Working Paper

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THE EVOLUTION OF THE MIDDLE CLASS IN LATIN AMERICA

Leopoldo Tornarolli*

1 INTRODUCTION

Latin American countries have always been characterised 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.

However, since the beginning of the 21st 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 significant 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.[1]

This situation has spawned literature covering different aspects related to the growth of the middle class. Some studies document the evolution of the size of this group, and others study the changes in the composition of the different classes that have occurred due to the aforementioned process, while another line of research investigates the (potentially beneficial) social effects of the expansion of the middle class in the region. In particular, 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 characterised by a diversity of definitions which may complement or contradict each other. This study uses a definition based on absolute income thresholds—a relatively standard approach in the literature—and traces the evolution of the middle class in 16 Latin American countries during the period between 2001–2011.

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This Working Paper was produced as a part of a wider research collaboration on the changing nature of the middle classes throughout the world between the IPC-IG and the Brazilian Secretariat of Strategic Affairs (SAE).

The remainder of the document is organised 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 rather 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 the 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 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 long period of time (2001–2011).

2.1 DATA

The empirical evidence presented in this study is based on microdata from more than 150 household surveys from 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 2001–2011.

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 Latin America 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 homogenise the original data using the same criteria and procedures, making statistics comparable across countries and over time. This is particularly important for the main variable of interest in this work: per capita household income. SEDLAC constructs this variable by adding incomes from labour sources (income from salaried work, self-employment and salaries assigned to owners) and non-labour sources (pensions, capital, benefits and transfers) for all members of a household.[2]

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 11 years to trace the evolution of the middle class. This means that 176 combinations of country/year were considered. For 149 of these 176 combinations the information presented comes from estimates obtained directly from household surveys from the SEDLAC project. In the remaining 27 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 every three years); (ii) at the time of this report SEDLAC did not yet have access to some surveys (for example, the 2011 household survey of El Salvador); 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 are not directly comparable to those carried out during the period 2004–2011).

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 World Development Indicators (WDI) data on per capita GDP growth. The following examples illustrate how the missing information was estimated:

Chile 2004 and 2005: Chile carries out its household survey 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. Using a similar procedure, statistics for 2001 and 2002 were obtained using CASEN 2000 and CASEN 2003, respectively.

Brazil 2010: The Instituto Brasileiro de Geografía e Estatística 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 adjusted by the growth rate of per capita GDP between 2009 and 2010; and the second one was obtained using PNAD 2011 and adjusted 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.

2.2 THE DEFINITION OF THE MIDDLE CLASS

As was previously mentioned, there is a lack of consensus on the empirical definition of the concept of the middle class. Thus, 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 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 as those lying outside these bounds. 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 relative size 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) define 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 times the median of labour income.

With this definition, the size of each class varies over time with changes in the distribution of income, which permits an analysis of 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 to each country. Thus, 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 poor households (the lower class) and the rest of the population, while a 'richness line' is defined to provide a delimitation between rich (the upper class) and non-rich households. In this way, the middle class is identified as people with income levels between the poverty and the richness lines.

There are different ways 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 rich households. The usual practice in this case is to find that threshold by analysing the pattern of consumption of rich households 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 (USD1 or USD2 per 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 USD6–10 per 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 USD2 per day at PPP) but have per capita incomes below the US poverty line (approximately USD13 per day at PPP).

There are other ways to define the middle classes in the economic literature. One alternative is to combine information on levels of income with information on other dimensions of welfare (such as education and/or labour status). Another possibility is to perform cluster and principal-factor analyses on income and education variables. There are also parametric and non-parametric studies which try to define income groups by evaluating the shape of the distribution of income. Finally, most recent approaches, such as that 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 proposing a definition of the middle class derived from polarisation measures.

The present study examines the evolution of the middle class in Latin America over the last decade by adopting the definition of the middle class proposed by the Secretaria de Assuntos Estratégicos (SAE) da Presidência da República Federativa do Brasil (2012). The 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 encompasses 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, the SAE considers that individuals have economic security when they have a low probability of being in income poverty. A similar approach to define the middle class can be found in a recent World Bank book by Ferreira et al. (2013).

