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The Growing but Vulnerable Middle Class in Latin America

**GROWTH PATTERNS,
VALUES AND
PREFERENCES**

The Growing but Vulnerable Middle Class in Latin America.

Growth Patterns, Values and Preferences

**Public Policy and Productive Transformation Series
N°17 / 2014**

Michael Penfold and Guillermo Rodríguez Guzmán

**The Growing but Vulnerable Middle Class.
Growth Patterns, Values and Preferences.**

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Foreword

Productive transformation has been one of the areas that CAF, as the development bank of Latin America, has fostered as a necessary condition for reaching a high and sustainable development in the region.

The experience and expertise generated in each project during the last decades have made the Institution a Latin American point of reference in areas such as competitiveness, Corporate Governance, local and business development, and productive inclusion.

The public policies necessary to drive productive transformation are based on the development of those capabilities aimed at the implementation of good practices and specific supports for improving business management and productivity. Thus, CAF makes its knowledge and expertise available and offers efficient support to a variety of sectors while, at the same, it creates documentation and does research on success stories that are relevant for the region.

“Public Policy and Productive Transformation” consists of a series of documents aimed at disseminating those experiences and success stories in Latin America as an instrument for spreading the knowledge that CAF makes available to the countries in the region so that better practices with respect to business development and productive transformation practices can be implemented.

L. Enrique García
Executive President

Executive Summary

The accelerated growth of the middle class that has taken place during the last decade in Latin America, as well as in other developing regions, has renewed the interest in this social group's impact on economic growth and social change. However, this stands in contrast with the ambiguity and confusion with which the middle class tends to be identified and quantified. Most studies focus on the analysis of income and fail to assess the values and preferences of middle classes in Latin America, a dimension that can be of great use to understand this phenomenon. This study aims to quantify the size of the middle class, not only from an income perspective but also delving into the subjective factors that determine the perception of belonging to the middle class, as well as looking at some of the value dimensions that characterize it.

Key Search Words: middle class; vulnerable class; values; preferences; middle class by income; middle class by self-perception; political ideology; institutions; social capital; political activism; social protection; post-materialism.

Introduction

The political and economic changes witnessed in Latin America during the first decade of the new millennium have been boosted, among other factors, by the emergence of the middle class. This phenomenon has also been observed in other developing regions throughout the world, especially in Asia and Eastern Europe, and undoubtedly entails fundamental challenges for the societies and public institutions in our continent and other regions. The growth of the global middle class currently lies at the center of an important debate: What makes the middle class different to other segments of society? Is the upward trajectory of this new social group truly irreversible? What impact can the middle sectors have on economic development and as a motor of social change? Are its values clearly different from those of other segments of the same society? How do these preferences play out *vis-a-vis* other developing regions? Are its values and preferences determined by a self-perception of belonging to this specific social group, or are they influenced by the cultural and institutional factors prevalent in the different developing countries and regions?

The relevance of the middle class as a motor of development is linked to a broadly shared idea: lower levels of inequality and a growing middle class are key elements that contribute to greater levels of development (Persson and Tabellini 1994; Easterly 2001; OECD 2011). Above a certain income threshold, the possibility of investing in goods that improve long-term growth perspectives tends to increase significantly. The ability to save and purchase durable goods with high underlying costs, such as homes and human capital, becomes a priority for this new middle class and consequentially, plays a dynamic role in economic development (Galor and Zeira 1993; Doepke and Zilibotti 2007). Middle classes also improve development prospects in so far as their growing purchasing capacity and changes in preferences lead them to demand higher-quality and more complex goods (Murphy, Schleifer and Vishny 1989; Schor 1999). There are also those who argue that middle classes create an entrepreneurial dynamism that is necessary to create new businesses, thus, generating better job opportunities and productivity growth¹ (Acemoglu and Zilibotti 1997; Lora and Castellani 2014).

Nevertheless, the debate around the importance of the middle class is not only limited to its potential impact on income levels; usually the rise of the middle class goes hand in hand with changes in the attitudes and preferences of those who belong to it, and these

¹ That being said, Banerjee and Duflo (2007) have found no evidence to support the idea that middle classes are more entrepreneurial in nature. Quite the contrary; the number of middle class entrepreneurs is not significantly higher than those from other segments of society, and they tend to operate small-scale businesses that are rarely profitable. Such results could be explained by the low income threshold used to identify the middle class.

may exert great influence on their political and social context. For example, such an impact can be attributable to the middle class as a source of values promoting hard work, saving and frugality (Weber, 1905[2005]); or because it supports the emergence and subsistence of democracies (Lipset, 1959); or because it promotes political stability given its inclination towards ideological moderation (López-Calva, Rigolini and Torche, 2012); or because it plays a role in social cohesion by mitigating tensions between the rich and the poor (Birdsall, 2010); or because it contributes to the introduction of reforms aimed at human capital accumulation and improvements in the governance of the State (Loayza, Rigolini and Llorente, 2012). In other words, middle classes are seen as fertile soils for the promotion of certain “desirable” values that are conducive to development.

Ultimately, these arguments echo those of the modernization theory that characterized development studies in the fifties and sixties. However, this line of reasoning has its detractors; those that see the rise of the middle class as a process that in itself can be disruptive and non-linear (Hirschman and Rotschild 1973; Huntington, 1991). Indeed, the expansion of the middle class can be accompanied by certain types of attitudes and desirable preferences, but the institutional weaknesses of countries when responding to these new demands can in fact turn middle classes into a source of instability (Huntington, 1991). The limited capabilities of the State to respond to more sophisticated demands, its low capacity to promote the reforms that could increase the levels of support and the constraints that limit the promotion of a new public policy agenda can ultimately become an obstacle for social and political change (O’Donnell 1973). There are also those that maintain that the rise of the middle class generates so much conflict that, faced with political instability, it chooses to support more conservative social and political views (O’Donnell 1973; Nun 1967). Under this vision, the “desirable” effects of the rise of the middle class, for example its democratizing impact, are only possible when this social group shares a broad social alliance with popular sectors (Rueschmeyer, Stephens and Stephens, 1992; Collier and Collier 1991).

This debate is especially complex in Latin America, as in other developing regions, given the ambiguity and confusion that tends to affect the ways in which we identify and quantify this segment of society. Efforts seem to focus on providing descriptive statistics of different income groups that may not necessarily be defined as middle class (López-Calva and Ortiz-Juárez, 2011). Additionally, income growth has been considered, perhaps mistakenly, as the main mechanism for the promotion of social change, ignoring that individuals’ self-perception of belonging to a given social group can have greater influence on their public policy preferences, as well as explaining the intra-group cohesiveness that allows the mobilization of demands directly linked to the issues that affect individuals the most (Lora and Fajardo 2011). Hence, any attempt to approach the debate about the middle class in Latin America requires a holistic analysis that brings together the objective knowledge provided by income measurements, with other measures focused on values and preferences.

Despite the difficulty in bringing both perspectives together, as they intrinsically measure different dimensions of the same social phenomenon, they must be considered jointly in order to understand (albeit not necessarily explain) the most distinctive features of this process.

Even though other studies have gone beyond the strictly economic and carried out a more descriptive analysis of the characteristics of middle classes in Latin America, they do not compare regions or they focus on topics less relevant for the formulation of public policies that can lead to increasing levels of well-being and development. Such is the case of the global study by the Pew Research Center (2009), which includes some Latin American countries² and takes into account the perceptions of middle classes about democracy, although it seems more interested on environmental, religious and moral topics. Another recent study, by the Asian Development Bank (2010), makes another contribution in so far as it includes factors such as political activism and the perception of the middle class about the way market mechanisms work; however, it concentrates on regional comparisons with an emphasis on South East Asia. Finally, López-Calva, Rigolini and Torche (World Bank, 2012) performed an econometric exercise for Latin America to determine if the self-perception of belonging to the middle class modified in any way some of the values linked to ideology, trust in institutions, legitimization of political violence and inter-personal trust. The authors come to the conclusion that in most cases these relationships are monotonous regarding income levels, but the study fails to discuss at a deeper level the real implications that the observed values could have on the formulation of public policies in the region.

Considering the limitations in the current literature, our study aims to make several contributions in an attempt to expand knowledge about the topic so that, ultimately, there can be an effective execution of public policies in light of the new realities emerging from this phenomenon. Firstly, we review the literature on the income thresholds considered to define middle classes as such, and then characterize the phenomenon focusing specifically on Latin America and comparing it with other developing regions such as South East Asia, Eastern Europe, the Middle East and Sub-Saharan Africa. This allows us to determine the actual size of the phenomenon in the region as well as compare results with other parts of the world. Secondly, we attempt to understand the determinants of the self-perception of belonging to each of the social classes in Latin America (and also made comparisons with other regions). This analysis allows us to identify the most important social differentiators that affect the subjective assessment of belonging to the middle class. Thirdly, by taking advantage of the wealth of information in the *World Values Survey* we analyze seven dimensions of the values and preferences of the middle class: political ideology, trust in institutions, social capital, political activism, free-market orientation, social protection orientation and post-materialism. Finally, based on this characterization we discuss some of the potential implications of the rise of the middle class for public policy agendas in Latin America.

² Argentina, Brazil, Chile, Mexico and Venezuela, as well as other countries such as Bulgaria, Egypt, India, Malaysia, Poland, Russia, South Africa, Ukraine and India.

Measuring the middle class

Different measures of the middle class

The measurement of middle classes is quite a controversial and difficult topic given the number of existing methodologies. In fact, as in every type of segmentation, the use of thresholds to identify the fact of belonging or not to the middle class is somewhat arbitrary. The literature identifies five large groups of measurements: i) as a specific segment of the income distribution function; ii) as a ratio of some type of central tendency measurement, typically the median; iii) a measurement based on absolute limits; iv) a combination of absolute measurements and one of the two relative measurements mentioned above; and v) the self-perception of belonging to a specific class.

In the first group, where studies focus on a segment of the income distribution function, we highlight the work of Easterly (2001), for whom individuals between the third and eighth deciles of the population can be considered as middle class. Also worth mentioning are Alesina and Perotti (1996), and Solimano (2008), for whom the middle class consists of people with an income level between the fifth and eighth decile, and the third and ninth decile, respectively. The main issue with this type of measurement is that the proportion of the population that is understood to be middle class is always fixed; hence, the segment's growth depends on total population growth. On top of that, the lack of consensus regarding the segments that can be considered as middle class makes this type of segmentation even harder.

The second group of studies, which identifies the middle class as a proportion of a central tendency measure, manages to solve the first of the deficiencies mentioned above. Birdsall, Graham and Pettinato (2000) consider the middle class to be a proportion of the population that ranges between 0.75 and 1.25 times the income distribution median. Other authors such as Davis and Huston (1992) and Blackburn and Bloom (1985) choose broader thresholds, but always seen as a proportion of the median. The difficulty with this type of segmentation is that it prevents comparisons between countries, as it uses different poverty thresholds based on the income distribution median of each country.

The third group aims to establish absolute income or consumption levels, controlled by Purchasing Power Parity (PPP), to define what the middle class is. This mechanism allows for international comparisons, but it is nevertheless arbitrary in so far as there is no consensus around the thresholds that must be used to segment middle classes. Banerjee and Duflo (2007) start with two measures of the middle class based on daily per capita consumption

levels of between 2 to 4 USD, and 6 to 10 USD. Ravallion (2009) establishes thresholds based on people with daily income levels between the median of developing countries (2 USD) and the poverty line in the US (13 USD). The World Bank (2007) uses the average daily income of Brazil and Italy, which ranges from 4.75 to 10.95 USD. Others such as Kharas (2010) or Kharas and Gertz (2010) analyze the segment earning between 10 and 100 USD per day. Finally, both Birdsall (2012) and the World Bank (2012) consider individuals earning between 10 and 50 USD per day as members of the middle class. Even though these methodologies establish parameters that allow the comparison of countries, they lack the theoretical substantiation necessary to establish these thresholds.

The fourth possibility combines the application of an absolute limit and a relative measure. The most illustrative example of this methodology is the work carried out by Birdsall (2010), which uses a level of income of 10 USD per day as the lower limit, and establishes the upper threshold at the 95th percentile of the income distribution function. These measurements share the same difficulties referred to in the studies described above.

Finally, the fifth group of studies employs information on the self-perception of belonging to the middle class gathered from survey respondents. This is the methodology used by the Asian Development Bank (2010), Lora and Fajardo (2011) and the World Bank (2012), and can be useful to compare the values and ideas of the middle class given that the perception of belonging to a given segment can be associated to a greater degree of social cohesion. Such social cohesion can promote the emergence of common visions and values that can lead individuals to act in a consistent way, apart from mobilizing the middle class as a social group towards the fulfillment of shared objectives and desires. In so far as these studies prioritize subjective perceptions, the most important question they have to answer is if the preferences of middle classes are uniform from one country to another or, on the contrary, if they are determined by other distinct features of these social segments.

Generally speaking, the actual measurement of the middle class is a highly subjective exercise, and therefore variable in terms of its results. Therefore, this type of exercise would do well to combine several methodologies in order to analyze in greater detail the dynamics that wish to be targeted.

Justification for the income measures used in the study

Considering the comprehensive nature of our proposed analysis, we decided to use two methodologies to measure the middle class. The first is an absolute measurement of the global and Latin American middle classes, and the second is based on the perception of belonging to the middle class and aims to explore the values and preferences of middle classes in Latin America.

Regarding the absolute measurement, we begin with a classification of five social classes defined as follows:

- i) Lower class: individuals with daily income levels below 4 USD, on a Purchasing Power Parity (PPP) basis.
- ii) Vulnerable class: individuals with daily income levels between 4 and 10 USD, on a PPP basis.
- iii) Lower middle class: individuals with daily income levels between 10 and 20 USD, on a PPP basis.
- iv) Upper middle class: individuals with daily income levels between 20 and 50 USD, on a PPP basis.
- v) Upper class: individuals with daily income levels greater than 50 USD, on a PPP basis.

The lower class is the easiest to pinpoint, as it is commonly defined as that with income levels below 2 USD per day, which is an internationally accepted measure for poverty. However, this lower limit lies below the 4 USD per day poverty line defined for Latin America. Therefore, this last measurement is more appropriate as the international convention would undervalue the number of individuals in the lower class, and include that part of the population in the middle class measurements despite their income levels not being consistent with such classification (Birdsall 2010; López-Calva and Ortiz-Juárez 2011; OECD 2011; Castellani and Parent 2011).

On the other hand, the lower and upper thresholds of the middle class are harder to determine. However, two important theoretical contributions can help us define the lower limit with greater precision. First, the distinguished work by López-Calva and Ortiz-Juárez (2011) helps to establish the segments to be considered as middle class by means of a convincing theoretical argument that is not found in the other types of measurements: the middle class is characterized by a certain degree of stability that allows it to withstand external shocks without its well-being or quality of life being significantly compromised. The practical implication of this notion is that being middle class means an individual has reached a level of income that reduces the probability of returning to poverty. Accordingly, and making use of panel data available for three Latin American countries, the authors conclude that an income level of around 10 USD a day translates into a relatively low probability of recidivism, which is close to 10%.

Several authors, such as Birdsall (2012) and the World Bank (2012), also stand by the arguments of López-Calva and Ortiz-Juárez (2011) as a valid method to determine the lower threshold for the middle class. However, despite the attractive regional specificity of the study and its measurement of middle classes based on a defining conceptual feature, we keep some reservations regarding the arbitrary nature of the chosen 10% probability of poverty recidivism in a 5-year period as the inflection point to assess the middle class. In that sense, a threshold of 20 USD per day could also be useful to determine the limits of what is and is not middle

class, as that level of income would reduce the probability of recidivism to practically zero, as calculated by López-Calva and Ortiz-Juárez (2011), allowing us to discard the previous concern.

The second contribution useful in establishing the lower threshold for the middle class, also consistent with the arguments of López-Calva and Ortiz-Juárez (2011), comes from the *Ecosocial* surveys, which reveals that the majority of individuals that identified themselves as members of the middle class, or lower middle class, in most cases had daily income levels of approximately 10 USD, while those that considered themselves to be members of the upper middle class had daily income levels that were generally above 20 USD (Birdsall 2012).

Regarding the middle class upper threshold, the discussion is less definitive and tends to be more arbitrary, as there are cutoff points that range from 10 USD (Banerjee and Duflo 2007) and 100 USD per day (Kharas 2010). If we take these as reference points, we can work under the assumption that the upper threshold must be somewhere in the continuum between 10 and 100 USD per day³. Both Birdsall (2012) and the World Bank (2012) use 50 USD per day as the upper limit, substantiating this on the results of the *Ecosocial* surveys. According to these readings, individuals that perceive themselves as belonging to the middle class are mostly concentrated around the 10 USD per day level, but the tail of this distribution reaches 50 USD per day, and hence, such a level is considered as an acceptable upper cut-off point for the measurement. We also subscribe to this characterization in our study. Lastly, the most affluent group is residually defined as those individuals with income levels above 50 USD per day.

Our analysis employs data from the World Bank's *PovCal* software, which based on household sample surveys offers information about the percentage of people that live with less than a given monthly amount in US dollars on a Power Purchasing Parity (PPP) basis. The number of individuals belonging to each class is obtained by combining the information from *PovCal* with the population data from UNCTAD (2014).

Justification for the measure of self-perception of belonging to the middle class used in the study

Most studies have focused almost exclusively on offering descriptive statistics regarding the size of the middle class based on relatively arbitrary income thresholds. However, the debate seems to have ignored the fact that the self-perception of belonging to a social class can be a much more relevant factor in terms of the cohesive and homogeneous mobilization of certain segments of society *vis-a-vis* their demands and proposals on issues that affect them. In fact,

³ The 10 USD upper limit can be discarded based on López-Calva and Ortiz-Juárez (2011), while Kharas's threshold (2010) can also be discarded as not even 0.7% of the Latin American population actually reaches that level of income. In fact, for countries such as Dominican Republic, El Salvador, Honduras, Nicaragua and Venezuela not even 0.15% of the population earns more than 100 USD per day (calculations based on information from the World Bank's *PovCal* software).

Hodge and Treiman (1968), Jackman and Jackman (1982) and Wright and Singelmann (1982), all quoted by Lora and Fajardo (2011), argue that it is important to include the perceptions of individuals as in many cases these do not match their objective income distribution positioning. Nevertheless, these perceptions tend to affect the behaviors and decisions of these self-defined social groups.

