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Economic Polarisation in Latin America and the Caribbean: What do Household Surveys Tell Us?

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Economic Polarisation

in Latin America and the Caribbean:

What do household surveys tell us? *

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Abstract

This document presents and discusses an extensive set of statistics aimed at characterizing the degree of economic polarisation in the Latin American and Caribbean (LAC) countries. The study is based on a dataset of household surveys from 21 LAC countries in the period 1989-2004. Latin America is characterised by a high level of economic polarisation, compared to other regions in the world. On average, income polarisation has mildly increased in the region since the early 1990s. The country experiences in terms of income polarisation, however, have been heterogeneous. The region has moved forward toward the reduction of educational inequalities, while the gaps between the rich and the poor in terms of access to basic services (water and electricity) have been reduced.

Keywords: polarisation, cohesion, inequality, Latin America, Caribbean

JEL codes: I3, D3, D6

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1. Introduction

There is an increasing concern on issues of social cohesion and polarisation arising from the observation that in many countries societies may be separating out into groups internally homogenous and increasingly different among them. That concern is particularly relevant in Latin America and the Caribbean (LAC), a region with traditionally very high levels of inequality, and increasing income disparities over the last two decades.[1]

Social cohesion is likely to be weak when the dispersion in the socioeconomic characteristics of a population is high. If people have access to substantially different sets of opportunities, and enjoy (or suffer) very different living standards, social tensions are likely to emerge. An economically polarised country is more likely to be socially and politically unstable.[2]

This study documents the levels and trends of economic polarisation in Latin America and the Caribbean by exploiting a large database of household surveys carried out in 21 countries in the period 1989-2004. The document seeks to identify dimensions where polarisation is more intense and countries/regions where fragmentation has been increasing over time.

As a result of the complexity and ambiguity of the concept, there is not an empirical counterpart of the idea of social cohesion. Rather than attempting to justify a unique indicator, we report different measures of socioeconomic disparities among groups. In this sense, we present indices of income polarisation and inequality, indicators of differences in the labour market as well as in the access to social services, and measures of educational gaps. The focus is not only on the levels of polarisation, but also in the patterns over the last 15 years.

The document shows evidence suggesting that Latin America is characterised by a high level of economic polarisation, compared to other regions in the world. On average, income polarisation has mildly increased in the region since the early 1990s. The country experiences, however, have been heterogeneous. While income polarisation substantially increased in some countries, the income distributions of other LAC economies turned less polarised. The region has moved forward toward the reduction of educational polarisation, and the gaps between the rich and the poor in terms of access to basic services (water and electricity) have been reduced.

The rest of the document is organised as follows. In section 2 we briefly discuss the concept of economic polarisation and social cohesion. In section 3 we present the

[1] See IADB (1998), Morley (2000), Ganuza *et al*. (2001), Bourguignon and Morrison (2003) and Gasparini (2004 a) for evidence on inequality in LAC.

[2] Of course, the causality can go both directions: socioeconomic fragmentation can be the consequence of social and political instability. A companion paper explores these links (Gasparini and Molina, 2006).

database of household surveys from which we draw most of results in the document. Section 4 is the core of the study, as it includes the statistics and analysis of income polarisation and inequality for the LAC countries. Section 5 presents a set of statistics on differences in labour market outcomes. In section 6 the focus is shifted toward education: we present statistics on various educational gaps, education inequality and educational mobility. In section 7 we report the differences in the access to housing and certain basic services, as water and electricity. Section 8 closes with a brief assessment of the results.

2. Economic polarisation

The concept of polarisation is directly linked to the sources of social tension. The notion has its roots in sociology and political science, with Karl Marx arguably being the first social scientist to study it. In Economics its formal analysis has its origins in the 1990s, in the works of Esteban and Ray (1991, 1994), Foster and Wolfson (1992) and Wolfson (1994). It was subsequently extended, with the ultimate goal of developing not just an index that measures polarisation, but also achieving an understanding of the possible causes which may affect it.[3]

Following Esteban and Ray (1994) we rely on what might be called the *alienation-identification* framework. The intuition is simple: given a relevant characteristic such as religion, income, race or education, a population is polarised if there are few groups of important size in which their members share this attribute and feel some degree of identification with members of their own group, and at the same time, members of different groups feel alienated from each other. This three elements (size group, identification and alienation) produce antagonism among the population which generates a hostile environment.

To be fair, the concern for differences in economic variables across groups has always been in the Economics agenda. David Ricardo (1817) stated that "*to determine the laws which regulate the distribution (among landowners, capitalists and workers) is the principal problem in Political Economy*". Economists have contributed to the discussion of social fairness, and have developed a large literature on the measurement of inequality.[4] The concept of inequality is closely linked to the principle of Dalton-Pigou: a transfer from an individual with higher income to another individual with lower income generates a more equal distribution. Equality is usually associated to social fairness, and it is viewed as a desirable social objective.[5] It is believed that a more equal economy is more stable from a political and social point of view, and it is more likely to have democratic regimes, less crime, and under certain circumstances higher economic growth.[6]

To understand the difference between polarisation and inequality, suppose a country with six persons labelled as A, B, C, D, E, F with incomes equal to $ 1, 2, 3, 4, 5 and 6, respectively. Suppose now two transfers of one peso: the first one from C to A, and the second one from F to D. The two transfers are equalizing (from richer to poorer persons), so all inequality indices complying with the Dalton-Pigou criterion will fall, or

[3] See Esteban and Ray (1994), Foster and Wolfson (1992), Wolfson (1994), Alesina and Spolaore (1997), Zhang and Kanbur (2001), D'Ambrosio and Wolf (2001), and Duclos, Esteban and Ray (2004).

[4] See Atkinson and Bourguignon (eds.) (2000), Deaton (1997), Cowell (2000) and Lambert (2001).

[5] Sen (2000) argues that all views of social fairness imply equality of something.

[6] See Persson and Tabellini (2003) for an introduction to this literature. A companion paper (Gasparini and Molina, 2006) discusses this issue in the LAC context.

at least not increase. The inequality analysis assesses the new situation as "better" than the initial one.

Notice, however, that in this example the new income distribution has three persons with $2 (A, B and C), and three persons with $5 (D, E and F). The population in this country is divided into two clearly differentiated groups that are internally perfectly homogeneous. Although less unequal, this society has become more polarised.[7] The notion of polarisation refers to homogeneous clusters that antagonize with each other. In the new situation of the example people may identify themselves as part of clearly defined groups which are significantly different from the rest. This polarisation may derive in greater social tension than in the initial distribution, and then in more social and political instability, crime, violence and other "bads". In fact, the conjecture that motivates research on polarisation is that contrasts among densely homogeneous groups can cause social tension. The polarisation measures depend on the degree of equality within each group (identification) and the degree of differences across groups (alienation). Higher identification and higher alienation raise polarisation.

The previous example is designed to illustrate a case where polarisation goes in opposite direction to inequality. However, it is likely that in most cases polarisation and inequality go in the same direction. Going back to the example, suppose that from the initial distribution there is a transfer of $1 from B to E: the economy is now more unequal and more polarised.

Thus, the analysis of polarisation should be viewed as complementary to that of inequality. Both polarisation and inequality are different although related dimensions of the same distribution. This document gives priority to the study of polarisation due to two reasons. First, the concept of polarisation seems more related to social cohesion, social tensions and instability than the concept of inequality. As mentioned above, the research on polarisation is mainly motivated by the conjecture that the differences among homogeneous groups cause social tension and instability. Even if we eventually find a high correlation between polarisation and inequality measures, we believe that statistics on polarisation should have the central role in a study on social cohesion. Second, polarisation is by far the distributional dimension less studied. While the inequality literature is large in Latin America, we are not aware of studies computing many polarisation measures for a large set of countries in the region. Although for both reasons this study focuses on income polarisation measures, we also present and analyze a large set of income inequality measures for all the LAC countries in our sample.

Social cohesion surely depends on both economic and non-economic variables. Even in a quite economically homogeneous society tensions may emerge because of, for instance, religious or racial differences. Similarly, a very economically-polarised and unequal society may exhibit high social cohesion if the sharing of some values, ideas and views is strong. Even if the income distribution remains stable in a given period of

[7] See below and section 4 for a rigorous definition of income polarisation.

time, social cohesion may increase under certain circumstances (*e.g*. under a war with other country) and decrease in others. This study focuses only on *economic* polarisation (and inequality) and then it is just a contribution to the assessment of the degree of social cohesion in a society. We estimate the distribution of economic variables and compute measures of polarisation and inequality. On average, we expect these measures to be positively correlated to situations of instability, lack of social cohesion, social tensions, crime and violence.

Most of this study deals with *income* polarisation. Income is usually taken as a proxy for well-being, but it is certainly not the only variable we should consider in the analysis. People may not care about incomes but about polarisation in the opportunities to generate incomes, and then be more concerned about the distribution of variables like education, assets, health, or access to basic services. In this document we follow the tradition of studying the income distribution as a proxy for the distribution of living standards. Anyway, we compute and report gaps in educational variables, housing and access to basic services as a way of measuring other variables affecting the current well-being of people, and determining their future opportunities.

In this study we present *static* measures of polarisation, *i.e*. those computed over the distribution of income from cross-section data from household surveys. Following the above example, suppose that for seasonal reasons individuals A, B and C earn $2 per month in the first half of the year and $5 per month in the second half, while individuals D, E and F earn $5 in the first semester, and $2 in the second one. In each semester, the income distribution is polarised; however, on average the yearly income distribution is egalitarian, and then not polarised. Unfortunately, household surveys do not follow individual over long periods of time to allow computing a more dynamic picture of polarisation. We are not aware of any study of income polarisation using the few short panels available in Latin America. Inequality studies from those panels suggest that the basic patterns persist although the levels of income inequality are lower than those arising from cross-section inequality studies. In particular, the region continues exhibiting very high levels of inequality. Our conjecture, then, is that the polarisation picture emerging from our study would not be very different from the one obtained with panel data.

3. The household surveys [8]

This document is based on microdata from a large set of household surveys carried out by the National Statistical Offices of the LAC countries in the period 1989-2004. The database used for this study is a sample of a larger one put together by CEDLAS and the World Bank: the Socioeconomic Database for Latin America and the Caribbean (SEDLAC).

Table 3.1 reports the household surveys used in the study. The sample includes information for Argentina, Bolivia, Brazil, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela. The sample covers all countries in mainland Latin America and four of the largest countries in the Caribbean – Dominican Republic, Haiti, Jamaica and Suriname. In each period the sample of countries represents more than 92% of LAC total population.

Whenever possible we select three years in each country to characterize the two main periods in the last 15 years: the growth period of the early and mid 1990s when several structural reforms were implemented, and the stagnation and crisis period of the late 1990s and early 2000s. Unfortunately, there is not enough information to characterize the recent recovery of the LAC economies that started around 2003.

Box 1: Growth in Latin America

On average per capita GDP in the LAC economies grew at an annual 2% between 1990 and 1997. Growth was particularly intense in South America (annual 2.8%). This period of relatively fast growth ended up in the late 1990s when several crises affected the region, in particular South America where growth became negative. Around 2003 most economies overcame the crises and started a strong recovery. Figure B.1 shows per capita GDP in constant prices for all the economies in our sample.

Most household surveys included in the sample are nationally representative. The main two exceptions are Argentina and Uruguay, where surveys cover only urban population, which nonetheless represents more than 85% of the total population in both countries. The household survey of Suriname has also an urban coverage (the city of Paramaribo). We also work with some surveys that cover only urban areas in Bolivia and Colombia to have a larger perspective of distributional changes.

Household surveys are not uniform across LAC countries. The issue of comparability is of a great concern. We make all possible efforts to make statistics comparable across countries and over time by using similar definitions of variables in each country/year,

[8] Some paragraphs of this section are taken from SEDLAC (2005), where we describe the database from which we have taken the sample used for this document.

and by applying consistent methods of processing the data. However, perfect comparability is far from being assured. A trade-off between accuracy and coverage arises. The particular solution adopted contains an unavoidable degree of arbitrariness. We try to be ambitious enough to include all countries in the analysis, and accurate enough so not to push the comparisons too much.

It is well known that household consumption is a better proxy for well-being than household income.[9] Despite this dominance, nearly all comparative distributional and poverty studies in LAC use income as the well-being indicator. A simple reason justifies this practice: few countries in the region routinely conduct national household surveys with consumption/expenditures-based questionnaires, while all of them include questions on individual and household income. In this study we compute polarisation and inequality measures for the distribution of income, not consumption.

