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BEING “MIDDLE-CLASS” IN LATIN AMERICA

By Francesca Castellani and Gwenn Parent
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ACKNOWLEDGEMENTS

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PREFACE

Growing interest in the fortunes of the middle class may be linked to the conviction that countries with a strong middle class enjoy low levels of inequality and social conflict. A robust middle class is supposed to contribute to economic and social stability and to better development prospects. But history also provides examples of middle class supporting populist options.

This hypothesis requires an in-depth analysis of the characteristics and vulnerability of the middle class as understanding the middle class becomes crucial for assessing its role in societies.

In developing economies, many in the middle sectors of income distribution are the formerly poor and are vulnerable to falling back into poverty in reaction to an external shock to the household (illness, unemployment, retirement) or the economy (recession). This characteristic calls for policies to mitigate their vulnerability. Progress achieved in poverty reduction strategies throughout the developing world invites complementary measures to consolidate the middle class, in order to support its contribution to development and contain its attraction towards populist options.

This paper addresses the issue of middle-class measurement and characterisation in Latin America, providing an answer to the following questions: Who is middle-class in Latin America? How different is the Latin American middle class from the rest of the world? How vulnerable and mobile is it? And how different is it from the rest of the income distribution spectrum? By doing so, the paper helps identify relevant measures to consolidate and secure middle-class prospects over time.

Mario Pezzini
Director
OECD Development Centre
October 2011
RÉSUMÉ

Ce papier rejoint le débat sur la taille de la classe moyenne en Amérique Latine, en étudiant sa structure et ses caractéristiques, ainsi que le potentiel de mobilité et son évolution dans le temps dans un groupe de pays de la région. L’analyse démontre que la classe moyenne dans les pays d’Amérique Latine est plus petite que celle des pays de l’OCDE. Néanmoins le potentiel de mobilité à la hausse de la classe moyenne ne montre pas de différences importantes. Malgré cela, elle exhibe un risque plus élevé de retomber dans la pauvreté, dévoilant l’importance d’une politique publique en faveur de la classe moyenne.

Classification JEL: O10, O12, I32.

Mots clés: classe moyenne ; mobilité sociale ; inégalité ; vulnérabilité ; résilience ; Amérique latine.

ABSTRACT

This paper joins the debate on the size of the middle class in Latin America, analysing its structure and characteristics. The paper investigates inter-class mobility potential and its evolution over time in the case of selected countries. As a result of the estimations, we find that Latin American countries have smaller middle classes than OECD countries. Moreover, this comparison shows that, while middle-class upward mobility potential is not very different, middle class resilience is higher in OECD countries. This suggests that particular attention should be paid to mitigating the impact of economic reversal on middle-class families, as they are more vulnerable to falling into poverty. This analysis provides a tool to identify the features of the middle class that need to be promoted by policy makers to foster middle-class resilience and enhance its stabilising role in society.

JEL Classification: O10, O12, I32.

Keywords: middle class; social mobility; inequality; vulnerability; resilience; Latin America.
The most perfect political community must be amongst those who are in the middle rank, and those states are best instituted wherein these are a larger and more respectable part, if possible, than both the other; or, if that cannot be, at least than either of them separate.

Aristotle (384 BC-322 BC)
I. INTRODUCTION

While the notion of belonging to the middle class appears to be universally attractive, it is not immediately clear what being "middle-class" actually means. In particular, should the middle class be defined in global or national terms? Do the characteristics of the middle class transcend national borders and levels of development? This paper tackles some of these issues, applying an income-based definition of the middle class to quantify its size, characteristics and mobility potential across Latin American and OECD countries. This analysis is a crucial first step for discussing the role of public policy to promote and consolidate the middle class.

Besides the psychological importance attached to belonging to a certain class, focus on the middle class in developing countries is justified by its potential contribution to economic and social welfare. Several channels through which the middle class might promote economic growth have been identified: fostering entrepreneurship, shifting the composition of consumer demand, as well as encouraging policy reforms and institutional changes conducive to growth. Empirical studies have shown its relevance for economic growth and prosperity in several respects. It contributes to mediation between rich and poorer classes – in Marx’s words: “it limits class conflicts” – an essential element of a sound democracy (Thurow, 1984). Furthermore, democratic regimes are more likely to occur in countries with middle classes (Barro, 1999).

As to its relevance as an engine for economic development, middle classes foster savings and human capital accumulation, as they specialise in occupations that require skills and experience (Torche and López-Calva, 2011) and shape values such as patience, effort and a strong work ethic (Doepke and Zilibotti, 2005). According to Acemoglu and Zilibotti (1997), middle class entrepreneurs contribute to employment and productivity growth. Others contend that the middle class does not show a higher propensity to entrepreneurship than other groups (Banerjee and Duflo, 2007). Additionally, political stability and social cohesion are furthered by large middle classes (Torche and López-Calva, 2011). An increase in the middle class share of income predicts a rise in political rights (Barro, 1999) and, in turn, stimulates long-term investments (Alesina and Perotti, 1996).

There is evidence of a strong association between solid middle classes and higher income, more education, better health outcomes and faster upward mobility (Easterly, 2001). Therefore, a better understanding of the middle class is crucial for designing and implementing policies to reduce income and social inequalities. An important element to consider, besides the size of the middle class, is the prospect for social mobility. If the middle class contributes to social welfare,

1. See Kharas (2010) for further discussion.
social mobility becomes a laudable policy objective, as social mobility translates into income and the expansion of the middle class over time.

These considerations are particularly relevant in Latin American countries, which have made historic strides in reducing poverty: while 44% of Latin Americans were poor in 2002, that proportion had fallen to 32% by 2010 (ECLAC, 2010). However, despite some progress also in reducing income inequality, this decrease has been much more modest. As a consequence, income inequality remains high in Latin America (Lopez-Calva and Lustig, 2010).

This paper uses comparable household survey data sets to estimate middle class size across a sample of Latin American countries and tries to analyse their income vulnerability in order to influence their fates. The contribution to the literature is threefold: i) provide comparable cross country middle class size estimations ii) analyse their socioeconomic characteristics and iii) evaluate their vulnerability.
II. MIDDLE CLASS MEASURES

Between 50% and 80% of opinion poll respondents in the United States classify themselves in the middle of the income spectrum. Table 1 provides some evidence based on self-perception surveys carried out in the United States over time. Belonging to the middle class is an appealing idea. This comes as no surprise, as the middle class is generally perceived as a stable and sound income group whose members display steady characteristics: adequate housing and health care, educational opportunities, secure retirement, stable jobs, holidays and leisure. A large middle class is perceived to invest vigorously in capital accumulation, both physical (plant and equipment) and human (education and training), and this may contribute to economic growth, national welfare, stability, and crisis resilience. Furthermore, a large middle class is synonymous with lower political polarisation. As a result, the middle class is a favourite target of policy-making. Still, stakeholders’ sense of belonging might fail to coincide with “income- or socially-based definitions”.