Size of the global and Latin American middle classes measured by income

The development of the global middle class is a fairly recent process, which is on an upward trend and leveraged by growth in the developing world. In 1981, more than 83% of the world population could be considered lower class (daily income below 4 USD), and even though that proportion has been cut in the last three decades, two out of every three people still belong to the less affluent segments of society: 4.58 billion people in 2010⁴. In this sense, overcoming poverty has allowed the emergence and growth of a social segment with higher levels of income, but that cannot be considered as middle class given its state of vulnerability. This so called vulnerable group represents 22.34% of the population, or 1.55 billion people. On the other hand, the middle segments have grown significantly: between 1981 and 2010 the segment earning 10-20 USD per day doubled and now represents 7.98% of the population, while those earning 20-50 USD per day rose from 1.2% to 2.9% of the global population. Finally, the most privileged class still represents a very small segment of global income distribution and is comprised by less than 36 million people, 0.5% of the total (see Graph 1).

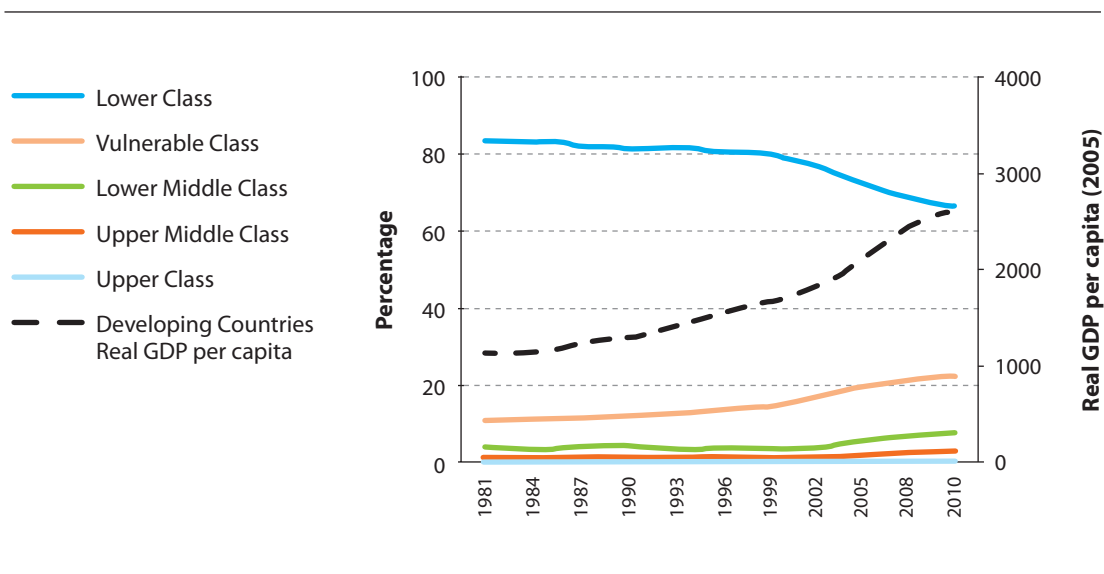
It is evident that the process through which poverty has been importantly reduced and the global middle class has emerged seems strongly linked with the growth of developing countries. It is evident that the process through which poverty has been importantly reduced and the global middle class has emerged seems strongly linked with the growth of developing countries. In fact, when comparing the changes in the composition of global income with the variation in real GDP per capita of this group of countries there is a very high correlation that may not actually reflect a causal relationship, but that nevertheless offers evidence about the interaction between both variables⁵. Similarly, Kharas (2010) and Cardenas, Kharas and Henao (2011) show, from both a global and Latin American perspective, that economic growth of developing countries seems to be importantly related to the expansion of the middle class, notwithstanding the plausibility of a problem of double causality.

Despite the fact that this general scenario can be considered favorable in so far as it has meant a boost to middle class growth and a significant reduction of the more impoverished segments, it still entails huge challenges in terms of the design of development policies. Specifically, it

4 Even though it is not reflected in the graph, we must point out the significant reduction of extreme poverty (individuals with a daily income below 2 USD) registered in the lower segments, from 69% in 1981 to 40% in 2010. It is also worth highlighting that this significant reduction is partly attributable to the high incidence of individuals with income levels very close to the 2 USD per day threshold (Ravallion 2009).

5 The correlations between the growth of real GDP per capita of developing countries and the different measures for the different levels of income, are as follows: Lower Class -0.98; Vulnerable Class 0.99; Lower Middle Class 0.88; Upper Middle Class 0.89; Upper Class 0.94.

GRAPH 1. COMPOSITION OF GLOBAL INCOME AND REAL GDP PER CAPITA GROWTH IN DEVELOPING COUNTRIES



Source: Own calculations based on World Bank (2014) and UNCTAD (2014)

proposes a new problem when taking into account the low institutional capability of the State in these developing countries, as they are now under the obligation of satisfying the needs of the poor, still numerous and with ever-growing needs, as well as called upon to develop support programs for those segments that have overcome poverty, but that are nonetheless in a vulnerable situation and at risk of regressing to that condition. This duality embodies one of the largest challenges for the formulation of public policies in the region over the next years.

Changes in income composition in developing regions

Global trends seem to point to a reduction of poverty and an expansion of vulnerable groups, but this evolution also reveals variations among the different developing regions.

China epitomizes this shrinking of the lower classes; in 1990 almost the totality of its inhabitants (98%) lived in a situation of poverty, but in 2010 the proportion of the population with a daily income below 4 USD stood at 57%⁶.

Consequentially, the vulnerable segment of the population grew significantly in China and by 2010 represented 33% of the population. Some academics, such as Kharas and Gertz (2010), are

⁶ More specifically, a large part of the reduction of poverty was concentrated in groups with income levels below the international poverty line (2 USD per day), which between 1990 and 2010 dropped from 84% to 27%.

even more optimistic than what this data suggests as their estimates⁷ indicate that by 2030 up to 74% of Chinese citizens could be members of the middle class. In this sense, the role that Asia and especially China can play in the development of the global economy is significant as the region is expected to become the main global consumption hub by 2030, replacing North America and Europe. According to the authors, the Asia Pacific region will go from representing 28% of the global middle class and 23% of global consumption in 2009, to represent 66% and 59% of these measures, respectively, by 2030; on its own, China could end up representing 18% of total consumption of the global middle class by 2030. Additionally, the authors propose that an alternative scenario of greater growth could be possible by boosting an even faster expansion of consumption, be it through a reduction of saving rates (which are especially high in China when compared to other countries in the region), or increasing the direct participation of household income in GDP⁸.

A similar phenomenon, but of smaller magnitude, was replicated in South East Asia, which by 2010 had seen its lower class shrink from 91% to a little over 71%, while vulnerable segments rose to 22% of the region's population. At the opposite point, the territories that comprise Sub-Saharan Africa remain stagnated and have not achieved significant changes in income composition. In the Middle East, growth has translated into modest poverty reduction levels and a subsequent expansion of vulnerable segments. Specifically, the least affluent class of that region shrunk from 69% to 49% of the total population, while those in a situation of vulnerability increased from 25.8% to 40% of the total.

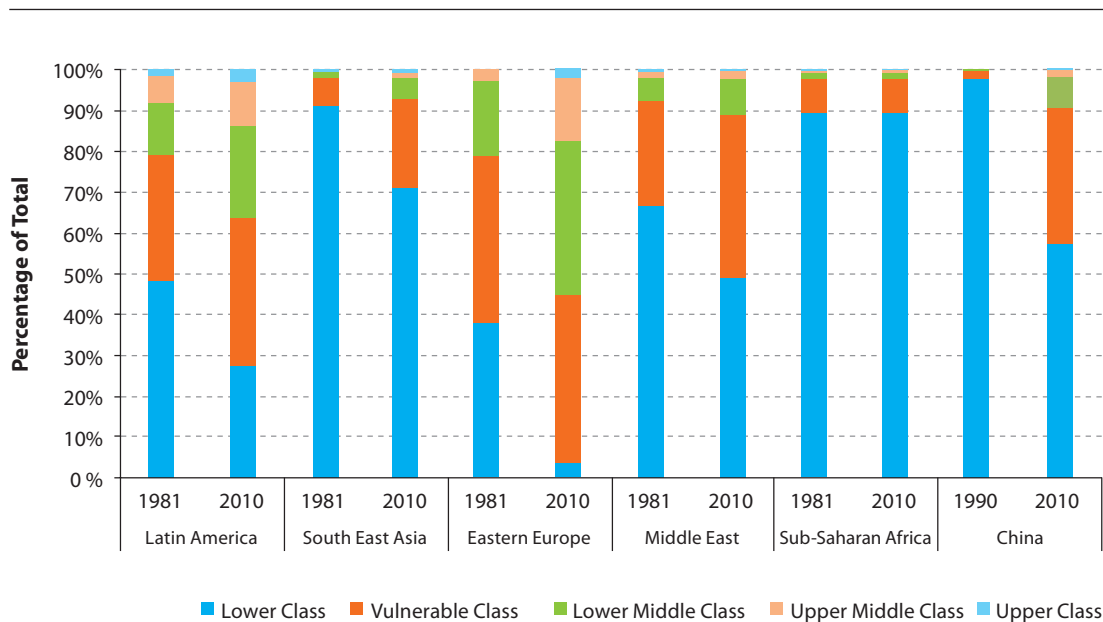
In Latin America, the transformation of income composition is consistent with that of other regions, as there has also been a reduction of the lower income groups together with an increase in size of the vulnerable segments (see Graph 2). However, the most salient feature in the region has been the significant growth of the lower middle class, which by 2010 had risen to 22% of the region's population (133 million people). Meanwhile, those earning between 20 and 50 USD per day currently represent 11% of the Latin American population (66 million people). Despite the fact that these levels are far from those observed in Eastern Europe – where the lower middle class totals 38% of the population – the sizeable expansion of the middle class is nevertheless an important milestone.

Finally, the number of individuals with income levels above 50 USD daily also grew, but remains below 3% of the total (See Graph 3). Additionally, it is worth mentioning that greater budget restrictions in Latin American countries, attributable to both the improvement of their terms of

⁷ The authors estimate growth by using a Cobb-Douglas function, where growth is dependent on capital accumulation, size of the workforce and total factor productivity (TFP). The model also assumes a process of technological convergence that will continue at historical rates, but only for those countries that have a proven capability to adapt and take advantage of new technologies in their productive processes. For additional details, please refer to Kharas and Gertz (2010).

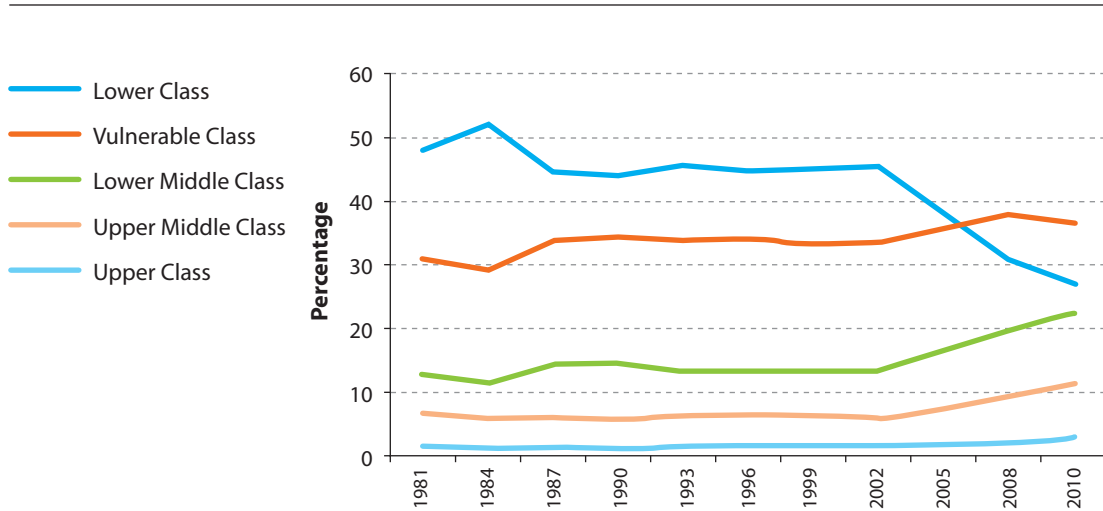
⁸ They propose the use of surpluses accumulated by state-owned companies to reduce taxes and other labor charges so as to expand the disposable income of families.

GRAPH 2. INCOME COMPOSITION BY REGION (5 CLASSES, 1981-2010)



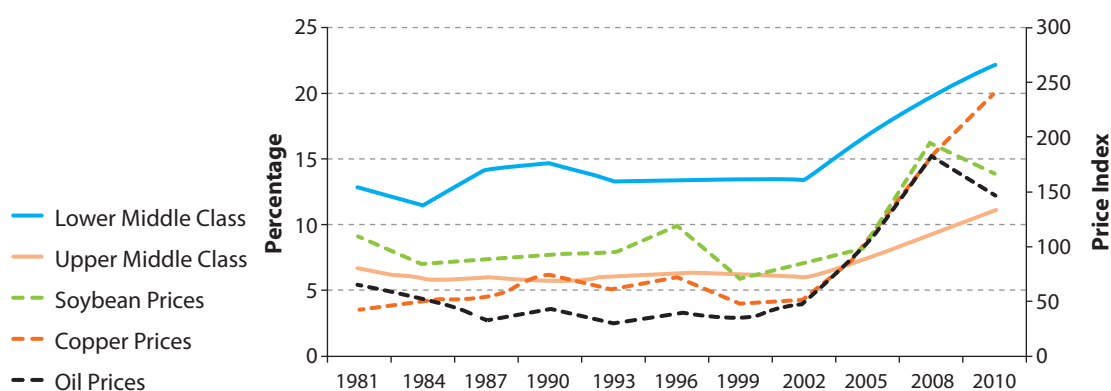
Source: Own calculations based on World Bank (2014)

GRAPH 3. INCOME COMPOSITION IN LATIN AMERICA



Source: Own calculations based on World Bank (2014)

GRAPH 4. GROWTH OF LATIN AMERICAN MIDDLE CLASSES AND THE COMMODITIES BOOM



Source: Own calculations based on World Bank (2014) and UNCTAD (2014)

trade and a number of institutional and political reforms in the last decade, have contributed to establish a context of greater growth and stability than in previous decades.

These favorable conditions may have benefited the expansion of the middle segments by multiplying investment and productive employment possibilities, even though it is quite feasible that a double causality and feedback relationship may have come into play. Consistent with this line of thought, when analyzing the price indices of certain commodities representative of Latin American exports such as copper, soybean and oil, there is an evident upward trend in prices since 2002 that provided these countries with a great influx of resources that contributed to boost economic growth, as well as providing mechanisms that promoted the growth of the middle class (see Graph 4)⁹.

There are two distinctive qualities of income growth in Latin America that make it quite significant when it comes to the formulation of public policies in the region. In the first place, the vulnerable segment has grown substantially, but this needs to be accompanied by large efforts to strengthen support and social security networks (health, education, social security, among others) to prevent vulnerable individuals returning to poverty. Targeted reforms in this sense are of the utmost importance as individuals earning between 4 and 10 USD daily make up the largest segment in Latin America. Secondly, the sheer volume of Latin Americans that can be classified as middle class (almost 200 million) can become a deciding factor in terms of

9 The correlations observed between the size of the lower middle class and the price indices of soybean, copper and oil are respectively, 0.83, 0.97 and 0.88. When looking at the upper middle class these correlations are, respectively, 0.87, 0.97 and 0.91. We must reiterate that despite the lack of causality in this evidence, it does indicate a clear link between the rise of the middle class and the commodities boom observed since 2002.

boosting and leveraging the region's future development. From a strictly economic viewpoint, middle classes could become a key component of the region's transformation process in so far as their higher consumption capacity and greater proclivity towards the accumulation of physical, financial and human capital can become the decisive inputs that change Latin America's long-term trajectory. Also, these new preference structures oriented towards more complex and higher quality products can provide the definitive impetus for key sectors in the economy, such as services, education, banking, construction and manufacturing.

Determinants of the perception of belonging to the middle class: *when being middle class is not the same as feeling middle class*

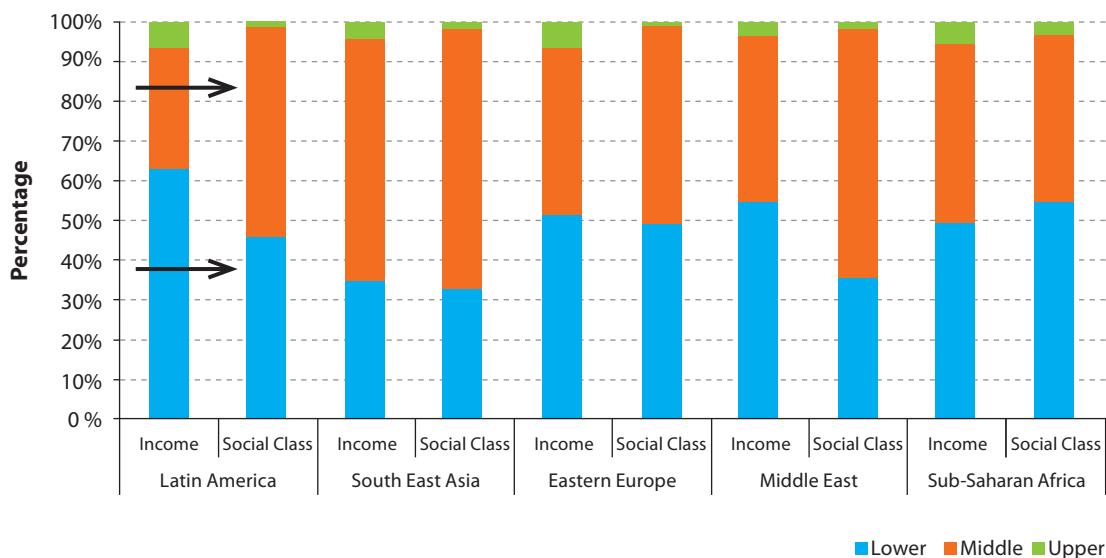
As referenced above, an income-based analysis of the middle class is useful to measure its expansion, but it does not allow a deeper understanding of its values and preferences. Evidently, perceptions are not always aligned with objective income distribution positions. Besides, subjective perceptions of social belonging can themselves affect the behavior and decisions of these segments of society.

Indeed, empirical results show that in some regions of the world it is not the same to “be” middle class than to “feel” middle class. There are noticeable differences between the percentage of individuals that consider themselves to be middle class and those who, given their income distribution position, are considered to belong to the middle segments¹⁰. This pattern is particularly apparent in Latin America and the Middle East. For instance, it is common for Latin American respondents to consider themselves middle class, even though their income may be lower or higher than that of the middle segments. While 53% of respondents consider themselves middle class, only 31% of the total has an income consistent with this status. On the other hand, 43% of Latin American respondents consider they belong to the lower class, but in reality 63% of them have income levels that place them objectively in the lower segments (see Graph 5). Data also reveals the existence of individuals from every income level that consider they belong to the middle class (despite having positions on the tails of the distribution), which reinforces the idea that there are other values beyond income that could determine these perceptions.

