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Resumen

Este trabajo documenta la evolución del tamaño de la clase media en Latinoamérica durante el período 2001-2013. La pertenencia a la clase media se define usando umbrales de ingreso identificados a partir del concepto de vulnerabilidad: los hogares de clase media disfrutan de cierta seguridad económica (baja probabilidad de caer en pobreza). En casi todos los países la clase media creció desde 2001, producto del crecimiento económico y la reducción de la desigualdad. Asimismo, se observa cierta convergencia entre países: el crecimiento de la clase media fue menor en aquellos países donde su participación poblacional era más alta en 2001.

Palabras clave: Latinoamérica, clase media, vulnerabilidad, desigualdad, crecimiento, convergencia.

Códigos JEL: D6, D31, I3, O1, O54, Z13.

Abstract

This paper documents the evolution of the size of the middle class in Latin America during 2001-2013. The middle class is defined using income thresholds, which are related to the concept of vulnerability: a household belongs to this group if it enjoys of economic security (low probability of poverty). In most countries the size of that group grew in the period. Economic growth and inequality reduction explain this result. The data reveals that there is a convergence in the size of the middle class across countries: the growth of that group was lower where its population share was initially higher.

Keywords: Latin America, middle class, vulnerability, inequality, growth, convergence.

JEL Codes: D6, D31, I3, O1, O54, Z13.

1. Introduction

Latin American countries have always been characterized by relatively high levels of income inequality, even taking into account their degree of economic development. If such "excess inequality" is combined with the fact that these are mostly middle-income and low-income countries, it can be understood that, in general, the middle class has not historically represented a significant proportion of the population in many countries in the region.

Since the beginning of the century, most countries in Latin America have enjoyed a relatively stable process of economic growth, accompanied by decreases in income inequality. This has resulted in a strong reduction in the incidence of poverty in the region and an increase in the share of the population belonging to the middle class. Currently, the size of the middle class in most countries in the region is similar to or even exceeds that of the poor population.[2]

This situation has spawned a literature covering different aspects related to the growth of the middle class. Some studies document the evolution of the size of this group, others study the changes in the composition of the different classes that have occurred due to the previously mentioned process, while another line of research investigates the (potentially beneficial) social effects of the expansion in the size of the middle class in the region. Particularly, some authors stress that the growth of the middle class would imply a reduction of the "excess inequality" in the region.

However, even with this development, the literature on the middle class has not reached a consensus on the empirical definition of the concept. The applied literature is characterized by a diversity of definitions which may complement or contradict each other. In this study a particular definition of middle class is applied. This definition is based on absolute income thresholds, a relatively standard approach in the literature. Using that definition, this work traces the evolution of the middle class in 16 Latin American countries, during the period 2001-2013.

The remainder of the document is organized as follows. Section 2 describes the data and the methodology used in the study. Section 3, which constitutes the core of the paper, presents the main patterns and trends of the middle class in Latin America. The analysis is performed both for Latin America as a whole, and also for individual countries. Finally, the conclusions are presented in Section 4

2. Data and Methodology

While there is a relatively vast empirical literature on the middle class, there are not many comparative studies involving several countries and there are few works studying the evolution of the middle class in a specific country over a relatively long period of time.

The main reason for this is that household surveys in different countries are not perfectly comparable, particularly with regard to the collection of information on income, which is the variable usually used to identify and measure the middle class in the applied economic literature. Additionally, the analysis of the evolution of the middle class and the comparability across countries may be limited by the methodology being employed, to the extent that many of the existing methodological proposals were not originally intended to make comparisons between countries (for example. the definitions based on measures of central tendency of the income distribution are not very useful for making comparisons between countries with very different income levels), or to measure the evolution of the middle class over time (for example, according

[2] This result depends on the empirical definition of the middle class used to estimates the population shares of each group.

to the definitions based on quantiles of income distribution the size of the middle class remains unchanged over time, and only changes in its composition can be evaluated).

This paper conducts a comparative analysis of the evolution of the middle class in a broad set of countries (all countries in continental Latin America plus the Dominican Republic), and for a recent and relatively large period of time (2001-2013). The data and methodology that were used to avoid the methodological limitations mentioned above are presented next.

2.1. Data

The empirical evidence presented in this study is based on microdata from more than 175 household surveys of 16 Latin American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela), covering the period 2001-2013.

The whole set of surveys belongs to a large database of household surveys from Latin American and the Caribbean: the *Socio-Economic Database for Latin America and the Caribbean* (SEDLAC), assembled by the Centro de Estudios Distributivos Laborales y Sociales (CEDLAS) of the Universidad Nacional de La Plata and The World Bank's Poverty Group (LCSPP).

Databases in SEDLAC have been constructed from national household surveys, which are not uniform across countries. The main contribution of the project is to homogenize the original data using the same criteria and procedures, making statistics comparable across countries and over time. This is particularly important for the case of the main variable of interest in this work, i.e., per capita household income. SEDLAC constructs this variable by adding incomes from labor sources (income from salaried work, self-employment and salaries assigned to owners) and non-labor sources (pensions, capital and benefits and transfers) for all members of a household.[3]

Guatemala and Nicaragua are not included in the analysis of the evolution of the middle class, since there are only three household surveys available for these countries which were conducted during the period under analysis.

Thus, this document uses a sample of 16 Latin American countries, over a period of 13 years to trace the evolution of the middle class. This means that 208 combinations of country/year were considered. For 179 of these 208 combinations the information presented comes from estimates obtained directly from household surveys of the SEDLAC project. In the remaining 29 cases statistics were not estimated directly from household surveys due to various reasons: (i) some countries do not perform household surveys every year (for example, Chile's household survey is conducted once every three years); (ii) at the time of this report SEDLAC had not yet had access to some surveys (for example, the household survey of El Salvador 2003); and (iii) it was decided not to use the data for some combinations of country/year where the household survey had significant methodological changes, to preserve the comparability (for example, the household surveys collected in the Dominican Republic during the period 2001-2003 which are not directly comparable to those carried out during the period 2004-2013).