Table 1. USA surveys on middle class

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RESULTS</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you describe yourself? poor/lower-income/middle-income/upper-income/rich?</td>
<td>9% poor &lt;br&gt; 24% lower-income &lt;br&gt; 58% middle-income &lt;br&gt; 8% upper-income &lt;br&gt; 1% rich</td>
<td>Gallup poll (1996)</td>
</tr>
<tr>
<td>Are you in the middle class? (yes/no?)</td>
<td>81% middle class</td>
<td>Harvard university (1996)</td>
</tr>
<tr>
<td>A person’s social class is determined by a number of things, including education, income, occupation, and wealth. How would you classify yourself?</td>
<td>7% lower class &lt;br&gt; 35% working class &lt;br&gt; 42% middle class &lt;br&gt; 15% upper middle class &lt;br&gt; 1% upper class</td>
<td>New York Times (2005)</td>
</tr>
<tr>
<td>How would you classify yourself into one of four categories: lower class, working class, middle class, or upper class?</td>
<td>6% lower class &lt;br&gt; 45% working class &lt;br&gt; 45% middle class &lt;br&gt; 4% upper class</td>
<td>National Opinion Research Center (N.O.R.C.) &amp; Roper Center (several years)</td>
</tr>
</tbody>
</table>

Box 1. Middle class in the United States

In the case of the United States (US), “there is no consensus definition of “middle class”, nor is there an official government definition (Casehill, 2007). The Census Bureau publishes figures breaking down the income distribution into quintiles, or fifths. The narrowest view of who might be considered middle class would include those in the middle quintile, those households with income between USD 36 000 and USD 57 660. A more generous definition might be based on the three middle quintiles, those households with incomes between USD 19 178 and USD 91 705. Surveys suggest that 1% to 3.3% of the population consider themselves to be upper class. Comparing those figures with the income distribution would put the dividing line between middle and upper class close to if not above USD 250 000. Similarly, survey responses suggest that the lower end of the middle class might be close to USD 40 000.” In the United States, the debate around the reduction in the size of the American middle class and its impoverishment intensified during the 1980s and 1990s and led to investigate its determinants.

According to Pressman (2007) several elements contributed to the thinning of the middle class in the US over time. Among this, demography plays a crucial role. Increasing divorce rates lead to the emergence of single parent- households and lower-class households headed by a woman. The incorporation of young cohorts, with no professional experience, in the job market implies a lower level of income earned. However, as people age, their income rises and income distribution flattens for each age group. Higher income inequality between genders is also indicated as a possible cause. In addition, other causes may be the decline of trade unions and a lower relevance of manufacturing jobs, as well as public policies aimed at fostering middle class incomes. Macroeconomic conditions (i.e. recession) and government policies (i.e fiscal transfers) also contribute to define the fraction of households classified as middle class.

Based on the Luxembourg Income Study (LIS) database, Pressman (2007) adopts a uniform definition of middle class (i.e. households receiving between 75% and 125% of median household income, adjusted for family composition), to study the income evolution overtime in several countries.

In 1980, middle class included 35%- 40% of all households, with high variance across countries, ranging from less than 30% (Canada, US and Israel) to over 50% (Sweden). By the end of 1990, 35-37% of households were middle class, maintaining similar variation across countries. Canada and Norway recorded an increase. By 2000, middle class has shrunk by 1 to 2 percentage points on average, mainly because of the smaller size in the USA middle class.

As to the potential determinant of the decline, this author finds that neither the age structure nor the household gender composition played a role. As no lasting effect can be attributed to macroeconomic causes, fiscal policy is found to be an important determinant of the size of the middle class, highlighting the importance of policy-making in defining middle class fortunes.


The strong sense of belonging to the middle class by the majority of the population is not matched by a universally accepted definition of this group. Scholars have striven to put forward such definitions and measurements, but discretionary elements have made them ill-suited to be general and widely accepted. These elements become relevant when comparing different realities like those of OECD-and Latin American countries, as discussed in more detail in Section III.

2. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Broadly speaking, measures to estimate the size of the middle class can be categorised by their reliance on economic and/or social criteria. The first refers to income/consumption ranges that segment population distribution. The second group includes reference to specific characteristics, such as education, occupational status, and consumption patterns.

Most social definitions are based on the stability of middle class characteristics. For example, Solimano (2008) argues that “…the prototype view of the middle class is that of a rather conservative, risk-averse, group that seeks stable jobs and predictable economic fortunes. …Thus, a stronger and more stable middle class is often considered as a stabilizing factor in politics and economics…” While generally useful for a socioeconomic characterisation and the study of the evolution of the middle class in a single country, these standards might result ill-suited for a cross-country comparison, especially between emerging economies and more advanced countries. For example, generally referring to people with professional degrees as being middle class can be misleading.

Income-based definitions are either “absolute or relative”. The former assumes fixed (i.e. absolute) income ranges (PPP adjusted, i.e. correcting for differences in purchasing power across countries). The latter considers the relative position with regard to national income distribution (i.e. quintiles). While income-based definitions enjoy higher analytical rigour than perception-based concepts, they are also debatable. An absolute threshold characterisation suffers from some arbitrariness which becomes relevant when applied to heterogeneous levels of development. While providing a common reference, absolute benchmarks might fall short of accounting for country-specific features. Conversely, relative definitions might provide less homogeneous boundaries as they are country-tailored. In general, absolute definitions have been applied to the evolution of the global middle class while relative boundaries for country-specific investigation.

Among absolute measures, Milanovic and Yitzaki (2002) use the average incomes of Brazil and Italy as the respective floor and ceiling references. This translates into roughly USD 12-50 a day per person at 2000 (PPP). Banerjee and Duflo (2007) apply the concept to several developing countries and use consumption ranges between USD 2-10 per day (roughly USD 800-USD 3 600 per year). This increases to USD 6 000 – USD 30 000 in 2007 PPP terms by McKinsey and Goldman Sachs (2008). Ravallion (2009) adopts an income range of USD 2-13 per day at 2005 PPP prices, as USD 2 a day is a commonly accepted definition of the poverty line in developing countries; people above this line are “middle-class” in the sense that they have moved out of poverty. Bhalla (2009) defines the middle class as those with annual incomes over USD 3 900 in purchasing power parity terms. Absolute boundaries, being poverty-level contingent might result less relevant for cross-country comparisons, as it is difficult to find common standards for different development levels.

