y_i$$

(1)

Income per capita is the sum of each individual's income and will depend on the number of household members, *n*. If we assume that only individuals older than age 15 contribute to family income, income per capita will in fact depend on the number of adults in the family, n_A, therefore income per capita can be rewritten as:

$$Y_{pc} = \frac{n_A}{n}\left(\frac{1}{n_A}\sum_{i\in A}^{n} y_i\right) \quad (2)$$

Income per adult, in turn, can be written as the sum of labor income,y_i^L, and nonlabor income, y_i^{NL}, where nonlabor income includes public social transfers, pensions, remittances and other private transfers.

$$Y_{pc} = \frac{n_A}{n}\left(\frac{1}{n_A}\sum_{i\in A}^{n} y_i^L + \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}\right) \quad (3)$$

Recognizing that not all adults in the household are employed, we note that household labor income per capita depends on the income of employed adults. Therefore we can rewrite labor income per employed adult as:

$$Y_{pc} = \frac{n_A}{n}\left[\frac{n_o}{n_A}\left(\frac{1}{n_o}\sum_{i\in A}^{n} y_i^L\right) + \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}\right] \quad (4)$$

where n_o is the number of employed adults.

The basic notion behind calculating the contributions to changes in inequality comes from the realization that any measure of inequality depends on the distribution of income across households. More specifically, let F(.) be a the cumulative density function of household income per capita, which depends on each of the components outlined above. Since inequality measures depend on F(.), then we can disaggregate income per capita in each household into the factors in equation (4). As a result, any inequality measure can be written as a function of each of these components. Therefore the contribution of each component towards changes in distribution can be expressed as a function of these indicators in the initial and end periods.

Following Barros et al. (2006), we can then simulate the distribution of welfare by changing each of these components one at a time, to calculate their contribution to the observed changes in inequality. In particular, let ϑ be any measure of inequality. Then, this measure will be a function of the cumulative density function, F(.), which in turn depends on each of the factors above:

$$\vartheta = \Phi\left(F\left(Y_{pc}\left(n, \frac{n_A}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$$

(5)

where $y_{PO}^{L} = \frac{1}{n_o}\sum_{i\in A}^{n} y_i^L$, and $y_{PA}^{NL} = \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}$. The elements in y_{PA}^{NL} include pensions, transfers, capital income, and other nonlabor income.

Given that the distributions of per capita income for period 0 and period 1 are known, we can construct counterfactual distributions for period 1 by substituting the observed level of the indicators in period 0, one at a time. For each counterfactual distribution, we can compute the inequality measures and interpret those counterfactuals as the inequality level that would have prevailed in the absence of a change in that indicator. For example, to see the impact of the change in the share of employed adults, we compute $\hat{\vartheta}$, where we substitute the value of $\frac{\mathrm{n_o}}{\mathrm{n_A}}$ observed in period 0 into the observed distribution in period 1. We can then compute:

$$\hat{\vartheta} = \Phi\left(F\left(Y_{pc}\left(n, \frac{n_A}{n}, \widehat{\frac{n_o}{n_A}}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$$

(6)

The contribution of the share of employed adults is the difference between the observed ϑ in period 1 and the estimated counterfactual, $\hat{\vartheta}$. Similarly, each of the other components in the income per capita distribution in period 1 can be substituted by their values in period 0 so that their contribution to changes in inequality can be computed.

Since we do not have panel data, we do not observe period 1 households in period 0. Therefore, we use a rank-preserving transformation to assign first-period characteristics to the second period. This method uses an idea first proposed by Juhn, Murphy and Pierce (1993), who decomposed changes in wages by running Mincer-type Ordinary Least Squares (OLS) regressions that allow decomposing labor income inequality, using any measure of inequality, in three parts. First, a quantity effect refers to the distribution of observable workers' characteristics, such as education and labor market experience, which are included as regressors in the equation. Second, a price effect captures changes in returns to observed characteristics through the regression's coefficients. Third, the regression residual (unobservables) reflects changes in inequality within education and experience groups. While counterfactuals for the quantity effect can be created by assigning the mean observable characteristic from one period to the other, and the counterfactual for the price effect can be created by substituting regression coefficients from one period to another, to complete that analysis, they needed to assign a value

to the residuals in each period. To do this, they created a counterfactual by ordering households by their earnings in each period, and then taking the average residual value in each quantile from the first period and assigning it onto all households in the same quantile in the second period.

In this case, instead of running a Mincer model, we create counterfactuals by ordering households by their per capita household income, and then taking the average value of each characteristic in equation (5) for each quantile in period 0 and assigning it to each household in that same quantile in period 1. For example, if we are decomposing the effect of labor income, we order households into quantiles by their observed per capita household income in periods 0 and 1. Then for every quantile in period 1, we replace the period 1 labor income with the average labor income in period 0 from households that were in the same quantile.

Box 1. Barros et al (2006) Methodology

1.	$\vartheta_0 = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Initial inequality indicator.
2.	$\widehat{\vartheta_{a1}} = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \widehat{y_{PA}}\right)\right)\right)$	Contribution of the interaction between share of adults and income per adult is $\widehat{\vartheta_{a1}} - \vartheta_0$
3.	$\widehat{\vartheta_{nA}} = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, y_{PA}\right)\right)\right)$	Contribution of share of household adults is $\widehat{\vartheta_{nA}} - \widehat{\vartheta_{a1}}$
4.	$\widehat{\vartheta_{a2}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{n_o}{n_A}, \widehat{y_{PO}^{L}}, \widehat{y_{PA}^{NL}}\right)\right)\right)$	Contribution of the interaction between labor and non labor income is $\widehat{\vartheta_{a2}} - \widehat{\vartheta_{nA}}$.
5.	$\widehat{\vartheta_{NL}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, \widehat{y_{PA}^{NL}}\right)\right)\right)$	Contribution of non-labor income is $\widehat{\vartheta_{NL}} - \widehat{\vartheta_{a1}}$.
6.	$\widehat{\vartheta_{a3}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{\widehat{n_o}}{n_A}, \widehat{y_{PO}^{L}}, y_{PA}^{NL}\right)\right)\right)$	Contribution of the interaction between labor income and the share of occupied adults is $\widehat{\vartheta_{a3}} - \widehat{\vartheta_{NL}}$.
7.	$\widehat{\vartheta_{no}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Contribution of the share of occupied adults is $\widehat{\vartheta_{no}} - \widehat{\vartheta_{a3}}$.
8.	$\widehat{\vartheta_{a4}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{\widehat{n_o}}{n_A}, \widehat{w_{PO}^{L}}, \widehat{H_{PO}^{L}}, y_{PA}^{NL}\right)\right)\right)$	Contribution of interaction between hours of work and earnings per hour is $\widehat{\vartheta_{a4}} - \widehat{\vartheta_{no}}$.
9.	$\widehat{\vartheta_{H}} = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{\widehat{n_o}}{n_A}, w_{PO}^{L}, \widehat{H_{PO}^{L}}, y_{PA}^{NL}\right)\right)\right)$	Contribution of hours of work is $\widehat{\vartheta_{H}} - \widehat{\vartheta_{a4}}$.
10.	$\vartheta_{\mathrm{F}} = \Phi\left(F\left(\left(\frac{n_A}{n}, \frac{n_o}{n_A}, \widehat{w_{PO}^{L}}, H_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Final inequality indicator, ϑ_F . The contribution of earnings per hour, w_{PO}^{L}, is calculated as a residual: $\vartheta_f - \widehat{\vartheta_{H}}$.