Also, we found it interesting to analyze this phenomenon by adding a temporal dimension. In this sense, we studied the four countries in the region for which we had access to temporal data series that covered the 1994-2009 period, uninterrupted: Argentina, Chile, Mexico and Peru. The phenomenon was quite consistent throughout, as we observed that in every case an important part of the population considered they belonged to the middle class, even though their income levels are inconsistent with that status. While in Peru the proportion of the population that feels middle class without being so has remained more or less stable around 23%, in Argentina during the 1999-2004 period a relative convergence of the respondents that self-defined themselves as middle class and those that can effectively be

¹⁰ For consistency purposes, we used the classifications available in *WVS* instead of those presented in the previous section as there could be some differences if the sampling exercise is not strictly representative of the population being studied. Additionally, *WVS* is not available for all the countries mentioned in the previous assessment, so it made more sense to rely exclusively on the data available in that survey.

GRAPH 5. DISCREPANCIES BETWEEN INCOME LEVELS AND SUBJECTIVE SOCIAL CLASSES BY REGION



Source: Own calculations based on World Values Survey (2013)

considered as members of this social class was observed. This could be a consequence of the drop in income due to the economic crisis, even though in the earlier and later periods the differences between both groups were around 15%. Lastly, in the cases of Chile and Mexico the differences between the population self-defined as middle class and the individuals with income levels consistent with being middle class are evident throughout the study period. However, it is important to make a side-remark in the Mexican case as data suggests that its middle class has a decidedly more aspirational inclination: for the 2004-2009 period, there is a difference of almost 48% between both measures, as 81% of the population sees itself as middle class, despite the fact that only 33.6% earns an income consistent with this social level.

Once we observed these differences between income levels and the perception of belonging to the middle class, it was necessary to thoroughly understand the determinants of this perception. To this effect we resorted to a model by the Asian Development Bank (2010) to determine the impact of certain variables on the probability of individuals considering themselves as members of each one of the social classes. However, while that work aimed to analyze global behavior using all the available data, we limit our study to the existing dynamics in the developing regions. We employed a Probit model, with the following specifications:

$$Prob (Y_i = 1) = \delta + \beta_j X_j + \epsilon$$

Where the endogenous variable is a latent variable, the probability of individuals perceiving themselves or not as part of the i th social class, where $i = \{1=\text{lower class}; 2=\text{middle class}; 3=\text{upper class}\}$. The coefficient vector β_i is associated to a vector of variables X_i that includes demographic and socio-economic factors (sex, age, number of children, educational level, living with parents, and if the family saved during the last year); work-related factors (if the head of family is employed, if the respondent is formally employed and receives a salary, if he/she works for a private company, as well as some characteristics regarding the type of employment: if it is more cognitive than manual, if it is more creative than repetitive, the degree of independence, and if he/she supervises anyone); common factors of each country (real GDP per capita logarithm, Gini coefficient, the rural percentage of the population and ethnic fragmentation¹¹); and fixed effects per region. These fixed effects are not included for measurements of countries within the same region. Individual data is obtained from information available in the *World Values Survey*. Information on GDP per capita, Gini coefficient and percentage of rural population is obtained from the *World Development Indicators* database of the World Bank, while the ethnic fragmentation coefficient is taken from Fearon (2003).

Results analysis

Results suggest that four variables have the highest average impact on the probability of someone identifying themselves as a member of a given social class in the estimates, with all the available data: educational level, saving capacity, supervising someone at work, and if head of family is employed.

In many cases, and not surprisingly, educational level comes up as one of the greatest social differentiators. Reaching an additional educational level translates into a 4.8% higher probability that individuals will consider themselves as members of the middle class. Additionally, the returns from education tend to increase as new educational levels are reached, thus contributing in greater fashion to the differentiating impact as higher levels of training are achieved.

Another relevant factor is the saving capacity of families. Having saved in the previous year contributes to a 15.8% increase in the probability of individuals perceiving themselves as middle class. This suggests that having more relaxed budget restrictions allow individuals to satisfy their fundamental needs and accumulate capital for investment purposes, which eventually will improve their growth trajectory as well as protecting them from any contingencies. This feature of stability makes individuals more inclined to feel they belong to the middle segments, as argued by López-Calva and Ortiz-Juárez (2011), among others.

¹¹ The ethnic fragmentation variable is included as a proxy of cultural diversity, which can have an impact on the definition of classes, apart from having an effect on a series of factors associated with the political and democratic stability according to Easterly's conclusions (2001).

Also important is the impact of work-related variables, such as employment status and other related characteristics. If the head of family is employed, there is a 5.45% greater chance that respondents will define themselves as middle class. At the same time, having people under one's supervision increases the probability of considering themselves as middle class by 6.5%. Also, having a job that is more cognitive, creative or independent also increases this probability, although to a lesser extent.

Regarding national variables, we observed that in countries with higher GDP per capita and lower inequality the probability of individuals identifying themselves as middle class also increases. On the other hand, even though initially it may sound counterintuitive, in countries with a larger rural population there is a greater probability that individuals will define themselves as middle class. A possible explanation for this is that the survey could be biased towards urban sectors: the simple fact of being an urban worker (hence with greater propensity to be surveyed) may contribute to these workers identifying themselves as middle class if they perceive rural workers as members of the lower classes.

Other results related to the impact of typical country factors, for example, ethnic fragmentation, are also significant. In this case, a lower degree of ethnic uniformity increases the probability of respondents identifying themselves as middle class. This is a very counterintuitive phenomenon and very hard to explain. One possibility is that in ethnically plural societies this relationship can be explained by the composition of the fragmentation. Thus, if an ethnic group holds a majority and there are multiple small social groups, the probability that the members of the most numerous ethnic group will feel politically empowered and as part of the middle class may be higher than in other societies with a more balanced composition. However, this fragmentation index does not offer such level of detail.

Lastly, there are other relevant results linked to the remaining work-related factors. To be employed by the private sector tends to reduce the probability of people identifying themselves as middle class. This could happen because of a higher incidence of respondents that are middle class and work in public institutions compared to those that identify themselves as lower or upper class. Similarly, a potential argument that could support this relationship is that individuals in developing countries perceive that employment in the public sector is more stable than in the private sector, where there is a greater level of informality. On the other hand, being in formal paid employment has a negative impact on the chance of individuals perceiving themselves as middle class. Following the previous line of thought, given that most formal jobs can be found in the private sector, and that these are probably seen as unstable, individuals tend to visualize themselves as vulnerable¹².

¹² For additional details, refer to Table 1-4.

In the particular case of Latin America, as in the analysis of results that includes the five regions, the saving capacity and educational level of respondents have an explicative power worth highlighting: saving capacity increases the probability of individuals considering themselves as middle class by 12.2%, while each additional educational level increases this probability by 3.5%. On the other hand, older individuals and those with fewer children have a greater propensity to classify themselves as middle class: the marginal impact of an additional year of age is 0.3%, while an additional child means a 2.9% drop in this probability. Regarding national variables, the relationships observed for income levels and rural percentage of the population are consistent with the previous results, and in both cases they improve the probability of individuals identifying themselves as middle class. However, in the case of ethnic fragmentation the results are totally opposite to those of the sample in every developing region; it appears that in more ethnically uniform Latin American countries the probability that individuals identify themselves as being middle class is higher. Finally, work-related factors do not seem to have a large impact on Latin American respondents' perception of belonging to a given social class¹³.

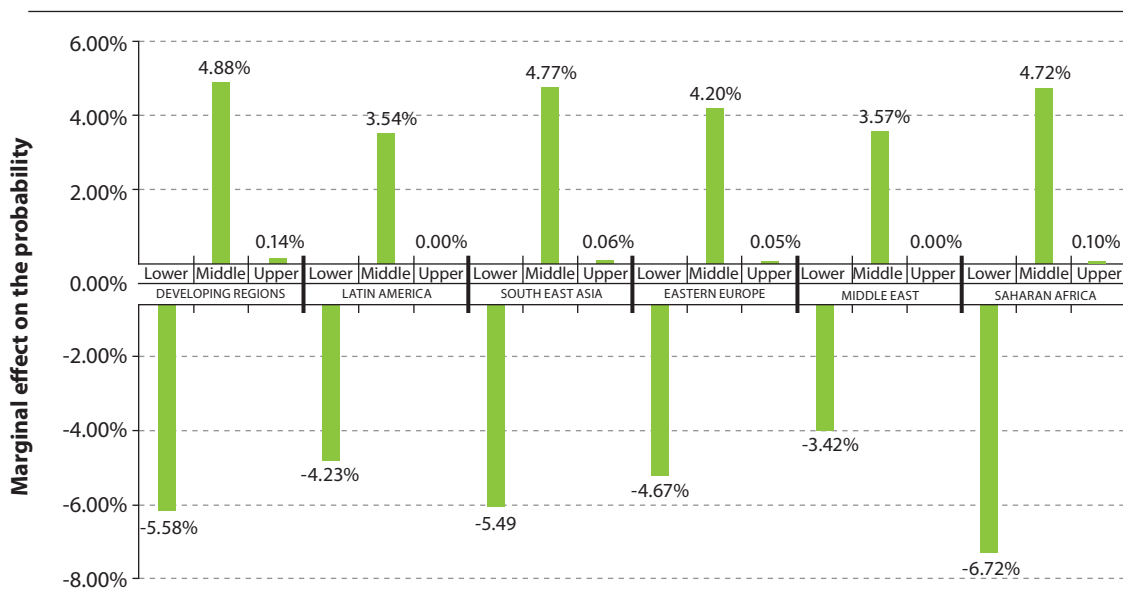
Saving capacity and educational level as the great social differentiators

One of the most important conclusions derived from our estimates, both for the entire group and each of the regional sub-samples, is the high impact that saving capacity and educational level have on the probability of an individual's self-perception as member of each social class. In every developing region studied, these variables always have a significant and large impact on the probability of individuals classifying themselves as members of a given social class.

However, we can also observe differences in the size of these impacts, which are especially interesting when analyzing Latin America. The Latin American region seems to be the area where educational levels generate the smallest impact on social self-perception (see Graph 6). One of the possible explanations for this is the drop in the returns from education experienced in the region during the past decade. Worth highlighting among the factors that have contributed to this change is the drop in the relative salaries of workers that have received tertiary level education given that instruction levels have grown faster than the number of available jobs with these educational requirements. On top of this, some argue that the efforts to increase tertiary education coverage has undermined quality and consequentially the salaries that employers are willing to offer (López-Calva and Lustig, 2010).

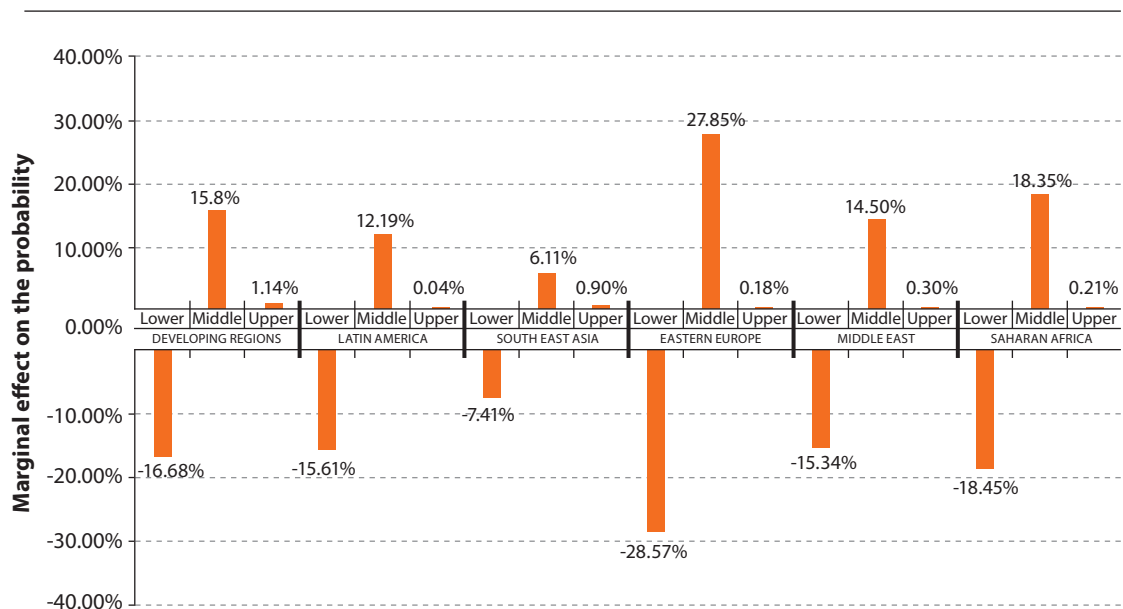
¹³ For additional details, refer to Table 2. The results estimated for each of the regions under analysis can also be found in Table 2.

GRAPH 6. MARGINAL EFFECT OF AN ADDITIONAL EDUCATIONAL LEVEL ON THE PROBABILITY OF INDIVIDUALS CONSIDERING THEMSELVES MEMBERS OF A GIVEN SOCIAL CLASS



Source: Own calculations

GRAPH 7. MARGINAL EFFECT OF SAVING CAPACITY ON THE PROBABILITY OF INDIVIDUALS CONSIDERING THEMSELVES MEMBERS OF A GIVEN SOCIAL CLASS



Source: Own calculations

On the other hand, saving capacity also has a significant impact in developing regions, although it is more uneven (see Graph 7). While saving in South East Asia increases the chance of individuals considering themselves middle class by a moderate 6.11%, in Eastern Europe this probability rises to 27.84%. In Latin America, saving capacity is also of key importance as individuals that have the possibility of saving have a 12.18% greater chance of considering themselves as middle class.

Values and Preferences of the Middle Class

As mentioned in previous sections, most of the efforts aimed at characterizing the middle class that have gone beyond analyzing income levels have focused on demographic, educational and work-related factors, which generally speaking, show a monotonous relationship with income levels (OECD 2011; Birdsall 2012; World Bank 2012). On the other hand, other studies that have tried to identify some of the values that define the middle class do not focus on Latin America, or include factors that are of secondary importance for public policy formulation, or fail to discuss with sufficient depth the implications of their findings (Pew Research Center 2009; Asian Development Bank 2010; López-Calva, Rigolini and Torche 2012). In order to exploit the wealth of information available in the *World Values Survey* (WVS) we decided to explore seven dimensions of the values of the middle class in Latin America, as well as compare the middle class and other social classes with their counterparts in the other four developing regions considered throughout this study: South East Asia, Eastern Europe, Middle East and Sub-Saharan Africa. The seven dimensions to be assessed are: political ideology, trust in institutions, social capital, political activism, free-market orientation, social protection orientation and post-materialism¹⁴.

Apart from developing a descriptive analysis of these seven dimensions for the chosen regions, we used linear regression analysis to determine if the fact of belonging to each of the social classes contributes to explain certain values and attitudes, after controlling for demographic variables (gender, age, and marital status), educational level and type of employment of respondents. For this purpose, firstly we established measurements for the group of developing regions, followed by regression analyses for each of the regional sub-samples, including fixed effects on a national scale. For additional details about the results, refer to Table 3 onwards.

Political ideology

The literature on modernization, especially when addressing the role of middle classes, considers that this segment of the population holds relatively moderate political values and therefore has a greater degree of tolerance than other classes (Lipset, 1959). This idea is even found in Classical Greece, where it was thought that the expansion of the middle class would create favorable social conditions for the introduction of democratic constitutional systems

¹⁴ In this case we calculated individual indices for each of these variables, where the established thresholds depend on the characteristics of the original information.

that would not result in a class struggle (Aristotle, 1999). In this sense, middle classes are desirable because in contrast with poorer segments their preferences are less re-distributive in nature, and contrary to the more opulent classes they will favor broader and more participative institutions. This social group is also seen as a mediator or buffer which can unify and temper the preferences of extreme groups (Birdsall 2010).

In order to measure the political ideology of the middle class, we constructed an index with values ranging from 1 to 10, where 1 reveals positions that are more Left-wing, and 10 those that are more Right-wing. The indicator gathers information about the positioning on the Left-Right scale (question E033 of the integrated questionnaire, *World Values Survey*), the preference for a more egalitarian society (E035), the preference for State ownership of companies (E036) and if competition is seen as favorable or not (E039).

Indeed, it was observed that middle classes in developing regions are ideologically moderate, as in every case more than 52% of respondents were concentrated in the two middle levels of the scale (5-6). Latin America is in fact the second most moderate region, with 57% of respondents concentrated in levels 5-6, compared to 64% in South East Asia. Also observed was a slight inclination towards right-wing ideologies in every region, although Latin America and the Middle East showed the least proclivity in this sense, with a reading of 5.75. In any case, this inclination towards right-wing ideologies is not seen as significant, as on average the most biased regional score was that of Sub-Saharan Africa, which all in all still scored a moderate 6.16 points.

This ideological moderation can also be seen in the other Latin American social classes, where the percentage of respondents around levels 5-6 remained around 55-57%. The bias towards right-wing ideologies was also maintained, and although it seems to increase as income levels grow, the change is quite modest in Latin America (ranging on average from 5.54 in the lower class to 5.92 in the upper class). In every region, with the exception of South East Asia, statistical evidence seems to suggest a greater bias towards right-wing ideas as we go up the social ladder, even after controlling for demographic, educational and work-related factors. In Latin America, belonging to the middle class increases the ideology index by 0.18 points, compared to the Middle East and Eastern Europe, where the impact of belonging to the middle class is greater, at 0.27 and 0.22 points, respectively. In other words, belonging to the Latin American middle class increases the propensity of individuals to move towards the more conservative spectrum, but less than in other regions, whereby we could argue that they tend to be more ideologically moderate. Notwithstanding the fact that these regional trends can be representative, there are some countries that seem to follow a different trajectory. The middle classes of Chile and Uruguay are more biased to the left than the regional average, with readings of 5.28 and 5.54, respectively, while their counterparts in Peru and Dominican Republic are more inclined to right-wing ideas, with readings of 6.19 and 6.39 points, respectively. Similarly, the monotonous relationship between political ideology and

income levels that is observed on average throughout the region is not representative of the individual cases of Brazil, El Salvador, Guatemala, Peru, Uruguay and Venezuela, where middle classes are more inclined to right-wing ideas.

Trust in institutions

The growth of the middle class and its supposed democratizing effect means that individuals will be more satisfied with the way their institutions function, and therefore these political systems will enjoy greater legitimacy (Lipset, 1959). The improving income levels of the population should go hand in hand with a perception of improvement in the quality of institutions. To verify this underlying idea of the theory of modernization we built an index ranging from 1 to 4, where higher values indicate a higher level of trust in State institutions. In this case, we have included measurements gauging individuals trust in government (E069_11), political parties (E069_12), the legislative power (E069_07), the judicial power (E069_17) and the police force (E069_06).