For the cases in which statistics were not obtained directly from household surveys, the information was produced using simple projections drawn from the closest available household survey in the country and from data of the World Development Indicators (WDI) on per capita GDP growth. The following examples illustrate how the missing information was estimated:

[3] For more information on the definition of income in SEDLAC see: http://sedlac.econo.unlp.edu.ar/eng/methodology.php

Chile 2004 and 2005: Chile carries out its household survey once every three years. The *Encuesta de Caracterización Socioeconómica Nacional (CASEN)* was carried out in 2003 and then in 2006, so there are no survey results for 2004 and 2005. In this study, the estimations for 2004 were obtained from CASEN 2003 by adjusting per capita household income by a factor capturing the growth of per capita GDP between 2003 and 2004. Similarly, the statistics for 2005 were estimated from CASEN 2006 by adjusting per capita household income by the growth rate of per capita GDP between 2005 and 2006. A similar procedure was employed to obtain the statistics for Bolivia 2003 and 2004, Chile 2001, 2002, 2007 and 2010, Colombia 2001, 2006 and 2007, Dominican Republic 2001, 2002 and 2003, Ecuador 2001 and 2002, Mexico 2013 and Venezuela 2012 and 2013.

Brazil 2010: The *"Instituto Brasileiro de Geografía y Estadística"* did not carry out the *Pesquisa Nacional por Amostra de Domicilios* (PNAD) in 2010. In this particular case, there is a PNAD for 2009 and another one for 2011. Two different estimations were obtained for 2010, the first one based on PNAD 2009 and adjusting by the growth rate of per capita GDP between 2009 and 2010; and the second one was obtained using PNAD 2011 and adjusting to take into account the growth rate of per capita GDP between 2010 and 2011. The statistics reported in this study are an average between the estimations obtained using these two alternatives. The same procedure was used to obtain statistics for Bolivia, 2010, Chile 2010 and 2012, El Salvador 2003 and Mexico 2001, 2003, 2007, 2009 and 2011.

2.2. The definition of the middle class

As it was previously mentioned, there is a lack of consensus on the empirical definition of the concept of the middle class. In this way, there are several alternative economic approaches which can be used to identify and measure the middle class.

In general, the most common practice in the economic literature is to use an income partition of society to identify the middle class. The main difference between these economic approaches is the method chosen to perform the income partition. In this sense, the income-based identification of the middle class is similar to the measurement of poverty, in which the delimitation of the boundaries between groups (poor and non-poor) is a key issue.

One relatively easy way to set those boundaries is using the quantiles of the income distribution. Researchers in this strand of the literature define the middle class by adopting a lower (for example, the second decile of the distribution) and an upper bound (for example, the top decile of the distribution). Then, the lower and the upper classes are defined by residual. The main disadvantage of this approach is that, by construction, the size of the three income classes is always the same. In other words, using this method it is impossible to evaluate whether or not the population share of the middle class is growing or diminishing.

Another methodology commonly used to identify the middle class is based on measures of central tendency, such as the mean and the median. In this case, the lower bound is set as a fraction of mean or median income, while the upper bound is determined as a multiple of the same central tendency measure. There are several well-known studies among those that have been conducted using this approach. For example, Birdsall et al. (2002) defines the middle class as those households with per capita incomes of between 0.75 and 1.25 times the median of the distribution, while Wolfson (1989) uses a range of 0.75-1.5 around the median of labor income.

With this definition, the size of each class varies over time with changes in the distribution of income, which permits to analyze the evolution of the size of the middle class for a particular country and period of time. However, the lower and the upper boundaries are set in relation to the central tendency measure of the income distribution, which is specific of each country. In this sense, the context-specific boundaries undermine the ease of comparison between countries.

A third alternative is based on absolute income thresholds. In conceptual terms this kind of measure is very similar to the traditional approach to poverty measurement: an absolute "poverty line" is used to set a boundary between the poor (the lower class) and the rest of the population, while a "richness line" is defined to provided a delimitation between the rich (the upper class) and the non-rich. In this way, the middle class is identified as people with income levels between the poverty and the richness lines.

There are different methods to construct the poverty and the richness lines. As in the case of poverty measurement, the poverty line is usually derived from the cost of a basket of basic goods and services. Although the definition of the richness line is conceptually similar, there is not an obvious basket of goods and services which can be used to identify the rich. The usual practice in this case is to find that threshold analyzing the pattern of consumption of the rich in the same expenditure survey used to derive the value of the poverty basket.

For purposes of international comparison, it is very convenient to set the poverty and the richness lines in terms of US dollars at purchasing power parity (PPP), in the same way that the international absolute poverty lines (US$ 1 or 2 a day at PPP) are defined. There are several studies using this methodology, for example, Banerjee and Duflo (2007) define the middle class as people with per capita consumption levels in the range of US$ 6 to US$ 10 a day at PPP, while Ravallion (2009) argues that the middle class should be composed by individuals who are not poor in their home countries (he suggests a poverty threshold of US$ 2 a day at PPP) but have per capita incomes below the US poverty line (approximately US$ 13 a day at PPP).

There are other ways to define the middle classes in the economic literature. An alternative is combining information on levels of income with information of other dimensions of welfare (such as education and/or labor status). Another possibility is to identify the middle class performing cluster and principal-factor analyses on income and education variables. There are also parametric and non-parametric studies which try to define income groups evaluating the shape of the distribution of income. Finally, most recent approaches, such as the developed in Cruces et al. (2011), try to avoid arbitrariness in setting the boundaries between income groups by endogenously defining those cut-off points and propose a definition of the middle class derived from polarization measures.

The present study examines the evolution of the middle class in Latin America in the last decade adopting the definition of the middle class proposed by the *Secretaria de Assuntos Estratégicos* (SAE) *da Presidência da República Federativa do Brasil* (2012). SAE breaks down Brazil's population into three groups (lower, middle and upper classes), according to the level of per capita household income and uses absolute income thresholds.

The definition of the middle class in SAE's study is based on the concept of vulnerability. The idea behind this concept is that belonging to the middle class encompass some degree of economic security or stability. This kind of security is then used as the basis to set the income thresholds defining the three classes. In the applied work, SAE considers that individuals have economic security when they have low probability of being in income poverty. A similar approach to define the middle class can be found in a recent book of The World Bank by Ferreira et al. (2013).