Barros et al. (2006) compute each counterfactual simulation in a nested fashion (as shown in Box 1). They identify the contribution that interactions between variables have in welfare changes by first computing the joint impact of a subset of variables, and then subtracting the marginal impact of each variable at a time. For instance, in step 2 in Box 1, they first compute the joint impact of

inserting both the share of adults and the income per adult from the first period into the distribution of the second period. They then compute the impact of only changing the share of adults, and take the difference of these two simulations to approximate the marginal impact that changing the share of adults had on the distribution. In step 4, instead of computing the impact of income per adult on its own, they compute the impact of changing both the labor and nonlabor income per adult. This is done because in principle, the sum of labor and nonlabor income should be equivalent to changing total income per adult. However, the results of these two simulations are different.

In contrast, we compute a cumulative counterfactual distribution by adding one variable at a time. The impact of changes in each variable and its interactions with all other variables is calculated as the difference between the cumulative counterfactuals as detailed in Box 2 for one possible path, taking into account the fact that nonlabor income is made up of pensions, transfers, capital income and other nonlabor income. In contrast to the Barros et al. (2006) approach, this method does not separately identify the contribution of the interaction between variables in the observed distributional changes, since doing so is partial at best given that changing any variable can potentially affect all other variables.

Box 2. Proposed Methodology along One possible path

1.	$\vartheta_0 = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Initial inequality rate
2.	$\widehat{\vartheta_1} = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Contribution of share of household adults is $\widehat{\vartheta_1} - \vartheta_0$
3.	$\hat{\vartheta}_2 = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Contribution of the share of occupied adults is $\widehat{\vartheta_2} - \widehat{\vartheta_1}$
4.	$\hat{\vartheta}_3 = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, \widehat{y_{PA}^{Pens}}, y_{PA}^{Trans}, y_{PA}^{Cap}, y_{PA}^{Oth\ NL}\right)\right)\right)$	Contribution of pensions is $\widehat{\vartheta_3} - \widehat{\vartheta_2}$
5.	$\hat{\vartheta}_4 = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, \widehat{y_{PA}^{Pens}}, \widehat{y_{PA}^{Trans}}, y_{PA}^{Cap}, y_{PA}^{Oth\ NL}\right)\right)\right)$	Contribution of transfers is $\widehat{\vartheta_4} - \widehat{\vartheta_3}$
6.	$\hat{\vartheta}_5 = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, \widehat{y_{PA}^{Pens}}, \widehat{y_{PA}^{Trans}}, \widehat{y_{PA}^{Cap}}, y_{PA}^{Oth\ NL}\right)\right)\right)$	Contribution of capital income is $\widehat{\vartheta_5} - \widehat{\vartheta_4}$
7.	$\hat{\vartheta}_6 = \Phi\left(F\left(Y_{pc}\left(\frac{\widehat{n_A}}{n}, \frac{\widehat{n_o}}{n_A}, y_{PO}^{L}, \widehat{y_{PA}^{Pens}}, \widehat{y_{PA}^{Trans}}, \widehat{y_{PA}^{Cap}}, \widehat{y_{PA}^{Oth\ NL}}\right)\right)\right)$	Contribution of other non-labor income is $\widehat{\vartheta_6} - \widehat{\vartheta_5}$
8.	$\vartheta_F = \Phi\left(F\left(Y_{pc}\left(\frac{n_A}{n}, \frac{n_o}{n_A}, y_{PO}^{L}, y_{PA}^{NL}\right)\right)\right)$	Final inequality rate. Contribution of labor income is $\widehat{\vartheta_F} - \widehat{\vartheta_3}$

As much of the micro-decomposition literature, this methodology suffers from path-dependence, in other words the order in which the cumulative effects are calculated matters[4]. One of the major contributions of this paper is that we apply the best known remedy for path-dependence, which is to calculate the decomposition across all possible paths and then take the average between them following the method proposed by Azevedo, Sanfelice and Nguyen (2012a). This involves calculating the cumulative decomposition in every possible order, and then averaging the results for each component. Since we have seven variables, this adds up to 5,040 potential decomposition paths (the result of 7!). The average effect for each variable is also known as the Shapley-Shorrocks estimate of each component.[5,6]

There is one remaining caveat to this approach: the counterfactual income distributions, on which these decompositions depend, suffer from equilibrium-inconsistency. Since we are modifying only one element at a time, the counterfactuals are not the result of an economic equilibrium, but rather a fictitious exercise in which we assume that we can in fact modify one factor at a time and keep everything else constant.

3. Data

The data used in this paper are from a harmonized database of household surveys from 14 Latin American countries compiled in the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), a joint effort of the *Centro de Estudios Distributivos Laborales y Sociales* of the Universidad Nacional de La Plata and the World Bank's Poverty, Gender and Equity group for Latin America. The countries included in this particular analysis are Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay. So as to make the time periods comparable across time, we use the circa criteria for the years 2000 and 2010. Table A1 in the Annex provides more details of the countries, years and surveys included in this study.

4. Results

The first result that is clear is that changes in labor income were the most important contributors to the decline in inequality across countries in Latin America as measured by the Gini coefficient (Figure 7). On average, 54 percent of the decline in income inequality in Latin America is related

[4] Path dependence is common in the micro-decomposition literature. See Essama-Nssah (2012), Fortin et al (2011) and Ferreira (2010) for recent reviews of the literature.

[5] See Shapley (1953) and Shorrocks (1999).

[6] The decomposition implement in this paper used the user written Stata ado ADECOMP written by Azevedo, Nguyen and Sanfelice (2012b).

to lower labor income inequality. The contribution of labor to declining income inequality is most salient in Argentina, Colombia, Chile, Ecuador, Mexico, Panama and Peru, where it contributed to at least 60 percent of the overall decline in inequality. Although nonlabor income and demographic changes also contributed to a decline in income inequality, the magnitudes of these effects are generally smaller.[7]

This result is robust to any potential path taken in decomposing these effects. The Shapely values reported in Figure 7 show the average of all potential decomposition paths. Regardless of the decomposition path taken, changes in labor income are the main contributors to the decline in inequality. The exceptions to this include Paraguay, where demographic effects are larger relative to the labor income effect, and Honduras, where income from transfers is the most important contributor. This is in line with relatively fast increases in the share of adults per household in these countries (Figure 3).

Interestingly, the share of adults employed in the household had no significant importance or in a few cases, even contributed to increases in inequality in some of the countries.

An important question is whether these changes in labor incomes reflect a change in the skills of the labor force, or changes in returns to existing skills. Other research in the region has documented a strong increase in the average educational level in the region, with a simultaneous decline in the wage premiums for skilled workers over the last decade, implying earnings per hours have become more equal (Azevedo et al 2012, Gasparini et al 2011).