Relative definitions – based on the middle range of national income distributions – make the lower and upper boundaries country-specific (i.e. associating it to median income). Thurow

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4. While poverty thresholds are clearly defined, middle-class “boundaries” rely on arbitrary limits.
5. See Kharas (2010) for further discussion.
(1987) defined the American middle class as the group with incomes lying between 75% and 125% of the median income. Birdsall et al. (2000) apply the same definition to developing countries. Easterly (2001) considers the income share of three middle quintiles (leaving out the poorest 20% and the richest 20%).

Solimano (2008) defines a broad middle class comprising individuals belonging to deciles 3 to 9 of the income distribution and breaks it into, (a) a lower middle class, corresponding to deciles 3 to 6, and (b) an upper middle class, corresponding to deciles 7 to 9.

Lower bound reliance on poverty -- be it in absolute or relative levels -- entails that non-poor households are “middle class”. One of the drawbacks of using an absolute poverty line as a lower threshold for middle class range is that income volatility might affect size over time. This contradicts the perception of stability associated with the concept of the middle class and the fact that its size is also stable overtime. A relative poverty line, related to some fraction of typical incomes, might result more appropriate. The OECD and the European Union countries use 50% and 60% of national median equivalised household income as poverty line.

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6. In their view, this approach does “… not pretend that this measure captures any fixed notion of the ‘middle class’. What it does capture—literally—is the middle strata in income terms in each country”.

7. He also proposes an aggregate definition that overlaps with others used in the literature.

8. Eurostat uses as the standard risk-of-poverty threshold (60% of the median income). In practice, it calculates and publishes rates according to various risk-of-poverty thresholds using various percentages (40%, 50%, 60%, 70%) of the median and the mean. ECLAC has used 50% of the median as standard for its calculations, although for internal uses other percentages of the median and of the average income have been used.
III. THE SIZE OF LATIN AMERICA’S “MIDDLE CLASS”

In this section, we compare alternative measurements of the middle class – in particular the resulting size of the middle class – applying them to selected OECD and Latin American countries. In particular, we consider the following alternatives:

a) PPP-based definition 2-20 USD (2005 PPP) per capita per day;

b) Distribution-based definition: leaving out the poorest 20% and the richest 20%;

c) Median income-based definition: 50-150% of median income (i.e. poverty generally defined as 50-60% of median income);\(^9\)

d) Poverty-line-based definition: lower bound is the national poverty line (national, urban), named thereafter NPL, and the upper bound is set as a multiple (3 times) of the national poverty line.

We use household survey data for several Latin American countries. We focus on information for 2006 as a base year for country comparisons, with a few exceptions. The countries considered in our analysis are Argentina (2006), Bolivia (2005), Brazil (2006), Chile (2006), Colombia (2008), Costa Rica (2006), Ecuador (2006), Honduras (2006), Italy (2006), Mexico (2006), Peru (2006), Uruguay (2005) and Venezuela (2006). Estimations are based on household total income adjusted for family composition (OECD scale).\(^10\)

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9. See also Davies et al. (1992).

10. The OECD weights for equivalised or household size adjusted income are as follows: 1 for the first adult; 0.5 for every other adult or child above 14 years old; 0.3 for every child under 14 years old.
### Table 2. Middle Class Size and Income Distribution in Latin America, 2006\(^{a}\)

<table>
<thead>
<tr>
<th></th>
<th>ARGENTINA</th>
<th>BOLIVIA</th>
<th>BRAZIL</th>
<th>CHILE</th>
<th>COLOMBIA</th>
<th>COSTA RICA</th>
<th>ECUADOR</th>
<th>MEXICO</th>
<th>PERU</th>
<th>URUGUAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(USD PPP 2005)</td>
<td>416</td>
<td>235</td>
<td>354</td>
<td>463</td>
<td>293</td>
<td>386</td>
<td>337</td>
<td>503</td>
<td>293</td>
<td>453</td>
</tr>
<tr>
<td><strong>PPP (2-20 dollars per day)</strong></td>
<td>Disadvantaged</td>
<td>10.8</td>
<td>18.2</td>
<td>4.5</td>
<td>1.8</td>
<td>12.6</td>
<td>6.4</td>
<td>5.1</td>
<td>0.5</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Middle Class</td>
<td>55.5</td>
<td>63.2</td>
<td>68.3</td>
<td>60.6</td>
<td>62.9</td>
<td>63.3</td>
<td>68.9</td>
<td>59.6</td>
<td>76.6</td>
</tr>
<tr>
<td></td>
<td>Affluent</td>
<td>33.7</td>
<td>18.7</td>
<td>27.2</td>
<td>37.6</td>
<td>24.4</td>
<td>30.3</td>
<td>26.0</td>
<td>39.9</td>
<td>19.4</td>
</tr>
<tr>
<td><strong>Distribution (quantiles 2 to 4)</strong></td>
<td>Disadvantaged</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Middle Class</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Affluent</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Median Income</strong></td>
<td>(0.5 to 1.5 median income)</td>
<td>Disadvantaged</td>
<td>15.8</td>
<td>26.2</td>
<td>16.4</td>
<td>17.2</td>
<td>23.5</td>
<td>17.7</td>
<td>19.9</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td>Middle Class</td>
<td>47.0</td>
<td>36.3</td>
<td>47.5</td>
<td>49.4</td>
<td>43.0</td>
<td>49.4</td>
<td>44.0</td>
<td>50.3</td>
<td>45.6</td>
</tr>
<tr>
<td></td>
<td>Affluent</td>
<td>37.2</td>
<td>37.5</td>
<td>36.1</td>
<td>33.4</td>
<td>33.5</td>
<td>32.9</td>
<td>36.1</td>
<td>34.2</td>
<td>34.3</td>
</tr>
<tr>
<td><strong>Poverty</strong> (^{b})</td>
<td>Disadvantaged</td>
<td>37.7</td>
<td>55.2</td>
<td>30.2</td>
<td>14.0</td>
<td>49.0</td>
<td>29.2</td>
<td>34.2</td>
<td>32.9</td>
<td>36.0</td>
</tr>
<tr>
<td></td>
<td>Middle Class</td>
<td>41.7</td>
<td>32.3</td>
<td>44.0</td>
<td>46.9</td>
<td>33.0</td>
<td>45.8</td>
<td>44.8</td>
<td>47.6</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td>Affluent</td>
<td>20.6</td>
<td>12.5</td>
<td>25.8</td>
<td>39.1</td>
<td>18.0</td>
<td>25.0</td>
<td>21.1</td>
<td>19.5</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Notes: \(^{a}\)Bolivia and Uruguay (2005) and Colombia (2008); \(^{b}\)Poverty lines for poverty-based definition: UN-ECLAC (2009).