Some authors and agencies adjust average income to accord with consumption data from national accounts to estimate distributional measures (ECLAC, 2003; Wodon, 2000; WDI, 2002). However, it is not clear that the adjustment for consumption increases comparability, since the reliability of national accounts need not be greater than the reliability of household surveys (Deaton, 2003). In this study we do not perform any adjustment to the original data to match national accounts.

A typical problem in household surveys is that of misreporting, in particular under-reporting. Under-reporting can be the consequence of the deliberate decision of the respondent to misreport, or to the absence of questions to capture some income sources, or to the difficulties in recalling or estimating income from certain sources. Although some sources more relevant for the poor as earnings from informal activities and home production are likely to be under-reported, capital income is probably the main under-reported income source. The share of capital income and profits captured by LAC household surveys is on average 4%, which is clearly too low as compared to National Accounts figures.

One strategy to adjust for misreporting is applying some grossing-up procedure. Income from a given source in the household survey is adjusted to match the corresponding value in the National Accounts. This adjustment usually leads to inflating capital income relatively more than the other income sources. However, it relies on the dubious assumptions that data from national accounts is error-free (Deaton, 2003). If we performed this kind of adjustment, the distributional comparisons across countries would depend on things like the treatment of capital income in the National Accounts of each country. For these reasons we decided to compute statistics with the raw data, as in most academic and official studies.

In Chile in order to alleviate under-reporting problems, incomes from the household survey (CASEN) are adjusted to match some National Accounts figures. Unfortunately, for this study we could not completely undo these adjustments to make Chile fully

[9] See for instance Deaton and Zaidi (2002).

comparable to the rest of the countries. Pizzolitto (2005) reports that income growth, poverty and inequality patterns are robust to these adjustments.

A common observation among users of household surveys is that they do not typically include "very rich" individuals: millionaires, rich landlords, powerful entrepreneurs and capitalists do not usually show up in the surveys. The highest individual incomes in LAC surveys mostly correspond to urban professionals. This fact can be the natural consequence of random sampling (there are so few millionaires that it is unlikely that they are chosen by a random sample selection procedure to answer the survey), non-response, or large under-reporting. The fact is that rich people in the surveys are "highly educated professionals obtaining labour incomes, rather than capitalist owners living on profits" (Székely and Hilgert, 1999). The omission of this group surely implies an underestimation of polarisation and inequality of a size difficult to predict. Studies for other regions have used tax information to estimate income for rich individuals (Piketty and Saez, 2003).

For comparability purposes we compute income using a common methodology across countries and years. In particular, we construct a common household income variable that includes all the ordinary sources of income and estimates of the implicit rent from own-housing.[10/11] Of course, even when we follow the same procedure, since household surveys differ across countries, we may end up with non-fully comparable variables.

[10] In the web site of the SEDLAC we provide details on the construction of household income.

[11] Some surveys include reliable self-reports of the implicit rent. In those surveys where this information is not available or is clearly unreliable we increase household income of housing owners by 10%, a value that is consistent with estimates of implicit rents in the region. All rural incomes are increased by a factor of 15% to capture differences in rural-urban prices. That value is an average of some available detailed studies of regional prices in the region. See SEDLAC (2005) for a discussion on this adjustment.

4. Income polarisation

In this section we first discuss the measurement of income polarisation, and then present and analyse levels and patterns of polarisation in LAC based on microdata from the set of household surveys listed above.

4.1. The measurement of income polarisation

As stated above, we rely on the alienation-identification framework: a population is polarised if (i) there are few groups of important size, (ii) in which their members share an attribute and feel some degree of *identification* with members of their own group, and (iii) members of different groups feel *alienated* from each other.

Income polarisation measures could be classified into two main sets. Although both sets use income as the variable for alienation, they differ in the nature of identification. While the first uses a discrete variable to provide the relevant grouping of the population, the latter uses income. The first set is known as "polarisation by characteristics", whereas the second is called "pure income polarisation". For instance, income polarisation by the area where the household lives (urban-rural) is part of the first set, while income polarisation where individuals identify themselves with those with similar income levels is known as "pure income polarisation".

IDENTIFICATION	ALIENATION	TYPE	INDEX
Discrete variable: area, race, educational level, etc	Continous variable: income	Polarization by Characteristics	Gradín Group Polarization (1999) Zhang - Kanbur (2001)
Continous variable: income	Continous variable: income	Pure Income Polarization	Duclos-Esteban-Ray (2004) -EGR - Wolfson

In what follows we provide a brief overview of the polarisation measures to be used throughout this paper. The sections are rather technical, even when we derive most analytical presentations to the Appendix, so it can be skipped by the reader without a formal background.

Polarisation by characteristics

Although alienation is considered to be into the income space, there might be other population characteristics that create group identity (*e.g.* religion in Northern Ireland, race in USA). As Gradín (2000) states it, "*despite polarization occurring in the income space, groups in the distribution are the result of similarities with respect to a relevant attribute other than income"* Therefore, it is interesting to explore different attributes that could potentially reflect a well-defined social group.

The literature on polarisation by characteristics has been recently increasing at a fast pace. Collier and Hoeffler (2000) measure polarisation in an empirical analysis of civil

war, Reynal-Querol (2001) studies polarisation by religion groups and its relationship with the probability of a conflict in sub-Saharan countries, D'Ambrosio (2001) argues that the region of residence accounts for polarisation in the Italian distribution of personal income, Gradín (2000) finds that education and socioeconomic condition are the key variables to explain polarisation in the Spanish distribution of income, and Zhang and Kanbur (2001) apply some polarisation measures to regional disparities in China.

In this paper we use Gradín (2000) "group polarisation", and Zhang and Kanbur (2001) indices. Gradín (2000) makes an extension of the Esteban and Ray (1994) approach to polarisation in order to analyse the role of different household characteristics in the formation of groups, and unlike other measures, accounts for both intra-group inequality as well as the overlapping between groups. Zhang and Kanbur (2001) propose an index of polarisation which is based on the ratio of the between-group inequality to the within-group inequality – both measured with Theil's Generalized Entropy index, where groups are defined accordingly with an attribute. See the Appendix for more on both indicators of group polarisation.

Pure income polarisation

In what follows we assume that income is a proxy of other relevant characteristics that generate identification among individuals. The first approach to implement a pure income polarisation measure is based on the idea of discrete groups, or socioeconomic classes. Following this logic, it is necessary to identify the number and the support interval of each disjoint group. Wolfson (1994), Esteban and Ray (1994) and Esteban, Gradín and Ray (1999) are the main contributions in this approach. Wolfson's (1994) measure assumes two groups of equal size, while the ER (1994) measure allows n groups of potentially different sizes. EGR (1999) leaves the determination of the number of groups to the researcher, while implements a methodology to endogenously determine group sizes based on the idea of minimizing income heterogeneity within groups. See the Appendix for further information.

Esteban *et al*. (1999) implement two enhancements on the original ER index (Esteban and Ray, 1994). The first includes a correction to account for intragroup dispersion, and the second, a methodology for selecting group sizes. This approach consists of choosing the n-spike distribution that minimizes the income dispersion within all socioeconomic classes (see Appendix).

Although the framework discussed so far follows an intuitive and common way to refer to different socioeconomic strata, the division of the income distributions in a finite number of groups is unnatural, due to the fact that income is a continuous variable. This fact implies some drawbacks: (i) there is a degree of arbitrariness in the choice of the number of income groups, and (ii) continuous changes in polarisation are not captured in some cases, given that the population is divided into a finite number of groups.

The Duclos-Esteban-Ray index (DER)[12], sets out to solve these problems. In order to do so, they redefine the axioms that must be satisfied by a polarisation index for continuous variables and present a measure of pure income polarisation. This new index allows for individuals not to be clustered around discrete income intervals, and lets the area of identification influence be determined by nonparametric kernel techniques, avoiding arbitrary choices. The authors establish that a general polarisation measure that respects a basic set of axioms must be proportional to

$$P_\alpha(F) = \int f(y)^\alpha g(y) dF(y)$$

where y denotes income and $F(y)$ its distribution. The function $g(y)$ captures the alienation effect while $f(y)^\alpha$ captures the identification effect. The higher the α parameter, the larger the weight attached to identification in the polarisation index.[13] The value of α should be set by the analyst, the policy maker or in general the person who is evaluating income polarisation in a given economy. In that sense α implicitly captures the value judgments of the analyst.[14] In the empirical part of the paper we present polarisation statistics for alternative values of the parameter α.

It is possible to account changes in polarisation through the contribution of alienation, identification and their joint co-movements. Increased alienation is associated with an increase in income distances, while increased identification implies a sharper definition of groups. When taken jointly, these effects may reinforce each other, in the sense that alienation may be highest at the incomes that have experienced an increase in identification, or they may counterbalance each other.

Box 2: Some illustrations

Pure income polarisation is a complex phenomenon to grab in a simple graph, since it is the result of the interaction of two distributional characteristics: identification and alienation. In general, no simple inspection of densities could determine whether or not a distribution *A* is more polarised than a distribution *B*. For instance, a unimodal distribution could be more polarised than a multimodal because of the lower identification of the latter. In order to develop some intuition of polarisation changes, Table B.1 shows the normalised means and the coefficients of variation (CV) for the income deciles in Venezuela, 1989 and 2003. The income changes were clearly unequalizing, raising alienation. However, in almost all deciles the within dispersion increased, thus reducing identification. The increase in the mean distance among deciles was not accompanied by clustering. These factors make the 2003 distribution more

[12] Duclos, Esteban and Ray (2004)

[13] When α=0 identification within groups is ignored by the index. In that case, the polarisation index coincides with the Gini coefficient. It can be shown that in order to respect the axioms, the parameter α must lie within the interval [0.25, 1]. See the Appendix for details.

[14] See Atkinson (1970) for a similar discussion regarding inequality indices.

unequal but less polarised when a larger weight is attached to identification (*e.g.* large values of the parameter α in the DER index).

Figure B.2 presents the mean-normalized income densities of two countries with roughly the same average alienation, Dominican Republic, 2004 and Mexico 2002. However, the Mexican distribution displays lower identification, resulting in a relatively lower level of polarisation.

4.2. Income polarisation in LAC

After discussing polarisation concepts, we show evidence on both group polarisation and pure income polarisation for all the countries/years in our sample of household surveys.

Polarisation by characteristics

Which household variable is the most relevant to characterize the population into homogeneous groups that antagonize each other in terms of income? How has income polarisation across these groups evolved in the last decade? This section is aimed at answering these questions. We focus on household per capita income as the income variable, and consider six alternative groupings of the population according to area (urban-rural), region, and the educational level, gender, race, and labour status of the household head. The classification of the population by area and region follows the definitions made by the National Statistical Offices in the household surveys.[15] We classify household heads according to education into seven groups: illiterate, primary incomplete, primary complete, high school incomplete, high school complete, college incomplete and college complete. Household heads are divided into whites and non-whites following Busso, Cicowiez and Gasparini (2005). We classify people according to their labour status into unemployed/inactive, formal and informal. The latter group is comprised by those employees in small firms (less than 5 employees), the self-employed without tertiary education, and zero-income workers (mostly family workers).

In Table 4.1 we present the Gradín Group Polarisation (GGP) and the Zhang and Kanbur (ZK) indices computed for each LAC country. For both indicators education is the most relevant variable for income polarisation, followed by labour relationship, and then depending on the country, region, area or race.[16] When divided by education, people in each group look more alike, and differences across groups are larger than when dividing by other characteristic. In particular, the classification by gender looks

[15] Notice that it is not possible to compare the level of the indices for the regional grouping across countries because the number of categories (regions) differs across nations. Comparability is assured for the rest of the variables.

[16] This result may depend on the weight to the identification term. However, in general the ranking is quite robust to changes in the weights.

almost irrelevant for polarisation. Although incomes in male-headed households are in general higher than incomes in households headed by females, both the identification within groups, and the income differences across groups are very small.

Among the sample of countries for which we could implement a consistent definition of race, group polarisation by this variable is particularly relevant in Brazil, Bolivia and Paraguay. Compared to the rest of the countries in the sample, they have the highest values for the race GGP and the ZK indices (Table 4.1). In these countries households headed by non-whites are substantially poorer than white households and particularly homogeneous in terms of income.