In summary, SAE defines a household as belonging to the ***lower class*** if it has a high probability of remaining or becoming poor in the near future. Empirically, a household is part of the lower class if its per capita household income is lower than US$ 4.35 a day at PPP. A household is considered ***middle class*** if it has a low probability of becoming poor in the near future. In terms of per capita income, these are households with income levels between US$ 4.35 and US$

15.23 a day at PPP. Finally, the ***upper class*** comprises households with an extremely low probability of becoming poor in the near future; that is, those with per capita household income higher than US$ 15.23 a day at PPP.

Even though this definition was specially constructed for the case of Brazil, it is interesting to use it to compare countries in Latin America, to the extent that Brazil is a country with a level of per capita GDP that is relatively close to the average per capita GDP of the 16 countries in the sample: according to the WDI, per capita GDP in Brazil was US$ 14,555 (PPP) in 2013, while it was US$ 14,600 for Latin America and The Caribbean.

3. The evolution of the middle class in Latin America

This section contains the empirical evidence on the main patterns and trends in the population share of the different income classes for Latin American countries during the period 2001-2013. After presenting the aggregate results for Latin America, a detailed country by country analysis is performed. Finally, this section closes by showing some evidence on the convergence in the size of the middle class across countries.

3.1. The evolution of the middle class in Latin America: aggregate results

The evolution of the middle class in Latin America as a whole between 2001 and 2013 is presented in Graph 1. This was constructed as a weighted average of the 16 countries included in the sample used in the analysis of the evolution of the size of the middle class. The graph shows the percentage of the total Latin America population represented by each class: lower in green, middle in orange and upper in purple. The different shades of each color indicate a subsequent division within each class: the lower class is divided between the extremely poor, the poor and the vulnerable; the middle class is divided by the lower, the middle and the upper middle class; and the upper class is composed by the lower and the upper upper class.

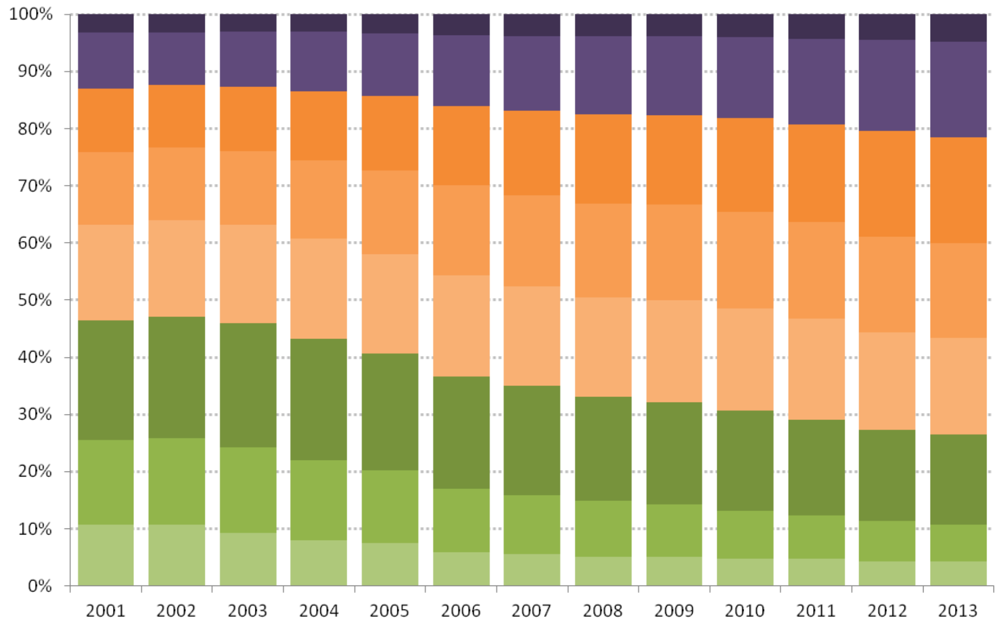
The results confirm what other authors have found, even using different methodologies: the region's middle class has experienced a significant increase in the last decade. While Latin America's middle class accounted for a 40.5% of the population of the region at the beginning of the century (2001), by 2013 that share had risen to 51.9%.

In the same period, the size of the upper class has also increased, from 13.0% in 2001 to 21.6% in 2013. Obviously, the results above imply that there was a significant decrease in the proportion of the population represented by the lower class, from 46.5% in 2001 to 26.5% in 2013. This result coincides with one of the main findings of the empirical literature on poverty in Latin America: in recent years the incidence of poverty has fallen sharply in the countries in the region.

One aspect of interest in Graph 1 is the year-to-year changes in the size of the middle class. The figure shows that the trend mentioned above was not stable throughout the period. At the beginning of the century, between 2001 and 2003, the size of middle class remained virtually unchanged in the region. This result is due to the combination of economic crises in some countries (including Argentina, Uruguay and Venezuela), stagnation in others (e.g. in Brazil, Colombia and Mexico) and low growth rates in the remaining states (Chile, Costa Rica and Peru, among others).

Then, from 2003 to 2008, there was a strong growth in the percentage of Latin American households that moved from the lower to the middle class, a process that took place in all the countries in the sample. This explains about 70% of the growth in the middle class in the region in the period under analysis. Between 2008 and 2009, the growth of the middle class in the region happened at a slower pace due to the international financial crisis, but after 2009 the share of this social group in the total population started to grow again to a higher rate. 2013 was the only year in the period in which the size of the middle class decreased, although this is explained by an increase in the population share of the upper class.

Graph 1: evolution of the middle class in Latin America



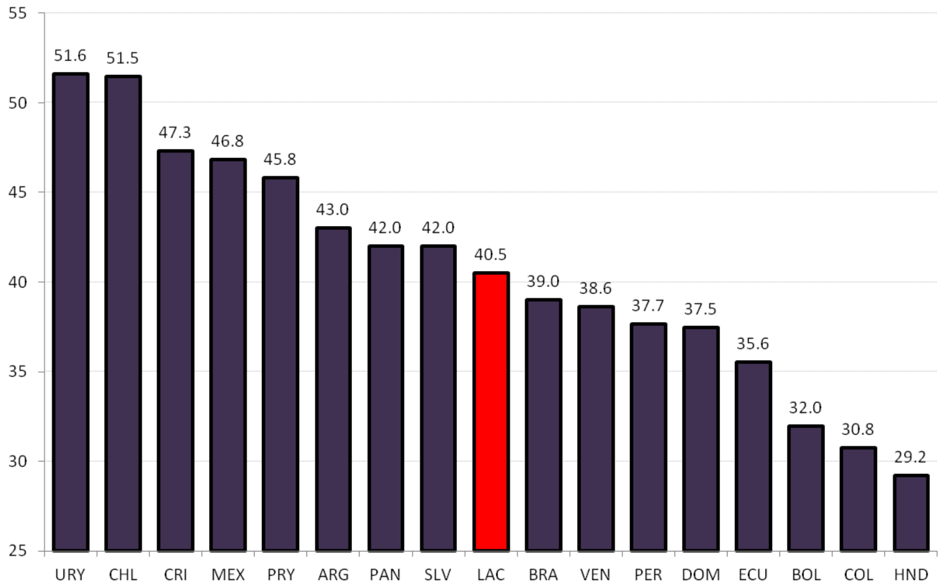
Source: author's calculations based in SEDLAC