Limiting our observations to the developing world, we found that in none of the regions studied middle classes exhibit high levels of trust in public institutions; this is especially true for Latin America where the readings were particularly low (2.11 points). In fact, 71% of the Latin American middle class scored between levels 1 and 2 of the scale. However, despite the low average trust in institutions in Latin America, the readings improve as we move up the social ladder, from 2.06 points for the lower class, to 2.29 for the upper class. The improving trend of trust in institutions measurements further up in the social ladder is also found in Eastern Europe and the Middle East, which is why there seems to be a direct relationship between trust in institutions and social class in these three regions, something confirmed by significant statistic evidence.

In this sense, it is worth pointing out that belonging to the middle class in Latin America has a lower impact on the trust in institutions dimension than in the other regions: only 0.04 additional points in the index, compared to 0.6 in Eastern Europe and 0.10 in the regression exercise for the Middle East. This suggests that the impact of belonging to the middle class has no significant impact on the trust individuals have in the quality of their institutions in Latin America. However, if we look at particular countries in the region we observe differences both in the levels of trust as well as in variations among different classes. Dominican Republic and Peru show the lowest level of trust in institutions among the middle class, with readings of 1.77 and 1.83, respectively, while the levels seen in Venezuela and Argentina are also low at 1.88, out of a maximum of 4. On the opposite side, Chile (2.23) and Uruguay (2.43) show the highest trust in institutions, even though these levels are low when compared to the average values in other regions such as the Middle East or South East Asia, where readings are above 2.53. In terms of changes in this variable by social class, differences among countries are also evident. While in Brazil and Mexico trust in institutions increases noticeably in the upper class level, in Argentina and Uruguay the trend indicates a reduction in trust as we reach higher levels of income.

Social capital

By social capital we mean the construction of organizational networks oriented at shaping the institutionalized social expectations that help support social cooperation within a specific community (Boix and Posner, 1998). These expectations allow individuals to develop cooperative attitudes geared towards their involvement in key issues of their communities. The origin of social capital is quite a controversial topic as on the one side there are theories that link it to income levels, while others establish associations with the historical and cultural characteristics of each community (Tocqueville, 2010 [1835]; Putnam 1994). However, do middle classes have a greater propensity to generate community networks and interactions that can improve social cooperation? To answer this question we built an index with values ranging from 1 to 4, where the highest values reflect higher levels of social orientation and interpersonal trust. The index includes questions that inquire about the level of trust in others (A165), especially measuring the level of trust in people the respondents know (G007_33) and in people they are getting to know (G007_34).

In every developing region we studied, social capital scores were very low for the middle classes, with most respondents scoring around 1-2 out of 4. Social capital scores are also very low in Latin America: 81% of middle class respondents score around the low and low-moderate levels of the scale. These low levels of social capital are even lower than those observed in Eastern Europe, the Middle East and Sub-Saharan Africa, where close to 77% of respondents score around 1-2, while in South East Asia this proportion totals 65% of respondents. In Latin America, social capital grows with income, and we observed a larger variation between the middle and upper classes than in other regions such as Eastern Europe and South East Asia, where middle classes tend to have a higher stock of social capital. However, irrespective of the favorable change that occurs as income grows, the readings continue to be very low; in Latin America, the proportion of respondents with low and low-moderate social capital scores varies from 85% for the lower class to 73% for the higher class, but generally speaking social capital levels remain very low. Similarly, it strikes us that belonging to the middle class in Latin America does not really increase social capital, after controlling for educational, work and demographic factors. On the other hand, when individuals considered themselves as upper class it had a positive impact of 0.2 points on the social capital index. This result clashes with the findings in Eastern Europe, where belonging to the middle class does increase social capital, after controlling for other variables. Additionally, when analyzing Latin American countries we found disparities in the social capital of each one. In this sense, the Peruvian middle class shows the lowest scores with almost 90% of the middle class with low and low-moderate social capital scores, with an average reading of 1.81. In contrast, Uruguay has the highest social capital scores in the region, with an average of 2.48 points and the greatest percentage of middle class respondents with a high level of social capital: 14% of respondents scored at the highest level (4 points).

Political activism

The idea that middle classes can be politically mobilized in order to make their demands known through channels that go beyond merely taking part in elections is a vision widely shared by development theorists (Huntington, 1991). The rise of the middle class is a potentially destabilizing phenomenon precisely because these social sectors can become politically active vis-a-vis a political system that has insufficient institutional capabilities to satisfy increasingly complex demands (Huntington, 1991). In order to measure political activism, we constructed an index that captures the level of participation of citizens when bringing their complaints, desires and requirements to the attention of the State. In this case, the index ranges from 0 to 10, where the highest numbers relate to greater citizen mobilization towards specific actions such as signing petitions (E025), boycotting (E026), taking part in peaceful demonstrations (E027), being involved in mass protests (E028) and occupying factories or companies (E029).

Curiously, and in contrast with the hypothesis mentioned above, the participation of the middle class in politically-motivated actions is extremely low in every region we assessed, with more than 60% of this group scoring around 0-2, on the 0-10 scale. The least active middle class is that of South East Asia, with an average score of 1.32 points and 78% of respondents around the 0-2 level. Oppositely, Latin America and Sub-Saharan Africa are the least inactive middle classes, with a score of 2.34 and close to 60% of respondents at the 0-2 level. In any case, the number of middle class respondents that show a favorable and participative attitude towards every type of activity and political demonstration is negligible: not even 3% of Latin American respondents reach the 8-10 level, and these scores are even lower in the others regions.

Regarding the variations observed in terms of income levels it is worth pointing out that in every region there is a direct relationship between political activism and social classes as the former grows hand in hand with income, although it can never be considered high. In Latin America, activism among the wealthy only scored 2.53 points. However, after controlling for the previously mentioned factors, we observed that belonging to the middle class does not modify political activism levels in Latin America or South East Asia. On the other hand, in Eastern Europe we observe a direct, growing and monotonous relationship between political activism and the social class to which individuals belong. Conversely, belonging to the lower class in the Middle East increases political activism, while belonging to the middle class reduces this attitude, a pattern repeated in Sub-Saharan Africa. We can also identify differences among classes in Latin American countries, but in general they all remain quite inactive. Among these countries, the middle class less concerned with participation is that of Guatemala with 1.13 points, followed by Peru with 1.81 and Venezuela by 1.83 points. Brazil, on the other hand, seems to have the most politically active middle class, scoring 3.11 points.

Free-market orientation

Birdsall (2010, 2012) has argued that the emergence of the middle class goes hand in hand with more favorable demands in terms of the consolidation of democracy and the rule of law, as well as support for market-friendly measures. Therefore, the development of this social group can become a key factor for economic development. In order to measure the propensity of individuals to view free-market rules positively as the guiding mechanism of economic processes we constructed an index ranging from 0 to 4, where the highest values reveal a more market-friendly opinion: favorable opinions towards competition (E039), trust in large companies (E069_13), fairness seen in greater rewards for more productive individuals¹⁵ (C059) and information on preferences between private or public ownership of companies (E036).

Generally speaking, the middle class's support of market rules is moderate-high in every developing region. However, Latin American middle classes have a lower regard for these mechanisms as indicated by a 2.27 score in the 0-4 scale, compared to 2.46 in the Middle East or 2.49 in Eastern Europe. Eastern Europe shows the highest proportion of respondents in this sense, with 56% scoring around the two segments that represent the highest level of market support (levels 3-4). On the other hand, Latin America has the highest incidence of people that reject free-market rules, with 16% scoring around the 0-1 level. In Latin America, market friendliness increases from 2.11 to 2.42 when moving up from the lower to upper classes, opposed to Eastern Europe, South East Asia and the Middle East, where middle classes show greater support for these mechanisms. Consistently though, belonging to the middle class in Latin America, Eastern Europe, the Middle East and Sub-Saharan Africa increases free market support. The impact seen in Latin America is the second highest after the reading for the Middle East, at 0.08 and 0.12 points, respectively. Regarding differences among Latin American countries, we observed that the middle classes of Colombia and Argentina were the least inclined to favor free-market rules (2.11 and 2.13, respectively), while Venezuela and Dominican Republic can be seen to show greater support for freer markets (2.46 and 2.54, respectively).

Social protection orientation

The most recent debate around Latin American middle classes focuses on the growth of a segment of the population that has emerged from poverty but nonetheless remains in a state of vulnerability (López-Calva and Ortiz-Juárez, 2011; OECD, 2011; World Bank, 2012). Given this situation of uncertainty it makes sense to explore the perceptions of individuals about the pertinence of greater State intervention in areas of social protection. To measure this dimension we asked whether if the State or individuals themselves should be mainly

¹⁵ This question proposes the dilemma of two secretaries that must carry out the same job, and questions the fairness of paying more to the most productive and efficient of the two in fulfilling the task at hand.

responsible for the provision of goods and services that could lead to a greater level of well-being. In this case we use a single variable, ranging from 1 to 10, where the higher values indicate a more individualistic view (E037).

The issue of social protection is quite controversial for middle classes as we can observe large groups that support extreme social protection measures provided by the State (more than 21% in every region except in South East Asia where the figure stands at 14%). These groups are opposed to others that advocate a greater responsibility of individuals as generators of well-being (from 7% in Eastern Europe to 15% in Latin America). On the other hand, the moderate groups that are slightly inclined towards the responsibility of the State (a reading of 5 in the scale of 1 to 10) are also important and represent 14-15% of respondents in every region. South East Asia and Latin America are the regions that place greater burden of responsibility on individuals, with readings of 5.46 and 5.15, respectively, while the Middle East is the region most inclined to believe that the State must be the main provider of social protection and well-being, scoring 4.24 out of 10.

In Latin America, individuals show a greater proclivity towards the notion that well-being is a responsibility of the individual and not the State the further up they are on the social ladder (with readings from 4.48 for the lower class, to 5.10 for the upper class). This finding is also consistent with that of other developing regions. Statistical analysis suggests that in every region merely belonging to the middle class has an impact on individuals' social protection orientation, with the exception of South East Asia. In Latin America, the impact is measured at 0.20 points, while in Eastern Europe it reaches 0.44 points.

Looking at Latin American countries, the middle classes of Chile and Uruguay advocate a greater level of public social protection (4.47 and 4.60 points, respectively), while El Salvador and Peru (5.91 and 5.87 points, respectively) are more inclined to advocate individual responsibility in the provision of well-being. Similarly, there are important exceptions to the linear growth seen on average across the board in Latin America. For example, in El Salvador the index behaves in opposite direction to social class levels, reflecting that the upper classes support public social protection in greater measure. In other countries such as Peru and Uruguay there is no noticeable change when moving from middle to upper classes, even though both of these are less inclined to advocate social protection systems than the lower class. In the cases of Brazil, Dominican Republic and Venezuela, the middle classes are the greatest advocates of individual responsibility in the provision of well-being. Finally, the observations for Argentina, Chile and Colombia are consistent with the general trend that indicates a higher inclination towards individual responsibility the further up the social ladder.

Post-materialism

The theory of modernization is based on the existing differences between “traditional” and “modern” societies, which are characterized by the particular economic, political and cultural factors of each one. These alleged differences are associated to different levels of economic development. Hence, as income gaps are narrowed a similar phenomenon should take place in the context of cultural differences. However, authors such as Inglehart (1971) consider that differences between the preferences of societies are influenced to a larger degree by the experiences of individuals during their formative years. According to the author, in societies that have undergone modernization processes the younger generations should show a greater inclination towards more modern points of view, specifically to have post-materialist preferences. Moreover, Inglehart deemed the study of the transformation of materialist preferences (associated with a high degree of economic stability, health and personal safety) into more post-materialist preferences (that prioritize self-expression, subjective wellbeing, the defense of ideas, and quality of life) as a key element to measure the modernization processes of societies (Inglehart and Caraballo 2007; Delhey 2009). Although the degree of post-materialism has been broadly studied without finding major differences between age groups as suggested by Delhey (2009), there can be noticeable regional disparities, especially when there are differing levels of economic development.

Traditionally, the materialist and post-materialist preferences of individuals have been measured through a series of indicators developed by Inglehart (1971). The specifics of these indices can be found in the WVS, which is why we decided to analyze the most complete index consisting of 12 items on a scale of 0-5, where the highest values reflect more post-materialist preferences. Results reveal that most respondents have a combination of materialist and post-materialist preferences, and while some regions could be more biased towards one factor than others, most respondents can be found in the moderate segments. In this sense, while materialist groups are small (between 5% in Latin America and 16% in Eastern Europe), those that are strictly post-materialist are almost non-existent (between 0.4% in Eastern Europe and 4% in Latin America). On the contrary, the number of respondents found in the intermediate positions of the scale (2-3 points) represent between 50% of respondents in Eastern Europe and 59% in Latin America and South East Asia. We found that Latin American middle classes are more moderate, although noticeably more post-materialist than their counterparts in other regions, with an average of 2.36 points in the 0-5 scale, compared to 1.65 in Eastern Europe and 1.95 in the Middle East, which is the second highest measurement. Another peculiarity of the post-materialism seen in Latin American middle classes is that while in developing regions middle classes tend to have more materialist views than their upper and lower classes (Sub-Saharan Africa and South East Asia), or the degree of post-materialism grows together with income levels (Middle East and Eastern Europe), in Latin America the middle class segments tend to have more post-materialist preferences than the rest of their society. It is important to clarify that this characteristic is not exclusively dependent on being part of this social class,

as belonging to the middle class in Latin America does not generate a statistically significant impact on post-materialism, even though the perception of being part of the middle class is found to be associated with more materialist attitudes of individuals. On the other hand, in Eastern Europe and the Middle East there is an observable, direct and significant relationship between this social class and the level of post-materialism of respondents. In contrast, when assessing the Latin American case in a detailed manner, once again it can be concluded that, with the exception of Guatemala, the middle classes of every country have more post-materialist preferences than their peers in other developing regions¹⁶. Additionally, there are observable differences between countries in the region, as the Guatemalan middle class is the most materialist (1.75 points), while the middle classes of Uruguay, Colombia and Argentina show the greatest inclination towards post-materialist views (2.71, 2.69 and 2.68 points, respectively). In every country included in the sample, with the exception of Peru and Uruguay, the middle classes show the greatest levels of post-materialism in their particular society.

¹⁶ The only exception is the middle class of Guatemala, which is more materialist than its peers in South East Asia and the Middle East.

Final thoughts

The new dynamism of the Latin American middle class is one of the most interesting elements that can help us understand the challenges and opportunities the region faces in terms of its economic and political development. The Latin American middle class is comprised by almost 200 million people, meaning 1 out of 3 Latin Americans belongs to the middle class, the second largest proportion among developing regions after Eastern Europe. Given the significant size of this phenomenon, the rise of the middle class can have a deciding impact on the social and productive transformation of the region. The hike in the number of citizens that are now part of this social group will no doubt have political, economic and social implications that in turn will modify existing patterns and feed new topics into public policy agendas in these countries.

For example, the rise of this new segment of the population offers new investment and development opportunities for mass consumption markets and the provision of services resulting from the changes in preferences towards more complex and higher-quality products and services. On the other hand, as suggested by empirical results, these individuals consider that their self-perception of being middle class is greatly influenced by their saving capacity. This reflects their interest in the accumulation of resources that will allow them to invest in physical or financial capital, and especially human capital, which is one of the defining characteristics of individuals that perceive themselves as middle class in every developing region. This simple change, which has been amplified by the expansion of this social group, suggests that certain sectors such as mass consumption, services, construction, finance, insurance and education could benefit as a consequence of the substantial growth in the proportion of potential clients in upcoming years. The growth of the middle class can kick-start the development of an economic cycle in which the new preferences and purchasing power of the middle sectors can expand the growth potential of society in general, allowing the latter to overcome poverty and consolidating intermediate sectors in a sustainable and repeatable manner over time.

Notwithstanding that middle class growth in the region has boosted purchasing capacity and expectations of well-being improvements for large segments of the population, there are still large groups that remain in a situation of vulnerability and at risk of returning to poverty. That is why governments also need to focus on this segment of the population. In fact, the group known as the vulnerable class (daily income between 4 and 10 USD) is the largest in the region, representing 39% of the total. This reality entails another huge challenge for public policy formulation, as efforts must be aimed at the expansion and scope of social support networks (health, education, social security, pensions) that will reduce the vulnerability of

large segments of Latin American society that could fall back into poverty. In this sense, the consolidation of these vulnerable groups and the middle class can become a solid foundation for economic development, but it is no less true that it can turn into a source of discontent and social exclusion if governments fail to provide improved access and quality public services. As both groups grow, public and private institutional networks will need to broaden and strengthen their capabilities *vis-a-vis* these increasingly complex social demands.

Apart from its size, another feature that distinguishes the Latin American middle class from its counterparts in other regions is its decidedly aspirational nature. A large proportion of Latin Americans are not formally part of the middle class, but feel as if they belong to it. This difference between objective defining elements and subjective perceptions reveals an underlying aspiration that is a key feature of the behavior of Latin American middle classes. Two relevant factors can help us understand this higher probability of self-perception: saving capacity and educational level. Both variables exert a high degree of influence on the subjective perception of belonging to a given social group, especially among the middle sectors. Hence, as long as Latin American countries promote reforms oriented at increasing saving and therefore investment mechanisms (changes to pensions systems and deeper capital markets are seen as key elements), these aspirations will be able to unfold without ending in social frustration. The same can be said about education: in so far as the improvement in penetration and the achievement of greater educational levels go hand in hand with improvements in service quality, then the impact of education on the self-perception of belonging to the middle class will have the objective support of an improvement in income levels. If on the contrary, as suggested by some studies, the returns on education start to fall due to a drop in quality, then this aspirational factor can become a cause of deep frustration and social conflict as we have seen in countries such as Chile and Brazil.

Faced with the incapability of governments to provide responses that are more in line with social changes, citizens have resorted to searching for private solutions to solve social problems and quality of life deficiencies. Several examples can be mentioned in this respect. Firstly, given the poor quality of public education, many social groups self-defined as middle class have decided to study in private institutions. As Birdsall points out (2012), participation of private schools can be as high as 85% in Brazil, and even 62% in countries with a reputation for providing high-quality public education, such as Costa Rica. Also worth highlighting are cases such as Chile, where the development of a large student loans market has allowed the deferral of payments of the substantial tuition fees, especially in the case of higher education. The other relevant dimension is the health sector, where the scope, supplies and staff deficiencies of the public system have prompted citizens who can afford it to migrate to private services. This phenomenon is quite evident in countries such as Venezuela where an alternative mechanism was sought to lighten the burden of the public system through legislation, forcing private insurance companies to offer lower-priced insurance policies to the middle and less privileged sectors of society.