One way to understand these changes is through Tinbergen's (1975) "race between education and technology". Tinbergen postulated that secular technological change would favor the relative demand for skilled labor, increasing their wages (and thus increasing overall inequality), whereas educational upgrading would provide a counterbalancing force reducing inequality. The empirical evidence suggests that during the 1990s technological change was ahead, leading to increasing income inequality. For instance, Bourguignon et al. (2005) found evidence for some Latin American countries that rapid technological change and structural reform in the 1990s was only slightly counterbalanced by an increase in average educational levels. However, the evidence for the 2000s seems to suggest a decline in wage premiums for skilled workers. For instance, Azevedo et al. (2013) find that falling returns to skills, measured as years of education and experience, is driving the decline in labor income inequality. Similarly, Gasparini et al. (2011) find that the decline in wage reward for skilled workers in 16 Latin American countries over the last decade had more to do with demand-side factors, including the price and commodity booms which led to an increased demand for low-skilled workers. This recent evidence is more relevant given the results presented here, where it is clear that the decline in income inequality was influenced mostly by changes in earnings per hour.

[7] The demographic contribution is relatively small and also transitory. As countries in the region move out of the demographic bonus they have enjoyed over the last 15 years, this component will likely vanish.

In terms of the contributions of nonlabor incomes to the decline in inequality, we find that changes in transfers contributed 21 percent of the observed regional decline in inequality, while changes in pensions contributed 9 percent. Income from transfers contributed to reducing inequality in all the countries. However, there is substantial heterogeneity across countries, with changes in transfers contributing over 15 percent in all countries, except Argentina, Panama, Paraguay and Peru. Note that in the case of Honduras, Costa Rica, Dominican Republic and Uruguay, increases in income from transfers was actually the main factor which led to a decline in the Gini.

Similarly, although changes in pensions contributed nearly 9 percent of the observed decline in inequality for the region as a whole, this varies from contributions of 20 percent to inequality reduction in the case of Argentina and Brazil, to cases where pensions actually led to increases in inequality in the cases of Colombia, Ecuador, El Salvador, Honduras, Mexico, Paraguay and Uruguay. This is in line with the observed increases in pension coverage for the bottom of the distribution in Argentina and the low (and in some cases declining) coverage for the bottom of the distribution in countries where pensions tended to increase inequality (Table 4).

5. Summary and Conclusions

Inequality continues to be a pervasive characteristic of Latin America, with levels that continue to be among the highest in the world. However, there is substantial evidence that inequality fell over the last decade in the region. This paper has sought to quantify, based on a series of counterfactual simulations, the contributions to the observed decline in inequality across Latin American countries.

The analysis shows that about half of the average decline in inequality in Latin America over the past decade was due to changes in labor income. In particular, most of the reduction in inequality can be attributed to an increase in earnings per hour for the bottom of the income distribution. Changes in transfers on average contributed about one-fifth of the decline in inequality for the region, although they were more important in Chile, Colombia, Costa Rica, Dominican Republic, Honduras and Uruguay. Pensions accounted for less than a tenth of the observed decline in inequality in the region as a whole, but this was largely driven by important contributions in the cases of Argentina and Brazil, given that in some instances pensions have actually led to increases in inequality.

These results point to the labor market as the main source for greater equalization in the region. There is some evidence this has been driven by declining skill premia at the top of the income distribution and improved levels of education at the bottom. Going forward, it will be important to ensure that the quality of education allows for higher employment in high productivity jobs, as well as with efficient policy frameworks that do not promote segmentation.

As Latin America enters a new decade, it is clear that inequality reduction is possible in the region. However, there are still many challenges to face in order to sustain the changes and continue improving equality, and to extend it to countries which have thus far not joined the trend of declining inequality and to prepare for changes yet to come.

While this type decomposition can be very useful for understanding the driving factors behind inequality reduction, its main limitation is the fact that it cannot shed light on whether the decline in inequality was due to changes in the endowments of the population, or due to changes in returns to those characteristics. For this type of analysis, one must turn to alternative decomposition techniques that impose an underlying labor model and greater structure compared to the nonparametric approach adopted here. Looking forward, this should be possible, particularly if those models can be enhanced by computing the Shapley-Shorrocks estimates adopted here to address path dependence.

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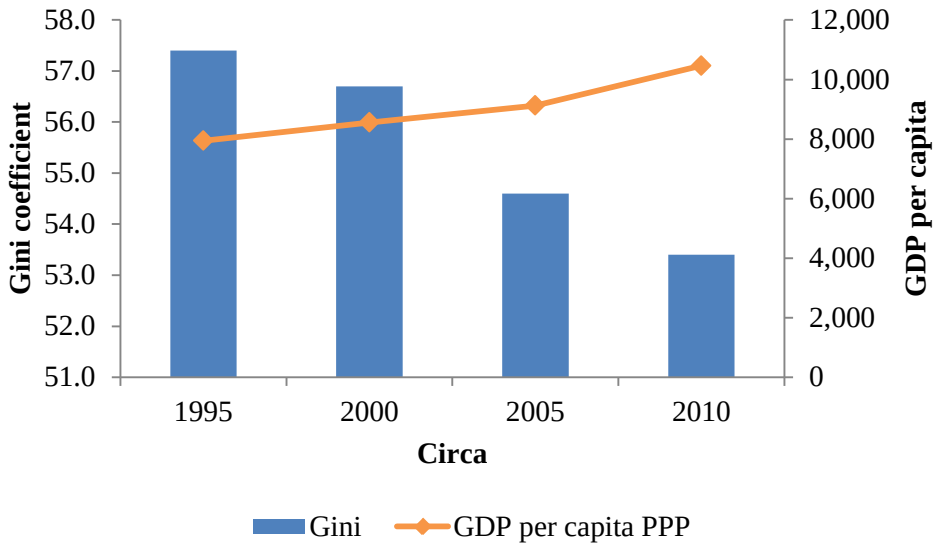
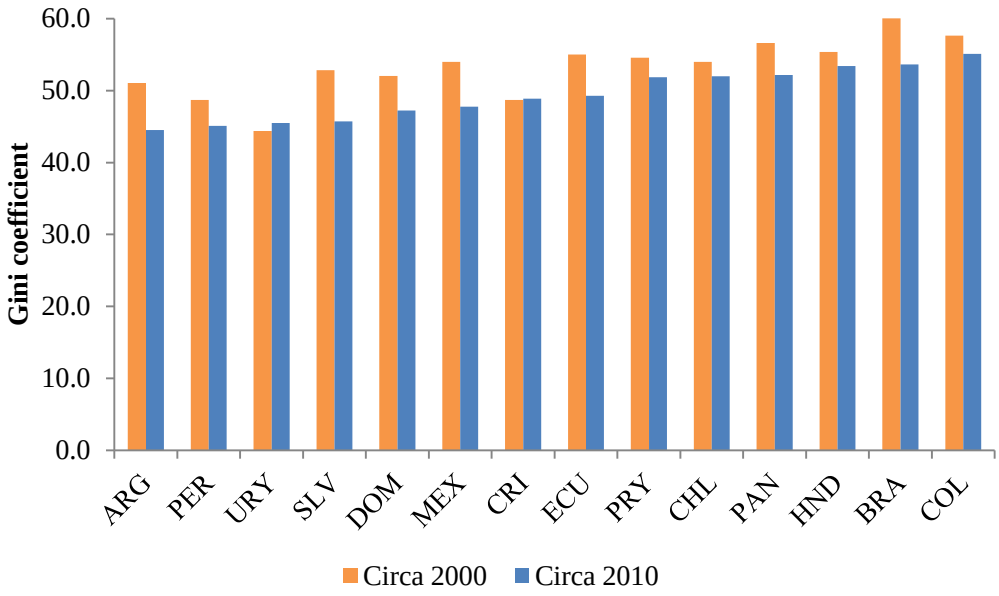
Figure 1. Gini trend and GDP per capita growth in Latin America.