3.2. The evolution of the middle class in Latin America: country by country results

Graph 2 shows the size of the middle class in each individual country in 2001. As can be seen in the Graph, there were significant differences between countries in the population share of the middle class at the beginning of the century. The middle class accounted for more than half of the population in only two countries, Chile and Uruguay, while in other six countries (Argentina, Costa Rica, El Salvador, Mexico, Panama and Paraguay) the participation of the middle class in total population exceeded 40% in 2001. In the remaining eight countries in the sample (Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, Honduras, Peru and Venezuela) the population share of the middle class was lower than 40%. A particular case is Honduras, which stands out as the only country in the sample where the percentage of people in the middle class was lower than 30% in 2001.[4]

[4] In Guatemala 2000 and Nicaragua 2001 the participation of the middle class in total population was also lower than 30%.

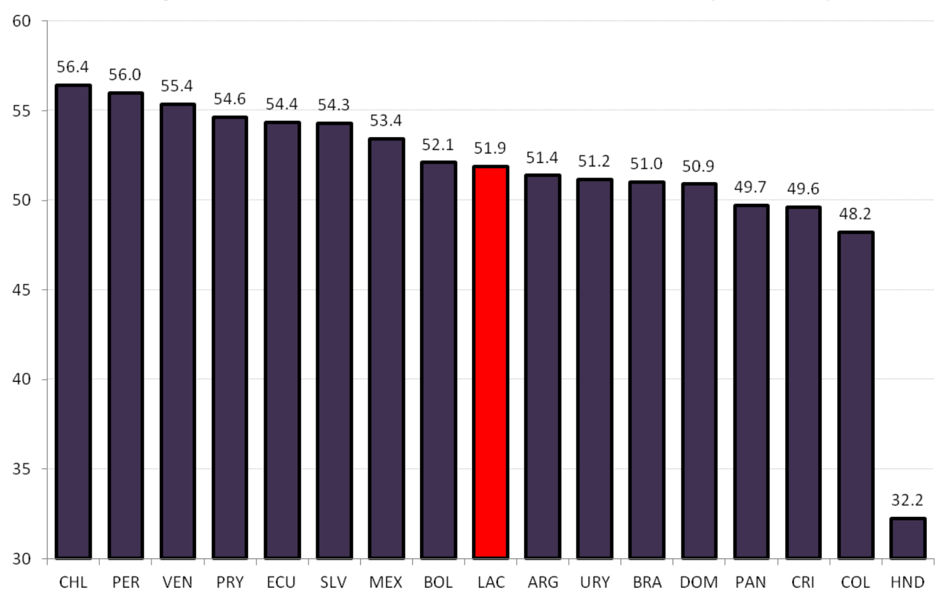
Graph 2: size of the middle class in 2001, by country



Source: author's calculations based in SEDLAC

A first assessment of the evolution in the size of the middle class in each individual country can be made looking at Graph 3. This figure shows the population share of the middle class in each Latin American country in 2013. According to the information exhibited in the Graph, in 12 out of the 16 countries in the sample the middle class comprises at least half of the population in 2013. In Colombia, Costa Rica and Panama the population share of the middle class is lower but close to 50%, while Honduras is again (and by far) the country with the lowest share of the population in the middle class (32.2%).

Graph 3: size of the middle class in 2013, by country



Source: author's calculations based in SEDLAC

The results of the previous paragraph imply that the size of the middle class has grown markedly in Latin American countries in the period of analysis. Graph A.1 in the Annex illustrates the year-by-year evolution of the size of each income class for all countries in the period 2001-2013.

In ***Argentina***, as a result of a deep economic crisis, there was a strong increase in the percentage of people in the lower class between 2001 and 2002. However, beginning in 2003, there a constant reduction in the size of the lower class emerges. Between 2002 and 2008 that reduction was almost equally explained by increments in the population share of both, the middle and the upper classes. However, after 2008, the increase in the size of the upper class almost fully accounted for the decrease in the share of the lower class, which means that the population share of the middle class remained virtually unchanged between 2008 and 2013.

The evolution of the income classes in ***Bolivia*** shares some similarities with the Argentinean case, but there are also some key differences. As in Argentina, the share of people in the lower class grew between 2001 and 2002, dropping afterwards. However, the dynamics of that process was very different: while in Argentina the majority of the reduction (84%) occurred between 2002 and 2008, in Bolivia most of the decrease (62%) was observed in the period 2007-2011. Another clear difference with Argentina is that the decline in the size of the Bolivian lower class over the period had mostly (67%) translated into an increase in the population share of the middle class.

In ***Brazil*** the shares in the population of the three income classes did not change much during the period 2001-2003. Since 2003, there have been continuous decreases in the proportion of people in the lower class and constant increases in the population share of the other two income groups. The intensity of those changes did not vary much during the period 2003-2013. After 2010, the population share of the middle class has remained relatively constant, while the proportion of people belonging to the upper class has increased by more than 25%.

Chile did not experience a crisis at the beginning of the period under analysis, but it was affected by the international crisis of 2008-2009. However, the evolution of the income classes in Chile was relatively similar to the Argentinean case: a significant reduction in the size of the lower class was observed in the period 2001-2013. The decline was distributed almost equally in increments in the size of the two other classes during the period 2001-2008, but from 2009 the decrease in the share of the lower class was counterbalanced by an increase in the proportion of people in the upper class, with no significant changes in the population share of the middle class.