In general, it is worth asking if we can identify distinctive values and preferences of these middle segments in Latin America compared to other developing regions. Results reveal that no particular traits can be identified for Latin American middle classes: either values are modified monotonously as individuals go up the social ladder (meaning intermediate results for middle classes), or results are quite similar to measurements for other social classes in other developing regions. Similar to the rest of the developing world, Latin American middle classes can be characterized by their moderate ideological views, low levels of social capital, reduced trust in institutions, low level of political activism or mobilization, polarized views about the State's role in social protection and their preference for market-friendly rules.

However, one result does separate the Latin American region from other emerging countries: the Latin American middle classes are clearly more post-materialist than their international peers, although this is not a distinctive peculiarity of this social class, but rather a feature of Latin American society as a whole. These results are paradoxical: Latin American society can be seen as highly uninterested in politics and increasingly demobilized, but it is nonetheless hard to ignore the huge demonstrations of recent years (with the important participation of the middle class) in countries such as Colombia, Chile, Brazil and Venezuela. A possible answer is that important parts of the population remain in a situation of high vulnerability and this can contribute to the generalized rejection of politics as mentioned before in response to the inefficiencies and deficiencies experienced in the provision of certain public goods such as health, education and social assistance. However, Latin American middle classes are also different from their peers in other regions with regards to the greater complexity and post-materialist nature of their preferences, as they prioritize self-expression, subjective well-being, defense of ideas and quality of life (even though this may be attributable to a regional trait, more than a particular feature of the middle class).

The protests that have taken place in several countries in the region are consistent with the accelerated process of change in the desires and values of certain Latin American societies that demand increasingly complex and specific goods and services that the State is in no position to provide; at least not at the same speed at which preferences are changing. In Chile, economic growth and access to education have not been sufficient to prevent the mobilization of the middle class to demand higher quality education at a lower cost. In Brazil, protests have concentrated on demanding improvements to services that have a high impact on the well-being of citizens, such as public transport. In Colombia, specifically in the municipality of Bogotá, the mismanagement of garbage collection and problems with urban mobility have meant that quality of life issues are now at the center of public debate. Finally, the recent mobilizations in Venezuela, an ideologically highly polarized society, reflect a confrontation over the democratic values of different groups. These examples show that the apparently inactive Latin American middle classes are now willing to resume their roles as promoters of social change, especially when this pertains to so called higher goods, such as quality of life, education or democracy. This is why the rise of the middle class poses huge challenges for

Latin America, challenges that will become an important source for change, but that will also test the ability of institutions and political leaders in different countries to re-think the future and respond to these emerging and increasingly complex social needs.

Accordingly, in a three-stage approach this study has attempted to measure the rise of the middle class, understand the factors that influence the self-perception of belonging to this social segment, and determine the existence of distinctive values that define these groups. The greatest concern revolves around the ability of governments in the region to adopt important institutional reforms that will allow them to approach the increasingly complex needs of a middle class that is crying out for improvements in services and quality of life, a situation that overlaps with the requirements in terms of access and social sustainability of the largest group in Latin American society, the so called vulnerable segment. It is now the responsibility of scholars and policymakers to deepen their knowledge about the explicit desires and preferences of these segments in each of their societies in order to effectively live-up to the challenging but unstoppable reality of the rise of the middle class. If not, some of the demonstrations seen during the past five years in Latin America might be just an example of the difficulty of managing a challenge of such magnitude in a context of low institutional quality¹⁷.

¹⁷ A new wave of studies can then focus on broadening the number of countries under study, as well as delving deeper into the conditions that can actually modify values and preferences over time. This can be done resorting to panel data that unfortunately were not available for our study.

Similarly, we propose two complementary mechanisms (based on income and self-perception) that can contribute to a segmentation of society and allow for a specific assessment of the preferences of citizens regarding the implementation of certain public policies as, in line with previous descriptions, the values of different segments of society can lead to seemingly contradictory policy recommendations that need to be balanced in order to maintain social stability and comply, as far as possible, with the objectives of strengthening the middle class and reducing poverty and vulnerability.

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Appendix 1
Probit Model of self-perception
of belonging to a given social class

TABLE 1. PROBIT OF THE PERCEPTION OF BELONGING TO A GIVEN SOCIAL CLASS IN DEVELOPING REGIONS

| Group of Variables | Variable | Developing Regions | | |
|--|--|--------------------------------|-----------------------|----------------------|
| | | Lower | Middle | Upper |
| Demographic and socio-economic variables | Women | 0.026997 [2.10]* | -0.020656 [1.57] | -0.001095 [0.62] |
| | Age | -0.001468 [2.39]* | 0.001708 [2.70]** | -0.000018 [0.20] |
| | Number of children | 0.002964 [0.67] | -0.003041 [0.66] | 0.000066 [0.10] |
| | Educational Level | -0.055842 [17.06]** | 0.04882 [14.77]** | 0.001412 [3.25]** |
| | Living with parents | 0.005697 [0.38] | -0.001911 [0.12] | 0.001622 [0.79] |
| | Family saves money | -0.166777 [11.77]** | 0.158005 [10.89]** | 0.011417 [4.98]** |
| | Head of family is employed | -0.054359 [3.01]** | 0.054729 [2.97]** | 0.003503 [1.47] |
| Work-related variables | Formally employed and remunerated | 0.039837 [2.92]** | -0.032191 [2.32]* | -0.001395 [0.77] |
| | Employed in a private company | 0.036214 [2.69]** | -0.03229 [2.35]* | -0.004685 [2.45]* |
| | Type of employment: more cognitive | -0.019325 [8.32]** | 0.019703 [8.33]** | -0.000282 [0.92] |
| | Type of employment: more creative | -0.006803 [2.84]** | 0.005752 [2.36]* | 0.000485 [1.58] |
| | Type of employment: greater independence | -0.00706 [3.21]** | 0.007855 [3.48]** | 0.000529 [1.60] |
| | Type of employment: supervises someone | -0.082663 [5.72]** | 0.065364 [4.43]** | 0.006821 [3.22]** |
| | Country characteristics | Percentage of rural population | -0.006201 [8.00]** | 0.006453 [8.14]** |
| GDP per capita logarithm | | -0.085571 [6.47]** | 0.088557 [6.50]** | 0.000891 [0.48] |
| Gini coefficient | | 0.000075 [5.49]** | -0.000065 [4.63]** | -0.000001 [0.65] |
| Ethnic fragmentation | | -0.003823 [9.97]** | 0.004011 [10.07]** | 0.000103 [1.73] |
| Fixed impact per region | Latin America | -0.272304 [8.88]** | 0.326309 [10.35]** | -0.00622 [1.76] |
| | Eastern Europe | -0.011606 [0.28] | 0.078086 [1.90] | -0.003123 [0.67] |
| | South East Asia | -0.043717 [1.42] | 0.122581 [3.98]** | -0.006169 [2.06]* |
| | Middle East | -0.298537 [10.67]** | 0.368434 [12.96]** | -0.005901 [1.76] |
| Pseudo-R2 | | 0.1742 | 0.1635 | 0.1192 |
| Positive predictive power | | 0.6568 | 0.7201 | 0 |
| Negative predictive power | | 0.74 | 0.6699 | 0.988 |

Probit Model, calculated with a constant. The average marginal impact of each one of the variables is shown.
Robust Z statistics shown in brackets.
* 5% significant; ** 1% significant.

TABLE 2. PROBIT OF THE PERCEPTION OF BELONGING TO A GIVEN SOCIAL CLASS IN DEVELOPING REGIONS

| Group of Variables | Variable | Latin America | | | South East Asia | | |
|---|--|------------------------|-----------------------|------------------------|---|-----------------------|---------------------|
| | | Lower | Middle | Upper | Lower | Middle | Upper |
| Demographic and socio-economic variables | Women | -0.012504 [0.39] | 0.009888 [0.30] | 0.000014 [0.43] | -0.012142 [0.47] | 0.015582 [0.58] | -0.003202 [0.88] |
| | Age | -0.003351 [2.55]* | 0.003334 [2.45]* | -0.000001 [0.36] | -0.002865 [2.10]* | 0.002866 [2.04]* | -0.000167 [0.82] |
| | Number of children | 0.024755 [2.20]* | -0.029026 [2.49]* | 0.00001 [0.85] | -0.009815 [1.01] | 0.008596 [0.85] | 0.000885 [0.66] |
| | Educational Level | -0.042297 [5.13]** | 0.035353 [4.18]** | -0.000005 [0.50] | -0.05493 [7.43]** | 0.047679 [6.37]** | 0.00059 [0.67] |
| | Living with parents | -0.007686 [0.21] | -0.001166 [0.03] | 0.000036 [0.84] | -0.047146 [1.62] | 0.06607 [2.22]* | 0.001656 [0.42] |
| | Family saves money | -0.156091 [4.51]** | 0.121878 [3.41]** | 0.000356 [2.82]** | -0.074059 [2.69]** | 0.061103 [2.17]* | 0.008969 [2.10]* |
| Work-related variables | Head of family is employed | -0.033379 [0.87] | 0.066672 [1.67] | -0.000049 [0.79] | -0.062541 [1.49] | 0.075514 [1.76] | -0.000181 [0.03] |
| | Formally employed and remunerated | -0.01246 [0.38] | 0.003405 [0.10] | 0.000006 [0.16] | 0.041379 [1.46] | -0.057294 [1.98]* | 0.001538 [0.42] |
| | Employed in a private company | -0.026896 [0.81] | 0.000155 [0.00] | -0.000025 [0.62] | 0.071031 [2.64]** | -0.036996 [1.35] | -0.00217 [0.61] |
| | Type of employment: more cognitive | -0.010822 [2.10]* | 0.010021 [1.89] | 0.000001 [0.24] | -0.032335 [5.82]** | 0.034657 [6.17]** | 0.000173 [0.23] |
| | Type of employment: more creative | -0.011644 [2.16]* | 0.009776 [1.77] | -0.0000002 [0.04] | -0.004387 [0.76] | 0.006392 [1.08] | -0.000374 [0.46] |
| | Type of employment: greater independence | -0.004004 [0.87] | 0.003138 [0.66] | 0.000016 [2.34]* | -0.000604 [0.11] | 0.00692 [1.24] | -0.000799 [1.04] |
| | Type of employment: supervises someone | -0.047997 [1.40] | 0.031476 [0.89] | 0.000097 [1.52] | -0.012581 [0.46] | 0.000978 [0.03] | 0.010488 [2.50]* |
| Country characteristics | Percentage of rural population | -0.035982 [4.46]** | 0.046762 [5.66]** | -0.00007 [10.57]** | -0.000323 [0.25] | 0.001646 [1.24] | -0.000045 [0.26] |
| | GDP per capita logarithm | -0.575598 [10.79]** | 0.67237 [12.26]** | -0.000418 [7.87]** | Omitted variable because of colinearity | | |
| | Gini coefficient | 0.000044 [0.45] | 0.000092 [0.90] | -0.0000002 [2.61]** | 0.000253 [5.46]** | -0.000195 [4.23]** | 0.000009 [1.39] |
| | Ethnic fragmentation | 0.009372 [2.19]* | -0.015067 [3.42]** | 0.000028 [7.53]** | Omitted variable because of colinearity | | |
| Number of observations | 1325 | 1325 | 1325 | 1548 | 1548 | 1548 | |
| Pseudo-R2 | 0.2021 | 0.1938 | 0.2952 | 0.1419 | 0.1146 | 0.1205 | |
| Positive predictive power | 0.6386 | 0.7548 | 0 | 0.3546 | 0.8811 | 0 | |
| Negative predictive power | 0.7632 | 0.6345 | 0.9917 | 0.8862 | 0.3618 | 1 | |

Probit Model, calculated with a constant. The average marginal impact of each one of the variables is shown.
Robust Z statistics shown in brackets.
* 5% significant; ** 1% significant.

TABLE 3. PROBIT OF THE PERCEPTION OF BELONGING TO A GIVEN SOCIAL CLASS IN DEVELOPING REGIONS (CONTINUED)

| Group of Variables | Variable | Eastern Europe | | | Middle East | | |
|---|--|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|------------------------|
| | | Lower | Middle | Upper | Lower | Middle | Upper |
| Demographic and socio-economic variables | Women | 0.03694 [1.07] | 0.009801 [0.28] | .000161 [0.35] | -0.041961 [1.74] | 0.030964 [1.21] | 0.000956 [0.91] |
| | Age | 0.002842 [1.83] | -0.003394 [2.17]* | 0.000038 [1.70] | -0.000712 [0.55] | 0.001871 [1.34] | -0.0001 [1.40] |
| | Number of children | 0.008612 [0.53] | 0.00758 [0.47] | -0.000049 [0.21] | 0.017923 [2.32]* | -0.020525 [2.50]* | 0.000359 [1.03] |
| | Educational Level | -0.046672 [4.68]** | -0.041962 [4.20]** | 0.000498 [2.29]* | -0.034237 [6.47]** | 0.035683 [6.43]** | 0.000009 [0.04] |
| | Living with parents | -0.020323 [0.53] | 0.02431 [0.63] | 0.000725 [1.06] | 0.045293 [1.72] | -0.041537 [1.50] | 0.000324 [0.30] |
| | Family saves money | -0.285689 [6.98]** | 0.278474 [6.81]** | 0.001823 [2.02]* | -0.1534 [6.22]** | 0.144979 [5.55]** | 0.003017 [2.07]* |
| Work-related variables | Head of family is employed | -0.060234 [1.35] | 0.053494 [1.20] | 0.000227 [0.38] | -0.022666 [0.76] | 0.009625 [0.31] | |
| | Formally employed and remunerated | 0.054205 [1.41] | -0.050973 [1.33] | 0.000116 [0.24] | 0.05567 [2.39]* | -0.063831 [2.59]** | 0.000154 [0.16] |
| | Employed in a private company | 0.068047 [2.08]* | -0.077111 [2.36]* | -0.00021 [0.42] | 0.008879 [0.33] | -0.025944 [0.94] | 0.000624 [0.62] |
| | Type of employment: more cognitive | -0.027966 [4.73]** | 0.024363 [4.12]** | 0.000013 [0.15] | -0.005599 [1.51] | 0.006766 [1.73] | -0.000283 [1.75] |
| | Type of employment: more creative | -0.009418 [1.51] | 0.005773 [0.93] | 0.000157 [1.70] | -0.006081 [1.66] | 0.005844 [1.51] | 0.000027 [0.19] |
| | Type of employment: greater independence | -0.013806 [2.36]* | 0.010809 [1.82] | 0.000068 [0.71] | -0.004675 [1.38] | 0.003391 [0.93] | 0.000196 [1.22] |
| | Type of employment: supervises someone | -0.160188 [3.57]** | 0.152152 [3.43]** | -0.000111 [0.20] | -0.032503 [1.33] | 0.019907 [0.77] | 0.002241 [1.81] |
| Country characteristics | Percentage of rural population | -0.013139 [2.41]* | 0.0103 [1.89] | 0.000663 [10.36]** | -0.111661 [7.69]** | 0.113125 [7.30]** | 0.005396 [78.20]** |
| | GDP per capita logarithm | 0.118451 [1.00] | 0.014821 [0.13] | -0.010882 [30.76]** | -2.493796 [7.80]** | 2.495333 [7.31]** | 0.128573 [103.30]** |
| | Gini coefficient | 0.000433 [2.11]* | -0.000314 [1.54] | -0.000019 [14.97]** | 0.00304 [7.77]** | -0.003071 [7.34]** | -0.000159 [43.94]** |
| | Ethnic fragmentation | 0.007626 [0.98] | 0.001232 [0.16] | -0.000736 [26.52]** | -0.105431 [7.99]** | 0.106743 [7.58]** | 0.005199 [57.31]** |
| Number of observations | | 1252 | 1252 | 1252 | 1744 | 1744 | 1509 |
| Pseudo-R2 | | 0.1607 | 0.1362 | 0.2396 | 0.237 | 0.2108 | 0.1594 |
| Positive predictive power | | 0.6495 | 0.646 | 0 | 0.4296 | 0.9303 | 0 |
| Negative predictive power | | 0.7246 | 0.7058 | 1 | 0.9442 | 0.4447 | 1 |

Probit Model, calculated with a constant. The average marginal impact of each one of the variables is shown.

Robust Z statistics shown in brackets.

* 5% significant; ** 1% significant.

TABLE 4. PROBIT OF THE PERCEPTION OF BELONGING TO A GIVEN SOCIAL CLASS IN DEVELOPING REGIONS (CONTINUED)

| Group of Variables | Variable | Sub-Saharan Africa | | |
|---|------------------------------------|--------------------|-----------|-----------|
| | | Lower | Middle | Upper |
| Demographic and socio-economic variables | Women | -0.013036 | 0.042546 | -0.00077 |
| | | [0.43] | [1.51] | [0.91] |
| | Age | -0.004366 | 0.004332 | 0.000022 |
| | | [3.15]** | [3.35]** | [0.60] |
| | Number of children | 0.010757 | -0.013832 | -0.000111 |
| | | [1.27] | [1.72] | [0.42] |
| | Educational Level | -0.067194 | 0.047249 | 0.000985 |
| [7.13]** | | [5.51]** | [4.45]** | |
| Living with parents | -0.02333 | 0.021029 | -0.000401 | |
| | [0.62] | [0.59] | [0.45] | |
| Family saves money | -0.184521 | 0.183545 | 0.002105 | |
| | [6.01]** | [6.35]** | [1.97]* | |
| Work-related variables | Head of family is employed | -0.041332 | 0.017272 | 0.001379 |
| | | [0.95] | [0.43] | [1.89] |
| | Formally employed and remunerated | 0.092681 | 0.004945 | -0.001564 |
| | | [2.07]* | [0.12] | [2.50]* |
| | Employed in a private company | 0.090868 | -0.033028 | -0.005412 |
| | | [2.46]* | [0.96] | [3.09]** |
| | Type of employment: more cognitive | -0.017298 | 0.02043 | -0.000183 |
| [3.11]** | | [3.92]** | [1.26] | |
| Type of employment: more creative | -0.005764 | 0.005272 | 0.000248 | |
| | [0.97] | [0.95] | [1.63] | |
| Type of employment: greater independence | -0.004921 | 0.004169 | 0.000179 | |
| | [0.80] | [0.72] | [1.12] | |
| Type of employment: supervises someone | -0.181847 | 0.128606 | 0.002354 | |
| | [5.08]** | [3.82]** | [1.90] | |
| Country characteristics | Percentage of rural population | -0.010142 | 0.001469 | 0.00017 |
| | | [3.42]** | [0.54] | [2.28]* |
| | GDP per capita logarithm | -0.205941 | 0.18818 | 0.001317 |
| | | [3.13]** | [3.08]** | [0.94] |
| Gini coefficient | 0.000173 | -0.000206 | 0 | |
| | [2.77]** | [3.53]** | [0.18] | |
| Ethnic fragmentation | -0.000681 | -0.003179 | 0.000083 | |
| | [0.35] | [1.72] | [1.84] | |
| Number of observations | | 1436 | 1436 | 1436 |
| Pseudo-R2 | | 0.158 | 0.1335 | 0.4065 |
| Positive predictive power | | 0.8039 | 0.3819 | 0.1852 |
| Negative predictive power | | 0.5455 | 0.8793 | 0.9993 |

Probit Model, calculated with a constant. The average marginal impact of each one of the variables is shown.