In summary, the 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 USD4.35 per 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 USD4.35 and USD15.23 per 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 USD15.23 per day at PPP.

Even though this definition was constructed specifically for the case of Brazil, it is interesting to use it to compare countries in Latin America, since Brazil has a level of per capita GDP that is relatively close to the average for the 16 countries in the sample: according to the WDI, per capita GDP was USD10,264 (PPP) in Brazil in 2011, and USD10,755 for the population-weighted average of the sample.

3 THE EVOLUTION OF THE MIDDLE CLASS IN LATIN AMERICA

This section contains empirical evidence on the main patterns and trends in the relative size of the different income classes in Latin American countries during the period 2001–2011. After presenting the aggregate results for Latin America, a detailed country-by-country analysis is performed. Finally, this section closes by presenting some evidence on the convergence in the size of the middle class across countries.

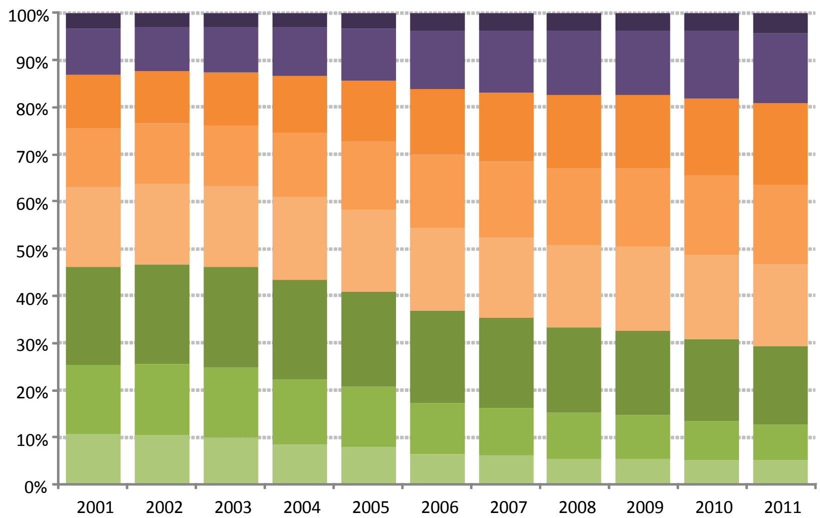
3.1 THE EVOLUTION OF THE MIDDLE CLASS IN LATIN AMERICA: AGGREGATE RESULTS

The evolution of the middle class in Latin America as a whole between 2001 and 2011 is presented in Figure 1. This was constructed as a weighted average of the 16 countries analysed. 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 colour indicate a subsequent division within each class: the lower class is divided into the extremely poor, the poor and the vulnerable; the middle class is divided into the lower, the middle and the upper middle class; and the upper class comprises 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 significant growth in the last decade, from 40.7 per cent of the population of the region at the beginning of the century (2001) to 51.4 per cent in 2011.

FIGURE 1

Evolution of the Middle Class in Latin America, 2001–2011



Source: Author's calculations based on SEDLAC.

Over the same period, the size of the upper class has also increased, from 13.1 per cent in 2001 to 19.3 per cent in 2011. Obviously, these results imply that there was a significant decrease in the proportion of the population represented by the lower class, from 46.2 per cent in 2001 to 29.3 per cent in 2011. 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 Figure 1 is the year-on-year changes in the size of the middle class. The graph shows that the growth trend mentioned above was not consistent throughout the period. At the beginning, between 2001 and 2003, the size of the middle class remained virtually unchanged in the region due to a combination of economic crises in some countries (including Argentina, Uruguay and Venezuela), stagnation in others (such as Brazil, Colombia and Mexico) and low growth rates in the others (Chile, Costa Rica and Peru, among others).