The case of ***Colombia*** is quite similar to the Brazilian one: there was no change in the relative size of the income classes in the first years of the period (between 2001 and 2002 in the case of Colombia), but starting in 2003 there has been a strong decline in the population share of the lower class. That decline was mainly translated in an increase in the share in the population of the middle class.

Costa Rica has also experienced a decline in the population share of the lower class. The rate of decrease was higher in the second part of the period (2006-2013), when 60% of the reduction in the size of the lower class has occurred. Another interesting aspect is that in the first 5 years of the period under analysis most of the decline in the population share of the lower class was translated into an increase of the share in the middle class, while in the last 8 years most of the decrease in the share of the lower class was explained by a grow in the proportion of the population in the upper class.

Between 2001 and 2004, the growth rate of per capita GDP was very low in ***The Dominican Republic***. The population shares of the different income groups were also very stable during the same period. In the next three years, as a result of annual growth rates of around 7.9%, there was a significant decrease (from 53.8% to 40.3%) of the proportion of the population in the lower class. The growth in the size of the middle class accounted for more than three- quarters of that reduction. The variation in the population shares of the different income groups has not been significant since 2007, although there has been some decrease in the share of the lower class.

Starting in 2003, economic conditions have begun to improve in ***Ecuador***. This process has been reflected in a significant reduction of the proportion of people in poverty and an important increase of the population share of the middle class. However, the process of movement of people from one (lower) income class to another (middle) did not take place at the same rate throughout the period 2003-2013. There were two sub-periods (2003-2006 and 2009-2013) in which the population share of the lower class declined at a high rate, while during the period 2006-2009 that share remained almost unchanged. During the period 2003-2013, 71% of the decrease in the participation of lower class translated into an increase of the size of the middle class.

There seemed to be little change in the population shares of the different income groups in ***El Salvador*** in the period of analysis. Between 2001 and 2005 the proportion of people in each group remained virtually at the same level, while in the period 2005-2013 there was a decrease in the proportion of people in the lower class, almost fully translated into an increase in the population share of the middle class. The last two years of the period are the ones with more changes in the proportion of population in each income group.

Honduras is the country in the sample with the highest proportion of people in the lower class: around 60% of the population belongs to that group. The population share of the different income groups did not change during the period 2001-2005, with a small increase in the size of the lower class being the most noticeable result. Between 2005 and 2009 the country seemed to have enjoyed a decline in the share of the population in the lower class, mostly translated into an increase in the participation of the middle class. However, this result was partially reversed in the following years, after the international crisis affected the country.[5]

In ***Mexico***, the proportion of the population belonging to the lower class declined in the period 2001-2006. This decrease was accompanied by incremental increases in the population share of both the middle and the upper classes. During 2008 and 2009, with the onset of the international financial and economic crisis, the proportion of Mexican people in the lower class then increased significantly. After two years of economic growth, in 2011 the population share of the lower class was almost the same as in 2008, the first year of the crisis. In the same period, the middle class experienced a small increase, while the population share of the upper class exhibited a slight decrease, as could be expected from the results on the lower and the middle classes. In the last two years of the period there were not changes in the population shares of the different income groups.

Panama has shown a continuous decline in the percentage of the population belonging to the lower class. At the same time both the middle and the upper classes have increased their population shares by almost the same magnitude. The intensity of that process was higher during the second half of the period of analysis: 65% of the reduction in the size of the lower class was verified during the period 2006-2013. It is worth mentioning that the decrease in the size of the lower class between 2008 and 2013 was fully translated into an increase in the share of the upper class, with a small decrease in the participation of the middle class.

In ***Paraguay***, after a significant increase in the proportion of people in the lower class during the economic crisis of 2002, the proportion of people in the lower income group showed a constant decrease (except for 2006). In contrast, the population shares of the other two income groups grew steadily over the period under examination, with the exception of the last year, when the

[5] The results must be interpreted prudently because the Honduran household survey is not a high quality one.

proportion of people in the middle class slightly declined, even though the lower class showed a clear decrease in its share of the population. This obviously means that the proportion of people in the upper class experienced a significant increase during 2013.

Peru is the country in the sample with the highest reduction (in percentage points) in the proportion of people in the lower class. The largest part of that decrease (74%) occurred in the period 2005-2012. Results show that when considering the whole period more than two-thirds of the decline in the population share of the lower class translated into increases in the participation of the middle class, though during the last few years of the period, particularly after 2011, the fall in the size of the lower class was mainly counterbalanced by an increase in the population share of the upper class.

In the case of ***Uruguay***, there are two significantly different sub-periods in the period 2001-2013. During 2001-2004 the country suffered a deep economic crisis (2002), which meant that per capita GDP in 2004 was lower than in 2001. In this period the percentage of the population in the lower class exhibited a sharp increase, while the population share of the middle class remained roughly unchanged. In the second sub-period, 2004-2013, there was a strong decline in the size of the lower class. Again, the share in the population of the middle class remained virtually unchanged. In other words, in Uruguay, the changes in the share of the lower class are almost fully translated into changes in the size of the upper class. It should be noted that even when the middle class did not show any significant change in its size, it has probably experienced changes in its composition.

Between 2001 and 2003 ***Venezuela*** suffered a significant economic and social crisis, which resulted in a drop of almost 20% in per capita GDP. As a result of the crisis, the proportion of the population in the lower class experienced a large increase, while the population shares of the other two income groups declined. Between 2003 and 2008, together with the economic recovery, the population share of the lower class showed a significant decrease, while the percentage of people in the middle class experienced a large expansion. After 2008, the proportion of people in each income group did not change significantly.

3.3. Is there a convergence across countries in the size of the middle class?

Graph 4 presents the percentage point increase in the participation of the middle class in the population of each country between 2001 and 2013, in relation to the participation that the same group had in each country at the beginning of the period. As can be seen, there is a clear negative relationship between the population share of the middle class in 2001 and the growth of that share in percentage points between 2001 and 2013.

The Graph shows that there appears to be some convergence in the proportion of the population that represents the middle class in the different countries in the sample, to the extent that the average growth of the size of that group seems to have been, on average, higher in countries in which the middle class represented a smaller proportion of the population in 2001. Most of the countries are located around the trend line, but the situation of some particular countries is worth mentioning in more detail.