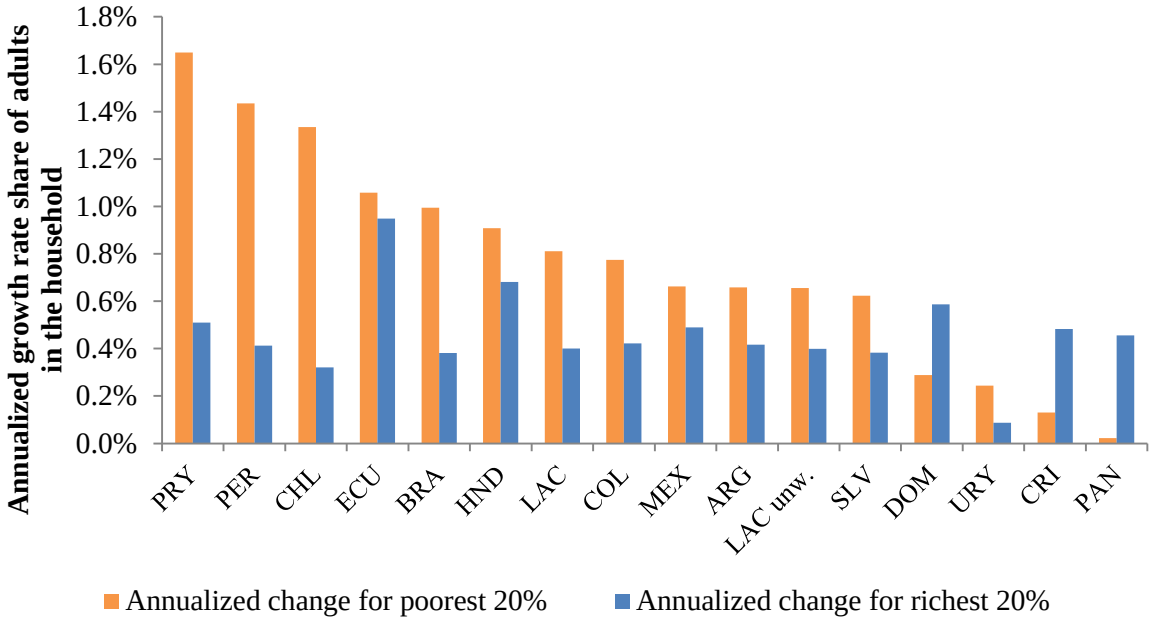
Source: SEDLAC data, 2011 (CEDLAS and the World Bank) and WDI 2012.

Figure 2. Change in income-based inequality.



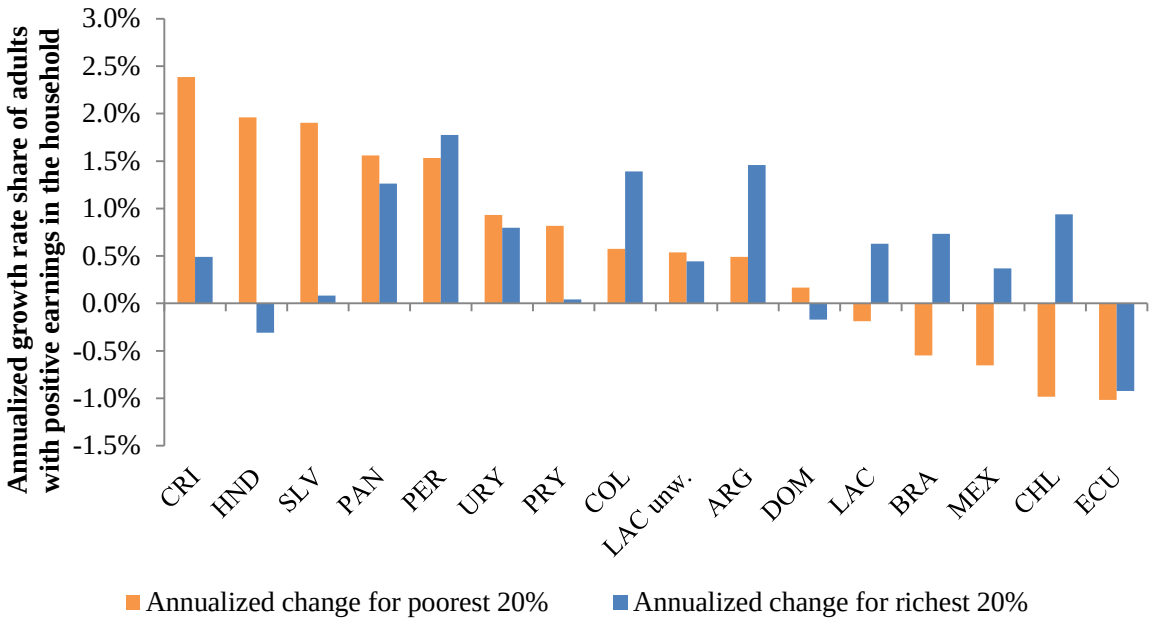
Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank)

Figure 3. Growth in the share of adults per household by poorest and richest quintile.



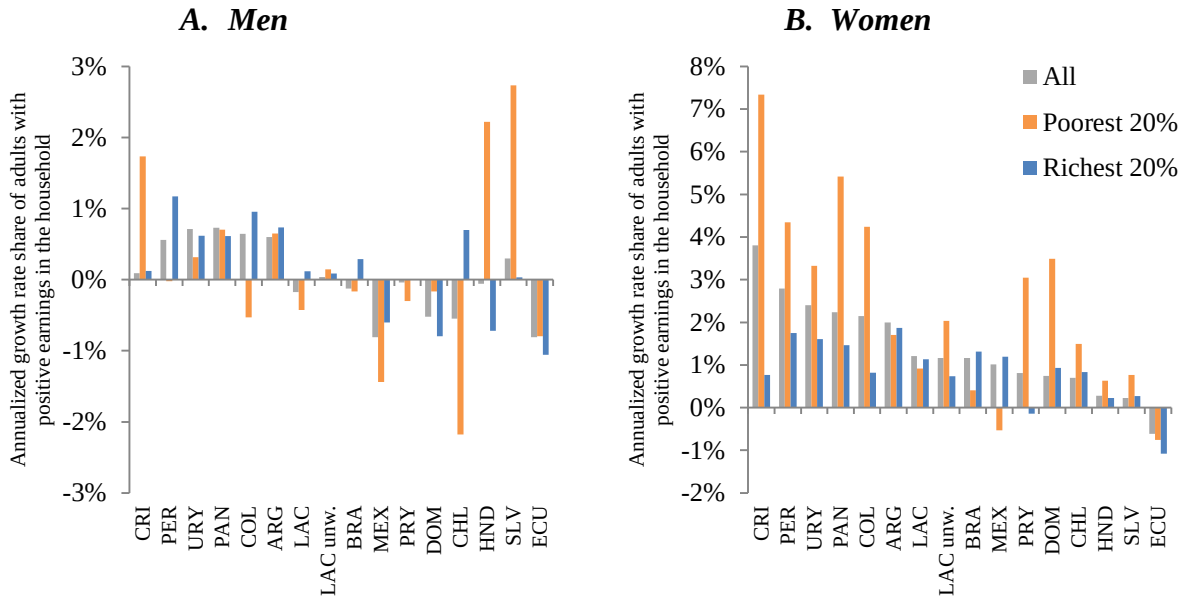
Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank). Note: The quintiles of income are based on the per capita household income.