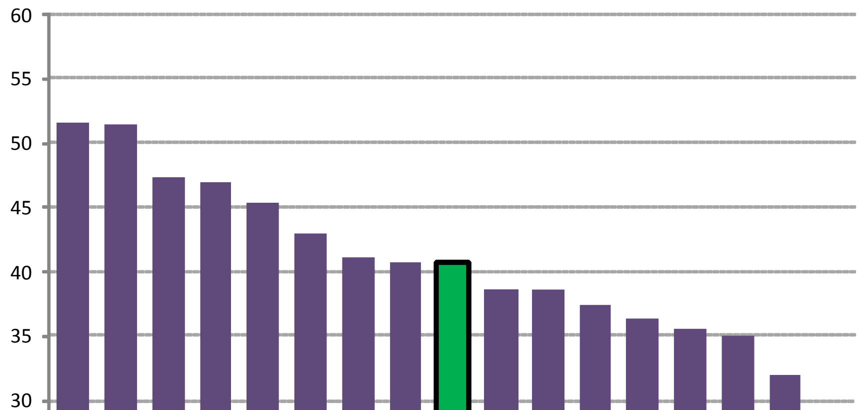
Then, from 2003 to 2008, there was a large increase in the percentage of Latin American households that moved from the lower to the middle class, a process that took place in all the countries in the sample. This explains about 75 per cent of the growth of the middle class in the region in the period under analysis. Between 2008 and 2009, this growth happened more slowly due to the international financial crisis, but between 2009 and 2011 the relative size of this social group grew at a rate similar to that observed between 2003 and 2008.

3.2 THE EVOLUTION OF THE MIDDLE CLASS IN LATIN AMERICA: COUNTRY-BY-COUNTRY RESULTS

Figure 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 relative size 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 another six countries (Argentina, Costa Rica, El Salvador, Mexico, Panama and Paraguay) it accounted for over 40 per cent of the total population in 2001. In the remaining eight countries in the sample (Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, Honduras, Peru and Venezuela) the middle class accounted for less than 40 per cent of the total population. Honduras stands out as the only country in the sample where the proportion of the total population in the middle class was lower than 30 per cent in 2001.[3]

FIGURE 2

Size of the Middle Class in 2001, by Country

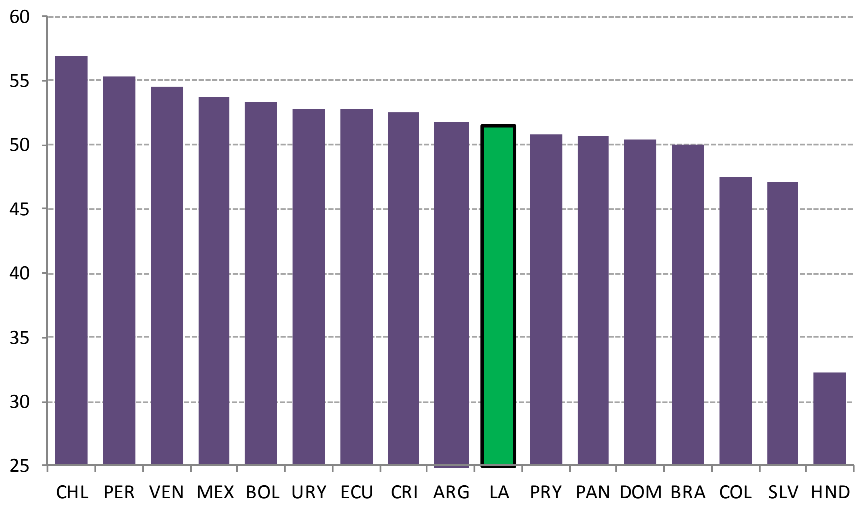


Source: Author's calculations based on SEDLAC.

A first assessment of the evolution of the size of the middle class in each individual country can be made by looking at Figure 3. This graph shows the share of the total population of the middle class in each Latin American country in 2011. In 13 of the 16 countries in the sample the middle class accounts for at least half of the population in 2011. In Colombia and El Salvador the relative size of the middle class is lower but close to 50 per cent, while Honduras is again the country with the lowest share of the population in the middle class (32.3 per cent).