Box 3: Race

As it is well documented in some recent studies, there are large differences between white and non-white in terms of income and other proxies of well being. The first panel in Figure B.3 documents these differences by showing the ratio of average household per capita income between these two groups in a sample of countries for which we could implement a consistent definition of race (see Busso *et al*., 2005). A significant share of these differences arises from a polarised distribution of education. White individuals have a considerable higher stock of human capital that allows them to obtain more productive jobs. The second panel in Figure B.3 illustrates the ratio white/non-white for years of education for people between 15 and 55 years old. In all LAC countries white individuals have substantially more years of formal education than their non-white counterparts. Besides differences in human capital, there is evidence pointing out to (at least statistical) discrimination: on average the labour market pays higher wages to white individuals with the same observable characteristics than non-white workers (Busso *et al*., 2005).

Figure 4.1 shows the ranking of LAC countries according to the level of the GGP index of income polarisation by education. The index ranges from 1 in El Salvador to 1.53 in Colombia. The latter has educational groups which are (relatively to other LAC countries) internally very homogeneous in terms of income, and very different among them.

The country ranking by income polarisation for educational groups does not replicate when dividing the population by other characteristic as area, labour status or gender (Figure 4.2). For instance, Brazil, the second country with the highest income polarisation by education has relatively low polarisation by area and gender when compared to other LAC countries. Instead, Peru ranks high in all characteristics except gender. These results suggest that countries significantly differ in the relevant variables that separate out their populations into relatively internally homogeneous groups that antagonize each other in terms of income.

Table 4.2 shows the sign of the change in the GGP index and its components. In most LAC countries income polarisation by educational groups has increased over the last decade. In many countries this has occurred through both larger identification of people within educational groups and higher antagonism across groups. Results are similar when using the Zhang and Kanbur Index (ZK) (see Table 4.3).

Income polarisation has also a geographical dimension. According to Table 4.2 income polarisation by regions has been increasing in most countries, while the experience of polarisation by area is somewhat more inconclusive.

Polarisation by labour status has increased in almost every country in the region, due to higher identification and antagonism. Households headed by formal workers are increasingly differentiating in terms of income from those households headed by informal workers. At the same time, in many countries both groups are becoming increasingly more homogeneous. This pattern may have important implications in terms of social tension arising from polarisation in the labour market. Section 5 has more on this.

Box 4: Basic Needs

Poverty can be defined over the space of "basic needs". Some LAC agencies and governments classify households as poor if some conditions of low-quality dwellings, no access to water and hygienic restrooms, low education and high dependency rates are met. We follow a similar methodology (see SEDLAC (2005) for specific details), and investigate the degree of income polarisation between the poor and the non-poor defined by basic needs. High income polarisation by this characteristic would reinforce the fragmentation by structural living conditions and would potentially lead to social unrest. Figure B.4 shows the GGP and ZK indexes for all the countries in the sample. Peru, Mexico and Brazil have the highest values for the GGP, while Guatemala, Honduras and Nicaragua rank high when ordered by the ZK index. Income polarisation by groups of basic needs is significant, but in most countries is lower than polarisation by education of the household head.

Pure income polarisation

In this section we turn to the analysis of pure income polarisation. In addition to documenting the level and changes in polarisation, this section studies how polarised is the region relative to other countries in the world, what are the empirical differences between inequality and polarisation, and which socioeconomic strata are more polarised. In order to do so, tables 4.4 to 4.9 report various indices of pure income polarisation (Wolfson, EGR and DER for several parameters) for all countries/years in our sample. Estimates are presented for each country, and for urban and rural areas, separately. The polarisation measures are computed for the distribution across

individuals of two income aggregates: household per capita income and household equivalized income.[17]

How polarised are the LAC countries?

We start the analysis of the income polarisation measures by comparing our estimates for LAC countries to those reported for other regions of the world. We make the comparisons in terms of the recently developed DER index. Duclos, Esteban and Ray (2004) compute this measure for a large sample of OECD countries using the Luxembourg Income Study database. Figure 4.3 shows these estimates along with our results for LAC countries for roughly the same period (mostly late 1990s). Although we apply the same methodology as in Duclos *et al*. (2004), there might be some differences in the treatment of the data that may bias the comparisons. Fortunately, Mexico 1996 is in both studies, and the two estimates are pretty close (difference of 2%), a fact that gives us some degree of confidence to take the comparison seriously.

The average DER pure polarisation index in Latin America and the Caribbean is 44% higher than the average for Europe, and 40% higher than the average for the rest of the OECD countries included in the Duclos *et al*. (2004) study. The most polarised country in Europe, Russia, is almost at the same level as the least polarised country in LAC, Uruguay. This small and largely urban South American country, the prototype of social cohesion in Latin America,[18] would be considered a very polarised society in the European context.

The picture of Latin America as a set of highly income-polarised economies does not come at a surprise. It has long been argued that inequality in the region is among the highest in the world.[19] Figure 4.3 suggests that the statement is also probably true when referred to income polarisation. Following the arguments in section 2, the evidence of Figure 4.3 helps to understand why Latin America is a region characterised by relatively high levels of tension and socio-political instability.

Which is the income-polarisation ranking across LAC countries?

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[17] We define an individual's *equivalized* household income as total household income divided by $(A + \pi_1.K_1 + \pi_2.K_2)^{\theta}$, where A is the number of adults, K_1 the number of children under 5 years old, and K_2 the number of children between 6 and 14. Parameters π allow for different weights for adults and kids, while θ regulates the degree of household economies of scale. Deaton and Zaidi (2002) suggest intermediate values for the π (π_1=0.5 and π_2=0.75), and a rather high value of θ (0.9) for countries like those in Latin America. We take that as the benchmark case. Although it would probably be more correct to assign different parameters to LAC countries in different states of development, we prefer to use the same scale across countries for transparency in the comparisons.

[18] Uruguay is known as the "Latin-American Switzerland".

[19] See IADB (1998), Morley (2000), Ganuza *et al*. (2001), Bourguignon and Morrison(2003) and Gasparini (2003), among others.

Figure 4.4 shows the polarisation ranking for the most recent survey in each country (early 2000s) for the DER with α=0.5. Brazil ranks as the most polarised country in the region. Bolivia, Haiti and Colombia are also high income-polarised countries.[20] On the other hand, Uruguay, Venezuela and Costa Rica are the least polarised countries in the region. The rankings are in general robust to the change in the weight to identification. Table 4.10 reports that most of the Spearman rank-correlation coefficients are higher than 0.90. Although some re-rankings occur (*e.g.* Uruguay ranks as the least polarised country with all indicators, except DER with α=0.75, for which it ranks second), they do not modify our general picture of polarisation in the region.

Polarisation measures differ by area. Figure 4.5 illustrates the DER for urban and rural areas for the last survey available for each country in our sample. The income distributions in urban areas have more antagonism than in rural ones in most LAC economies. On average, the DER in rural areas is 2 points lower than in urban areas. Panama, Mexico, Paraguay and Bolivia are the only countries where polarisation is significantly higher in rural areas (for DER with α=0.5).

How has income polarisation evolved during the last 15 years?

This subsection is divided into two parts: we first summarize the main patterns in the region, and then present a brief description of the country changes. Patterns in LAC polarisation can be traced with the information contained in tables 4.4 to 4.9. Tables 4.11 and 4.12. show changes in the main LAC polarisation measures and the Gini index of inequality for two periods (wherever possible): (i) the period of growth and reforms - early and mid 1990s - and (ii) the period of stagnation and crisis – late 1990s and early 2000s.[21] Four main general results emerge from these tables:

1. *Heterogeneity*

Experiences have been heterogeneous across LAC countries. On average, 10 out of 16 economies have experienced some increase in inequality and polarisation over the period under analysis. Distributional changes have been large in some countries, and negligible in others. Differences in patterns are noticeable even at the level of subregions. For instance, in the Mercosur, while inequality and polarisation went down in Brazil and to some extent in Chile, most indicators of these distributional dimensions dramatically increased in Argentina, Paraguay and Uruguay over the last two decades.

[20] Jamaica is also a very polarised country according to the 2002 survey. However, the quality of the income data in that country is low (the household survey is a consumption survey) and polarisation measures are very volatile. For that reason we prefer not to highlight the high value of the Jamaica's DER in the graph.

[21] Changes can be studied for a sample of 16 countries. There are not enough comparable surveys to analyze patterns over the 1990s and 2000s in Dominican Republic, Ecuador, Guatemala, Haiti, and Suriname.

This heterogeneity of patterns is striking, since LAC economies share many structural characteristics and were subject to similar shocks. The political cycle is also similar across Latin-American nations. In particular, during the 1990s most countries implemented market-oriented reforms. Despite these similarities economic performances have been substantially different, including changes in income polarisation and inequality. The heterogeneity of results provides a useful instrument to identify policies and scenarios under which some countries have managed to grow and/or become more equitable.[22]

2. *On average, small increase in polarisation and inequality*

As mentioned above, more than half of the countries have experienced increases in their levels of polarisation and inequality. Anyway, changes in most countries have been rather small. On average polarisation and inequality have mildly increased in the region over the last 15 years. Table 4.12 reports an increase of around 2.5% in the polarisation indicators. The average increase in the Gini was about the same amount.

There is a heated debate in Latin America (as well as in other regions of the world) regarding the effect of globalisation on economic disparities, and hence on social tension. Of course, showing polarisation and inequality patterns during a period of increasing economic liberalisation and globalisation does not prove any causal relationship. However, it helps to feed a debate that seems many times based on weak anecdotal evidence.

Results 1 and 2 above appear to be in contrast to the extreme versions of the globalisation debate. On the one hand, in contrast to some anti-globalisation arguments, polarisation did not increase in all economies subject to economic liberalisation, and in many the increase was rather small. In fact, the inequality story of LAC in the 1990s does not seem significantly worse than that of the 1980s, when globalisation was not a relevant issue. On the other hand, and in contrast to the arguments of some globalisation advocates, polarisation and inequality did increase on average in the region. Moreover, that implied that in some LAC countries, even when economies were growing presumably as a consequence of liberalisation policies, poverty significantly increased. Globalisation may have not benefited the whole population, and may have even harmed the poor, at least in some economies.

3. *Larger increase in polarisation and inequality in South America in the 1990s*

The increase in the LAC average is driven by changes in South America (Table 4.12). In most Central American countries changes have been almost negligible. In contrast, in

[22] Naturally, the rigorous study of the determinants of the performance of the LAC economies is well beyond the scope of this paper. See Ganuza *et al*. (2001), Morley (2000), and section 5 of this paper for some arguments of a large debate.

most (not in all) South American countries inequality and polarisation went significantly up. The increase seems to have been particularly relevant in the early and mid 1990s, a period of relatively fast growth and structural reforms. The described pattern fits to the cases of Argentina, Bolivia, Colombia, Paraguay, Peru, Uruguay and Venezuela, and probably Ecuador. This process may be closely link to the generation of social tension as well as the existence of social unrest.

4. *Convergence*

Changes have implied some sort of convergence across LAC countries: inequality and polarisation have especially increased in the group of less polarised/unequal countries: Argentina, Costa Rica, Uruguay, and Venezuela. The coefficient of variation of the polarisation indicators and the Gini coefficient have declined over the last 15 years (see last row in Table 4.12).

In what follows we briefly comment on the changes in inequality and polarisation in all countries in the sample. Figure 4.6 is constructed with information from SEDLAC (2005) that uses the same datasets as in this study. The different panels illustrate changes in the Gini indicator of inequality and in the EGR income polarisation index in each LAC country. Figure 4.7 presents the DER, Wolfson and EGR3 polarisation measures.

Argentina has experienced a sharp increase in inequality. The Gini coefficient for the household per capita income increased almost 6 points from 1992 to 2004. Table 4.11 reports sizeable increases in polarisation for most indicators (see also Figure 4.6). In particular, when dividing the population into 2 or 3 income groups, polarisation substantially increased. Inequality and polarisation have increased particularly during the 1990s, and to a lesser extent in the stagnation/crisis period from 1998 to 2004.[23] Like its neighbour Argentina, Uruguay has witnessed a steady increase in inequality and polarisation. This has occurred both during the growth and the stagnation periods, and was larger (more than twice) than the average for LAC. Inequality and most measures of polarisation display a slight increase in Paraguay since 1997, when national household surveys became available. Various sources of information suggest a sizeable increase in inequality in the first half of the 1990s.[24]

In Brazil the income distribution has become less unequal and polarised since the early 1990s, according to most indicators. Figure 4.6 shows a declining pattern since 1990 both in inequality and polarisation. Table 4.11 indicates that the fall has been approximately the same in the growth period of the 1990s and in the stagnation period

[23] The comparison considers a year when the crisis was over (2004). Horenstein and Olivieri (2004) find that inequality and polarisation climbed during the peak of the crisis (2002), with the latter rising at a higher rate. Both dimensions quickly went down when the economy recovered.