Uruguay is the only country in the region with a decrease in the population share of the middle class between 2001 and 2013. As it is illustrated in the Graph, this country was the one with the highest share of the population in the middle class in 2001, with over half of the population already belonging to that income group at the beginning of the century.

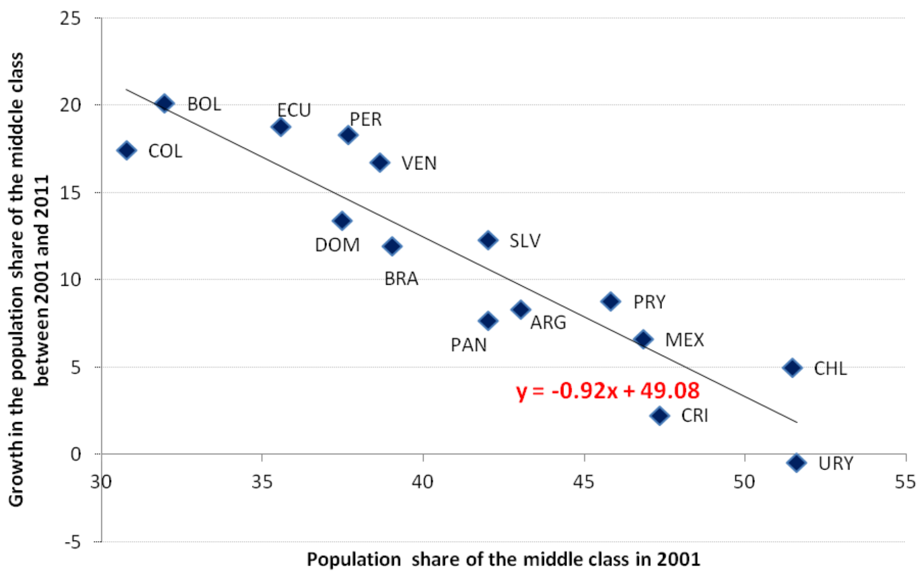
Honduras, which was not included in Graph 4, constitutes the country with the smallest share of the population in the middle class in 2001, and the country with the smallest percentage point increase in the population share of the middle class between 2001 and 2013. In that sense, this country seems to be the only exception to a possible convergence in the relative size of the middle class among Latin American countries.

When excluding Honduras, Colombia, Bolivia and Ecuador are the three countries where the share of the middle class in the total population was the smallest in 2001. However, these countries, together with Peru, have experienced the greatest growth in the relative size of that income group, with an increase above 17 percentage points in the period under analysis.

The case of Peru is not surprising if it is considered that this is one of the countries in the region with the highest rate of economic growth in the period 2001-2013, with a cumulative growth in per capita GDP of 77%. Additionally, income inequality has shown a significant downward trend in Peru during the period under examination.

The cases of Bolivia and Ecuador are more striking, as these countries have not shown a too promising economic performance during the period 2001-2013 (the cumulative growth of per capita GDP was around 38% in both countries). In that sense, the increase in the size of the middle class in Bolivia and Ecuador is mainly driven by a significant decrease in income inequality.

Graph 4: convergence in middle class size between countries?



Source: author's calculations based in SEDLAC

The results exhibited in the previous graph are compatible with the predictions of Paes de Barros and Grosner (2013). These authors evaluate the evolution of income distribution by monitoring the relative population shares of three income classes in which they have previously broken down the population (lower, middle and upper).

According to the aforementioned authors, the relative size of the income classes evolves following a predictable pattern during the process of development. In other words, the authors propose that the different stages of the process of transition from a poor society, where most of the population belongs to the lower class, to a wealthy society, where most of the population belongs to the upper class, can be characterized in terms of the relative size of the three income classes.

Specifically, the three classes can be ranked in six ways, according to their relative size. However, as a rule, the authors establish that when the lower class is the largest group, the upper class is never larger than the middle class. Similarly, the middle class is never smaller than the lower class when the group with the largest size is the upper class. Taking in mind these two rules, there are only four possible ways in which the classes can be ordered. Considering that in each case the income class with the largest size may or may not hold more than 50 per cent of the population, the authors mention that there are eight different states in which an income distribution can be found:

- **State I:** the society is initially very poor; the majority of the population belongs to the lower class (L), with a small proportion in the middle class (M) and even a smaller share in the upper class (U). In this state: $L > 50\% > M > U$.
- **State II:** as income grows, the population share of the lower class declines, while the proportion of the upper class increases. At this stage, there are more people entering the middle class from the lower class than people leaving the middle class to the upper class, so the middle class expands. The decrease of the population share of the lower class is large enough to imply that the lower class is no longer the majority of the population. However, the lower class remains the largest group of the population, and the upper class the smallest. In this state: $50\% > L > M > U$.
- **State III:** as the economy continues to grow, there are new reductions in the size of the lower class and increases in the size of the middle class. At the end, the share of the middle class exceeds the share of the lower class, but it is still not the majority of the population. The lower class remains the second largest group in size, even when the upper class has also increased its population share. In this state: $50\% > M > L > U$.
- **State IV:** as the growth process continues, more people move from the lower to the middle class, until it becomes the majority of the population. The share of the upper class continues to grow, though it is still the smallest group of the society. In this state: $M > 50\% > L > U$.
- **State V:** with another round of income growth, there are new reductions in the size of the lower class and increases in the size of the upper class. Finally, the number of people in the upper class becomes larger that the number of people in the lower class. The middle class is still the majority of the population, but its size begins to contract: from this point forth, any new income increase provokes an expansion of the upper class (people leaving the middle class) of a larger magnitude than the reduction of the lower class (people entering to the middle class). In this state: $M > 50\% > U > L$.
- **State VI:** the middle class is still the largest income group, but it no longer represents the majority of the population. The lower class continues to reduce, while the size of the upper class increases. In this state: $50\% > M > U > L$.
- **State VII:** if the process of development continues, the population share of the upper class continues to grow. Finally, the society reaches a stage in which the upper class is the largest income group, but less than a half of the population belongs to this income group. In this state: $50\% > U > M > L$.
- **State VII:** finally, economic growth leads to a situation where the upper class becomes the majority of the population. In this state: $U > 50\% > M > L$.