FIGURE 3

Size of the Middle Class in 2011, by Country



Source: Author's calculations based on SEDLAC.

These results imply that the middle class has grown markedly in Latin American countries over the period of analysis. Figure A.1 in the Annex illustrates the year-on-year evolution of the relative size of each income class for all countries over the period 2001–2011.

In **Argentina**, as a result of a deep economic crisis, there was a large increase in the percentage of people in the lower class between 2001 and 2002. However, beginning in 2003, a constant reduction in the size of the lower class emerges. Between 2002 and 2008 that reduction was almost equally explained by increases in the relative size of both the middle and the upper classes. However, after 2008, the relative decrease in the size of the lower class was almost fully accounted for by the increase in the relative size of the upper class, which means that the middle class remained virtually unchanged between 2008 and 2011.

The evolution of the income classes in **Bolivia**[4] shares some similarities with Argentina, but there are also some key differences. As in Argentina, the share of people in the lower class grew between 2001 and 2002 and fell afterwards. However, the dynamics of that process were very different: while in Argentina the majority of the reduction (78 per cent) occurred between 2002 and 2008, in Bolivia most of the decrease (65 per cent) was observed in the period 2008–2011. Another clear difference from Argentina is that the decline in the relative size of the Bolivian lower class over the period mostly (76 per cent) translated into an increase in the relative size of the middle class.

In **Brazil** the relative sizes 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 relative size of the other two income groups. The extent of those changes did not vary much between 2003 and 2011.

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 Argentina: a significant reduction in the size of the lower class was observed in the period 2001–2011. The decline was distributed almost equally between increases in the size of the two other classes during the period 2001–2008, but from 2009 the decrease in the relative size of the lower class was counterbalanced by an increase in the proportion of people in the upper class, with no significant changes in the relative size of the middle class.

The case of **Colombia** is quite similar to that of Brazil: there was no change in the relative size of the income classes in the first years of the period (between 2001 and 2004 in the case of Colombia), but since 2004 there has been a strong decline in the relative size of the lower class. That decline mainly translated into an increase in the share of the population in the middle class.

Costa Rica has also experienced a decline in the relative size of the lower class. The rate of decrease was greater in the second half of the period, when 61 per cent of the reduction in the size of the lower class occurred. Another interesting aspect is that in the first five years of the period under analysis most (71 per cent) of the decline in the relative size of the lower class translated into an increase in the relative size of the middle class, while in the last five years most (92 per cent) of the decrease in the relative size of the lower class was explained by a growth 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 relative sizes of the different income groups were also very stable during this period. In the next three years, as a result of annual growth rates of around 7.9 per cent, there was a significant decrease (from 53.8 per cent to 40.3 per cent) of the proportion of the population in the lower class. Growth in the relative size of the middle class accounted for more than three quarters of that reduction. The relative size of the different income groups has not changed significantly since 2007, although there has been some decrease in the size of the lower class.

Economic conditions began to improve in **Ecuador** from 2003. This process was reflected by a significant reduction in the proportion of people in poverty and a marked increase in the relative size 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 2003–2011. There were two sub-periods (2003–2006 and 2009–2011) in which the relative size of the lower class declined rapidly, but between 2006 and 2009 it remained almost unchanged. During the period 2003–2011, 74 per cent of the decrease in the relative size of the lower class translated into an increase in the size of the middle class.

There seems to have been little change in the relative size of the different income groups in **El Salvador** over 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 2005–2009 there was a decrease in the proportion of people in the lower class, almost fully translated into an increase in the relative size of the middle class. In the last two years of the period being studied the proportion of the population in each income group remained almost unchanged.