Robust Z statistics shown in brackets.

* 5% significant; ** 1% significant.

Appendix 2
OLS Model to determine values and preferences of the middle class

TABLE 5. OLS MODEL OF THE DETERMINANTS OF THE POLITICAL IDEOLOGY INDEX

| | IDEOLOGY | | | | | | | | |
|--------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------------|-------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.1707 [12.46]** | | | -0.1670 [6.86]** | | | 0.0225 [0.61] | | |
| Middle Class | | 0.1779 [13.22]** | | | 0.1774 [7.42]** | | | -0.0447 [1.26] | |
| Upper Class | | | 0.1106 [2.09]* | | | 0.0673 [0.62] | | | 0.0237 [0.18] |
| Women | -0.0999 [7.58]** | -0.1000 [7.59]** | -0.0944 [7.15]** | -0.0659 [2.88]** | -0.0659 [2.88]** | -0.0596 [2.60]** | -0.0421 [1.27] | -0.0414 [1.25] | -0.0422 [1.28] |
| Age | -0.0008 [1.67] | -0.0009 [1.88] | -0.0008 [1.57] | 0.0078 [8.94]** | 0.0077 [8.86]** | 0.0080 [9.24]** | 0.0003 [0.22] | 0.0003 [0.26] | 0.0003 [0.20] |
| Single | -0.0386 [2.27]* | -0.0383 [2.25]* | -0.0362 [2.12]* | -0.0103 [0.37] | -0.0097 [0.35] | -0.0018 [0.06] | -0.0033 [0.07] | -0.0023 [0.05] | -0.0049 [0.11] |
| Educational Level | 0.0584 [18.67]** | 0.0586 [18.85]** | 0.0683 [22.53]** | 0.0490 [8.79]** | 0.0493 [8.93]** | 0.0604 [11.33]** | 0.0202 [2.52]* | 0.0213 [2.67]** | 0.0189 [2.43]* |
| Full-time work | 0.0443 [3.07]** | 0.0439 [3.04]** | 0.0454 [3.14]** | 0.0564 [2.26]* | 0.0579 [2.32]* | 0.0558 [2.23]* | 0.0410 [1.08] | 0.0407 [1.07] | 0.0416 [1.09] |
| # Observations | 43448 | 43448 | 43448 | 14525 | 14525 | 14525 | 3921 | 3921 | 3921 |
| R-squared | 0.04 | 0.04 | 0.03 | 0.05 | 0.05 | 0.05 | 0.02 | 0.02 | 0.02 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Lower Class | -0.2356 [8.00]** | | | -0.1995 [4.58]** | | | -0.1557 [5.49]** | |
| Middle Class | 0.2158 [7.38]** | | | 0.2760 [6.63]** | | | 0.1344 [4.75]** | | |
| Upper Class | 0.3186 [2.23]* | | | 0.1405 [0.78] | | | -0.0228 [0.29] | | |
| Women | -0.1154 [4.16]** | -0.1122 [4.05]** | -0.1041 [3.75]** | -0.1172 [2.77]** | -0.1222 [2.89]** | -0.1101 [2.59]** | -0.1055 [3.92]** | -0.1046 [3.89]** | -0.1029 [3.82]** |
| Age | -0.0103 [10.04]** | -0.0103 [10.04]** | -0.0107 [10.42]** | 0.0013 [0.77] | 0.0010 [0.59] | 0.0014 [0.85] | 0.0047 [3.97]** | 0.0046 [3.89]** | 0.0051 [4.26]** |
| Single | 0.0593 [1.34] | 0.0657 [1.48] | 0.0687 [1.54] | -0.1179 [2.14]* | -0.1237 [2.26]* | -0.1221 [2.22]* | -0.0163 [0.48] | -0.0180 [0.53] | -0.0169 [0.50] |
| Educational Level | 0.0824 [11.06]** | 0.0848 [11.44]** | 0.0976 [13.56]** | 0.0502 [5.55]** | 0.0431 [4.71]** | 0.0584 [6.57]** | 0.1042 [14.90]** | 0.1072 [15.52]** | 0.1152 [17.02]** |
| Full-time work | 0.0616 [2.04]* | 0.0591 [1.95] | 0.0700 [2.31]* | -0.0959 [2.06]* | -0.0917 [1.97]* | -0.1042 [2.24]* | 0.1067 [3.36]** | 0.1094 [3.44]** | 0.1061 [3.34]** |
| # Observations | 9481 | 9481 | 9481 | 5039 | 5039 | 5039 | 10482 | 10482 | 10482 |
| R-squared | 0.08 | 0.08 | 0.07 | 0.03 | 0.03 | 0.02 | 0.06 | 0.06 | 0.06 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 6. OLS MODEL OF THE DETERMINANTS OF THE TRUST IN INSTITUTIONS INDEX

| | INSTITUTIONS | | | | | | | | |
|--------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.0436 [7.09]** | | | -0.0435 [4.08]** | | | -0.0088 [0.45] | | |
| Middle Class | | 0.0380 [6.24]** | | | 0.0438 [4.13]** | | | 0.0042 [0.21] | |
| Upper Class | | | 0.0677 [2.76]** | | | 0.1985 [3.99]** | | | 0.1094 [1.43] |
| Women | 0.0050 [0.85] | 0.0051 [0.87] | 0.0063 [1.07] | -0.0388 [3.79]** | -0.0386 [3.77]** | -0.0372 [3.63]** | 0.0229 [1.27] | 0.0228 [1.26] | 0.0234 [1.29] |
| Age | 0.0010 [4.68]** | 0.0010 [4.61]** | 0.0010 [4.70]** | 0.0010 [2.64]** | 0.0010 [2.64]** | 0.0010 [2.78]** | -0.0001 [0.09] | -0.0001 [0.09] | -0.0001 [0.11] |
| Single | -0.0191 [2.50]* | -0.0188 [2.46]* | -0.0187 [2.44]* | -0.0329 [2.59]** | -0.0325 [2.56]* | -0.0326 [2.57]* | -0.0001 [0.00] | -0.0002 [0.01] | -0.0006 [0.03] |
| Educational Level | -0.0265 [18.93]** | -0.0260 [18.67]** | -0.0240 [17.80]** | -0.0073 [3.02]** | -0.0073 [3.03]** | -0.0048 [2.09]* | -0.0158 [3.43]** | -0.0160 [3.45]** | -0.0166 [3.67]** |
| Full-time work | 0.0001 [0.01] | -0.0001 [0.01] | -0.0004 [0.07] | -0.0076 [0.67] | -0.0078 [0.69] | -0.0080 [0.71] | 0.0213 [1.05] | 0.0215 [1.06] | 0.0217 [1.08] |
| # Observations | 68396 | 68396 | 68396 | 22718 | 22718 | 22718 | 5664 | 5664 | 5664 |
| R-squared | 0.08 | 0.08 | 0.08 | 0.05 | 0.05 | 0.05 | 0.08 | 0.08 | 0.08 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Lower Class | -0.0905 [8.23]** | | | -0.1230 [6.22]** | | | -0.0108 [0.73] | |
| Middle Class | 0.0558 [5.00]** | | | 0.0997 [5.20]** | | | -0.0881 [5.93]** | | |
| Upper Class | 0.1327 [2.37]* | | | 0.1231 [1.73] | | | -0.0270 [0.67] | | |
| Women | 0.0242 [2.35]* | 0.0255 [2.48]* | 0.0273 [2.66]** | 0.0373 [2.17]* | 0.0387 [2.25]** | 0.0420 [2.43]* | -0.0185 [1.33] | -0.0158 [1.14] | -0.0182 [1.31] |
| Age | 0.0022 [5.84]** | 0.0021 [5.65]** | 0.0020 [5.43]** | 0.0000 [0.04] | 0.0000 [0.06] | 0.0001 [0.16] | -0.0033 [5.40]** | -0.0031 [4.94]** | -0.0033 [5.35]** |
| Single | 0.0143 [0.89] | 0.0184 [1.14] | 0.0182 [1.13] | -0.0636 [2.85]** | -0.0634 [2.84]** | -0.0641 [2.86]** | -0.0161 [0.93] | -0.0153 [0.88] | -0.0160 [0.92] |
| Educational Level | -0.0180 [6.57]** | -0.0153 [5.63]** | -0.0124 [4.69]** | -0.0627 [15.56]** | -0.0615 [15.29]** | -0.0570 [14.52]** | -0.0501 [14.50]** | -0.0432 [12.42]** | -0.0491 [14.65]** |
| Full-time work | -0.0205 [1.84] | -0.0205 [1.84] | -0.0185 [1.65] | -0.0153 [0.73] | -0.0175 [0.83] | -0.0245 [1.17] | -0.0096 [0.57] | -0.0110 [0.65] | -0.0096 [0.57] |
| # Observations | 18578 | 18578 | 18578 | 8412 | 8412 | 8412 | 13024 | 13024 | 13024 |
| R-squared | 0.02 | 0.02 | 0.02 | 0.08 | 0.08 | 0.08 | 0.10 | 0.11 | 0.10 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 7. OLS MODEL OF THE DETERMINANTS OF THE SOCIAL CAPITAL INDEX

| | SOCIAL CAPITAL | | | | | | | | |
|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.0484 [6.75]** | | | -0.0393 [2.68]** | | | -0.0142 [0.61] | | |
| Middle Class | | 0.0270 [3.75]** | | | 0.0277 [1.89] | | | 0.0196 [0.88] | |
| Upper Class | | | 0.0436 [1.52] | | | 0.2079 [2.77]** | | | 0.0974 [1.02] |
| Women | -0.0141 [2.03]* | -0.0133 [1.93] | -0.0128 [1.85] | -0.0462 [3.32]** | -0.0458 [3.30]** | -0.0452 [3.25]** | -0.0650 [3.20]** | -0.0651 [3.20]** | -0.0646 [3.18]** |
| Age | 0.0032 [12.48]** | 0.0032 [12.48]** | 0.0033 [12.58]** | 0.0039 [7.92]** | 0.0039 [7.97]** | 0.0039 [8.08]** | 0.0031 [3.46]** | 0.0031 [3.46]** | 0.0031 [3.46]** |
| Single | 0.0207 [2.33]* | 0.0208 [2.34]* | 0.0209 [2.35]* | 0.0784 [4.72]** | 0.0795 [4.79]** | 0.0798 [4.81]** | 0.0222 [0.80] | 0.0223 [0.81] | 0.0225 [0.81] |
| Educational Level | 0.0074 [4.54]** | 0.0088 [5.46]** | 0.0102 [6.51]** | 0.0379 [11.57]** | 0.0387 [11.84]** | 0.0402 [12.84]** | -0.0050 [0.90] | -0.0052 [0.95] | -0.0045 [0.84] |
| Full-time work | 0.0281 [3.59]** | 0.0278 [3.54]** | 0.0267 [3.40]** | 0.0413 [2.61]** | 0.0411 [2.60]** | 0.0409 [2.59]** | 0.0508 [2.21]* | 0.0509 [2.21]* | 0.0498 [2.17]* |
| # Observations | 38326 | 38326 | 38326 | 9758 | 9758 | 9758 | 4437 | 4437 | 4437 |
| R-squared | 0.03 | 0.03 | 0.02 | 0.09 | 0.09 | 0.09 | 0.08 | 0.08 | 0.08 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|-------------------|
| | Lower Class | -0.0531 [2.77]** | | | 0.0235 [1.49] | | | -0.0396 [2.88]** | |
| Middle Class | 0.0463 [2.38]* | | | -0.0189 [1.22] | | | 0.0256 [1.85] | | |
| Upper Class | 0.0187 [0.22] | | | -0.0247 [0.38] | | | 0.0968 [2.43]* | | |
| Women | -0.0176 [1.10] | -0.0164 [1.03] | -0.0151 [0.95] | -0.0199 [1.29] | -0.0202 [1.30] | -0.0209 [1.35] | 0.0132 [1.02] | 0.0138 [1.06] | 0.0142 [1.09] |
| Age | 0.0016 [2.87]** | 0.0017 [2.90]** | 0.0016 [2.82]** | 0.0027 [4.49]** | 0.0027 [4.47]** | 0.0027 [4.43]** | 0.0011 [2.02]* | 0.0011 [2.08]* | 0.0012 [2.13]* |
| Single | 0.0327 [1.35] | 0.0345 [1.43] | 0.0360 [1.49] | 0.0385 [1.88] | 0.0386 [1.89] | 0.0390 [1.91] | -0.0302 [1.85] | 0.0300 [1.84] | 0.0284 [1.74] |
| Educational Level | 0.0079 [1.85] | 0.0082 [1.93] | 0.0109 [2.65]** | -0.0064 [1.97]* | -0.0067 [2.07]* | -0.0076 [2.43]* | -0.0084 [2.25]* | 0.0073 [1.97]* | 0.0067 [1.85] |
| Full-time work | -0.0111 [0.64] | -0.0113 [0.65] | -0.0105 [0.61] | 0.0130 [0.74] | 0.0132 [0.75] | 0.0143 [0.81] | -0.0305 [1.72] | 0.0316 [1.78] | 0.0309 [1.74] |
| # Observations | 6922 | 6922 | 6922 | 7689 | 7689 | 7689 | 9520 | 9520 | 9520 |
| R-squared | 0.03 | 0.03 | 0.03 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 8. OLS MODEL OF THE DETERMINANTS OF THE POLITICAL ACTIVISM INDEX

| | POLITICAL ACTIVISM | | | | | | | | |
|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.0603 [3.49]** | | | 0.0575 [1.91] | | | -0.0901 [1.23] | | |
| Middle Class | | -0.0737 [4.36]** | | | -0.0535 [1.84] | | | 0.0878 [1.24] | |
| Upper Class | | | 0.0381 [0.58] | | | -0.2685 [1.93] | | | -0.0965 [0.45] |
| Women | -0.4591 [27.75]** | -0.4539 [27.45]** | -0.4567 [27.63]** | -0.3146 [11.37]** | -0.3149 [11.38]** | -0.3177 [11.49]** | -0.5230 [7.73]** | -0.5240 [7.74]** | -0.5206 [7.69]** |
| Age | -0.0042 [6.70]** | -0.0041 [6.53]** | -0.0042 [6.63]** | -0.0013 [1.21] | -0.0013 [1.22] | -0.0014 [1.31] | -0.0015 [0.57] | -0.0016 [0.57] | -0.0014 [0.51] |
| Single | 0.0983 [4.56]** | 0.1014 [4.70]** | 0.0998 [4.63]** | 0.0055 [0.16] | 0.0052 [0.15] | 0.0036 [0.10] | 0.3262 [3.47]** | 0.3284 [3.50]** | 0.3361 [3.58]** |
| Educational Level | 0.1929 [49.75]** | 0.2011 [52.02]** | 0.1965 [52.56]** | 0.2582 [38.61]** | 0.2579 [38.69]** | 0.2547 [40.05]** | 0.1398 [9.30]** | 0.1404 [9.42]** | 0.1456 [10.08]** |
| Full-time work | 0.1594 [8.89]** | 0.1591 [8.87]** | 0.1594 [8.89]** | 0.1325 [4.44]** | 0.1330 [4.45]** | 0.1324 [4.43]** | 0.0135 [0.18] | 0.0128 [0.17] | 0.0101 [0.13] |
| # Observations | 64219 | 64219 | 64219 | 22689 | 22689 | 22689 | 3149 | 3149 | 3149 |
| R-squared | 0.09 | 0.09 | 0.09 | 0.13 | 0.13 | 0.13 | 0.07 | 0.07 | 0.07 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| | Lower Class | -0.1286 [3.33]** | | | 0.1996 [5.44]** | | | -0.0266 [0.68] | |
| Middle Class | 0.1359 [3.53]** | | | -0.1332 [3.78]** | | | -0.1279 [3.26]** | | |
| Upper Class | 0.4298 [2.30]* | | | -0.0849 [0.66] | | | 0.1745 [1.51] | | |
| Women | -0.4802 [13.12]** | -0.4801 [13.12]** | -0.4770 [13.03]** | -0.3424 [9.78]** | -0.3484 [9.95]** | -0.3581 [10.26]** | -0.7358 [19.72]** | -0.7356 [19.72]** | -0.7363 [19.73]** |
| Age | -0.0068 [5.20]** | -0.0068 [5.16]** | -0.0071 [5.41]** | -0.0022 [1.59] | -0.0022 [1.59] | -0.0024 [1.72] | -0.0127 [7.71]** | -0.0123 [7.46]** | -0.0127 [7.71]** |
| Single | 0.1048 [1.77] | 0.1061 [1.79] | 0.1050 [1.77] | 0.1034 [2.27]* | 0.1000 [2.19]* | 0.0970 [2.13]* | 0.0833 [1.74] | 0.0847 [1.76] | 0.0825 [1.72] |
| Educational Level | 0.1656 [17.00]** | 0.1657 [17.08]** | 0.1720 [18.18]** | 0.2047 [25.99]** | 0.2034 [25.55]** | 0.1963 [25.39]** | 0.1430 [16.11]** | 0.1509 [17.24]** | 0.1434 [16.71]** |
| Full-time work | 0.1656 [4.09]** | 0.1629 [4.02]** | 0.1700 [4.20]** | 0.1388 [3.52]** | 0.1427 [3.62]** | 0.1486 [3.77]** | 0.2392 [5.77]** | 0.2298 [5.54]** | 0.2388 [5.77]** |
| # Observations | 11880 | 11880 | 11880 | 12822 | 12822 | 12822 | 13679 | 13679 | 13679 |
| R-squared | 0.11 | 0.11 | 0.11 | 0.14 | 0.14 | 0.14 | 0.09 | 0.09 | 0.09 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 9. OLS MODEL OF THE DETERMINANTS OF THE FREE MARKET ORIENTATION INDEX