[24] See Fazio and Tornarolli (2005).

that followed. The exception to this picture is when computing the DER with high weight to identification.

The Chilean economy is characterized by high income inequality and polarisation. The income distribution remained basically unchanged over the 1990s. There are some signs suggesting a significant fall in inequality and polarisation in the last household survey (CASEN, 2003). If that change is confirmed in the next survey Chile would have started a road toward a more equitable distribution.

In Bolivia changes in the income distribution have been unequalizing in the last decade. All indicators computed in this study also record an increase in polarisation. In particular, polarisation has increased if identification is given high weight in the DER. Polarisation has increased both during the growth period of the 1990s and during the stagnation initiated in 1998. Also, there is evidence on inequality-increasing changes in Peru during the reform and growth years of the 1990s. Our sample covers the stagnation period 1997-2003. There are no signs of significant changes in inequality and polarisation in that period.

Colombia is a highly unequal/polarised society. Moreover, both inequality and polarisation have increased in urban areas.[25] The increase took place during the 1990s and was of a magnitude larger than in most other countries. Its neighbour Venezuela has also experienced a significant increase in inequality and polarisation between 1989 and 1998. Although the distribution has substantially moved since then, the comparison 1998-2003 implies no significant changes in inequality and polarisation.[26]

Costa Rica has one of the least polarised distributions in LAC. However, the country has experienced a sizeable increase in inequality and polarisation since the early 1990s. Most of the increase in polarisation has occurred in the period of stagnation that started in 1999. El Salvador has experienced a slow but steady fall in inequality and polarisation. All measures in table 4.11 are in accordance with this pattern. In contrast, the income distribution in Honduras has been rather stable in the 1990s. The household survey (EPH) of 2003 has some signs of increasing polarisation. The Nicaragua's economy fell during the 1980s and early 1990s. The strong recovery that started around 1993 was accompanied by a significant reduction in inequality and polarisation. The stagnation in per capita GDP since 1999 has implied a rather unchanged distribution. In Panama inequality, as measured by the Gini coefficient, was rather stable: that indicator increased less than 2%. Increases in polarisation measures were in general a bit larger. Fragmentation was particularly large when computed with the DER 0.75.

[25] Although the Colombia's survey (Encuesta Continua de Hogares) has now a national coverage, for comparison purposes and given that the survey was only urban in the early 1990s, we use only the urban observations.

[26] The exception is the DER with α=0.75. See Box 2 for more on this.

The Mexican economy exhibits a steady trend toward less inequality and polarisation. The intensity of this pattern differs across indices (Table 4.11). The reduction in polarisation seems to have happened both before and after the Tequila crisis.

Box 5: Polarisation: the sub-national level

The national statistics hide a wide range of situations within countries. In Table B.2 we present the DER index for all regions in each country. Although most general result concerning polarisation patterns are unchanged, the table suggests the presence of relevant idiosyncratic factors. Table B.3 presents a ranking of regions by the DER with α=0.5. There is considerable overlapping across countries (see Figure B.5). It is interesting to notice that national polarisation in some countries is above the regional values. That is for instance the case in Peru, where regions considered separately have relatively low values of the DER, but as income differences across regions are large, total national polarisation is relatively high.

What is the (empirical) difference between inequality and polarisation?

As explained in previous sections income polarisation and inequality are different although related dimensions of the income distribution. The correlation between these two dimensions is positive and significant. Figure 4.8 displays the Gini coefficient and the DER income polarisation index for different α parameters. As α goes up the weight of identification in the polarisation measures is increased and hence the linear relationship between polarisation and inequality looses strength. As Duclos, Esteban and Ray (2004) states, "…*the extent to which inequality comparisons resemble polarization comparisons depends on the parameter* α*, which essentially captures the power of the identification effect"*. When α=0.25 the linear fit is very precise: the R^2 is 0.98. Instead for α=1 the R^2 is 0.45: the relationship is still positive and statistically significant, but, loosely speaking, there are things captured by the polarisation index that do not show up in the inequality measure.

Figure 4.9 presents the percent changes in polarisation and inequality between the first and the last survey available for each country. When α=0.25 (first panel) the signs of the changes in polarisation and inequality coincide. The strength of this relationship weakens as α goes up because the polarisation index attaches more weight to the identification within income groups. In some cases the identification effect shifts the sign of the overall polarisation change. For instance, Brazil exhibits a decrease in polarisation for most indicators in the period 1990-2003, mainly because the decline in alienation outweighs the increase in identification over the period. However, for a large α polarisation stays roughly unchanged.

Box 6: Polarisation and the shrinking middle class

Although in practice polarisation may go along without a reduction in the middle-income groups, the stereotype of a polarisation process suggests a vanishing middle class. Some authors have alerted on a process of distributional "stress" for middle-income households (Birdsall, Graham, and Pettinato, 2000). In addition of being a worrying phenomenon *per se*, that stress may have relevant consequences on policy issues, as the support of the middle-class is key in the political process.

We apply the methodology of Birdsall *et al*. (2000) to our dataset by defining the middle class as those individuals whose household per capita incomes are in an interval around the median of the income distribution (in the range of 75 and 125 percent of the median). This criterion, that departs from the traditional definition based on fixed income intervals, or in labour and educational characteristics, is useful for comparison purposes across countries.

The first two columns in Table B.4 show the share of the population that belong to that interval, and the share of income accrued to that group. On average, the middle-income group defined as explained above represents 22% of the country population, which coincides with the mean value found by Birdsall *et al*. (2000). They report a share of over 30% for advanced economies, ranging from 24% in the United States to 49% in Finland.

On average, the share of income in the middle-income group is about 13%, which is relatively low compared to international standards. It is interesting to notice that LAC income distributions are pretty similar around their median values.

The third column reports the share of the mean with respect to the median, a measure of skewness of the distribution, and hence a measure of inequality. That ratio ranges from 1.4 in Uruguay to 1.9 in Haiti. Finally, in the fourth column we report the ratio between the median income for the richest group of individuals that generate 50% of total income over the median. There are considerable differences in this ratio across LAC countries: while the ratio is 2.86 in Venezuela, it rises to 5.58 in Brazil.

Changes in the size of the middle-income groups (in terms of population and income) have been similar to those reported for polarisation and inequality. The "middle-class" seems to have been shrinking in most of South America, with the exceptions of Brazil and Chile. Changes in Central America and Mexico have been milder, without clear signs of a significant reduction in the middle class.

Who contributes more in income polarisation?

The DER polarisation measure is the sum of all individual antagonism in the society. It is interesting to know how the different income strata contribute to overall polarisation. In order to accomplish this task the population is partitioned in twenty income vintiles so the sum of the antagonism of each vintile is the total DER measure.

Figure 4.10 indicates that the poorer vintiles in general are the ones that contribute the most to total antagonism because of their high identification. The lower the parameter

α, the larger the contribution to total polarisation. The contribution of the richest vintiles is smaller due to their relatively low identification, even though they have a more intense alienation. In other words, although the richest vintiles are relatively farther away in the income dimension, they are relatively more heterogeneous and thus less identified with their vicinity.

Given a level of total polarisation, a homogeneous distribution of antagonism over the population may lead to lower tension. In contrast, if the lowest vintiles are highly polarised, then a high-level antagonism of this population potentially creates more tension and would disrupts social cohesion. That seems to be the situation in most LAC countries: on average, the first 8 vintiles exceed their theoretical participation of 5% in more than 1 percentual point.

Most LAC countries behave as the mean shown in Figure 4.10. Bolivia and Jamaica present a relatively higher participation in the lowest vintiles that produce a monotone downward slope relationship (see Figure 4.11). The reason relies on the relatively large identification effect reinforcing alienation in the first two vintiles. In other words, the poorest 10% of the Bolivian and Jamaican population are internally more homogeneous than the poorest 10% in the rest of the countries in the region.

Box 7: DER decomposition

The DER polarisation measure could be decomposed into three multiplicative components: mean identification, mean alienation and the rescaled correlation between individual identification and alienation.[27] This decomposition allows us to explore how these components interact in each income distribution to determine total polarisation.[28] Table B.5 considers the case of α=0.5. Brazil has a lower level of average alienation (Gini coefficient) than Jamaica or Haiti, but the average α-identification (column i) and the correlation (column c) counterbalance the first effect. Consider now two countries with the same level of average alienation (inequality) such as Mexico and Dominican Republic. They end up with different levels of polarisation because of a higher identification in the latter country.

Table B.6 explores the change of the three components over time. The sign of the change in polarisation depends not only on the weight to identification but also on the correlation. For instance, with α=0.75, in Argentina as well as in Venezuela there is a compensation between the average alienation change, and changes in the α-identification and the correlation term.

[27] For further details see Duclos, Esteban and Ray (2004).

[28] Of course, it is impossible to move independently these components, because they are all interrelated dimensions of the same distribution.

5. Labour markets

The previous section documents levels and changes of household income inequality and polarisation across LAC countries. The differences in the household income distribution between two countries (or between two points in time in a given country) are the consequence of differences in four sources: (i) labour incomes, (ii) capital incomes (including benefits and land rents), (iii) government transfers, and (iv) the demographic structure of households.

There is some evidence pointing out to the particularly unequal distribution of capital and land rents in Latin America (Deiniger and Olinto, 2002). These differences, however, are not behind the high levels of inequality and polarisation in LAC shown above, because capital income is not well captured in the household surveys of the region. The share of capital income in total income reported in the surveys is around 4%, which is much lower than the figures usually reported in National Accounts.

A similar argument applies to government transfers. In particular, cash transfers do not play a key role in the redistributive schemes of the countries in the region. Some countries have recently implemented conditional cash transfers, but in most cases they are still small programs. Government cash transfers represent just less than 1% of total income recorded in LAC household surveys, and then cannot account for differences in patterns in inequality and polarisation across countries or over time.

Finally, although demographic factors may account for some differences in the household per capita income distributions of LAC countries, their contribution is empirically estimated to be small (Haimovich *et al*, 2005). Moreover, as demographic changes occur at a slow pace, the recent income distribution changes in the region are hardly mainly determined by demographic factors.[29]

Given the small share of capital income and transfers in total income, and the slow changes of demographic factors, the conclusion is straightforward: differences in the per capita income distributions documented above are mainly the consequence of differences in labour market outcomes. Figure 5.1 shows a high positive correlation between the polarisation index DER computed over the distribution of labour income and over the distribution of household per capita income.

Table 5.1 reports a large set of polarisation measures for the distribution of individual labour income. Wherever possible we report three values corresponding to early 1990s (around 1992), mid/late 1990s (around 1997) and early 2000s (around 2003). Figure 5.2 illustrates the patterns of changes in polarisation of labour incomes for all the countries in the sample.[30] Very few countries have experienced a consistent pattern of reduction in labour income polarisation. When comparing the observation for the early 2000s with

[29] See Marchionni and Gasparini (2004) for evidence on Argentina.

[30] In those countries where an observation is missing (e.g. Paraguay and Peru in the early 1990s) we have estimated polarisation measures based on trends in inequality reported by other authors.

that of the early 1990s, polarisation as measured by the EGR 3 decreased only in Brazil and Mexico. But note that these results do not hold when using the DER 0.5: polarisation in Mexico did not significantly changed, while polarisation in Brazil went up. As the weight to identification increases, changes in the labour income distribution in Brazil are assessed to have been polarisation-increasing.

In figure 5.3 we take advantage of a recent study carried out with the same dataset used for this document (Gasparini *et al*., 2006) and report patterns in the Gini coefficient for the distribution of earnings. Although results differ across countries, in most LAC labour markets wage inequality has not fallen. In fact, earnings disparities have substantially increased in some countries of the Southern Cone (Argentina, Uruguay and Paraguay), the Andean region (Colombia and Venezuela) and Central America (Costa Rica, Panama and Nicaragua). The increase was particularly noticeable in Argentina, where the Gini coefficient jumped from 0.40 to 0.47 in just a decade. The earnings distribution has remained quiet in Chile (although there are some signs of falling inequality in the last survey), Bolivia, Honduras and El Salvador. Brazil has been experiencing small but sustained reductions in wage inequality. The Gini coefficient dropped from a level of 0.6 in the early 1990s to 0.55 in 2003. Wage inequality has been also steadily fallen in Mexico in the last decade.