Honduras is the country in the sample with the highest proportion of people in the lower class: around 60 per cent. The relative size 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 relative size of the middle class. However, this result was partially reversed over the following two years.[5]

In **Mexico**, the proportion of the population belonging to the lower class declined in the period 2001–2007. This decrease was accompanied by incremental increases in the relative size 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 relative size of the lower class was almost the same as in 2008, the first year of the crisis. Over the same period, the middle class experienced a small increase, while the relative size of the upper class exhibited a slight decrease, as could be expected from the results for the lower and middle classes.

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 grown by almost the same magnitude. The rate of that growth was higher during the second half of the period of analysis: 64 per cent of the reduction in the size of the lower class took place during the period 2006–2011. It is worth mentioning that the decrease in the size of the lower class between 2010 and 2011 translated fully into an increase in the relative size of the upper class, with a small decrease in the relative size 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 decreased consistently. In contrast, the relative size of the other two income groups grew steadily over the period under examination, with the exception of the last year, when the proportion of people in the middle class declined slightly, even though the lower class showed a clear decrease in its share of the population. This obviously means that the relative size of the upper class experienced a significant increase during 2011.

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 (72.6 per cent) occurred in the period 2005–2011. Results show that, when considering the whole period, more than two thirds of the decline in the relative size of the lower class translated into increases in the relative size of the middle class, though during the last few years of the period, particularly in 2011, the decrease in the relative size of the lower class was mainly counterbalanced by an increase in the relative size of the upper class.

In the case of **Uruguay** there are two significantly different sub-periods between 2001 and 2011. During 2001–2004 the country suffered a deep economic crisis, 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 relative size of the middle class remained roughly unchanged. In the second sub-period, 2004–2011, there was a large decrease in the size of the lower class. Again, the relative size of the middle class remained virtually unchanged. In other words, in Uruguay the changes in the relative size of the lower class almost fully translate 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 probably experienced changes in its composition.

Between 2002 and 2003, **Venezuela** suffered a significant economic and social crisis, which resulted in a drop of almost 20 per cent in per capita GDP. As a result, the proportion of the population in the lower class experienced a large increase, while the relative size of the other two income groups declined. Between 2003 and 2008, together with the economic recovery, the relative size of the lower class showed a significant decrease, while the percentage of people in the middle class experienced a large increase. After 2008 the proportion of people in each income group did not change significantly.

3.3 IS THERE CONVERGENCE ACROSS COUNTRIES IN THE SIZE OF THE MIDDLE CLASS?

Figure 4 presents the increase in percentage points in the relative size of the middle class in each country between 2001 and 2011. As can be seen, there is a clear negative relationship between the relative size of the middle class in 2001 and the growth of that relative size in percentage points between 2001 and 2011.

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 some particular countries are worth mentioning in more detail.

Uruguay is the country in the region with the smallest percentage point increase in the relative size of its middle class between 2001 and 2011. As is illustrated in Figure 4, this was the country with the largest middle class as a proportion of the total population in 2001, with over half of the population already belonging to that income group at that time.

Honduras, which is not included in Figure 4, was the country with the smallest share of its population in the middle class in 2001, and the country with the second smallest percentage point increase in the relative size of its middle class between 2001 and 2011. Thus, it seems to be the only exception to a possible convergence in the relative size of the middle class among Latin American countries.