| | FREE-MARKET ORIENTATION | | | | | | | | |
|--------------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|------------------|--------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.0909 [13.20]** | | | -0.0821 [6.28]** | | | 0.0201 [0.97] | | |
| Middle Class | | 0.0824 [12.11]** | | | 0.0799 [6.20]** | | | 0.0337 [1.68] | |
| Upper Class | | | 0.0029 [0.11] | | | 0.0958 [1.62] | | | -0.1496 [2.08]* |
| Women | -0.0572 [8.60]** | -0.0571 [8.58]** | -0.0547 [8.22]** | -0.1012 [8.23]** | -0.1008 [8.20]** | -0.0987 [8.03]** | 0.0220 [1.16] | 0.0225 [1.18] | -0.0225 [1.18] |
| Age | 0.0011 [4.16]** | 0.0010 [3.91]** | 0.0011 [4.21]** | 0.0039 [8.37]** | 0.0039 [8.34]** | 0.0040 [8.61]** | 0.0011 [1.42] | 0.0011 [1.40] | 0.0012 [1.45] |
| Single | -0.0089 [1.04] | -0.0087 [1.02] | -0.0077 [0.90] | 0.0098 [0.66] | 0.0104 [0.70] | 0.0135 [0.91] | 0.0322 [1.27] | 0.0318 [1.25] | 0.0335 [1.32] |
| Educational Level | 0.0331 [20.91]** | 0.0336 [21.20]** | 0.0386 [25.09]** | 0.0492 [16.42]** | 0.0498 [16.74]** | 0.0547 [19.10]** | 0.0084 [1.78] | 0.0078 [1.67] | 0.0100 [2.17]* |
| Full-time work | 0.0487 [6.68]** | 0.0482 [6.62]** | 0.0475 [6.52]** | 0.0318 [2.37]* | 0.0325 [2.42]* | 0.0311 [2.32]* | 0.0096 [0.45] | 0.0104 [0.49] | 0.0087 [0.40] |
| # Observations | 49210 | 49210 | 49210 | 15721 | 15721 | 15721 | 5101 | 5101 | 5101 |
| R-squared | 0.04 | 0.04 | 0.03 | 0.06 | 0.06 | 0.06 | 0.02 | 0.02 | 0.02 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|
| | Lower Class | -0.0817 [6.07]** | | | -0.0394 [2.05]* | | | -0.0813 [5.36]** | |
| Middle Class | 0.0753 [5.62]** | | | 0.1223 [6.65]** | | | 0.0616 [4.00]** | | |
| Upper Class | -0.0300 [0.45] | | | -0.1003 [1.30] | | | 0.0075 [0.17] | | |
| Women | -0.0759 [5.92]** | -0.0753 [5.87]** | -0.0720 [5.61]** | -0.0195 [1.11] | -0.0222 [1.27] | -0.0184 [1.05] | -0.0358 [2.48]* | -0.0356 [2.47]* | -0.0344 [2.38]* |
| Age | -0.0029 [6.18]** | -0.0029 [6.20]** | -0.0030 [6.42]** | 0.0019 [2.59]** | 0.0018 [2.44]* | 0.0019 [2.62]** | 0.0029 [4.50]** | 0.0029 [4.50]** | 0.0030 [4.75]** |
| Single | 0.0135 [0.66] | 0.0147 [0.72] | 0.0170 [0.84] | 0.0019 [0.08] | 0.0009 [0.04] | 0.0012 [0.05] | -0.0154 [0.85] | -0.0148 [0.82] | -0.0146 [0.81] |
| Educational Level | 0.0228 [6.59]** | 0.0234 [6.79]** | 0.0281 [8.39]** | 0.0280 [7.26]** | 0.0232 [5.98]** | 0.0300 [7.94]** | 0.0368 [9.57]** | 0.0380 [9.84]** | 0.0422 [11.28]** |
| Full-time work | 0.0399 [2.92]** | 0.0389 [2.84]** | 0.0424 [3.10]** | -0.0158 [0.79] | -0.0117 [0.58] | -0.0184 [0.91] | 0.0773 [4.43]** | 0.0782 [4.47]** | 0.0767 [4.39]** |
| # Observations | 10304 | 10304 | 10304 | 7095 | 7095 | 7095 | 10989 | 10989 | 10989 |
| R-squared | 0.07 | 0.07 | 0.07 | 0.03 | 0.03 | 0.03 | 0.07 | 0.07 | 0.07 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 10. OLS MODEL OF THE DETERMINANTS OF THE SOCIAL PROTECTION ORIENTATION INDEX

| | SOCIAL PROTECTION ORIENTATION | | | | | | | | |
|--------------------------|-------------------------------|----------------------|----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | 0.3404 [18.40]** | | | 0.3147 [8.12]** | | | 0.1391 [2.12]* | | |
| Middle Class | | -0.1466 [8.04]** | | | -0.1966 [5.14]** | | | -0.1143 [1.82] | |
| Upper Class | | | -0.3543 [4.96]** | | | -0.2232 [1.20] | | | -0.1044 [0.45] |
| Women | 0.1289 [7.26]** | 0.1208 [6.79]** | 0.1166 [6.56]** | 0.1473 [4.00]** | 0.1440 [3.91]** | 0.1376 [3.73]** | 0.0464 [0.79] | 0.0461 [0.78] | 0.0423 [0.72] |
| Age | 0.0046 [6.67]** | 0.0045 [6.56]** | 0.0044 [6.44]** | -0.0003 [0.24] | -0.0005 [0.36] | -0.0008 [0.61] | 0.0008 [0.31] | 0.0007 [0.29] | 0.0006 [0.25] |
| Single | 0.0726 [3.17]** | 0.0685 [2.99]** | 0.0677 [2.95]** | 0.0773 [1.75] | 0.0719 [1.62] | 0.0668 [1.51] | -0.0483 [0.60] | -0.0507 [0.63] | -0.0542 [0.67] |
| Educational Level | -0.0903 [21.98]** | -0.1029 [25.16]** | -0.1098 [27.71]** | -0.0600 [6.78]** | -0.0687 [7.78]** | -0.0815 [9.64]** | -0.0346 [2.34]* | -0.0365 [2.49]* | -0.0416 [2.89]** |
| Full-time work | -0.0285 [1.45] | -0.0282 [1.43] | -0.0264 [1.34] | -0.0391 [0.97] | -0.0372 [0.92] | -0.0348 [0.86] | -0.0328 [0.50] | -0.0294 [0.45] | -0.0221 [0.34] |
| # Observations | 122938 | 122938 | 122938 | 32807 | 32807 | 32807 | 9484 | 9484 | 9484 |
| R-squared | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |

| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Lower Class | 0.3409 [8.66]** | | | 0.2242 [6.21]** | | | 0.5044 [12.43]** | |
| Middle Class | -0.4383 [11.00]** | | | -0.1119 [3.23]** | | | 0.0828 [2.00]* | | |
| Upper Class | -0.4923 [2.55]* | | | -0.3985 [3.21]** | | | -0.0595 [0.48] | | |
| Women | 0.2155 [5.84]** | 0.2182 [5.91]** | 0.2055 [5.56]** | 0.1138 [3.36]** | 0.1070 [3.16]** | 0.1021 [3.02]** | -0.0274 [0.71] | -0.0366 [0.94] | -0.0359 [0.93] |
| Age | 0.0157 [11.79]** | 0.0156 [11.73]** | 0.0163 [12.28]** | 0.0015 [1.11] | 0.0014 [1.05] | 0.0013 [0.95] | 0.0003 [0.16] | -0.0007 [0.42] | -0.0005 [0.30] |
| Single | 0.0405 [0.69] | 0.0271 [0.47] | 0.0248 [0.42] | -0.1040 [2.40]* | -0.1073 [2.48]* | -0.1066 [2.46]* | 0.2303 [4.68]** | 0.2279 [4.61]** | 0.2297 [4.65]** |
| Educational Level | -0.1286 [13.13]** | -0.1250 [12.84]** | -0.1485 [15.61]** | -0.0744 [10.06]** | -0.0793 [10.70]** | -0.0839 [11.64]** | -0.1867 [19.07]** | -0.2232 [22.94]** | -0.2183 [22.91]** |
| Full-time work | -0.0330 [0.82] | -0.0221 [0.55] | -0.0408 [1.01] | -0.0179 [0.45] | -0.0130 [0.33] | -0.0102 [0.26] | -0.1683 [3.65]** | -0.1556 [3.37]** | -0.1590 [3.44]** |
| # Observations | 22295 | 22295 | 22295 | 31779 | 31779 | 31779 | 26573 | 26573 | 26573 |
| R-squared | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.07 | 0.06 | 0.06 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

TABLE 11. OLS MODEL OF THE DETERMINANTS OF THE POST-MATERIALISM INDEX

| | POST-MATERIALISM | | | | | | | | |
|--------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Developing Regions | | | Latin America | | | South East Asia | | |
| Lower Class | -0.0312 [4.22]** | | | 0.0004 [0.02] | | | -0.0097 [0.39] | | |
| Middle Class | | 0.0226 [3.13]** | | | 0.0125 [0.80] | | | 0.0077 [0.32] | |
| Upper Class | | | 0.0562 [2.02]* | | | -0.2305 [2.94]** | | | 0.0621 [0.69] |
| Women | -0.0206 [2.92]** | -0.0202 [2.87]** | -0.0196 [2.78]** | 0.0121 [0.81] | 0.0118 [0.79] | 0.0122 [0.82] | -0.0531 [2.34]* | -0.0531 [2.34]* | -0.0527 [2.32]* |
| Age | -0.0047 [17.13]** | -0.0047 [17.15]** | -0.0047 [17.12]** | -0.0018 [3.14]** | -0.0018 [3.18]** | -0.0017 [3.11]** | -0.0046 [4.74]** | -0.0046 [4.74]** | -0.0046 [4.73]** |
| Single | 0.0755 [8.24]** | 0.0756 [8.26]** | 0.0756 [8.26]** | 0.0616 [3.38]** | 0.0611 [3.36]** | 0.0630 [3.46]** | 0.1311 [4.23]** | 0.1313 [4.23]** | 0.1314 [4.24]** |
| Educational Level | 0.0563 [34.15]** | 0.0570 [34.80]** | 0.0580 [36.42]** | 0.1220 [33.19]** | 0.1211 [33.16]** | 0.1223 [34.76]** | 0.0339 [5.95]** | 0.0341 [6.02]** | 0.0342 [6.17]** |
| Full-time work | -0.0009 [0.11] | -0.0008 [0.11] | -0.0012 [0.16] | 0.0123 [0.74] | 0.0124 [0.75] | 0.0122 [0.74] | 0.0623 [2.46]* | 0.0620 [2.45]* | 0.0615 [2.44]* |
| # Observations | 106839 | 106839 | 106839 | 24738 | 24738 | 24738 | 9157 | 9157 | 9157 |
| R-squared | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.04 | 0.04 | 0.04 |

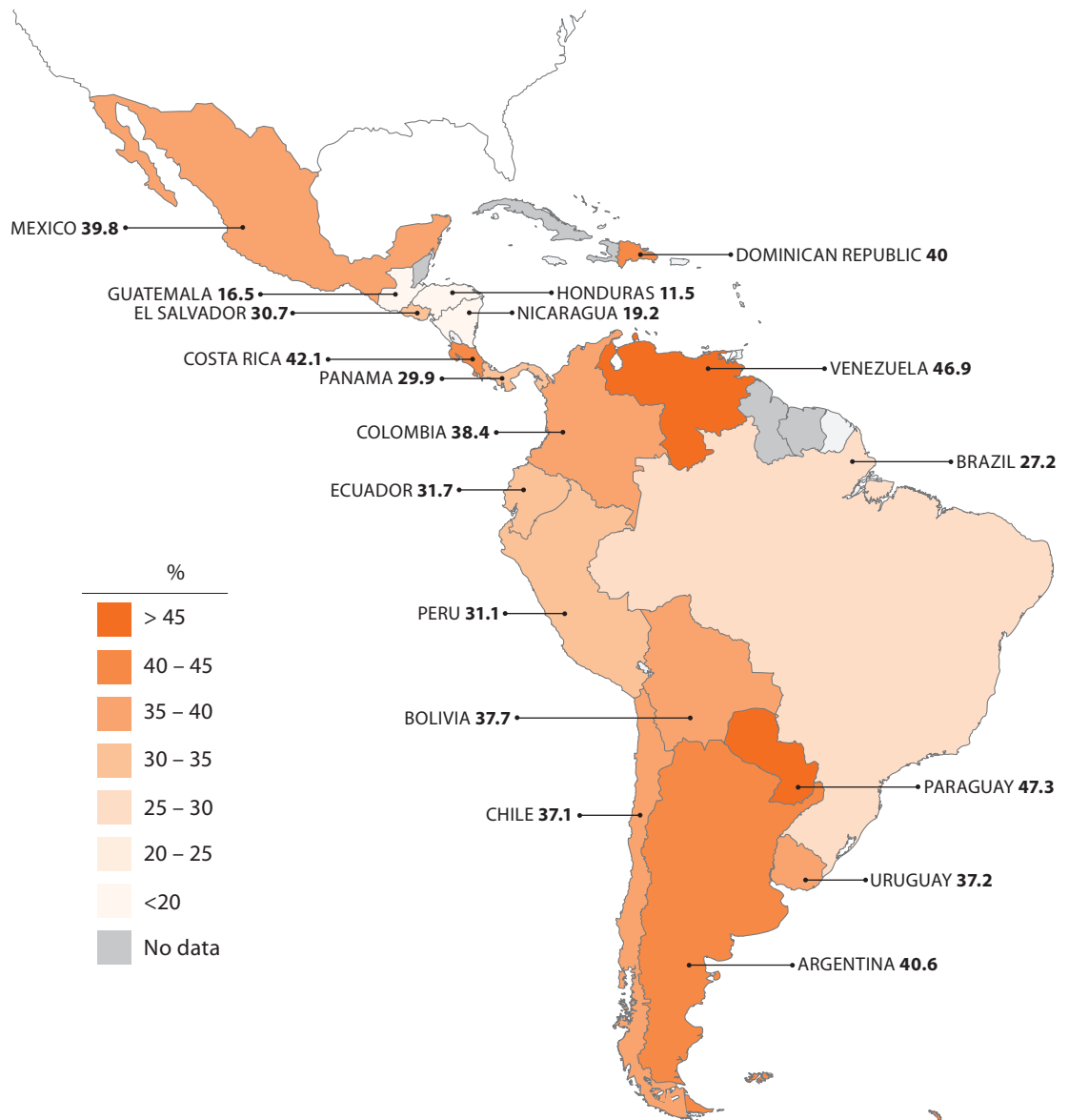
| | Eastern Europe | | | Middle East | | | Sub-Saharan Africa | | |
|--------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Lower Class | -0.0511 [3.26]** | | | -0.0807 [4.97]** | | | -0.0353 [2.45]* | |
| Middle Class | 0.0588 [3.72]** | | | 0.0343 [2.22]* | | | -0.0773 [5.26]** | | |
| Upper Class | 0.2672 [3.44]** | | | 0.0882 [1.69] | | | -0.0359 [0.82] | | |
| Women | -0.0198 [1.35] | -0.0201 [1.37] | -0.0184 [1.25] | 0.0016 [0.11] | 0.0043 [0.29] | 0.0057 [0.38] | -0.0355 [2.58]* | -0.0343 [2.49]* | -0.0350 [2.54]* |
| Age | -0.0058 [10.91]** | -0.0058 [10.92]** | -0.0059 [11.12]** | -0.0048 [7.81]** | -0.0047 [7.78]** | -0.0047 [7.74]** | -0.0044 [7.33]** | -0.0042 [6.94]** | -0.0044 [7.23]** |
| Single | 0.1390 [6.00]** | 0.1411 [6.09]** | 0.1410 [6.09]** | 0.1254 [6.55]** | 0.1262 [6.59]** | 0.1256 [6.56]** | 0.0141 [0.80] | 0.0159 [0.91] | 0.0142 [0.81] |
| Educational Level | 0.0602 [15.38]** | 0.0601 [15.44]** | 0.0625 [16.47]** | 0.0671 [20.30]** | 0.0691 [20.84]** | 0.0705 [21.85]** | 0.0139 [3.98]** | 0.0203 [5.86]** | 0.0164 [4.84]** |
| Full-time work | 0.0449 [2.82]** | 0.0436 [2.74]** | 0.0456 [2.87]** | -0.0081 [0.48] | -0.0109 [0.64] | -0.0124 [0.73] | 0.0392 [2.39]* | 0.0354 [2.16]* | 0.0384 [2.34]* |
| # Observations | 21202 | 21202 | 21202 | 26001 | 26001 | 26001 | 25741 | 25741 | 25741 |
| R-squared | 0.07 | 0.07 | 0.07 | 0.09 | 0.09 | 0.09 | 0.02 | 0.02 | 0.02 |

OLS Model, estimated with constant. Robust t statistics shown in brackets. * 5% significant; ** 1% significant.