The labour income statistics do not take into account those people who are unemployed. Figure 5.4 shows the unemployment rates in the LAC countries.[31] While unemployment is relatively low in Central American economies, the rates are high in some Andean and Southern Cone countries.

As expected unemployment is higher among the youth. What is more worrying is the relative large raise in unemployment in that age group documented in Figure 5.5. In many countries in the region youth unemployment rates have dramatically increased over the last decade. That increase has occurred in general over the whole period under analysis. The growing unemployment among the youth is not only a worrying fact *per se*, but also due to its potential effect on social instability, given the potentially active role of young people. If the youth feel increasingly excluded from the labour market, social tensions may emerge. Even when the statistics suggest that they would have better employment opportunities when adults, that may not be enough for the youth to continue investing in human capital and social capital for the future, and to peacefully accepting a state of affairs that they may consider increasingly unfair.

In most of the countries where unemployment went up, the increase was more intense for the unskilled (see Figure 5.6). That was the case in Argentina, Brazil, Costa Rica, Paraguay and Uruguay. This pattern is certainly worrying. A fraction of the population is becoming increasingly less attractive for the labour market, and hence they have fewer chances to find a decent job, and to be integrated to the market economy. In this context social tensions are more likely to emerge.

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[31] See Gasparini *et al*. (2005) for a more comprehensive study of labour markets in LAC.

Notice that in many countries unemployment for the unskilled substantially increased over the growth period of the early and mid 1990s. This was a period of important reforms, but not a period of macroeconomic crisis. Even in a context of strong growth the labour markets of many countries could not absorb the unskilled labour force. The crises of the late 1990s/early 2000s deepened the difficulties for the unskilled. It is interesting to note that in many countries, even when the economies recovered from the crises and now have levels of activity similar or higher than those of the 1990s, the unemployment rates of the unskilled remain substantially higher than in the previous decade. Figure 5.7 stresses this result by showing relative earnings by education groups. The first panel illustrates the earnings ratios for (i) the skilled relative to the semi-skilled, and (ii) the unskilled relative to the semi-skilled. The second panel shows the changes in these ratios over the last 15 years. Notice that the gap between the unskilled and the semi-skilled is not large and has not significantly changed over time. In sharp contrast, the gap between the skilled and the rest is large and has substantially grown in most LAC countries.

Table 5.2 illustrates changes in the gap skilled/unskilled by showing the coefficients for a college dummy in a Mincer equation. The "returns" to superior education in terms of hourly wages have increased in almost all countries of the region.

The increase in the gap between the skilled and the rest took place in a period when most countries implemented reforms including trade liberalisation, financial liberalisation, privatisations and market de-regulation. These reforms were followed by significant changes in the sectoral structure of the economy, and maybe more important, changes in the ways of production used throughout the economy. The incorporation of new technologies, machinery and equipment yielded a reduction in the relative demand for unskilled labour that implied a sizeable reduction in their possibilities of finding a decent job. There is an increasing literature discussing these hypotheses, but much more research is needed to provide rigorous evidence.[32]

Notice that the economic changes affected the unskilled and the semi-skilled in roughly the same way. These two groups are increasingly alike, in comparison with the skilled. Many countries seem to have experienced a bipolarisation between professionals and technicians with a superior education degree, who have taken advantage of the new economic environment, and the rest of the workers, who have struggled with the new economic conditions. This polarisation may lead to increasing social tensions, even if the economy manages to grow and the unskilled get a wage raise. An unbalanced growth of opportunities and outcomes in the labour market may weaken social cohesion and lead to social instability.

A remarkable feature of LAC labour markets is the substantial increase in the labour participation of women. Employment rates have also substantially increased for female workers. Women wages are still lower than their male counterparts (even when

[32] See Ganuza *et al*. (2001), Behrman *et al*. (2004), Sánchez Páramo and Schady (2003) and Gasparini (2004), among others.

controlling for observable characteristics), but the gap has been narrowing down over the last decades (see Figure 5.8) in most countries of the region.

6. Education

The differences in incomes and labour outcomes documented in previous sections are largely determined by differences in productive assets. Chiefly among them is the level of human capital. Formal education can contribute to social cohesion through various channels. If differences in the access to formal education are small, the opportunities to accumulate human capital would be similar across individuals. An economically-polarised society is less likely to arise from an egalitarian distribution of human capital, considering that economic outcomes are closely related to the endowment of human capital. Moreover, formal education can help to build a common set of values and reinforce a national cultural identity, contributing to social cohesion.

In this section we present a large set of statistics aimed at documenting and characterizing the level and trends of the gaps in formal education in the LAC countries.

Educational gaps

As in most of the rest of the world, Latin American and Caribbean countries have made substantial progress in extending the coverage of formal education in the last decades. Figure 6.1 shows the average years of formal education for different age groups in the latest survey available for each country in our sample. The Figure allows a log-run view of the LAC educational systems as they include people aged 70 and older who have received their education in the 1930s.

In all cases the curves are positive-sloped, meaning higher educational levels for the younger cohorts. For most countries we present the years-of-education curves by gender, area (urban-rural), race (white-non-white) and quintiles (quintile 1 – the poorest –, and quintile 5 – the richest). It is important to take into account that for people in their twenties the process of formal education may have not finished yet. In particular, since disadvantaged groups are less likely to pursue superior studies, the education gap is under-estimated for the youngest generations.

The region has experienced substantial progress toward the aim of gender equality in terms of education. While among the LAC elderly men are significantly more educated than women, that is not true anymore for the youngest generations. In fact, in the majority of countries young women have more years of education than young men. A cross in the education curves has taken place in most countries. The timing has been different. While in Argentina women in their late forties have more years of formal education than their male counterparts, in Honduras that situation holds only for people in their early thirties and younger. There are some countries where the gender gap in favour of men still remains but has been reduced over the decades. That group is comprised by Bolivia, El Salvador, Guatemala, Mexico and Peru. Haiti is the only country in LAC where there are no signs of a shrinking gender educational gap. Figure

6.2 shows examples of these patterns. While the gap has turned in favour of men in Venezuela and Brazil, it has been reduced in Mexico, and remains large in Haiti.

In contrast to the case of gender, differences in education between urban and rural areas remain large. On average, people in the countryside have four years of education less than in cities. In none of the countries in the sample the difference in years of education between urban and rural areas has significantly fallen. This does not mean that there has not been progress in rural areas, but instead that progress has been at roughly the same rate as in urban areas (see Figure 6.3). The same conclusion holds for the differences by race in those countries where a specific race question is included in the latest household survey available (see Figure 6.4).

There are large differences in educational attainment among people in different income strata (Figure 6.5). In many countries the difference for the youngest generations between the top and the bottom quintile is around 6 years of education. The coverage of formal education has increased among the poor, but at the same time the rich have increased their years of education, implying a roughly unchanged gap over the last decades.

In summary, while the educational gaps by gender have been eliminated, they still remain large in terms of area, race and income strata. The results in terms of social cohesion are ambiguous. On the one hand, the situation of the disadvantaged has substantially improved in terms of years of formal education over the last decades. The strong increase in enrolment is certainly a key instrument for a more integrated society. However, this positive outcome is shadowed by some qualifications. As illustrated above, the "distance" of the disadvantaged (in terms of income, area or race) with respect to the most-favoured groups remains the same. All groups have scaled up the educational ladder, but they are still at very different steps, a fact that surely undermines social cohesion and economic mobility. In addition, there is some evidence pointing to a fall in the education quality received by the poor, as a consequence of a more massive public education system.

Inequality in years of education

In table 6.1 we compute the Gini coefficient for the distribution of years of education as one measure of inequality in education. The use of educational-Ginis has been recently increasing in the literature.[33] However, it is not obvious that inequality in education should be measured by an index of *relative* rather than *absolute* differences among individuals.[34] For that reason we also report the absolute gap in years of education

[33] For instance, Thomas, Wang and Fan (2002) calculate Ginis over the distribution of years of education for 140 countries in the period 1960-2000.

[34] The Gini coefficient, as most of the inequality indices, is scale-invariant (see Lambert, 2001).

between quintiles 1 and 5. Results are shown for three age groups: (10-20), (21-30) and (31-40). Figure 6.6 illustrates the changes in the educational Ginis and the educational gaps by income quintiles between the first and the latest survey available (in most cases early 1990s and early 2000s). Notice that while Figures 6.1 to 6.5 have shown the patterns in education over the last seven decades, Figure 6.6 documents changes occurred during the last 15 years.

The educational Ginis have dropped in most countries, with only a few exceptions. Although the educational gaps by quintiles have also decreased in several countries, the second panels in Figure 6.6 do not suggest a consistent movement toward narrower gaps throughout the region.

Literacy

Most LAC countries either have already achieved or are close to achieve 100% literacy rates. Since the most advantaged groups were already close to that goal, most of the improvements in the last decades involved the most disadvantaged groups: women, rural areas, non-whites and the poor. Figure 6.7 shows literacy rates of different age groups for all the countries in the sample. In nearly all the cases the gaps in terms of literacy rates have been reduced over the last six decades. Only in few countries with low mean literacy rates, like Haiti, Honduras and Nicaragua, the gaps are still large.

Primary completion rates

The primary completion rate, computed as the share of youngsters aged 15-24 with a primary school degree, is a relevant indicator of educational progress. Figure 6.8 shows the primary completion rates of each age group for the last available survey in our sample of 21 LAC countries. As with the previous indicators, all countries have experienced improvements over the last decades. In particular, rates for the most disadvantaged groups have been growing. However, in many countries changes have been slower than for the most favoured groups. That is the case in Bolivia, Brazil, El Salvador, Guatemala, Haiti, Honduras and Nicaragua, all countries with low mean primary completion rates.

There seems to be a pattern of educational growth, in which first the gains are more concentrated in the urban middle and high income groups. In that stage of development the educational gaps widen. When educational rates (literacy, primary completion, and others) are already high for the most favoured groups, growth slows down (the obvious case is when the rate is 100%) and the most disadvantaged groups start to catch up. In

some countries at a higher development stage the catch up in primary completion rates is close to be completed. This is the case of Argentina, Chile, Jamaica and Uruguay.[35]

School enrolment

In this section we document levels and patterns of net enrolment rates, *i.e*. the share of individuals in a given age group that are attending the educational level that corresponds to their age. Net enrolment rates are computed for primary, secondary and tertiary levels of education. Table 6.2 shows the gaps in these rates when dividing the population by income, gender and area. The gaps are defined as the difference of rates between two groups.[36]

In most LAC countries the primary school enrolment gap by income is small, given that the attendance rates are relatively high for poor children (see Figure 6.9). In the poorest Central American countries (El Salvador, Honduras, Guatemala and Nicaragua) primary school enrolment rates are still under 80% in the bottom quintile, while they are higher than 95% in the top quintile. In contrast, some countries have achieved primary enrolment rates for the poorest children higher than 95%, and then the enrolment gap has become very small. This is the case in Jamaica, Chile, Uruguay, Argentina, Mexico, Dominican Republic, Costa Rica, Colombia (urban), Brazil and Peru.

The enrolment gaps by income are substantially higher in the secondary and tertiary levels. On average, the difference between quintiles 5 and 1 is around 30 points. Low-income Central American countries have large gaps in secondary school, but low in tertiary, given the low attendance rates, even for the rich.[37] The more developed countries of the Southern Cone - Argentina, Chile and Uruguay – have relatively small gaps in secondary school, but large gaps in superior education. While these countries have achieved relatively high levels of high school attendance among the poor, universities have still a very low proportion of poor people. In contrast to other countries in the region, the enrolment rates for the tertiary level are above 60% in the richest quintile of these countries.

In most countries the gap in primary school enrolment by income has shrunk over the last 15 years (Figure 6.10). That is also the case for secondary school, although there are some countries where the gap has widened. The gap in enrolment has substantially widened at the college level in nearly all countries of the region. In most of these countries enrolment rates for the poor have increased but at a lower pace than for the rich. The increasing opportunities for the poor in terms of higher education may foster

[35] That seems to be also the case in the city of Paramaribo (Suriname).