Figure 4. Growth in the share of adults with positive labor earnings.



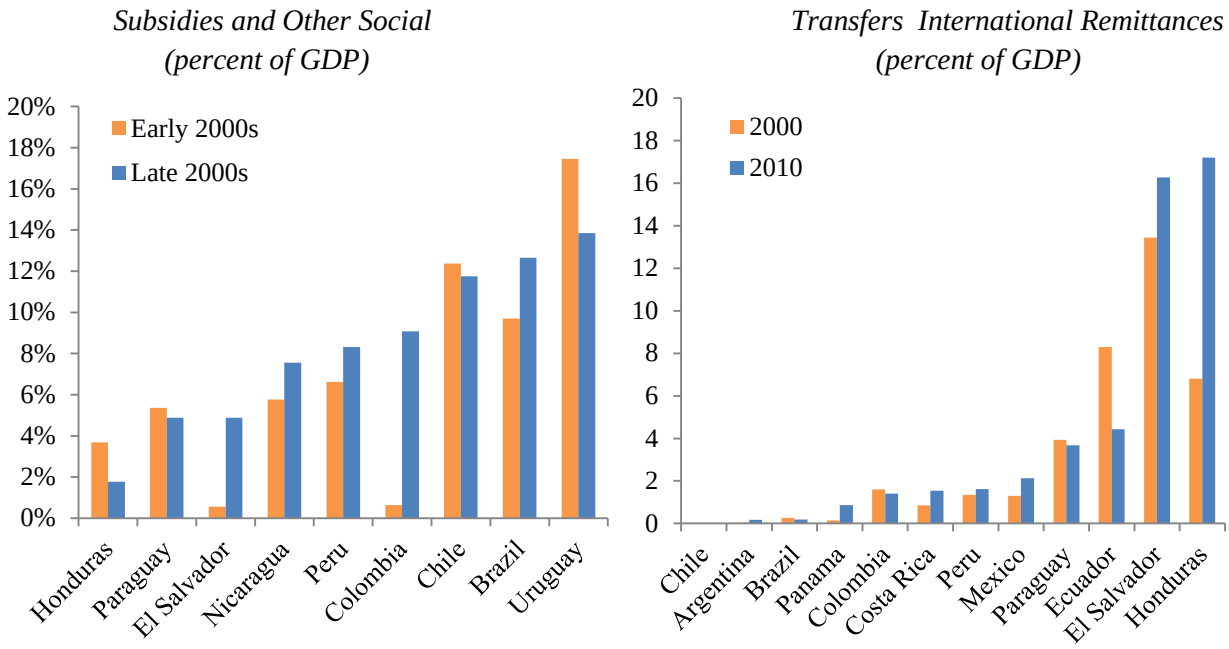
Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank). Note: The quintiles of income are based on the per capita household income.

Figure 5. Changes in the share of adults with positive earnings in the household.



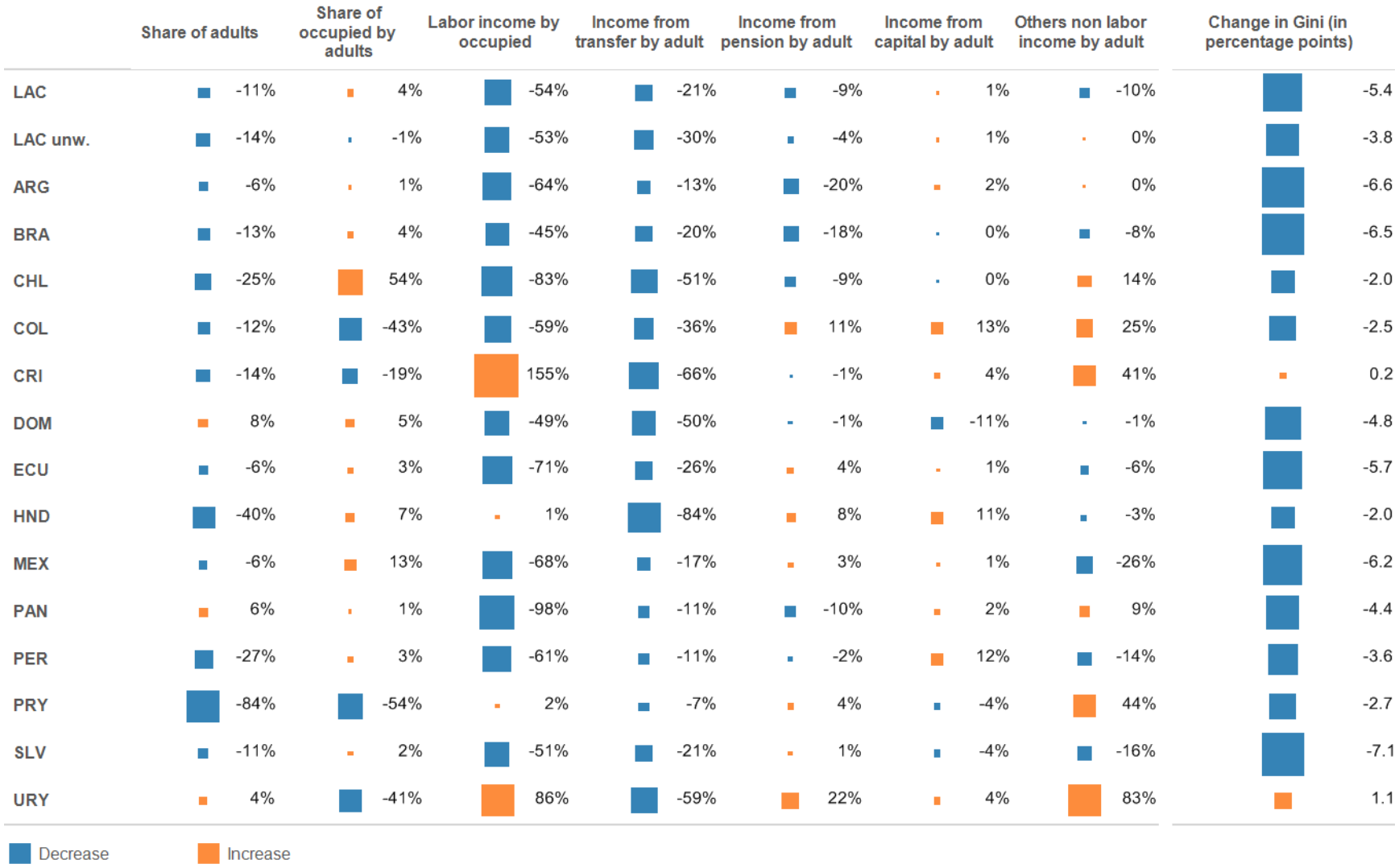
Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank). Note: The quintiles of income are based on the per capita household income.

Figure 6. Non-Labor Income Growth



Source: WDI, 2012.