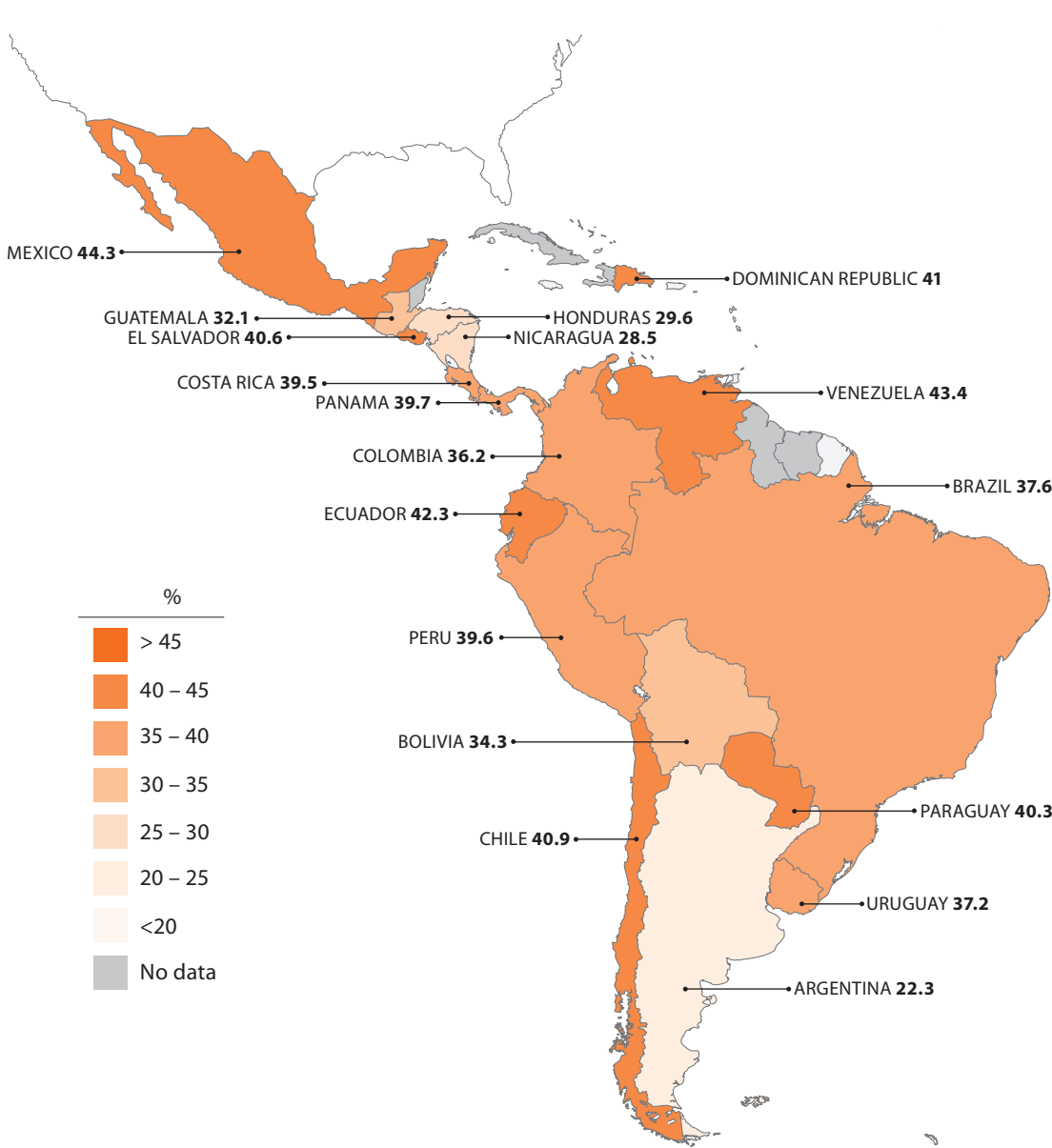
Appendix 3

Maps of social class sizes in Latin America

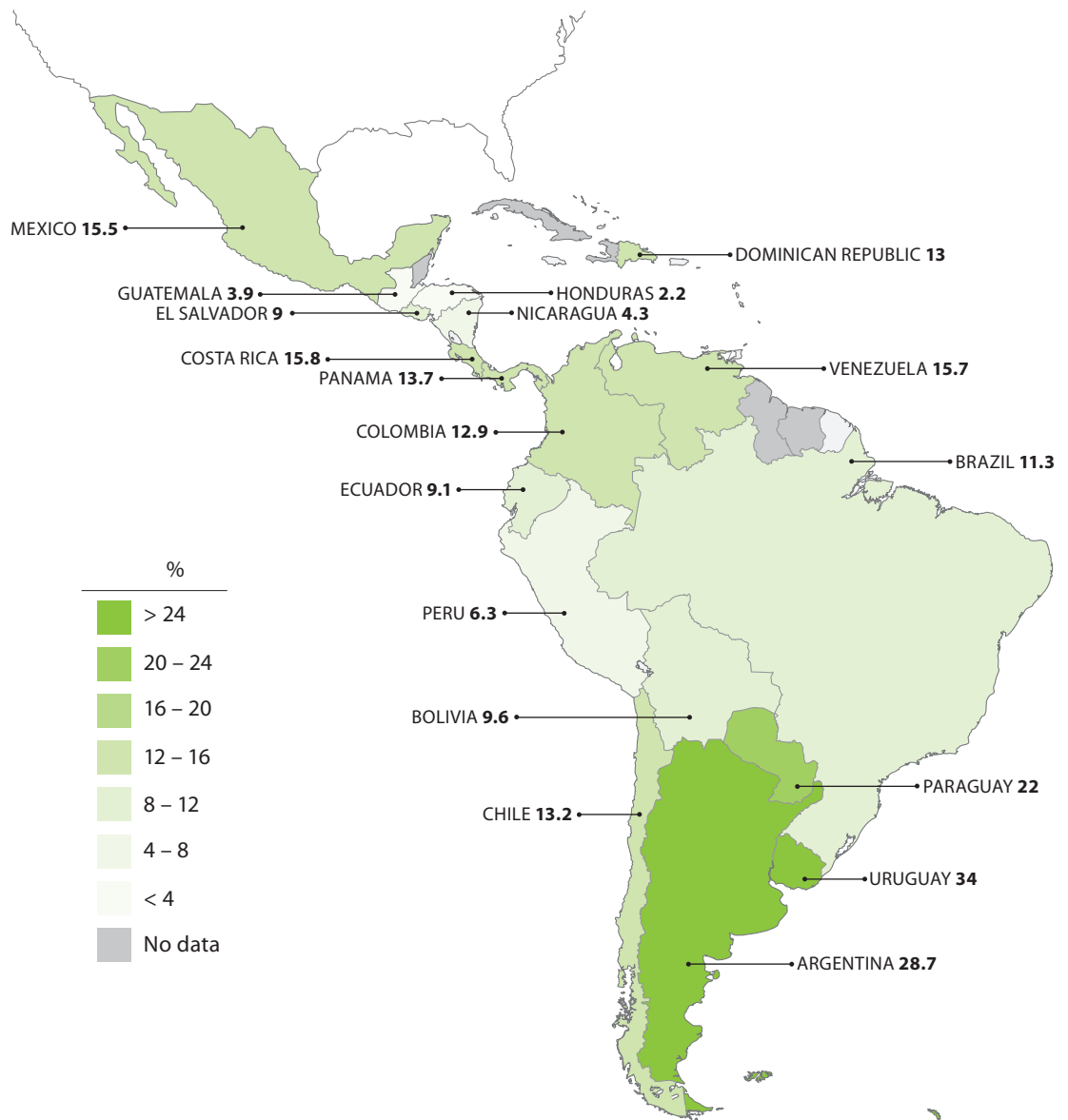
MAP 1. SIZE OF THE VULNERABLE CLASS IN LATIN AMERICAN COUNTRIES (BEGINNING OF THE 1990S)



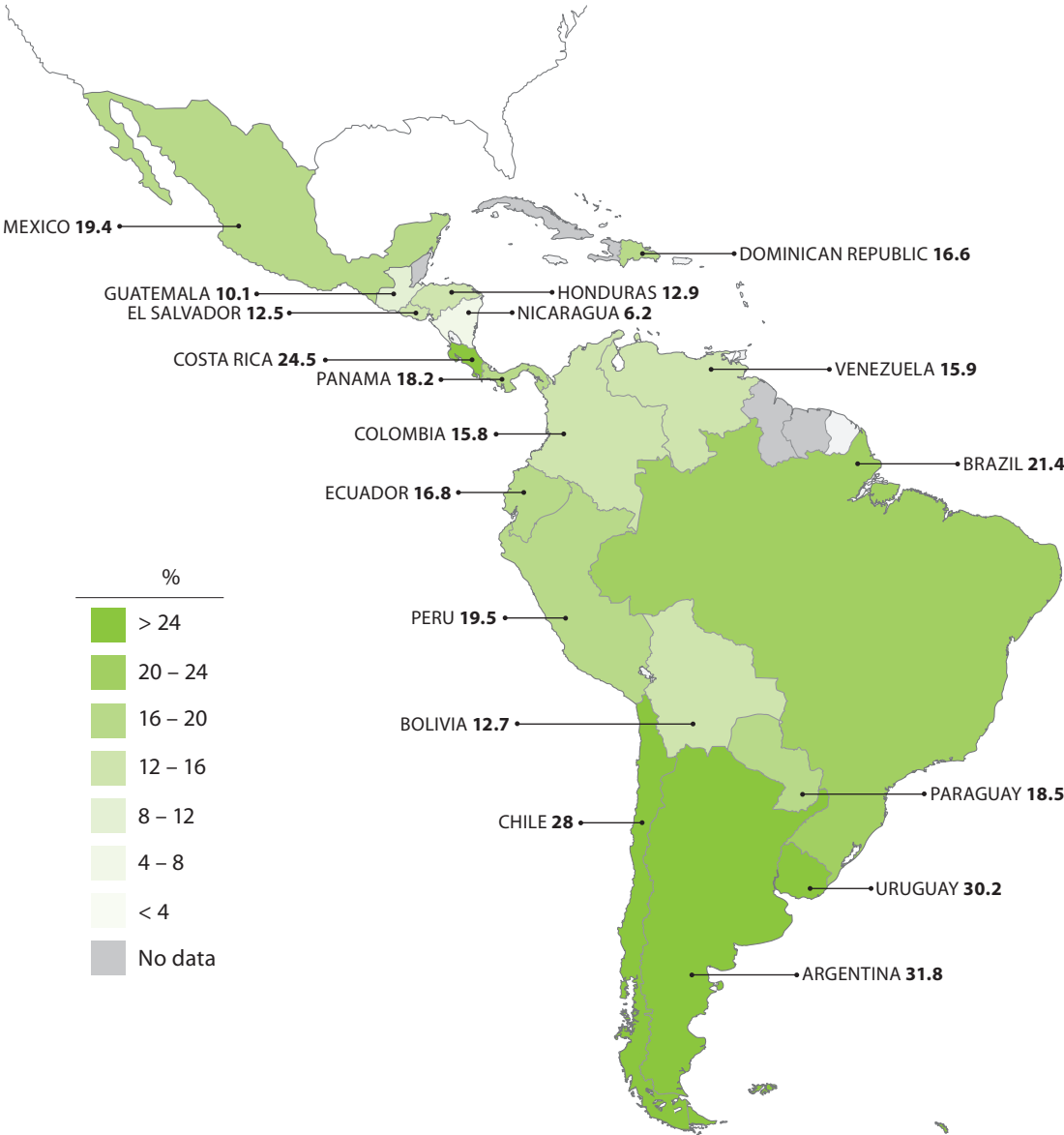
MAP 2. SIZE OF THE VULNERABLE CLASS IN LATIN AMERICAN COUNTRIES (END OF THE 2000S)



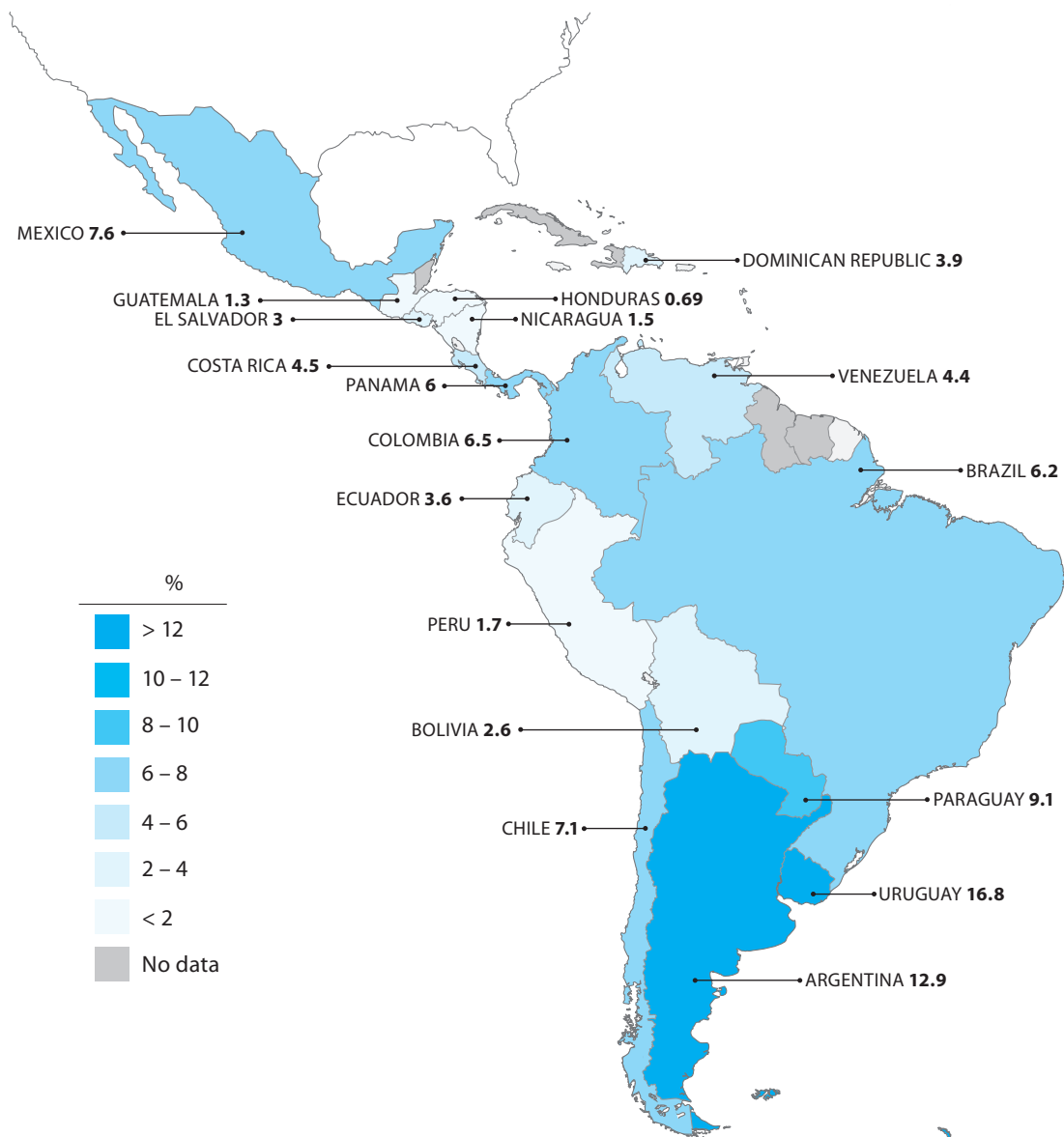
MAP 3. SIZE OF THE LOWER MIDDLE CLASS IN LATIN AMERICAN COUNTRIES (BEGINNING OF THE 1990S)



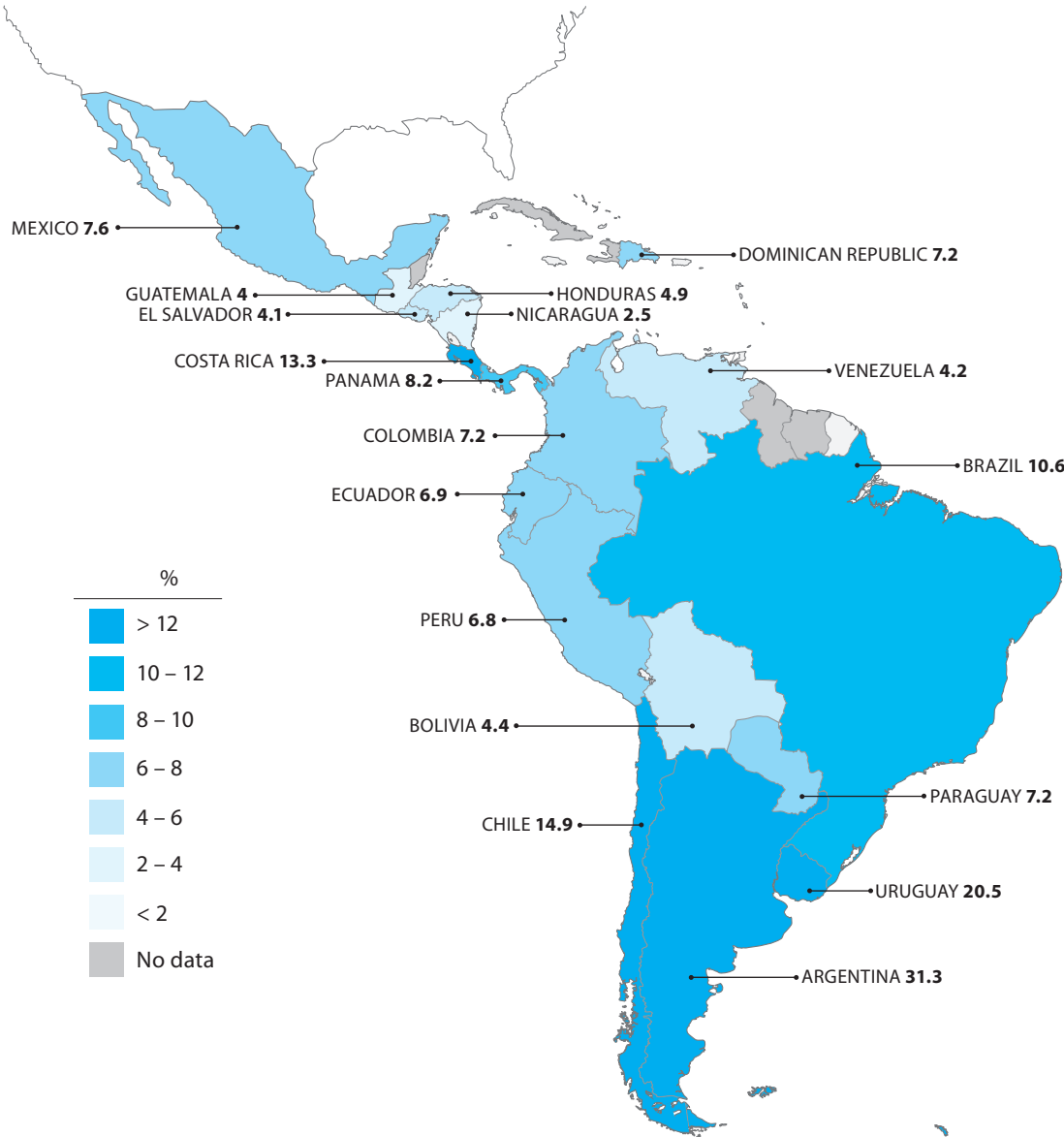
MAP 4. SIZE OF THE LOWER MIDDLE CLASS IN LATIN AMERICAN COUNTRIES (END OF THE 2000S)



MAP 5. SIZE OF THE UPPER MIDDLE CLASS IN LATIN AMERICAN COUNTRIES (BEGINNING OF THE 1990S)



MAP 6. SIZE OF THE UPPER MIDDLE CLASS IN LATIN AMERICAN COUNTRIES (END OF THE 2000S)



The accelerated growth of the middle class that has taken place during the last decade in Latin America, as well as in other developing regions, has renewed the interest in this social group's impact on economic growth and social change. However, this stands in contrast with the ambiguity and confusion with which the middle class tends to be identified and quantified. Most studies focus on the analysis of income and fail to assess the values and preferences of middle classes in Latin America, a dimension that can be of great use to understand this phenomenon. This study aims to quantify the size of the middle class, not only from an income perspective but also delving into the subjective factors that determine the perception of belonging to the middle class, as well as looking at some of the value dimensions that characterize it.

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