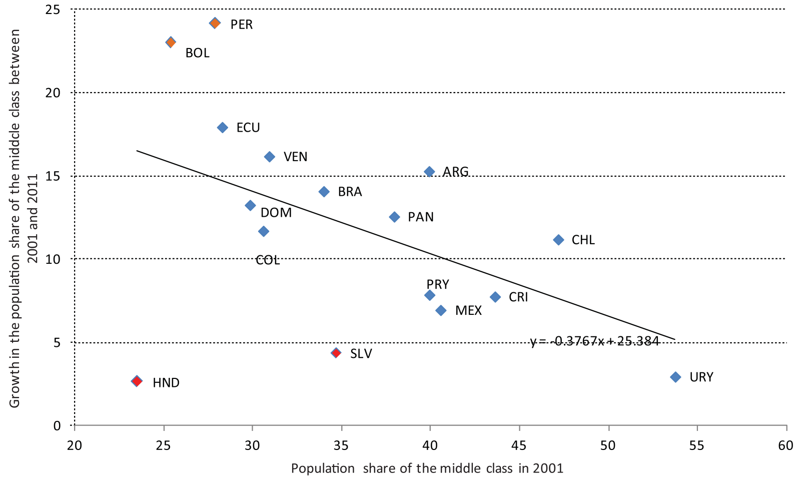
When excluding Honduras, Peru and Bolivia are the two countries where the share of the middle class in the total population was the smallest in 2001. However, these countries have experienced the greatest growth in the relative size of that income group, with an increase above 20 percentage points in the period under analysis.

The case of Peru is not surprising, given that this is one of the countries with the highest rate of economic growth in the region between 2001 and 2011, with a cumulative growth in per capita GDP of 65 per cent. Additionally, income inequality showed a significant downward trend in Peru during the period under examination.

The case of Bolivia is more striking, as the country did not show very promising economic performance during the period 2001–2011 (the cumulative growth of per capita GDP was 27 per cent). Therefore, the increase in the relative size of the middle class in Bolivia is mainly driven by a significant decrease in income inequality. However, given that data from the Bolivian household survey were released only recently, estimations for this study are preliminary, so these numbers should not be considered definitive.

FIGURE 4

Convergence in the Size of the Middle Class between Countries?



Source: Author's calculations based on SEDLAC.

The results shown in Figure 4 are compatible with the predictions of Paes de Barros and Grosner (2013). These authors evaluate the evolution of income distribution by monitoring the relative size of three income classes into which they have previously divided the population (lower, middle and upper).

According to these 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 characterised 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 largest group is the upper class. Bearing in mind these two rules, there are only four possible ways in which the classes can be ordered. Considering that in each case the largest income class may or may not account for 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 an even smaller proportion in the upper class (U). In this state: *L > 50% > M > U.*
- **State II:** As income grows, the relative size 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 in the relative size 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 relative size of the middle class exceeds that of the lower class, but it is still not the majority of the population. The lower class remains the second largest group, even when the upper class has also increased its share of the population. 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 accounts for the majority of the population. The relative size of the upper class continues to grow, though it is still the smallest group. 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 than the number of people in the lower class. The middle class still accounts for the majority of the population, but its size begins to contract: from this point onwards, any new income increase provokes an expansion of the upper class (people leaving the middle class) of a larger magnitude than the reduction in the size of the lower class (people entering 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 grow smaller, while the size of the upper class increases. In this state: *50% > M > U > L*.
- **State VII:** If the process of development continues, the relative size of the upper class continues to grow. Finally, the society reaches a stage at 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 VIII:** 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 above, there are two unambiguous trends: the relative size of the lower class always shrinks, and the relative size of the upper class always expands. Yet 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 whenever the number of people leaving the lower class is higher than the number of people entering the upper class, and it will contract whenever the number of people leaving the lower class is 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 lower class is larger than 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 share of the population of the middle depends on the level of inequality in the distribution of income.

In societies with a high degree of inequality, the expansion of the upper class begins even in the presence of a large lower class. Most Latin American countries fit that description.

Table 1 shows by which stage of the evolution of the distribution of income classes each country could be characterised at the beginning and 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 three others were in State II (Brazil, El Salvador and Panama). Considering the process of economic growth enjoyed by Latin American countries over the last decade, a significant increase in the relative size of the middle class in those countries would be expected between 2001 and 2011, 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 nine 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 2011. Panama stands out as the only country in this group that reached State V by 2011, and that year marks precisely the first reduction in the share of the population of the lower class that did not translate into an increase in the share of the population of the middle class. This situation was exactly the one that Paes de Barros and Grosner envisaged.