Figure 7. Shapley Value Estimates of the Contributions to the decline in the Gini Coefficient.



Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank). Note: It was considered as adults occupied those individuals who report to have labor income greater than zero.

Table 1. Determinants of Income per capita.

	ARG			BRA			CHL			COL			CRI			DOM			ECU		
			Annualized			Annualized			Annualized			Annualized			Annualized			Annualized			Annualized
	2000	**2010**	change	**2001**	**2011**	change	**2003**	**2009**	change	**2002**	**2010**	change	**2004**	**2008**	change	**2000**	**2010**	change	**2003**	**2010**	change
Per capita Income	351.6	432.9	2.1%	289.6	387.4	3.0%	408.1	495.7	3.3%	222.3	295.3	3.6%	298.4	376.0	6.0%	299.0	256.1	-1.5%	205.6	267.3	3.8%
Share of adults	0.72	0.76	0.5%	0.71	0.77	0.7%	0.74	0.78	0.8%	0.67	0.71	0.7%	0.71	0.73	1.0%	0.67	0.71	0.6%	0.66	0.72	1.2%
Labor income by adults	377.5	418.1	1.0%	291.0	362.5	2.2%	445.6	528.4	2.9%	219.2	292.8	3.7%	373.8	446.3	4.5%	338.4	261.5	-2.5%	251.6	291.7	2.1%
Share of occupied by adults	0.51	0.57	1.1%	0.56	0.58	0.3%	0.53	0.53	0.1%	0.52	0.57	1.2%	0.54	0.57	1.4%	0.55	0.54	-0.1%	0.57	0.54	-0.9%
Labor income by occupied	731.6	726.0	-0.1%	524.5	617.6	1.6%	864.2	990.2	2.3%	411.4	518.0	2.9%	696.9	785.8	3.0%	627.0	495.0	-2.3%	456.7	559.8	2.9%
Non Labor income by adults	104.3	143.9	3.3%	96.3	127.0	2.8%	107.0	117.0	1.5%	98.2	106.9	1.1%	50.0	63.4	6.1%	118.6	101.6	-1.5%	56.2	73.4	3.9%
Income from transfer by adult	17.4	21.3	2.1%	2.6	9.7	14.0%	11.7	15.5	4.8%	10.9	23.9	10.4%	3.0	16.5	53.4%	49.5	40.3	-2.0%	20.4	24.0	2.3%
Income from pension by adult	47.2	56.3	1.8%	57.0	77.1	3.1%	35.5	36.2	0.3%	16.0	26.3	6.4%	23.2	29.9	6.5%	4.7	6.7	3.6%	7.6	17.6	12.7%
Income from capital by adult	6.3	6.5	0.3%	10.1	7.2	-3.4%			-	8.8	15.7	7.4%	8.1	9.6	4.4%	9.7	5.8	-4.9%	8.3	8.6	0.5%
Others non labor income by adult	33.4	59.8	6.0%	26.6	33.0	2.2%	59.8	65.3	1.5%	62.5	40.9	-5.1%	15.8	7.4	-17.3%	54.7	48.7	-1.2%	19.8	23.2	2.2%

	HND			MEX			PAN			PER			PRY			SLV			URY		
			Annualized			Annualized			Annualized			Annualized			Annualized			Annualized			Annualized
	1999	**2010**	change	**2000**	**2010**	change	**2002**	**2010**	change	**2004**	**2010**	change	**1999**	**2010**	change	**2000**	**2010**	change	**2000**	**2010**	change
Per capita Income	137.1	192.5	3.1%	280.8	287.5	0.2%	282.3	335.2	2.2%	210.1	277.8	4.8%	277.6	301.0	0.7%	211.9	200.8	-0.5%	478.1	488.3	0.2%
Share of adults	0.57	0.65	1.1%	0.66	0.71	0.7%	0.68	0.71	0.5%	0.69	0.72	0.8%	0.60	0.68	1.2%	0.64	0.69	0.7%	0.77	0.78	0.2%
Labor income by adults	194.2	224.3	1.3%	331.1	308.1	-0.7%	318.7	354.6	1.3%	206.2	278.6	5.1%	336.7	347.6	0.3%	261.6	221.8	-1.6%	388.4	387.4	0.0%
Share of occupied by adults	0.57	0.56	-0.1%	0.57	0.57	0.1%	0.52	0.57	1.3%	0.56	0.63	1.8%	0.59	0.61	0.4%	0.50	0.50	0.1%	0.54	0.61	1.3%
Labor income by occupied	363.2	420.7	1.3%	630.1	566.2	-1.1%	606.7	607.1	0.0%	387.9	464.2	3.0%	581.8	604.8	0.4%	535.9	454.1	-1.6%	730.9	646.1	-1.2%
Non Labor income by adults	41.4	70.8	5.0%	89.9	93.4	0.4%	83.2	98.5	2.1%	95.1	108.8	2.3%	112.3	92.3	-1.8%	65.5	70.0	0.7%	231.9	232.0	0.0%
Income from transfer by adult	20.4	41.9	6.7%	16.5	18.1	0.9%	27.3	32.0	2.0%	15.8	18.6	2.7%	27.7	24.8	-1.0%	30.3	36.6	1.9%	27.9	47.9	5.6%
Income from pension by adult	1.3	3.6	9.8%	14.3	20.0	3.4%	39.4	50.0	3.0%	11.1	12.0	1.3%	12.9	13.7	0.5%	7.3	8.1	1.1%	102.2	94.2	-0.8%
Income from capital by adult	3.1	5.1	4.8%	5.2	6.0	1.4%	6.7	8.3	2.6%	6.3	11.0	9.7%	8.0	6.7	-1.6%	3.8	1.2	-11.0%	14.6	17.1	1.6%
Others non labor income by adult	16.6	20.2	1.8%	53.9	49.3	-0.9%	9.8	8.2	-2.2%	61.9	67.1	1.4%	63.6	47.1	-2.7%	24.2	24.1	0.0%	87.2	72.8	-1.8%

Source: Author's calculations with data from SEDLAC (CEDLAS and the World Bank).

Note: Income is per capita monthly constant, PPP 2005. It was considered as adults occupied those individuals who report to have labor income greater than zero.

Table 2. Worked hours and labor income per hour.