Source: Authors’ calculations are based on 2006 national household surveys. Estimations are based on household net incomes adjusted for family composition with OECD adult equivalent scale.
Table 2 and Figure 1 reveal that PPP- and distribution-based definitions provide similar results with a middle-class size between 35-55% of total households. Median income and poverty-based definitions also give comparable estimations of a smaller middle class of 40-50%. The income-based definition shows that around 40% of Latin American households are middle-class. The spectrum ranges from over 50% in Uruguay and Mexico, and Chile (around 50%) to Bolivia with around 37%.

Figure 1. Middle class size in selected Latin American and OECD countries (% of households)


* In accession discussions at the time of writing.

Source: Authors’ calculations are based on 2006 national household surveys. Estimations are based on household income.

While the PPP-based definition offers an appealing universal measure, it might be less suitable for countries with different income levels. It is interesting to note that the PPP lower boundary (i.e. in USD 2 PPP), in the case of Latin America, results in poverty rates which are well below national estimates. As a consequence, using this measure might fail to accurately portray national income distribution. The median income-based measurement presents income distributions akin to the ones based on national poverty lines, with the advantage of providing a standardised lower bound with respect to nationally defined poverty lines. Moreover, 50% of
median household income is a widely used and generally accepted proxy for low-income thresholds. In the rest of the paper, we use this measure to identify the characteristics of the middle class across selected countries.

Figure 1 illustrates the implications of using different measures (PPP-based and median income-based) when comparing Latin American and OECD countries. The PPP income thresholds are less relevant for OECD countries, while the median-based measurement provides an estimate of the size of the middle class size that ranges between 50% and 80% of the households, with an average of 67% for OECD countries, well above the estimated Latin America average of 46%.

Figure 2 simulates income group distributions across countries by applying a global threshold based on the “OECD median income”, estimated using the VI wave of Luxembourg Income Study (2004), as if the 17 OECD countries for which we have information were a single country (OECD median income calculated over all 17 OECD countries household observations). We then use this homogeneous measure to apply our median income-based definition (0.5 to 1.5 times the 2004 OECD median income, 1 497 USD PPP 2005).

Figure 2. Middle class size based on OECD median income (%)


Source: Authors’ calculations are based on 2006 national household surveys. Estimations are based on household income.

Based on this exercise, the middle class spectrum ranges from 14.7% of Mexican households (where, based on national income distribution, almost 53% of households are middle

11. For OECD data we use the Luxembourg Income Study (LIS) Database which contains income microdata from a large number of countries at multiple points in time.
class) to 78.8% of households in Sweden. This “OECD-wide definition” of the middle class allows identifying three groups of countries: i) emerging countries (Mexico, Poland and Hungary), with a low proportion of middle-class households, which have not reached yet the OECD standards of living; ii) rich countries (i.e. Luxembourg, USA, Switzerland, Norway or Canada) with a relative large proportion of rich households (more than 30%) and therefore, a relatively small middle class, and iii) “middle-class” countries (Korea, Sweden, Finland and Denmark) with very sound and large middle class.
IV. A PORTRAIT OF THE LATIN AMERICAN MIDDLE CLASS

As noted in the discussion of sociological or status-based definitions of the middle class, it is important to identify the “features” that might define the middle class beyond income. Latin American household surveys permit a closer look at the family structure, age, marital status and occupation of middle-class households.

Table 3 shows that female headed households belong more often to the lower income group where they represent between 22-36% of total poor households (except for Brazil). Still, middle class households are more often headed by women than affluent ones in Argentina, Brazil, Chile and Uruguay (no significant difference for Colombia, Costa Rica, Mexico and Peru). Middle-class female headed households represent between 23-35% of total middle-class households.

Table 3. Female headed households (% of total households)

<table>
<thead>
<tr>
<th>Country</th>
<th>ALL</th>
<th>Disadvantaged</th>
<th>Middle Class</th>
<th>Affluent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uruguay</td>
<td>34.3%</td>
<td>36.3%</td>
<td>35.0%</td>
<td>31.9%</td>
</tr>
<tr>
<td>Argentina</td>
<td>31.4%</td>
<td>35.2%</td>
<td>32.1%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Brazil</td>
<td>28.8%</td>
<td>27.8%</td>
<td>30.5%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Chile</td>
<td>29.7%</td>
<td>37.3%</td>
<td>30.1%</td>
<td>24.7%</td>
</tr>
<tr>
<td>Colombia</td>
<td>29.8%</td>
<td>35.4%</td>
<td>28.0%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>27.9%</td>
<td>34.9%</td>
<td>25.9%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>25.1%</td>
<td>23.2%</td>
<td>25.4%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Peru</td>
<td>23.5%</td>
<td>22.4%</td>
<td>23.9%</td>
<td>23.8%</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

Table 4 shows the age profile of household heads, by income class. Middle-class household heads are, in average, older than disadvantaged and affluent ones in Argentina, Brazil and Chile (resp. 52, 48 and 52 years old), and younger in Costa Rica, Mexico and Peru (resp. 46, 46, 49 years old). When decomposing by age classes, it appears that poor household heads are more often younger (less than 30) and affluent households are headed by older heads (41-65 years old). This is consistent with a life-cycle of increasing wealth by households as the household head ages. However, old household heads (over 65 years old) are more likely to be associated with lower income groups.
Table 4. Age profile of household heads (% of total households)

<table>
<thead>
<tr>
<th>Age (mean)</th>
<th>ARGENTINA</th>
<th>BRAZIL</th>
<th>CHILE</th>
</tr>
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<tbody>
<tr>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>50</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>MC</td>
<td>50</td>
<td>43</td>
<td>52</td>
</tr>
<tr>
<td>A</td>
<td>52</td>
<td>48</td>
<td>49</td>
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</table>

<table>
<thead>
<tr>
<th>Age0_30</th>
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<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
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<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>13%</td>
<td>15%</td>
<td>8%</td>
</tr>
<tr>
<td>MC</td>
<td>13%</td>
<td>15%</td>
<td>7%</td>
</tr>
<tr>
<td>A</td>
<td>14%</td>
<td>11%</td>
<td>9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age31_40</th>
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<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>19%</td>
<td>23%</td>
<td>19%</td>
</tr>
<tr>
<td>MC</td>
<td>18%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>A</td>
<td>22%</td>
<td>22%</td>
<td>19%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>ARGENTINA</th>
<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>19%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>MC</td>
<td>21%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>A</td>
<td>20%</td>
<td>23%</td>
<td>27%</td>
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</table>