Throughout the process described in the previous paragraphs, there are two unambiguous trends: the population share of the lower class always shrinks, and the population share of the upper class always expands. On the contrary, the direction of the change in the size of the middle class is not always the same. It depends on the relative magnitude of the contraction of the lower class and the expansion of the upper class. The middle class will expand (contract) whenever the number of people leaving the lower class is higher (lower) than the number of people entering the upper class.

According to Paes de Barros and Grosner, the middle class tends to grow when the size of the lower class is higher than the size of the upper class, and to shrink otherwise. That result implies that, at some point, the middle class will reach a maximum size. This occurs precisely in the transition from State IV to State V. At this point, the exact population share of the middle depends on the level of inequality in the distribution of income. In societies where the degree of inequality is high, the expansion of the upper class begins even in the presence of a large lower class. Most Latin American countries fit in that description.

Table 1 shows which stage of the evolution of the distribution of income classes each country could be characterized by at the beginning and at the end of the period under analysis. In the first year of the period, seven countries were in State I (Bolivia, Colombia, Dominican Republic, Ecuador, Honduras, Peru and Venezuela), while two others were in State II (Brazil and El Salvador). Considering the process of economic growth enjoyed by Latin American countries in the last decade, it would be expected to find a significant increase in the population share of the middle class in those countries between 2001 and 2013, as they would be transitioning from the first to the intermediate states of development. That was precisely the result in all of them, with the exception of Honduras, which stayed in State I. In the remaining eight countries mentioned above the middle class became the largest group of the population at the end of the period, and in all of them but Colombia the majority of the population belonged to the middle class in 2013.

The remaining six countries of the sample were situated in States III (Argentina, Costa Rica, Mexico, Panama and Paraguay), IV (Chile) and V (Uruguay) at the beginning of the period. Mexico and Paraguay reached State IV by the end of the period, while Argentina, Chile and Uruguay were in State V in 2013. As the authors predict, the middle class in these three countries seem to have reached a maximum population share and it has started to contract in the last years of the period under analysis. Panama and Costa Rica stand out as the only countries transitioning to State VI by 2013. In the last few years, it is observed that in Costa Rica and Panama the reductions in the population share of the lower class are not translated anymore into increases in the population share of the middle class, the exact situation that Paes de Barros and Grosner had envisioned.

Table 1: Process of development and share of the middle class

	Population Share					Population Share			
2001	**Lower**	**Middle**	**Upper**	**STATE**	**2013**	**Lower**	**Middle**	**Upper**	**STATE**
ARG	38.8	43.0	18.2	**III**	ARG	13.0	51.4	35.6	**V**
BOL	60.5	32.0	7.5	**I**	BOL	30.1	52.1	17.8	**IV**
BRA	46.4	39.0	14.6	**II**	BRA	23.1	51.0	25.9	**V**
CHL	27.1	51.5	21.4	**IV**	CHL	8.9	56.4	34.7	**V**
COL	60.8	30.8	8.5	**I**	COL	33.9	48.2	17.9	**III**
CRI	35.5	47.3	17.2	**III**	CRI	20.0	49.6	30.3	**VI**
DOM	54.6	37.5	7.9	**I**	DOM	37.6	50.9	11.5	**IV**
ECU	56.5	35.6	7.9	**I**	ECU	29.8	54.4	15.8	**IV**
SLV	47.5	42.0	10.5	**II**	SLV	36.2	54.3	9.5	**IV**
HND	64.9	29.2	5.9	**I**	HND	62.8	32.2	5.0	**I**
MEX	39.9	46.8	13.3	**III**	MEX	31.3	53.4	15.2	**IV**
PAN	41.3	42.0	16.7	**III**	PAN	23.0	49.7	27.3	**VI**
PRY	40.2	45.8	14.0	**III**	PRY	22.9	54.6	22.4	**IV**
PER	55.5	37.7	6.9	**I**	PER	24.0	56.0	20.0	**IV**
URY	16.4	51.6	32.0	**V**	URY	9.6	51.2	39.3	**V**
VEN	55.4	38.6	6.0	**I**	VEN	35.8	55.4	8.9	**IV**

Source: author’s calculations based in SEDLAC

The model presented by Paes de Barros and Grosner, and the results in Table 1, help to understand the dynamics of the process currently in place in Latin American countries: at first sight there is a (seemingly clear) convergence in the size of the middle class across Latin American countries. However, a deeper examination of the process shows that this convergence is just a transitory result of countries with different levels of development moving through different stages of income distribution.

4. Conclusions

This document presented evidence about the evolution of the middle class in 16 Latin American countries throughout the period 2001-2013. Using a particular methodology to identify the middle class, the one proposed by the "Secretaria de Assuntos Estratégicos da Presidência da República Federativa do Brasil", this report showed that for all the countries under analysis there was a significant growth in the population share of the middle class between the beginning and the end of the period considered. This result is not a surprise considering previous findings: several authors, using different methodologies to identify the middle class, have stated that the proportion of people belonging to this group in Latin American countries has experienced significant growth in recent years.

There are two reasons behind the growth of the Latin America middle class. First, since the beginning of this century (despite affects of different economic crises), Latin American countries have enjoyed relatively high average growth rates. Second, throughout the last decade most Latin American countries have experienced a period of unprecedented progress reducing income inequality.

Although the population share of the middle class has increased in all countries, the results presented in Section 3 demonstrated that the process of growth in the size of the middle class did not follow a consistent pattern across countries and years. However, a deeper examination of the data reveals that there is a pattern worth noticing: there seems to be a convergence in the relative size of the middle class across countries, to the extent that countries where the middle class represented a lower proportion of the total population at the beginning of the period are, in general, those who have experienced the highest growth in the relative size of this socioeconomic group.

What is the explanation of that process of convergence in the relative size of the middle class across countries? As it was shown at the end of Section 3, the differential evolution of the middle class size between countries can be relatively well explained by the simple model proposed by Paes de Barros and Grosner. These authors evaluate the way in which the relative size of the three income classes, by which the population can be broken down, evolves during the process of development.

Two main insights emerge from that model. First, the growth of the population share of the middle class depends on the stage of development in which each country finds itself. Second, when a country reaches a certain level of development, the relative size of the middle class starts to shrink. To put it in a different way, the middle class has a maximum size in each country.