[36] For reference we also define in table 6.2 the gap by quintiles as the ratio of enrolment rates.

[37] The gaps computed as differences in rates are small, but computed as ratios are huge, given that almost no poor people attend universities and tertiary institutions.

social cohesion; however, as they may perceive that progress has being slower than in other groups, social tensions might arise.

The gender gaps in primary school are almost inexistent, with the exception of Guatemala, where attendance rates are somewhat lower for females (Figure 6.11). That Central American country and Peru are the sole cases where high school enrolment rates are slightly higher for men. In the rest of the countries females are more likely to attend secondary school than men are. That gap is also present, although with less intensity, at the college level.

School attendance rates are significantly higher in urban areas than in the countryside (Figure 6.12). The gaps are rather small in primary school, but quite large in secondary and college levels. Poor Central American countries have the largest area gaps in primary and secondary school. In most countries the area gaps in primary and secondary school have been reduced, while gaps in tertiary education have widened (Figure 6.13).

Educational mobility

As discussed in section 2, polarisation is perceived as a less pressing issue when social mobility is high. If people can easily move from one group to the other, social tensions can be reduced by the prospects of future changes. In this section we present statistics on educational mobility that capture the degree to which some educational outcomes are linked to the socioeconomic situation of the student. In a high-mobility country differences in educational outcomes across children and youngsters are weakly linked to the incomes and educational status of their parents. Since formal education is one of the main determinants of incomes, we expect high educational mobility to translate into high income mobility.

However, there are some reasons why this translation may not function perfectly. Incomes are greatly affected by a sort of unobservable factors like contacts, education quality, some dimensions of ability, and others that might be more concentrated in rich households. Second, some income sources like capital gains and land rents may be weakly linked to formal education.

In this section we compute an Educational Mobility Index (EMI), following Andersen (2001). The EMI is defined as 1 minus the proportion of the variance of the school gap that is explained by family background. In an economy with very low mobility, family background would be important and thus the index would be near zero. To compute the EMI we run regressions of the schooling gap, defined as the difference between (i) years of education that a child would have completed had he entered school at normal age and advanced one grade each year, and (ii) the actual years of education.

Table 6.3 shows the EMI for teenagers (13 to 19) and young adults (20 to 25) for all countries in our sample. The poorest Central American countries have the lowest values for the EMI. In the other extreme Argentina, Chile and Jamaica are countries with relatively high educational mobility. Changes have been slow over time, and mostly

toward more mobility in the (13-19) age group, and toward less mobility in the (20-25) age group (see Figure 6.14). That difference may be related to the increase in the gaps in tertiary education documented above.

Public and private schools

The study of the type of school (public or private) is interesting for two reasons. First, education quality may substantially differ between public and private schools, which raises an issue of potential polarisation, even if the gaps in terms of years of education are small. Second, even in the case of similar education quality across school types, the educational segregation, *i.e*. a situation where certain socioeconomic groups attend only certain types of schools, may be a source of social fragmentation.

Table 6.4 shows the share of students attending public schools at the primary, secondary and tertiary levels. The difference of that share between income quintiles 5 and 1 significantly differ across countries and educational levels (Figure 6.15). In urban Argentina for instance, while 94% of primary school students from quintile 1 attend public schools, the share is just 33% in the upper quintile. In Mexico the gap is smaller: 97% and 70% respectively.

Few countries have information for public school attendance in several years. Figure 6.16 shows changes in the difference in public school attendance between poor (quintile 1) and rich (quintile 5) students. In most countries the differences in primary and tertiary education have been reduced in the last decade. The result is ambiguous in the case of high school. In Chile, for instance, while an increasing number of higher-income children are attending public primary schools, rich youngsters have been moving toward private institutions.

7. Housing and services

Housing is the main asset that most people own. However, the decision whether to buy a house does not necessarily depend, at least in an obvious way, on wealth or income. If for instance rich people are more mobile, they may choose to rent houses or apartments instead of buying them. The expected positive relationship between housing ownership and wealth is based on the imperfections in the credit markets. When the access to a credit is difficult or impossible, poor people are less likely to buy a house, and more likely to sell an inherited dwelling in bad economic times to smooth consumption. The fragmentation of the society can take a housing dimension: on the one hand poor people renting or just illegally occupying dwellings and lots, and on the other rich people owning the houses and apartments where they live. In the first part of this section we explore that potential situation by using information on housing ownership from the LAC household surveys.

There are other dimensions that are more interesting, but impossible to investigate with the data at hand. The spatial segregation of the population is probably the most relevant. In an increasingly polarised society people live close to those in their "group". The picture of rich people living in gated neighbourhoods and poor people in shanty town comes easily to mind. Unfortunately, in most datasets released by the National Statistical Offices we do not know the exact location of the dwelling to carry out a spatial segregation analysis.

Surveys do contain information on housing ownership. We construct a variable that takes the value 1 when the household owns both the lot and the dwelling. Table 7.1 shows the share of owners by area and quintiles of the income distribution. It is interesting to notice that while in some relatively richer countries (*e.g.* Uruguay, Mexico, Argentina, Chile and Brazil) high-income people are more likely to own a dwelling than poor people are, the opposite is true in other poorer countries (see also Figure 7.1). Part of the difference comes from the fact that ownership is more common in rural areas than in the cities, even among the poor. In countries like Bolivia, Guatemala, and Peru the higher national housing ownership rates in quintile 1 compared to quintile 5 are basically explained by high housing ownership rates of the rural poor.

Figure 7.2 suggests that over the last decade the difference in housing ownership between the rich and the poor has increased in some countries, although not in all. Among the countries with already a difference in favour of the rich, the gap has become even larger only in Argentina. In those countries where the gap increased, only in Argentina, Honduras and Paraguay the share of poor people owning their dwellings went down.

In summary, from the evidence shown it does not emerge a clear picture of severe fragmentation in terms of housing ownership. The difficulties for the poor of buying a house seem greater in urban areas (and hence in more urban countries).

Water

The easy access to a safe source of water is one of the fundamental indicators of development. Most LAC surveys do not ask about potable water, but on the location of the water source. Table 7.2 shows the share of households with access to a source of water in the house or lot.

Countries widely differ in the share of households with easy access to water, and in the gaps between the rich and the poor (see Figure 7.3). As expected, in all countries the access to water is more difficult for the poor. In several countries the differences are enormous. In Peru, for instance, while 89% of people in quintile 5 report easy access to water, the share in quintile 1 is just 31%. As discussed above, that does not necessarily mean any access to potable water, but indicates the difficulties for poor people in getting water, which translates into higher costs in terms of time and money, and less use of water, with presumably health consequences.

In most countries high-income groups have already achieved high water coverage rates. Hence, the expansions in the water network benefit mostly the poor. Figure 7.4 shows that in almost all countries the gap between quintile 5 and 1 in terms of access to water has been reduced over the last decade.

Electricity

The access to electricity has increased in most LAC countries in the last decades. Several nations have achieved almost full coverage, in particular in urban areas. Table 7.3. shows the share of household with electricity in the house. The gap between the rich and the poor is narrow in many countries. The differences are larger, and in some cases substantial, in those countries with a large rural population not covered yet by the electricity network. Since poor people are more concentrated in rural areas, the electricity gap between the rich and the poor is large in those countries (*e.g.* Bolivia, Peru, and most Central American countries). In Bolivia, for instance, while 95% of households in quintile 5 have electricity, the proportion falls to 25% in quintile 1. The difference is mostly accounted by the fact that the poor live in rural areas: in the Bolivian cities 91% of the poor have access to electricity.

As in the case of water, the expansion in the electricity network has benefited mostly the poor. Figure 7.6 shows that the gap in terms of access to electricity between those households in the top quintile and those located in the bottom quintile has been significantly reduced in the last decade.

An assessment

This section has pictured a situation where the poor has less access to water and electricity than the rest of the population. This fact is certainly worrying and deserves attention from local policymakers and international organisations. However, two elements should be considered in the assessment. First, most of the differences are due to low coverage in rural areas, which are mostly populated by the poor. Extending the access to water and electricity in these areas is more costly, and then will take more time to occur. Second, some progress has been achieved in water and electricity in the region over the last decades that mainly benefited the poor. The patterns of increasing income polarisation documented in previous sections do not seem to be replicated in the access to water, electricity, and likely other services like sanitation and telephone.

8. Concluding comments

It has long been argued that Latin American and Caribbean countries are among the most unequal economies in the world. From the evidence shown in this study the region is also characterised by a high degree of polarisation, *i.e.* a situation of homogeneous groups that antagonize each other. The most polarised country in Europe, Russia, is comparable to the least polarised country in LAC, Uruguay, which is considered the prototype of social cohesion in Latin America. This high income polarisation may be linked to the high levels of socio-political instability and violence that characterize the region.

Moreover, there are some worrying signs of increasing, or at least non-decreasing economic polarisation in the region over the last 15 years, which may reinforce the latent sources of social tension:

1. Income polarisation increased in most of South America, and stayed roughly unchanged in Central America.
2. Unemployment has increased in most of South America, in particular among the urban youth and the unskilled.
3. Many countries seem to have experienced a labour market bipolarisation between professionals and technicians with a superior education degree, who have taken advantage of the new economic environment, and the rest of the workers, who have struggled with the new economic conditions.
4. Households headed by formal workers are increasingly antagonizing in terms of income from those households headed by informal workers.
5. In most LAC countries income polarisation by educational groups has increased over the last decade.
6. The educational gaps in terms of area, race and income strata remain large. Although the educational situation of the disadvantaged (in terms of income, area or race) has substantially improved over the last decades, their "distance" with respect to the most-favoured groups remains in general the same. The gap in enrolment has substantially widened at the college level in nearly all countries of the region.

Along with these negative patterns, it is important to mention some positive changes:

1. Income polarisation and inequality have fallen in some economies. There does not seem to exist a fatal destiny to increasing disparities in the region.
2. Women have moved forward in many dimensions: the gaps in the labour market have been reduced, and the educational gaps have been closed in most countries.

3. There has been a sizeable increase in education in the region. The situation of the disadvantaged has substantially improved in terms of years of formal education over the last decades. The strong increase in enrolment is certainly a key instrument for a more integrated society.
4. In most countries the gap in primary school enrolment, and the gaps in the access to water and electricity by income strata have shrunk over the last decades.

The Latin American and Caribbean economies are now in a stage of economic recovery and expansion. GDP is growing and poverty is falling in most countries. Societies in general, and international organisations and local governments in particular, face a great opportunity to reinforce these positive patterns and to change the negative ones in order to slowly undo a long history of economic polarisation.

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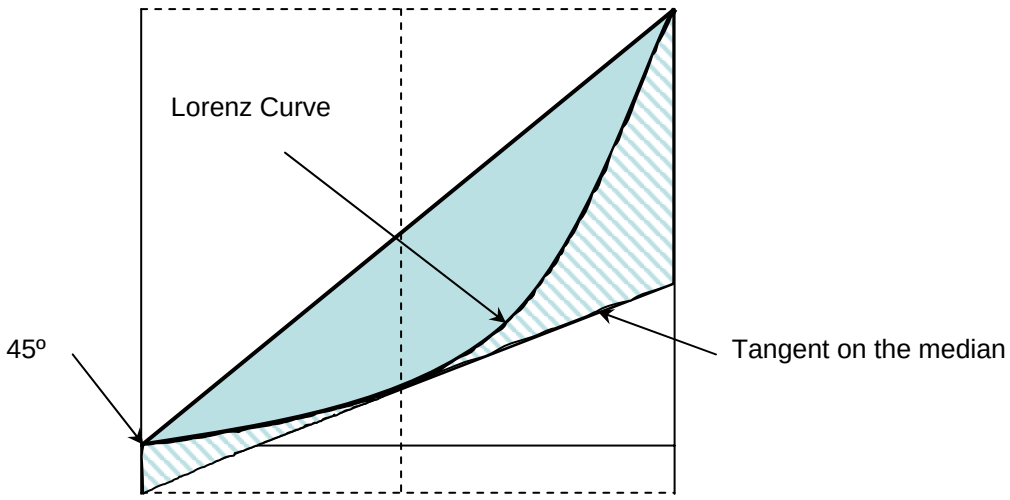
Appendix: The measurement of polarisation

Wolfson(1994)

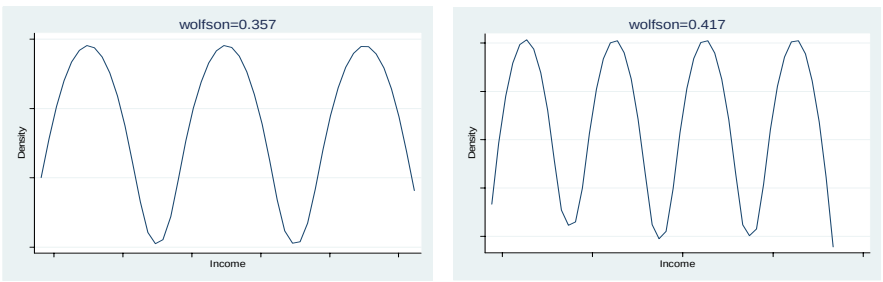
Wolfson's polarisation measure is derived from the Lorenz curve. It is defined as twice the area between the Lorenz curve and the tangent line at the median point (see figure bellow). It can be written as:

$$P^{W} = \frac{\mu}{m}\left[0.5 - L(0.5) - \frac{G}{2}\right]$$

where μ= mean, m= median, L(0.5) = value of the Lorenz curve at the median income and G = Gini coefficient. Polarisation reaches the maximum value when half of the population has zero income and the other half has twice the mean. Wolfson shows that like the Gini this index lies between zero and one.