<table>
<thead>
<tr>
<th>Ageover65</th>
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<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
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<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>21%</td>
<td>27%</td>
<td>28%</td>
</tr>
<tr>
<td>MC</td>
<td>17%</td>
<td>23%</td>
<td>28%</td>
</tr>
<tr>
<td>A</td>
<td>17%</td>
<td>26%</td>
<td>31%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
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<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>D</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>MC</td>
<td>100%</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>A</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4 showed the age profile of household heads for disadvantaged, middle class and affluent categories. Table 5 takes age cohorts for the entire population (not only heads of households) and compute the relative shares of income groups. Therefore, Table 5 illustrates how the likelihood of being middle-class change with age. Young individuals are less likely to be in the middle class than older ones in Argentina, Brazil and Chile and more prone to be poor. On the contrary, in Costa Rica, Mexico and Peru, people younger than 30 years are more likely to be middle-class than poor (relatively to other age classes). In all countries, individuals between 41 and 65 years old are more likely to be affluent. The size of middle class for older individuals (over 65) is higher compared to other age classes in Argentina, Brazil and Chile, while in Costa Rica, Mexico and Peru the size of disadvantaged group is higher compared to younger classes.
Table 5. How does the likelihood of being middle class change with age? (% of total population)

<table>
<thead>
<tr>
<th></th>
<th>ARGENTINA</th>
<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
<td>A</td>
</tr>
<tr>
<td>age0_30</td>
<td>30.1%</td>
<td>45.0%</td>
<td>24.8%</td>
</tr>
<tr>
<td>age31_40</td>
<td>25.3%</td>
<td>41.7%</td>
<td>34.9%</td>
</tr>
<tr>
<td>age41_50</td>
<td>24.8%</td>
<td>41.3%</td>
<td>33.9%</td>
</tr>
<tr>
<td>age51_65</td>
<td>25.2%</td>
<td>41.8%</td>
<td>33.0%</td>
</tr>
<tr>
<td>ageover65</td>
<td>20.0%</td>
<td>54.2%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Children 0 to 3</td>
<td>30.4%</td>
<td>45.7%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Children 3 to 6</td>
<td>32.6%</td>
<td>45.3%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Children 6 to 14</td>
<td>35.6%</td>
<td>44.8%</td>
<td>19.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>COSTA RICA</th>
<th>MEXICO</th>
<th>PERU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
<td>A</td>
</tr>
<tr>
<td>age0_30</td>
<td>21.4%</td>
<td>51.4%</td>
<td>27.3%</td>
</tr>
<tr>
<td>age31_40</td>
<td>19.4%</td>
<td>49.7%</td>
<td>30.9%</td>
</tr>
<tr>
<td>age41_50</td>
<td>17.1%</td>
<td>45.7%</td>
<td>37.3%</td>
</tr>
<tr>
<td>age51_65</td>
<td>22.1%</td>
<td>41.9%</td>
<td>36.0%</td>
</tr>
<tr>
<td>ageover65</td>
<td>37.2%</td>
<td>38.8%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Children 0 to 3</td>
<td>23.0%</td>
<td>53.4%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Children 3 to 6</td>
<td>23.3%</td>
<td>54.1%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Children 6 to 14</td>
<td>27.7%</td>
<td>51.5%</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

Note: D=Disadvantaged; MC= Middle Class; A=Affluent.

Source: Authors’ calculations.

Disadvantaged households have generally less members than middle-class households (except in Chile, Costa Rica and Peru where the difference is not significant), but affluent households are in all countries of lower size. There is no particular income class pattern regarding marriage (including cohabiting/common law), as middle-class families are more often headed by a pair of married adults only in Argentina and Costa Rica, while poor Mexican and Peruvian household heads are more often married. Chile is an exception as affluent households cohabit more often than those in the middle and disadvantaged groups. In all countries affluent households are more likely to have fewer children.
### Table 6. Family composition and marital status of heads (% of total households)

<table>
<thead>
<tr>
<th></th>
<th>ARGENTINA</th>
<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL D MC A</td>
<td>ALL D MC A</td>
<td>ALL D MC A</td>
</tr>
<tr>
<td>family size</td>
<td>3.3 3.8 3.4 2.9</td>
<td>3.4 4.1 3.4 3.1</td>
<td>3.7 3.8 3.8 3.5</td>
</tr>
<tr>
<td>nb children (-14)</td>
<td>0.8 1.2 0.9 0.5</td>
<td>0.9 1.6 0.8 0.5</td>
<td>0.9 1.1 0.9 0.7</td>
</tr>
<tr>
<td>Hh head married</td>
<td>62% 59.7% 63.0% 63.5%</td>
<td>n.a. n.a. n.a. n.a.</td>
<td>69.1% 62.7% 69.2% 72.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>COSTA RICA</th>
<th>MEXICO</th>
<th>PERU</th>
</tr>
</thead>
<tbody>
<tr>
<td>family size</td>
<td>3.7 3.7 4.0 3.4</td>
<td>4.0 4.7 4.1 3.3</td>
<td>4.4 4.4 4.5 4.1</td>
</tr>
<tr>
<td>nb children (-14)</td>
<td>1.0 1.2 1.2 0.7</td>
<td>1.2 1.9 1.3 0.8</td>
<td>1.3 1.7 1.4 0.9</td>
</tr>
<tr>
<td>Hh head married</td>
<td>67% 58.6% 71.1% 67.5%</td>
<td>71% 77.3% 72.2% 66.2%</td>
<td>70% 71.3% 70.0% 68.2%</td>
</tr>
</tbody>
</table>

**Notes:** D=Disadvantaged; MC= Middle Class; A=Affluent. Bold figures for D and A when the difference with MC is significant at 95% confidence.