TABLE 1

Process of Development and Relative size of the Middle Class

	Population Share					Population Share			
Country/year	**Lower**	**Middle**	**Upper**	**STATE**	**Country/year**	**Lower**	**Middle**	**Upper**	**STATE**
ARG 2001	38.8	43.0	18.2	III	ARG 2011	13.5	51.7	34.7	V
BOL 2001	60.5	32.0	7.5	I	BOL 2011	32.3	53.3	14.4	IV
BRA 2001	46.7	38.6	14.7	II	BRA 2011	28.1	50.1	21.9	IV
CHL 2001	27.1	51.5	21.4	IV	CHL 2011	10.9	57.0	32.1	V
COL 2001	54.0	36.3	9.6	I	COL 2011	36.6	47.5	15.8	III
CRI 2001	35.5	47.3	17.2	III	CRI 2011	19.8	52.5	27.7	V
DOM 2001	54.6	37.5	7.9	I	DOM 2011	37.9	50.5	11.6	IV
ECU 2001	56.5	35.6	7.9	I	ECU 2011	33.3	52.8	13.9	IV
SLV 2001	49.4	40.7	9.9	II	SLV 2011	44.2	47.1	8.7	III
HND 2001	64.9	29.2	5.9	I	HND 2011	60.6	32.3	7.1	I
MEX 2001	39.8	46.9	13.2	III	MEX 2011	31.4	53.7	14.8	IV
PAN 2001	41.8	41.2	17.0	II	PAN 2011	23.9	50.7	25.4	V
PRY 2001	40.8	45.3	13.9	III	PRY 2011	31.3	50.8	17.9	IV
PER 2001	58.6	35.0	6.3	I	PER 2011	28.6	55.3	16.1	IV
URY 2001	16.4	51.6	32.0	V	URY 2011	10.7	52.8	36.6	V
VEN 2001	55.4	38.6	6.0	I	VEN 2011	37.4	54.5	8.0	IV

Source: Author's calculations based on SEDLAC.

The remaining six countries in the sample were situated in States III (Argentina, Costa Rica, Mexico 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, Costa Rica and Uruguay were in State V in 2011. As the authors predicted, the middle class in these four countries seems to have reached a maximum share of the population and started to contract in the later years of the period under analysis.

The model presented by Paes de Barros and Grosner, and the results in Table 1, help to understand the dynamics of the process currently taking 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 between 2001 and 2011. 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 share of the population accounted for by the middle class between the beginning and the end of the period. 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 the effects 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 towards reducing income inequality.

Although the relative size of the middle class has increased in all countries, the results presented in Section 3 demonstrate that the process of growth 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 noting: there seems to be 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 which have experienced the highest growth in the relative size of this socio-economic group.

How do we explain that convergence in the relative size of the middle class across countries? As was shown at the end of Section 3, the different evolution of the size of the middle class 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 evolves during the process of development.

Two main insights emerge from that model. First, the growth in the share of the population 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 differently, the middle class has a maximum size in each country.

The predictions of the model help to explain the abovementioned convergence process: given that Latin American countries differ in their levels of income and development, the rates of growth in the relative size of their middle classes should also be different. 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.

ANNEX: ADDITIONAL GRAPHS AND TABLES

GRAPH A.1

The Evolution of the Middle Class, by Country (2001–2011)

Source: Author's calculations based on SEDLAC.

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NOTES

1. This result depends upon the empirical definition of the middle class used to estimate the share of the population accounted for by each income group.

2. For more information on the definition of income in SEDLAC, see: <http://sedlac.econo.unlp.edu.ar/eng/methodology.php>.

3. In Guatemala in 2000 and Nicaragua in 2001 the proportion of the middle class relative to the total population was also lower than 30 per cent.

4. Bolivia showed a significant improvement in its income indicators between 2008 and 2011. These results are considered preliminary and must be considered carefully, because the household surveys used in the estimations were added to the SEDLAC inventory only recently, and further examination of the data will be conducted in the near future.

5. The results must be interpreted prudently, because the Honduran household survey is not up to high standards.

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