This measure has problems when there are several income poles. The income distribution in the second panel of the next graph is intuitively less polarised than the income distribution in the first panel, since income masses are less identified. However, the Wolfson index shows the opposite result because it implicitly assumes the existence of two groups of equal size.



ER(1994)

Esteban and Ray (1994) introduce a model of individual attitudes in a society and use four axioms to narrow down the set of possible measures. In particular, they suppose that each individual is subject to two forces. On the one hand she identifies with those she considers to be members of her own group. *I*: $\Re_+ \to \Re_+$ represents the identification function. On the other hand, she feels alienated from those she consider to be members of other groups. *a*: $\Re_+ \to \Re_+$ is the alienation function. An individual with income *y* feels alienation $a(\delta(y, y'))$ from an individual with income *y'*, where $\delta(y, y')$ stands simply for the absolute distance $|y-y'|$. Note that alienation, as well as identification, is perfectly symmetric in this scheme. The joint effect of the two forces is given by the effective antagonism function, *T(I,a)*. Total polarisation in the society is postulated to be the sum of all the effective antagonisms:

$$P(\pi, y) = \sum_{i=1}^{n}\sum_{j=1}^{n} \pi_i \pi_j T(I(\pi_i), a(\delta(y, y')))$$

Esteban and Ray demonstrate that the only measure of this family which satisfies the axioms has the following expression.

$$P^*(w, y) = k\sum_{i=1}^{n}\sum_{j=1}^{n} \pi_{i=1}^{1+\alpha} \pi_j \left| y_i - y_j \right|$$

For $k>0$ and $\alpha\varepsilon[1, 1.6]$ that indicates the degree of sensitivity to polarisation.

EGR(1999)

Esteban, Gradín and Ray (1999) state that the ER (1994) polarisation measure for discrete groups or "n-spike representation" should be used only after the population has been regrouped in a way that captures the group identification structure of society. This clustering will lose some of the initial information that concerns the dispersion of the population around the clusters that are treated as single groups: the ER measure needs to be corrected. EGR propose the following polarisation measure:

$$P(f; \alpha, \beta) = ER(\alpha, \rho) - \beta\varepsilon(f, \rho)$$

The first term is the ER measure of polarisation and the second term is a measurement error or lack of identification weighted by a free parameter β.

Diagrammatically an n-spike representation is equivalent to transforming the original Lorenz Curve into a piecewise linear Lorenz curve (with n pieces) (see figure bellow). In other words each individual in a given group is assumed to have the same income. Hence the minimal error term is obtain through the minimisation of the area between the original Lorenz curve and the piecewise linear representation. It is therefore immediate that:

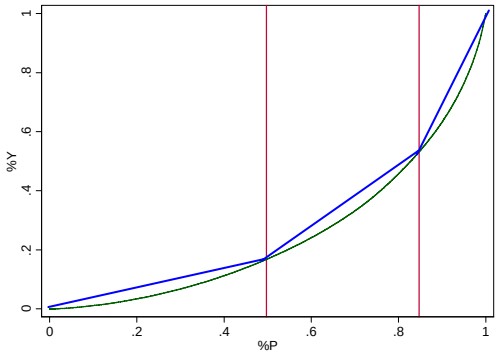
$$\varepsilon(f, \rho^*) = G(f) - G(\rho^*)$$

where G(.) assigns the Gini coefficient to the distribution variable in its argument. ρ* is the optimal n-spike representation that best approximates to the real distribution. Combining the previous equations:

$$P(f,\alpha,\beta) = ER(\alpha,\beta) - \beta\left[G(f) - G(\rho^*)\right]$$

The next figure illustrates the optimal three spike representation of the Honduras 2003 income distribution using the EGR methodology. The values s1 and s2, marked as red lines, divide the population into three socioeconomic groups ("poor", "rich" and "middle class"). This approach consists of choosing the *n*-spike distribution that minimizes the income dispersion within all socioeconomic classes. For instance if the s2 spike moves to the left the "rich" income variance increases while the middle class variance is reduced. The figure shown below depicts a situation where no changes in the *n*-spike can produce a reduction in total dispersion.

"Income classes" in EGR index
Honduras 2003



Gradín Group Polarisation Index (GGP)

Gradín (2000) assumes that despite polarisation occurring in the income space, groups in the distribution are the result of similarities with respect to a relevant attribute other than income. Thus, he treats the distribution as if it were the aggregate result of more than one stochastic process. In this sense, a population can be divided into "n" groups or sub-populations according with any characteristic (*e.g.* race, region, occupation, etc.). The number of groups depends on the nature of the characteristic. Groups are exogenously conformed according to whether their members share the same category for a given characteristic regardless of their income proximity. Compared to identification by income intervals, we expect higher intra-group dispersion and lower between groups heterogeneity.

Define a partition $\rho^c = (q_1,...q_n; m_1,...m_n)$, where q_i is the population share in group i and $m_1 \leq m_2 \leq .... \leq m_3$ indicate average incomes of the groups. The measure is defined in accordance with the EGR(1999) index as:

$$GP(F;\alpha,\beta,\rho^c) \equiv P(F;\alpha,\beta,\rho^c) - (-\beta) = ER(\alpha,\rho^c) - \beta\left[\varepsilon(F;\rho^c) - 1\right]$$

$$\varepsilon(F;\rho^c) = G(F) - G(\rho^c)$$

The error term is expressed in parallel to EGR(1999) and accounts for both intra-group inequality as well as overlap between groups.[38]

The index is sensitive to the number of categories for which the characteristic is expressed. In particular, the smaller the number, the larger we expect both terms in the index, so the net effect is ambiguous. The most relevant characteristics will be those showing at the same time high polarisation between the groups and homogeneity within them.

Zhang and Kanbur Index (ZK)

Zhang and Kanbur (2001) propose an index of polarisation based on the ratio of the between-group inequality to the within-group inequality – both measured with Theil's Generalized Entropy index. This polarisation index captures the average distance between groups in relation to income differences within groups. As the groups become internally more homogeneous, within-group inequality diminishes, differences across groups are, relatively speaking, magnified and polarisation is higher. Similarly, if we leave within-group inequality unchanged as the distance between-group increases, polarisation rises.

The measure for polarisation suggested by Zhang and Kanbur is:[39]

$$ZK = \frac{T_B}{T_W}$$

$$ZK = \frac{\sum_{j=1}^{K} \frac{n_j}{N}\frac{\mu_j}{\mu} ln\left(\frac{\mu_j}{\mu}\right)}{\sum_{j=1}^{K} \frac{n_j}{N}\frac{\mu_j}{\mu} T_j}$$

$$\text{where } T_j = \frac{1}{n_j}\sum_{j=1}^{K} \frac{y_j}{\mu_j} ln\left(\frac{y_j}{\mu_j}\right)$$

K: number of groups; n_j: number of individuals in each group; N: total number of individuals; μ_j: mean income of each group; μ: mean income; *yi:* individual income.

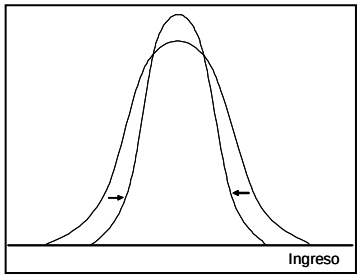
Duclos-Esteban-Ray index (DER)

[38] For a more detailed treatment of the subject we refer the reader to Gradín (2000) and Esteban, Gradín and Ray (1999)

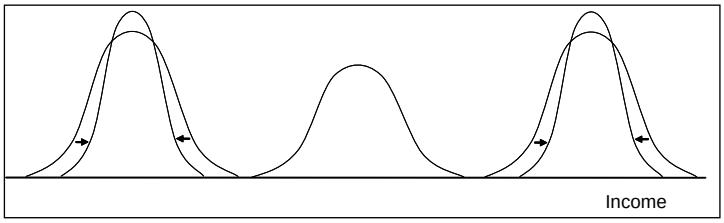
[39] For a more detailed treatment of the subject we refer the reader to Zhang and Kanbur (2001)

The following axioms that are satisfied by the DER index are based on a density with finite support (kernel), and symmetric reductions in dispersion that concentrate the density around its mean (squeezes).

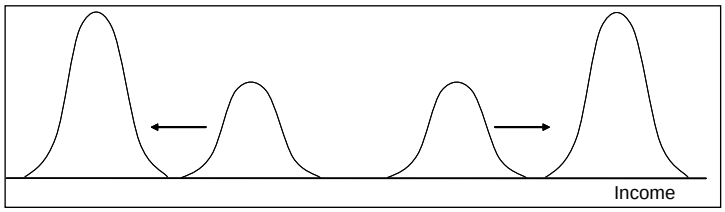
Axiom 1: if a distribution is made up of a basic density, then a squeeze cannot increase polarisation.



Axiom 2: if a symmetric distribution is composed by three basic densities then a squeeze in the outer densities should not reduce polarisation.



Axiom 3: if we consider a symmetric distribution made up of four basic densities with disjoint supports, then a move of the center distributions towards their outer neighbours, while keeping the disjoint supports, should increase polarisation.



Axiom 4: Given two distributions F and G, if P(F) ≥ P(G), being P(F) and P(G) the respective polarisation indexes, it must be that P(αF) ≥ P(αG), where αF and αG represent a rescaled version of F and G.

The authors establish that a general polarisation measure that respects the previous axioms must be proportional to:

$$P_\alpha(f) \equiv \iint f(x)^{1+\alpha} f(y)|y-x|dydx$$

where $f(y)$ and $f(x)$ denote the income (or other well-being measure) density function. The formula can be rewritten as

$$P_\alpha(F) = \int f(y)^\alpha g(y) dF(y)$$

where $F(y)$ denotes the income distribution function, $g(y)$ captures the "alienation" effect, and $f(y)^\alpha$ the "identification" effect.

If we have a sample of incomes with independent and identically distributed observations ranked from smallest to highest, the DER operational formula is:

$$P_\alpha(\hat{F}) = n^{-1} \sum_{i=1}^{n} \hat{f}(y_i)^\alpha \left[\hat{\mu} + \left(y_i \left(\overline{w}^{-1} \left(2 \sum_{j=1}^{i} w_j - w_i \right) - 1 \right) - \overline{w}^{-1} \left(2 \sum_{j=1}^{i-1} w_j y_j - w_i y_i \right) \right) \right]$$

where y_i is the i-th individual income, $\hat{\mu}$ is the sample mean, w_i is the weight of individual i, and $\overline{w} = \sum_{j=1}^{n} w_j$.