**Source:** Authors’ calculations.

### Table 7. Education level of household heads

<table>
<thead>
<tr>
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<th>ARGENTINA</th>
<th>BRAZIL</th>
<th>CHILE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL D MC A</td>
<td>ALL D MC A</td>
<td>ALL D MC A</td>
</tr>
<tr>
<td>Less than Complete Primary</td>
<td>12.2 18.6 14.9 3.8</td>
<td>16.0 28.0 19.2 3.6</td>
<td>25.1 42.9 28.8 9.2</td>
</tr>
<tr>
<td>Primary Completed</td>
<td>27.8 32.4 34.7 15.2</td>
<td>45.0 54.7 52.1 28.3</td>
<td>14.7 19.0 17.4 8.2</td>
</tr>
<tr>
<td>Secondary Incomplete</td>
<td>15.2 14.7 17.3 12.8</td>
<td>2.1 2.0 2.5 1.7</td>
<td>17.8 18.0 20.1 14.1</td>
</tr>
<tr>
<td>Secondary Completed</td>
<td>18.8 16.1 17.9 22.0</td>
<td>25.2 13.0 23.2 35.9</td>
<td>23.4 15.2 24.5 26.5</td>
</tr>
<tr>
<td>Sup/Univ Incomplete</td>
<td>11.1 8.2 8.6 16.6</td>
<td>2.2 0.5 1.1 5.0</td>
<td>4.9 1.9 3.7 8.5</td>
</tr>
<tr>
<td>Sup/Univ Completed</td>
<td>14.9 10.1 6.6 29.6</td>
<td>9.4 1.9 1.9 25.5</td>
<td>13.8 2.7 5.4 33.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>COSTA RICA</th>
<th>MEXICO</th>
<th>PERU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Complete Primary</td>
<td>24.5 44.8 26.5 8.0</td>
<td>10.1 25.0 9.5 2.4</td>
<td>27.9 53.3 27.7 10.7</td>
</tr>
<tr>
<td>Primary Completed</td>
<td>29.8 31.6 37.4 17.9</td>
<td>38.9 54.1 45.6 18.6</td>
<td>16.7 21.6 17.8 11.7</td>
</tr>
<tr>
<td>Secondary Incomplete</td>
<td>16.3 10.3 19.3 16.2</td>
<td>20.6 15.6 24.9 15.9</td>
<td>12.5 12.4 14.7 9.4</td>
</tr>
<tr>
<td>Secondary Completed</td>
<td>11.0 6.0 9.5 16.4</td>
<td>16.2 4.7 14.7 25.4</td>
<td>22.9 10.4 24.8 28.7</td>
</tr>
<tr>
<td>Sup/Univ Incomplete</td>
<td>18.4 7.3 7.4 41.5</td>
<td>1.2 0.1 0.7 2.8</td>
<td>5.3 0.7 4.7 9.3</td>
</tr>
<tr>
<td>Sup/Univ Completed</td>
<td>13.0 0.4 4.6 34.9</td>
<td>14.7 1.5 10.2 30.3</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** D=Disadvantaged; MC= Middle Class; A=Affluent

Figures are not comparable across countries as educational systems are not structured homogeneously in Latin American countries. Primary education consists of 6 years (in Costa Rica, Mexico and Peru) to 8 years (in Brazil and Chile). Secondary education counts from 3 years (in Brazil) to 7 years in Mexico (including secundaria, normal basica, preparatoria, bachillerato y tecnica commercial con requisito de secundaria). Completing secondary means between 11 and 13 years of education (11 for Brazil, Costa Rica and Peru, 12 for Argentina and Chile, and 13 in the case of Mexico).

**Source:** Authors’ calculations.
Table 7 focuses on education levels of household heads. As expected, in all countries income classes are strongly correlated with education. In comparison with the other income groups, middle-class household heads are more likely to have incomplete secondary education (or even just primary completed in the case of Argentina and Costa Rica). In all countries, household heads having completed only primary education or less are more often poor, while completed secondary education is more likely to be a characteristic of affluent households than of the middle classes. University seems to be restricted to the affluent as the gap remains important with respect to middle-class figures (more than 20% in all countries).

Table 8. Main sectors of economic activity and labour status (household heads only)

<table>
<thead>
<tr>
<th></th>
<th>Argentina (urb)</th>
<th>Uruguay (urb)</th>
<th>Brazil</th>
<th>Chile</th>
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<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing</td>
<td>8.1</td>
<td>4.0</td>
<td>10.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Mining, Electricity, Water supply</td>
<td>11.7</td>
<td>11.5</td>
<td>29.3</td>
<td>4.2</td>
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<tr>
<td>Manufacturing</td>
<td>26.7</td>
<td>26.6</td>
<td>26.3</td>
<td>16.6</td>
</tr>
<tr>
<td>Construction, Transport, Communication</td>
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<td>5.8</td>
<td>5.1</td>
<td>19.4</td>
</tr>
<tr>
<td>Wholesale, Hotels, Restaurants</td>
<td>18.8</td>
<td>16.7</td>
<td>7.8</td>
<td>29.8</td>
</tr>
<tr>
<td>Public administration, Education, Health</td>
<td>14.4</td>
<td>18.5</td>
<td>11.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Other services</td>
<td>16.9</td>
<td>16.9</td>
<td>9.3</td>
<td>23.2</td>
</tr>
<tr>
<td>% active occupied/total</td>
<td>63.6</td>
<td>64.9</td>
<td>81.6</td>
<td>60.7</td>
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</table>

Geographic coverage of surveys

<table>
<thead>
<tr>
<th></th>
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<th>Mexico</th>
<th>Peru</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
<td>A</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing</td>
<td>33.7</td>
<td>18.4</td>
<td>6.5</td>
</tr>
<tr>
<td>Mining, Electricity, Water supply</td>
<td>1.1</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10.5</td>
<td>14.2</td>
<td>12.3</td>
</tr>
<tr>
<td>Construction, Transport, Communication</td>
<td>10.8</td>
<td>18.1</td>
<td>16.5</td>
</tr>
<tr>
<td>Wholesale, Hotels, Restaurants</td>
<td>21.0</td>
<td>22.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Public administration, Education, Health</td>
<td>5.6</td>
<td>9.3</td>
<td>22.2</td>
</tr>
<tr>
<td>Other services</td>
<td>17.4</td>
<td>15.8</td>
<td>18.1</td>
</tr>
<tr>
<td>% active occupied/total</td>
<td>57.0</td>
<td>80.4</td>
<td>84.2</td>
</tr>
</tbody>
</table>

Geographic coverage of surveys

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>National</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: D=Disadvantaged; MC= Middle Class; A=Affluent

Figures shown are for the middle sector household heads; for disadvantaged and affluent. Columns may not sum to 100% as some sectors of economic activity are not reported here.

Table 8 shows the proportion of household heads that are economically active and occupied and their sector of economic activity, by income classes. As Argentinean and Uruguayan data are exclusively urban, sectors are not strictly comparable with other countries that present nationwide coverage.
There is a positive correlation between income and the proportion of active and occupied heads, with the notable exception of Peru where the relation is completely inversed: disadvantaged household heads are more often active and occupied but mostly in agriculture (82%) where incomes usually are very low and might reflect household subsistence production rather than labour market participation.

In urban Argentina and Uruguay, disadvantaged households are more likely to be employed in wholesale, hotels and restaurants (and construction for Uruguay). Middle-class households are more often employed in service sector in Argentina. In all other countries, the agricultural sector is mainly occupied by the poor, while the service sector (Public Administration, Education and Health as well as other services) is associated with higher ranks on the social scale. Latin America’s middle class works more often in manufacturing and construction sectors (also wholesale, hotel restaurants).
V. INTERGROUP INCOME GAPS: A HINT AT SOCIAL MOBILITY POTENTIAL

Social mobility, intrinsic to income and middle class size evolution overtime, is often analysed in terms of intergenerational mobility, which considers the socioeconomic status differences between parents and children (OECD, 2010, Daude (2011)). This mobility reflects the changes in social status inside the family, in particular the possibility to climb the social ladder, as a result of better socio-economic conditions.