Worked hour - main activity

	Men									Women								
	All			**Poorest 20%**			**Richest 20%**			**All**			**Poorest 20%**			**Richest 20%**		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	45.3	44.6	-0.2%	40.8	40.2	-0.1%	46.1	45.6	-0.1%	37.1	37.3	0.1%	29.3	30.2	0.3%	39.5	39.7	0.1%
LAC unw	45.4	44.2	-0.3%	40.2	39.2	-0.3%	46.9	45.7	-0.3%	38.3	37.5	-0.2%	30.3	29.9	-0.1%	40.8	40.3	-0.1%
ARG	46.6	44.5	-0.5%	41.0	41.9	0.2%	47.7	43.3	-1.0%	35.2	33.4	-0.5%	28.0	28.0	0.0%	37.7	35.3	-0.6%
BRA	44.4	42.1	-0.5%	40.5	38.6	-0.5%	44.9	42.8	-0.5%	35.7	35.9	0.0%	28.7	28.3	-0.1%	38.0	37.7	-0.1%
CHL	47.4	45.2	-0.8%	45.0	43.9	-0.4%	47.7	45.6	-0.7%	41.7	40.5	-0.5%	33.7	36.1	1.1%	43.4	41.5	-0.8%
COL	48.5	49.5	0.2%	43.7	43.1	-0.2%	49.0	51.1	0.5%	39.2	40.3	0.3%	30.8	31.8	0.4%	41.4	43.2	0.6%
CRI	48.7	49.7	0.5%	41.2	45.9	2.8%	48.9	49.2	0.2%	39.0	40.1	0.7%	30.1	31.6	1.2%	42.0	42.6	0.4%
DOM	44.0	42.1	-0.4%	39.1	39.2	0.0%	45.4	43.0	-0.5%	38.4	37.4	-0.3%	32.0	35.2	0.9%	40.0	38.5	-0.4%
ECU	42.7	43.2	0.2%	36.9	39.0	0.8%	45.1	44.9	-0.1%	36.9	38.1	0.4%	31.6	33.3	0.8%	39.9	41.3	0.5%
HND	43.4	37.3	-1.4%	37.7	30.3	-2.0%	47.1	42.7	-0.9%	36.8	33.1	-0.9%	26.2	21.5	-1.8%	41.1	38.5	-0.6%
MEX	46.1	48.1	0.4%	41.8	44.2	0.6%	45.8	48.9	0.7%	37.6	39.1	0.4%	28.4	32.5	1.4%	39.4	41.8	0.6%
PAN	42.0	40.6	-0.4%	35.0	30.6	-1.7%	44.9	43.6	-0.4%	37.4	36.4	-0.4%	25.5	22.7	-1.5%	41.2	40.8	-0.1%
PER	43.5	42.7	-0.3%	36.1	32.8	-1.6%	48.1	46.4	-0.6%	37.3	36.3	-0.5%	31.2	29.5	-0.9%	42.8	40.4	-1.0%
PRY	46.5	47.8	0.3%	41.9	42.2	0.1%	48.5	49.1	0.1%	40.9	40.3	-0.1%	32.8	29.9	-0.8%	43.4	43.3	0.0%
SLV	45.0	42.8	-0.5%	38.6	36.8	-0.5%	47.9	45.8	-0.4%	43.5	40.9	-0.6%	33.3	29.6	-1.2%	44.8	43.5	-0.3%
URY	46.1	42.7	-0.7%	44.6	40.6	-0.9%	46.0	42.7	-0.7%	36.1	34.1	-0.6%	31.7	29.3	-0.8%	36.7	35.1	-0.4%

Wage per hour - main activity

	Men									Women								
	All			**Poorest 20%**			**Richest 20%**			**All**			**Poorest 20%**			**Richest 20%**		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	3.6	4.3	1.7%	1.0	1.5	4.1%	8.3	8.8	0.5%	3.1	3.8	2.0%	1.0	1.5	3.4%	5.9	6.8	1.5%
LAC unw	3.7	4.0	0.6%	1.3	1.5	1.8%	7.8	7.8	0.1%	3.4	3.7	0.7%	1.3	1.5	1.2%	6.0	6.4	0.7%
ARG	4.8	4.9	0.2%	2.2	2.2	-0.1%	8.7	7.9	-0.9%	4.8	5.0	0.4%	2.6	2.2	-1.5%	7.5	7.6	0.1%
BRA	3.6	5.2	3.9%	0.8	1.7	8.0%	8.7	11.2	2.5%	3.0	4.3	3.8%	0.8	1.6	6.7%	6.2	8.2	2.8%
CHL	5.5	6.7	3.4%	1.8	2.5	5.5%	12.9	14.2	1.7%	4.4	5.1	2.4%	1.8	2.4	4.9%	8.5	9.3	1.5%
COL	2.5	3.0	2.5%	0.8	1.0	3.7%	5.7	6.3	1.4%	2.8	2.9	0.1%	0.8	1.0	1.9%	5.7	5.6	-0.3%
CRI	4.0	4.6	3.1%	1.8	2.0	2.5%	7.4	8.9	4.8%	4.1	4.3	1.0%	1.8	2.0	1.8%	6.4	7.2	2.8%
DOM	3.5	2.7	-2.4%	1.3	1.3	-0.3%	7.1	4.9	-3.6%	3.1	2.7	-1.5%	1.5	1.0	-4.0%	5.4	4.7	-1.5%
ECU	3.4	3.6	0.8%	1.1	1.4	3.8%	6.8	6.9	0.2%	3.1	3.3	0.9%	1.0	1.3	3.2%	5.9	5.6	-0.7%
HND	2.4	2.9	1.7%	0.6	0.6	0.1%	4.7	6.6	3.2%	2.0	3.2	4.3%	0.7	1.0	3.7%	3.4	5.8	5.0%
MEX	4.0	3.4	-1.7%	1.1	1.2	1.2%	9.4	6.7	-3.3%	3.1	3.3	0.6%	1.0	1.3	2.6%	5.5	5.7	0.3%
PAN	4.0	4.3	0.7%	1.0	1.4	4.6%	8.9	8.1	-1.2%	4.3	4.3	0.0%	1.4	1.6	1.4%	7.1	7.1	0.1%
PER	2.5	3.3	5.3%	0.9	1.5	8.8%	5.2	6.1	2.9%	1.9	2.6	4.9%	0.7	1.1	6.8%	3.4	4.5	4.6%
PRY	3.7	3.5	-0.6%	0.9	1.0	0.9%	7.7	7.5	-0.3%	3.5	3.6	0.3%	1.2	1.2	0.5%	5.7	6.6	1.4%
SLV	3.3	2.7	-1.9%	1.2	1.3	1.1%	6.1	4.7	-2.5%	2.9	2.6	-1.0%	1.1	1.4	2.2%	5.1	4.2	-1.8%
URY	4.8	4.5	-0.5%	2.2	2.0	-1.0%	9.5	9.3	-0.2%	4.3	3.9	-0.9%	1.9	1.8	-0.8%	7.7	7.3	-0.6%

Source: Estimates based on data from SEDLAC (CEDLAS and the World Bank). Note: The quintiles of income are based on the per capita household income. Only observations greater than zero were considered.

Table 3. Share of transfers, on average, in total household income.

	All			Poorest 20%			Richest 20%		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	4%	7%	7.2%	7%	20%	11.1%	2%	2%	-0.6%
LAC unw.	7%	10%	3.8%	12%	20%	5.3%	4%	4%	0.2%
ARG	5%	6%	3.4%	8%	19%	9.0%	3%	2%	-4.7%
BRA	1%	6%	17.8%	3%	24%	21.2%	1%	0%	-3.8%
CHL	4%	6%	7.5%	10%	15%	7.0%	1%	1%	-16.4%
COL	4%	8%	10.9%	5%	18%	17.9%	3%	4%	5.6%
CRI	3%	6%	26.0%	10%	16%	13.0%	0%	1%	59.4%
DOM	10%	14%	3.5%	12%	22%	6.7%	10%	10%	-0.4%
ECU	9%	11%	2.5%	19%	22%	2.5%	6%	3%	-6.5%
HND	9%	17%	5.6%	13%	22%	5.1%	9%	11%	1.8%
MEX	5%	7%	4.8%	9%	17%	6.1%	2%	2%	-0.5%
PAN	13%	13%	-0.3%	32%	33%	0.4%	3%	4%	0.6%
PER	5%	5%	0.9%	4%	8%	12.6%	5%	4%	-3.6%
PRY	7%	8%	1.0%	8%	12%	3.8%	5%	4%	-0.9%
SLV	13%	15%	1.6%	20%	18%	-0.7%	7%	8%	2.1%
URY	6%	12%	6.4%	13%	30%	9.1%	3%	4%	4.4%

Source: Estimates based on data from SEDLAC (CEDLAS and the World Bank).