The predictions of the model help to explain the above-mentioned convergence process: given that Latin American countries differ in their levels of income and development, the rates of growth in the population share of the middle class should also be different among them. Moreover, a contraction in the size of the middle class should be expected in those countries with the highest level of development. In other words, the convergence can be explained by the fact that Latin American countries are currently going through different stages of development.

References

- **Banerjee A.V., and E. Duflo (2008)** "What is Middle Class about the Middle Classes around the World?" Journal of Economic Perspectives, American Economic Association, vol. 22(2), pages 3-28, Spring.
- **Birdsall, N., Graham, C. and S. Pettinato (2000)** "Stuck in the Tunnel: Is Globalization Muddling the Middle Class?" Papers 14, Brookings Institution Working Papers. Washington, D.C, Brooking Institution.
- **Cruces, G., López-Calva, L.F. and D. Battistón (2011) "**Down and Out or Up and In? Polarization-Based Measures of the Middle Class for Latin America**"** CEDLAS, Working Papers 0113, Universidad Nacional de La Plata. La Plata, Centro de Estudios Distributivos, Laborales y Sociales.
- **Ferreira, F., Messina, J., Rigolini, J., López-Calva, L.F., Lugo, M.A. and R. Vakis (2013)** "Economic mobility and the rise of the Latin America Middle Class" World Bank Latin America and Caribbean Studies. Washington, D.C, The World Bank.
- **Paes de Barros, R. and D. Grosner (2013)** "Middle Class Expansion and the Stages of the Transformation Process of Income Distribution", Poverty in Focus Number 26. Brasilia, International Poverty Centre for Inclusive Growth.
- **Ravallion, M. (2009) "**The Developing World's Bulging (but Vulnerable) Middle Class" Policy Research Working Paper 4816. Washington D.C., The World Bank.
  Secretaria de Assuntos Estratégicos da Presidência da República Federativa do Brasil (2012) "Vozes da Clase Media" Caderno 1, SAE. Brasilia, Secretaria de Assuntos Estratégicos da Presidência.
- **World Development Indicators (2013)** The World Bank. Washington, D.C.
- **Wolfson, M.C. (1989)** "Inequality and polarization: is there a disappearing middle class in Canada?" Mimeo.

Annex: Additional Graphs and Tables

Graph A.1: The evolution of the middle class, by country (2001-2013)

Source: author's calculations based in SEDLAC

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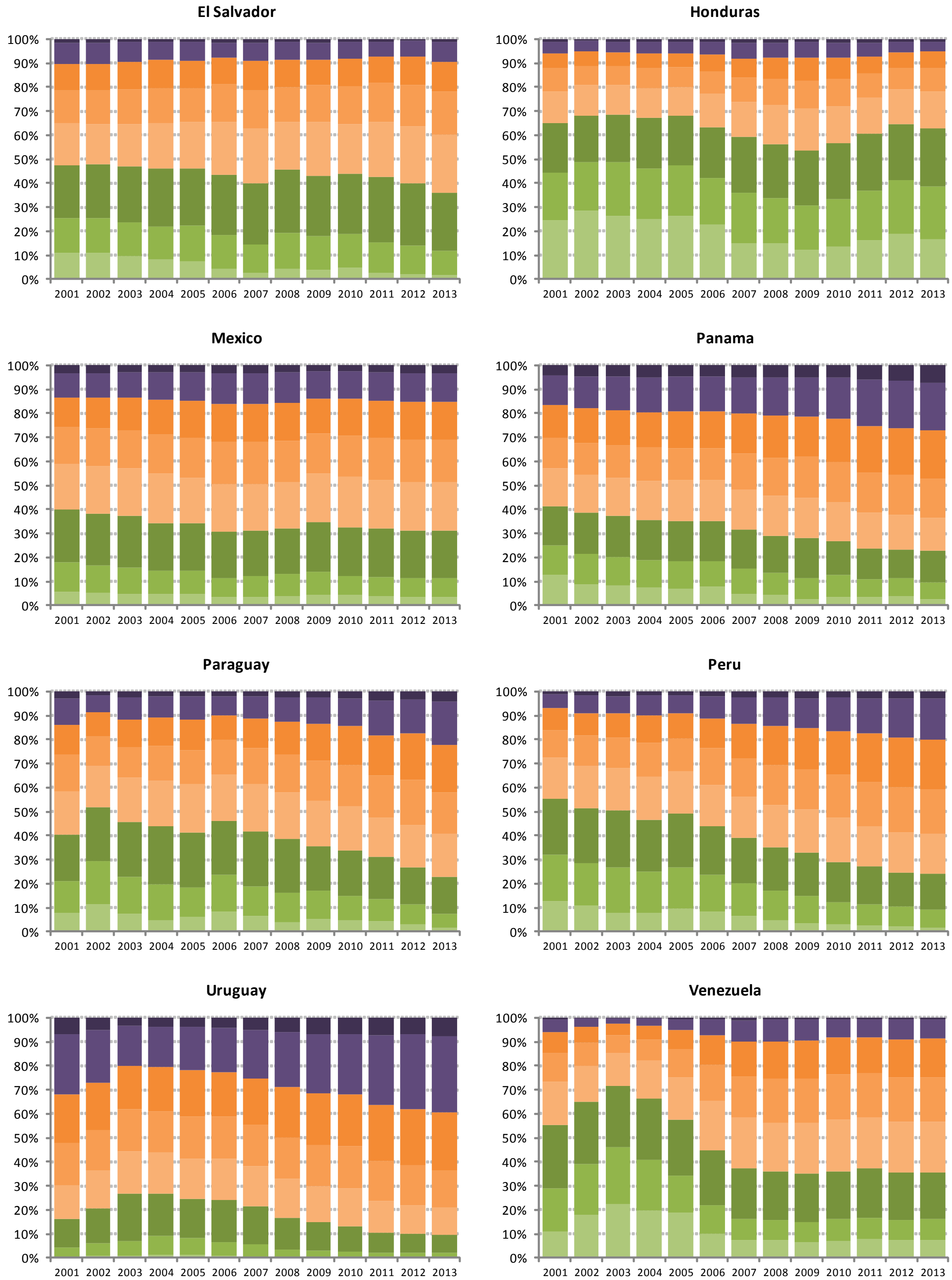

Source: author's calculations based in SEDLAC