Intergenerational mobility is the result of several elements, which range from inherited abilities and social context to environmental factors. The latter are shaped by the policies determining access to human capital formation, such as public support for early childhood development, primary, secondary and tertiary education, as well as redistributive policies (e.g. tax and transfer schemes).

In what follows, we examine the gaps across income classes, using the median income-based distribution of households, and take these distances as an indication of mobility potential of households to move along the income ladder (i.e. a poverty gap, a middle class gap from the poverty line, from the median income and from the middle class upper threshold). In a nutshell, we gauge mobility potential as the distance to climb into the next income group or to avoid falling into a lower income group, estimating the potential to move up and down the social (i.e. income) ladder based on total household income.12

We calculate several indices to gauge the “potential” of income groups to climb the ladder that can provide useful signals to foster mobility. To do so, we use our median income-based definition (50-150% of the median total household income, adjusted for family composition using the OECD adult equivalent scale). This has the advantage of being both country-specific and comparable across countries. To simplify interpretation, we distinguish a lower and upper middle class, as the vulnerability to exit middle class is unlikely to be the same for both categories.

Indicators are calculated as “gaps” or mean “income distance” over population, indicating the mean shortfall from respective thresholds. All indicators are normalised to 1 to simplify interpretation.

12. Weber (1905) argued that “class stratification” had a clear and important economic dimension, he believed in two other related dimensions of stratification, namely: status and power.
Poor Mobility Potential Index: $MP_{disadvantaged}$

This indicator is calculated by the mean distance of the poor from the lowest income level (0), as a proportion of the poverty line (i.e. normalised to 1) – considering the 50% of median income. The mean is taken over all poor households, as identified by our income-based definition (from 0 to 0.5 of median income). Thus, it measures the average shortfall from the lower income threshold, expressed as a percentage of this line.

The following formula is used to compute the $MP_{poor}$

$$MP_{disadvantaged} = \frac{\sum_{i=1}^{M1} w_i (y_i - 0.5 y_m)}{0.5 y_m (\sum_{i=1}^{M1} w_i)}$$

where

- $M_1 = \text{number of households in the poor group (i.e. whose income is less than 50% of median)}$
- $y_m = \text{median income}$
- $y_i = \text{income of the } i^{th} \text{ household}$
- $w_i = \text{weights}$

This measure, which ranges from 0 to 1, provides an indication of the distance/effort that has already been covered/made to move into the middle class. A high (low) $MP_{poor}$ implies a smaller (larger) income shortfall (distance) to get into the middle class and a higher (lower) mobility potential by the poor.\(^{13}\)

Middle Class Resilience Index: $RES_{middle\_class}$

This indicator is the mean distance of the lower middle class from the relative poverty line (0.5 times the median per capita income) as a proportion of the distance (normalised to 1). The mean is taken over all lower middle class households, as identified by our income-based definition (from 0.5 to 1 times the median income).

The following formula is used to compute the $RES_{middle\_class}$

$$RES_{middle\_class} = \frac{\sum_{i=1}^{M2} w_i (y_i - 0.5 y_m)}{0.5 y_m (\sum_{i=1}^{M2} w_i)}$$

where

- $M_2 = \text{number of households in the lower middle class group (i.e. whose income ranges between 50% -100% of median)}$
- $y_m = \text{median income}$
- $y_i = \text{income of the } i^{th} \text{ household}$
- $w_i = \text{weights}$

\(^{13}\) See also Foster, Greer and Thorbecke (1984).
This measure, which ranges from 0 to 1, provides an indication of the distance of a lower middle class member from the poverty line (0.5 median income), or the effort they already made to stay in the middle class. A high (low) RES\textsubscript{middle\_class} implies a lower (higher) risk of falling into poverty and a higher (lower) resilience of staying in the middle class, as lower middle class individuals would be concentrated close to the median income rather than the poverty line.

Middle Class Mobility Potential Index: MP\textsubscript{middle\_class}

This indicator is the mean distance of the upper middle class from their lower threshold (median income) as a proportion of the distance (normalised to 1). The mean is taken over the upper middle class households, as identified by our income-based definition (between 1 to 1.5 times the median income).

The following formula is used to compute the MP\textsubscript{middle\_class}

\[
MP_{\text{middle\_class}} = \frac{\sum_{i=1}^{M_3} w_i (y_i - y_m)}{0.5 y_m (\sum_{i=1}^{M_3} w_i)}
\]

where

- \( M_3 \) = number of households in the upper middle class group (i.e. whose income ranges between 100% -150% of median)
- \( y_m \) = median income
- \( y_i \) = income of the \( i \)th household
- \( w_i \) = weights

This measure, which also ranges from 0 to 1, provides an indication of the “effort” that has already been made to move into the affluent income group. A high (lower) MP\textsubscript{middle\_class} implies a smaller (larger) income shortfall from the upper middle class threshold and a higher (lower) potential for the upper middle class to move up into the affluent group.

Middle Class Cohesiveness Index: COH\textsubscript{middle\_class}

This indicator is the mean distance of the middle class (50% - 150% of the median income) from the median income as a proportion of the distance. The mean is taken over all middle-class households, as identified by our income-based definition (from 0.5 to 1.5 median income). It gives an indication of the dispersion of household incomes among the middle class.

The following formula is used to compute the COH\textsubscript{middle\_class}

\[
COH_{\text{middle\_class}} = 1 - \frac{\sum_{i=1}^{M_4} w_i |y_i - y_m|}{y_m (\sum_{i=1}^{M_4} w_i)}
\]

where

- \( M_4 \) = number of households in the upper and lower middle class group (i.e. whose income ranges between 50% -150% of median)
- \( y_m \) = median income
- \( y_i \) = income of the \( i \)th household
- \( w_i \) = weights
This measure, which also is between 0 and 1, provides an indication of the degree of polarisation within the middle income group.

A high (lower) COH_{middle\,class} implies a lower (higher) distance from median income (i.e. centre of the middle class distribution range) and a higher (lower) cohesiveness of the middle class. A more homogeneous income distribution might contribute to income equality. So, if on one hand we are confronted with a lower probability to move up the ladder, this also hints at a lower probability to move into poverty.

All indicators have been defined so that a high (low) indicator means a positive (negative) implication regarding social mobility potential.