Table 4. Share of pensions, on average, in total household income.

	All			Poorest 20%			Richest 20%		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	9%	10%	0.8%	5%	5%	0.3%	11%	12%	0.9%
LAC unw.	6%	6%	0.7%	3%	4%	1.5%	8%	9%	0.7%
ARG	12%	13%	0.9%	7%	12%	4.8%	13%	10%	-2.0%
BRA	16%	17%	0.6%	9%	9%	-0.6%	17%	18%	0.4%
CHL	9%	8%	-1.4%	7%	8%	1.2%	8%	7%	-3.5%
COL	3%	4%	3.2%	0%	0%	5.4%	9%	10%	2.2%
CRI	6%	6%	1.6%	6%	6%	-1.0%	7%	8%	4.3%
DOM	1%	2%	4.6%	1%	2%	2.8%	1%	3%	10.8%
ECU	2%	4%	7.7%	1%	1%	1.9%	4%	8%	11.3%
HND	0%	1%	5.8%	0%	0%	-5.0%	1%	2%	5.9%
MEX	3%	4%	3.2%	1%	2%	3.6%	5%	7%	4.0%
PAN	8%	10%	2.6%	2%	7%	15.5%	15%	15%	-0.1%
PER	3%	3%	-1.5%	0%	0%	0.6%	6%	5%	-2.5%
PRY	2%	2%	0.6%	0%	0%	21.9%	5%	5%	0.3%
SLV	2%	2%	0.2%	1%	0%	-6.1%	4%	5%	2.6%
URY	17%	16%	-0.9%	10%	8%	-2.6%	21%	20%	-0.5%

Source: Estimates based on data from SEDLAC (CEDLAS and the World Bank).
Note: The quintiles of income are based on the per capita household income.

Table 5. Percentage of people over 65 years old receiving pension.

Men

	All			Poorest 20%			Richest 20%		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	57%	61%	0.6%	14%	16%	1.3%	70%	74%	0.5%
LAC unw.	42%	45%	0.5%	19%	22%	1.7%	59%	62%	0.6%
ARG	77%	87%	1.3%	33%	69%	7.5%	82%	83%	0.1%
BRA	90%	89%	-0.1%	58%	46%	-2.3%	91%	92%	0.1%
CHL	73%	66%	-1.6%	51%	47%	-1.4%	74%	73%	-0.3%
COL	22%	27%	2.8%	2%	1%	-9.1%	50%	60%	2.4%
CRI	51%	54%	1.2%	22%	38%	15.0%	74%	66%	-2.8%
DOM	17%	21%	1.9%	8%	10%	2.2%	27%	41%	4.3%
ECU	19%	27%	5.5%	3%	4%	4.6%	40%	56%	4.8%
HND	7%	9%	3.4%	2%	0%	-	13%	26%	6.3%
MEX	24%	36%	3.9%	4%	7%	6.3%	46%	58%	2.4%
PAN	50%	51%	0.3%	7%	10%	4.0%	79%	84%	0.7%
PER	34%	34%	0.0%	1%	2%	13.6%	62%	63%	0.3%
PRY	21%	14%	-3.8%	1%	3%	5.3%	49%	36%	-2.8%
SLV	20%	21%	0.4%	2%	2%	1.1%	46%	48%	0.3%
URY	89%	88%	-0.1%	72%	76%	0.6%	87%	86%	-0.1%

Women

	All			Poorest 20%			Richest 20%		
	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change	Circa 2000	Circa 2010	Annualized change
LAC	50%	53%	0.7%	10%	13%	2.9%	60%	66%	1.0%
LAC unw.	31%	36%	1.2%	15%	17%	1.7%	45%	53%	1.7%
ARG	69%	92%	3.0%	35%	77%	8.3%	81%	91%	1.1%
BRA	83%	83%	0.0%	51%	38%	-3.0%	82%	87%	0.6%
CHL	57%	53%	-1.2%	32%	34%	1.2%	65%	68%	0.7%
COL	11%	19%	7.5%	0%	1%	7.8%	24%	44%	7.9%
CRI	30%	31%	0.9%	10%	9%	-3.3%	53%	58%	2.4%
DOM	7%	10%	3.9%	1%	0%	-18.6%	13%	23%	6.1%
ECU	12%	17%	5.9%	2%	1%	-12.6%	35%	45%	3.7%
HND	2%	6%	8.7%	0%	0%	0.0%	6%	17%	9.3%
MEX	15%	18%	1.5%	1%	3%	11.6%	31%	39%	2.2%
PAN	35%	39%	1.5%	1%	6%	23.9%	67%	72%	0.9%
PER	9%	12%	5.0%	0%	0%	0.0%	23%	30%	4.2%
PRY	14%	18%	1.9%	0%	3%	0.0%	31%	39%	2.1%
SLV	10%	14%	3.3%	1%	1%	-1.4%	24%	36%	3.9%
URY	87%	86%	0.0%	72%	70%	-0.3%	88%	89%	0.0%

Source: Estimates based on data from SEDLAC (CEDLAS and the World Bank).

Note: The quintiles of income are based on the per capita household income.

ANNEX

Table A1. Household surveys used from SEDLAC harmonization

Country	Code	Name of survey	Acronym	Circa 2000	Circa 2010	Coverage
Argentina	ARG	Encuesta Permanente de Hogares-Continua	EPH-C	2000	2010	Urban-31 cities
Brazil	BRA	Pesquisa Nacional por Amostra de Domicilios	PNAD	2001	2011	National
Chile	CHL	Encuesta de Caracterización Socioeconómica Nacional	CASEN	2003	2009	National
Colombia	COL	Gran Encuesta Integrada de Hogares	GEIH	2002	2010	National
Costa Rica	CRI	Encuesta de Hogares de Propósitos Múltiples	EHPM	2004	2008	National
Dominican Republic	DOM	Encuesta Nacional de Fuerza de Trabajo	ENFT	2000	2010	National
Ecuador	ECU	Encuesta de Empleo, Desempleo y Subempleo	ENEMDU	2003	2010	National
El Salvador	SLV	Encuesta de Hogares de Propósitos Múltiples	EHPM	2000	2010	National
Honduras	HND	Encuesta Permanente de Hogares de Propósitos Múltiples	EPHPM	1999	2010	National
Mexico	MEX	Encuesta Nacional de Ingresos y Gastos de los Hogares	ENIGH	2000	2010	National
Panama	PAN	Encuesta de Hogares	EH	2002	2010	National
Paraguay	PRY	Encuesta Permanente de Hogares	EPH	1999	2010	National
Peru	PER	Encuesta Nacional de Hogares	ENAHO	2004	2010	National
Uruguay	URY	Encuesta Continua de Hogares	ECH	2000	2010	Urban – Montevideo and Interior+5000 inhabitants