Figure 3 allows comparing Latin American and OECD countries, showing that, while middle class mobility potential is not very different, mobility potential for the poor and middle class resilience are higher in OECD countries. Uruguay, with the largest middle class in the region, shows also the highest mobility potential for the poor, in addition to the most cohesive middle class.
Figure 3. Social mobility potential in Latin America and OECD
(higher values = better performance)

Note: Median Income-based definition 50%-150% median income.

Source: Authors’ calculations.

Social mobility potential over time in selected Latin American countries

This section analyses the size of the middle class and social the potential evolution of mobility over time in five countries for which several years of consistent household surveys were available.

Our estimations show a substantial retrenchment of the middle class in Argentina. Between 1996 and 2003, Argentina’s middle class shrank by almost 20% (around 10 pp.). This

14. Byrdsall et al. (2000) also analyse middle-class changes in selected Latin American countries in the 1980s and 1990s, using a different middle class definition.
trend was accompanied by a growing disadvantaged population, while the size of the affluent strata remained unaffected. Unstable economic performance over the decade has affected lower income groups more than proportionally and resulted in lower social interclass mobility potential. The crisis at the beginning of the 2000s seems to have intensified this trend, leading to increasing poverty rates. Since 2003, the picture has been improving for the poor but the middle class still exhibits low degrees of upward mobility.

Chile represents an opposite case, presenting a very sound and stable increase in the size of the middle class over time (around 49% of total households as of 2006). The latter has been associated with stable interclass mobility potential and poverty reduction. Higher-income households have represented a constant share of the population.

Costa Rica shows progress on all fronts (i.e. poverty reduction and middle class increase) until 2007. In 2008-09 there was a surge in poverty rates and a reduction in mobility potential, linked to poorer economic performance (i.e. higher inflation and lower growth).

**Figure 4. Middle class size and social mobility potential**

### Argentina

- **Middle Class Size**
  - Disadvantaged
  - Middle Class
  - Affluent

### Chile

- **Middle Class Size**
  - Disadvantaged
  - Middle Class
  - Affluent

- **Social Mobility**
  - MPS-disadvantaged
  - MPS-middle_class

- **Social Mobility**
  - MPS-disadvantaged
  - MPS-middle_class
Costa Rica

Note: Median Income-based definition 50%-150% median income.

Source: Authors’ calculations.

Transition matrix

To complement the concept of mobility potential, we examine if this potential to move up for the disadvantaged (or avoid moving down for the middle class), measured as distances to the respective threshold, has resulted in actual mobility. Panel data observations are needed to address this question. We were able to compute panels for Chile between 2000 and 2003 and for Peru over the period 1998-2006.

Given the different time frames and the corresponding transition matrices (three years in the case of Chile, one year for Peru), results are not comparable across countries as observed mobility will be rationally higher over a larger period of time.

Table 9. Chile Transition Matrix

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
</tr>
<tr>
<td>Poor</td>
<td>26.27</td>
<td>51.76</td>
</tr>
<tr>
<td>MC</td>
<td>19.9</td>
<td>51.9</td>
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<tr>
<td>Rich</td>
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<td>45.47</td>
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<tr>
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<td>49.97</td>
</tr>
<tr>
<td>Entire Dataset</td>
<td>19.07</td>
<td>48.46</td>
</tr>
</tbody>
</table>

Notes: D=Disadvantaged; MC= Middle Class; A=Affluent. Transition matrix representing the percentage of disadvantaged/middle class/affluent in 2003 depending on their class in 2000.

Source: Authors’ calculations based on 2000 and 2003 national household surveys in Chile (Panel observations only).

Mobility is quite important in Chile, as only 26% of the poor in 2000 were still poor after a three-year period. In the same way, only 39% of the affluent households remain affluent.
Upward mobility affected 27.8% of all households, but downward mobility is also high (29.5% of households decent one or two income group). According to these numbers, only 42.7% of Chilean households do not change income groups between 2000 and 2003.

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>MC</td>
<td>A</td>
<td>Panel</td>
<td>Entire Dataset</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>63.61</td>
<td>32.04</td>
<td>4.36</td>
<td>21.67</td>
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<tr>
<td>MC</td>
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<td>18.62</td>
<td>49.67</td>
<td>48.52</td>
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<tr>
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<td>67.75</td>
<td>28.66</td>
<td>29.9</td>
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<tr>
<td>Panel</td>
<td>22.85</td>
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<td>29.61</td>
<td></td>
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</tr>
<tr>
<td>Entire Dataset</td>
<td>21.64</td>
<td>46.86</td>
<td>31.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: D= Disadvantaged; MC= Middle Class; A=Affluent. Transition matrix representing the percentage of disadvantaged/middle class/affluent in 2006 depending on their class in 2005.

Source: Authors’ calculations based on 2005 and 2006 national household surveys in Peru (Panel observations only).

As expressed above, the reference period for the following matrix is not the same as for Chile; results are thus not comparable between countries. Nevertheless, data for Peru allow us to construct panels for a larger period of time (1998-2006), and to observe the evolution of mobility between classes over time.

Figure 5. Observed mobility (using panel data)

Note: Percentage of household staying in the same class or moving (up or down) through the social scale from one year to another (left), and decomposition of mobility into upward mobility (household moving up into the social classes scale and downward mobility (right).

Source: Authors’ calculations based on national household surveys in Peru (Panel observations only).
It appears from the 2005-2006 transition matrix that upward mobility is quite high for the poor compared to downward mobility of affluent households. Since 1998, Peru increased its social mobility: upward mobility rose by 70% between 1999 and 2004 (only 11.3% of households in 1999 moved up while they were 19.3% on 2004). In the meantime, downward mobility decreased. This is consistent with the strong rise in our Poor Mobility Potential Index as expressed above. This indicator, measuring the distance of the poor from the middle class threshold, appears to give some indication about the mobility we observe on panel data.
VI. CONCLUSIONS

The estimation of the size and the analysis of some relevant characteristics of the Latin American middle class reveal similar patterns across the region. The region shows smaller middle classes than more advanced countries, pointing to its higher levels of inequality. As expected, income groups are strongly correlated with education, pointing to the importance of education access and quality in enhancing social and economic welfare. In most of the countries in our sample, agriculture remains a primary sector of employment for the poor, while the middle-class works more often in manufacturing and construction sectors. Comparisons between Latin American and OECD countries show that, while middle class mobility potential is not very different, the mobility potential of the poor as well as the resilience of the middle class are significantly higher in OECD countries. Therefore, attention should be paid to mitigating the impact of economic hardship on middle class families, as they are more vulnerable to fall into poverty. Last but not at least, the impact that macroeconomic performance appears to have had on the middle class – shrinking in countries during episodes of crisis and high volatility – strengthens the role of macroeconomic stability in fostering the middle class and its contribution to economic development.
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