The function $\hat{f}(y_i)$ is a nonparametric kernel estimate of the income density, using a bandwidth that minimizes the mean square error of the estimator h*, given by

$$h^* = \sqrt{\frac{cov(a_\alpha(y), P_\alpha''(y))}{\alpha \sigma_k^2 (\int f(y) P_\alpha(y) dy)^2}} n^{-\frac{1}{2}} + o(n^{-1})$$

with

$$a_\alpha(y) = (1+\alpha) P_\alpha(y) + y \int f(x)^\alpha dF(x) + 2 \int_y^\infty (x - y) f(x)^\alpha dF(x)$$

Duclos, Esteban and Ray (2004) provide other formulas that are easier to compute. The first can be used with normal distributions and will not exceed the h^* that minimizes the mean squared error by more than 5%.

$$h^* \cong 4.7 n^{-5} \sigma \alpha^{-1}$$

The second is for distributions with skewness greater than 6:

$$h^* \cong n^{-5} IQ \frac{(3.76 + 14.7\sigma_{ln})}{(1 + 1.09 * 10^{-4} \sigma_{ln})^{(7268 + 15323\alpha)}}$$

where IQ is the interquantile range, and σ_{ln} is the variance of log-income.

Table 3.1
Household surveys used in the study

Country	Name of survey	Acronym	Years	Coverage
Argentina	Encuesta Permanente de Hogares	EPH	1992-2003	Urban
	Encuesta Permanente de Hogares-Continua	EPH-C	2003-2004	Urban
Bolivia	Encuesta Integrada de Hogares	EIH	1993	Urban
	Encuesta Nacional de Empleo	ENE	1997	National
	Encuesta Continua de Hogares- MECOVI	ECH	2000-2002	National
Brazil	Pesquisa Nacional por Amostra de Domicilios	PNAD	1990-2003	National
Chile	Encuesta de Caracterización Socioeconómica Nacional	CASEN	1990-2003	National
Colombia	Encuesta Nacional de Hogares - Fuerza de Trabajo	ENH-FT	1992	Urban
	Encuesta Nacional de Hogares - Fuerza de Trabajo	ENH-FT	1996-2000	National
	Encuesta Continua de Hogares	ECH	2000-2004	National
	Encuesta de Calidad de Vida	ECV	2003	National
Costa Rica	Encuesta de Hogares de Propósitos Múltiples	EHPM	1992-2003	National
Dominican R.	Encuesta Nacional de Fuerza de Trabajo	ENFT	1996-2004	National
Ecuador	Encuesta de Condiciones de Vida	ECV	1994-1998	National
	Encuesta de Empleo, Desemple y Subempleo	ENEMDU	2003	National
El Salvador	Encuesta de Hogares de Propósitos Múltiples	EHPM	1991-2003	National
Guatemala	Encuesta Nacional sobre Condiciones de Vida	ENCOVI	2000	National
	Encuesta Nacional de Empleo e Ingresos	ENEI - 2	2002	National
Haiti	Enquête sur les Conditions de Vie en Haïti	ECVH	2001	National
Honduras	Encuesta Permanente de Hogares de Propósitos Múltiples	EPHPM	1992-2003	National
Jamaica	Jamaica Survey of Living Conditions	JSLC	1990-2002	National
Mexico	Encuesta Nacional de Ingresos y Gastos de los Hogares	ENIGH	1992-2002	National
Nicaragua	Encuesta Nacional de Hogares sobre Medición de Nivel de Vida	EMNV	1993-2001	National
Panama	Encuesta de Hogares	EH	1995-2003	National
Paraguay	Encuesta Integrada de Hogares	EIH	1997	National
	Encuesta Permanente de Hogares	EPH	1999-2003	National
	Encuesta Integrada de Hogares	EIH	2001	National
Peru	Encuesta Nacional de Hogares	ENAHO	1997-2003	National
Suriname	Expenditure Household Survey	EHS	1999	Urban/Paramaribo
Uruguay	Encuesta Continua de Hogares	ECH	1989-2004	Urban
Venezuela	Encuesta de Hogares Por Muestreo	EHM	1989-2003	National

Table 4.1
Group polarisation
Household per capita income
Levels of GGP (α= 1, β= 1) and ZK measures

Country	Year	Educational Level		Gender		Area (urban/rural)		Region		Labor Relationship		Race (*)	
		GGP	ZK	GGP	ZK	GGP	ZK	GGP	ZK	GGP	ZK	GGP	ZK
Argentina	2004	1.26	0.31	0.50	0.000	-	-	0.75	0.03	0.84	0.06	-	-
Bolivia	2002	1.42	0.50	0.50	0.006	0.99	0.15	0.85	0.06	1.08	0.15	0.90	0.09
Brazil	2003	1.46	0.62	0.45	0.000	0.62	0.03	0.85	0.07	1.03	0.12	0.98	0.12
Chile	2003	1.43	0.43	0.52	0.003	0.58	0.02	0.85	0.05	0.93	0.09	0.50	0.01
Colombia	2004	1.51	0.54	0.58	0.009	-	-	0.91	0.07	-	-	-	-
Costa Rica	2003	1.42	0.56	0.55	0.002	0.84	0.06	0.81	0.05	0.93	0.10	0.53	0.00
Dominican Rep	2004	1.26	0.33	0.56	0.004	0.82	0.06	1.03	0.11	0.73	0.04	-	-
Ecuador	2003	1.24	0.28	0.54	0.003	0.86	0.07	0.56	0.00	0.90	0.08	0.62	0.02
El Salvador	2003	1.00	0.23	0.50	0.000	0.93	0.11	0.90	0.08	0.88	0.07	-	-
Honduras	2003	1.38	0.54	0.49	0.001	1.06	0.16	1.10	0.14	0.96	0.17	0.53	0.01
Jamaica	2002	0.96	0.19	0.87	0.085	0.63	0.02	0.71	0.02	0.70	0.44	-	-
Mexico	2002	1.39	0.49	0.48	0.000	0.80	0.08	0.86	0.07	1.03	0.14	0.77	0.04
Nicaragua	2001	1.43	0.55	0.55	0.006	0.87	0.06	1.01	0.09	0.92	0.07	0.57	0.01
Panama	2003	1.42	0.45	0.46	0.000	0.91	0.11	0.79	0.05	1.07	0.14	-	-
Paraguay	2002	1.23	0.27	0.46	0.000	0.79	0.05	0.97	0.10	1.08	0.15	0.87	0.06
Peru	2002	1.40	0.38	0.49	0.002	1.07	0.20	1.38	0.33	1.06	0.15	0.79	0.05
Uruguay	2003	1.15	0.31	0.69	0.013	-	-	0.90	0.08	0.83	0.06	-	-
Venezuela	2003	1.18	0.29	0.60	0.004	-	-	0.82	0.04	0.95	0.10	-	-

Source: Own calculations based on household surveys
Note: GGP= Gradín Group Polarisation Index, ZK=Zhang and Kanbur index.
(*) Peru estimations' are based on ENAHO 2001

Table 4.2
Group polarisation
Household per capita income
Signs of changes in the GGP (α=1, β=1) measure and its components over the 1990s

Country	Period	Educational Level			Gender			Area (urb/rural)			Regions			Labour relationship			Race		
		GGP	ER	ε	GGP	ER	ε	GGP	ER	ε	GGP	ER	ε	GGP	ER	ε	GGP	ER	ε
Argentina	92-04	+	+	+	-	-	+	n/d	n/d	n/d	+	+	+	-	+	+	n/d	n/d	n/d
Bolivia	97-02	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	n/d	n/d	n/d
Brazil	90-03	-	-	+	+	-	-	-	-	+	+	-	-	+	+	-	+	-	-
Chile	90-03	+	+	-	+	+	-	+	+	-	+	+	-	+	+	-	n/d	n/d	n/d
Colombia	92-04	+	+	+	+	+	+	n/d	n/d	n/d	+	+	-	n/d	n/d	n/d	n/d	n/d	n/d
Costa Rica	92-03	+	+	-	-	+	+	-	+	+	+	+	+	+	+	+	-	+	+
Dominican Rep	00-04	+	+	-	+	+	-	-	-	+	-	-	+	-	-	+	n/d	n/d	n/d
Ecuador	94-03	+	+	-	+	+	-	+	-	-	-	-	+	+	-	-	n/d	n/d	n/d
El Salvador	91-03	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	n/d	n/d	n/d
Honduras	97-03	+	+	-	+	+	-	+	+	-	+	+	-	+	-	-	n/d	n/d	n/d
Jamaica	90-99	+	+	-	+	+	-	+	+	-	+	+	-	+	+	-	n/d	n/d	n/d
Mexico	92-02	-	-	-	+	-	-	-	-	-	+	-	-	n/d	n/d	n/d	n/d	n/d	n/d
Nicaragua	93-01	+	+	-	+	-	-	-	-	+	+	+	-	+	+	-	n/d	n/d	n/d
Panama	95-03	+	+	-	-	-	+	-	-	+	-	-	+	+	+	-	n/d	n/d	n/d
Paraguay	97-02	-	-	+	-	+	+	-	-	+	-	-	+	+	+	-	n/d	n/d	n/d
Peru	97-02	-	+	+	+	+	+	+	+	+	+	+	+	-	-	+	n/d	n/d	n/d
Uruguay	89-03	+	+	-	+	+	-	n/d	n/d	n/d	-	+	+	+	+	-	n/d	n/d	n/d
Venezuela	89-03	-	+	+	-	-	+	n/d	n/d	n/d	-	-	+	+	+	-	n/d	n/d	n/d

Note: GGP= Gradín Group Polarisation Index, ZK=Zhang and Kanbur index.
ER = Esteban and Ray Polarisation Index
ε = lack of identification
n/d = not available
(+) = positive variation
(-) = negative variation
Source: Own calculations based on household surveys

Table 4.3
Group polarisation
Household per capita income
Signs of changes in the ZK measure and its components (within and between) over the 1990s

Country	Period	Educational Level			Gender			Area (urb/rural)			Regions			Labour relationship			Race		
		ZK	Wth	Btw	ZK	Wth	Btw	ZK	Wth	Btw	ZK	Wth	Btw	ZK	Wth	Btw	ZK	Wth	Btw
Argentina	92-04	+	+	+	-	+	-	n/d	n/d	n/d	+	+	+	-	+	-	n/d	n/d	n/d
Bolivia	97-02	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	n/d	n/d	n/d
Brazil	90-03	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	+	-	-
Chile	90-03	+	-	+	+	-	+	+	-	+	+	-	+	+	-	+	n/d	n/d	n/d
Colombia	92-04	-	+	+	+	+	+	n/d	n/d	n/d	+	+	+	n/d	n/d	n/d	n/d	n/d	n/d
Costa Rica	92-03	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Dominican Rep	00-04	+	+	+	+	+	+	-	+	-	-	+	-	-	+	-	n/d	n/d	n/d
Ecuador	94-03	+	-	-	+	-	+	+	-	-	-	-	-	+	-	+	n/d	n/d	n/d
El Salvador	91-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/d	n/d	n/d
Honduras	97-03	+	-	+	+	-	+	+	-	+	+	-	+	+	-	+	n/d	n/d	n/d
Jamaica	90-99	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-	n/d	n/d	n/d
Mexico	92-02	+	-	-	-	-	-	-	-	-	+	-	+	n/d	n/d	n/d	n/d	n/d	n/d
Nicaragua	93-01	+	-	+	-	+	+	-	+	-	-	+	+	+	+	+	n/d	n/d	n/d
Panama	95-03	+	+	+	-	+	-	-	+	-	-	+	-	+	+	+	n/d	n/d	n/d
Paraguay	97-02	-	+	-	+	+	+	-	+	-	-	+	-	+	+	+	n/d	n/d	n/d
Peru	97-02	-	+	+	+	+	+	-	+	+	-	+	+	-	+	-	n/d	n/d	n/d
Uruguay	89-03	+	-	+	+	-	+	n/d	n/d	n/d	+	-	+	+	+	+	n/d	n/d	n/d
Venezuela	89-03	-	+	-	-	+	-	n/d	n/d	n/d	-	+	-	+	+	+	n/d	n/d	n/d

Note: ZK= Zhang and Kanbur Polarisation Index
Wth= Within effect
Btw= Between effect
n/d= not available
(+) = positive variation
(-) = negative variation
Source: Own calculations based on household surveys

Table 4.4
Pure income polarisation
Household per capita income
National statistics

	National										
	Wolfson	EGR (2)			EGR (3)			DER			
		α			α			α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Argentina											
15 cities											
1992	0.410	0.204	0.150	0.107	0.730	0.494	0.339	0.334	0.284	0.269	0.289
1998	0.485	0.228	0.168	0.121	0.803	0.545	0.373	0.355	0.294	0.270	0.272
28 cities											
1998	0.488	0.230	0.170	0.122	0.808	0.548	0.376	0.359	0.300	0.274	0.277
2004	0.500	0.233	0.172	0.123	0.828	0.560	0.384	0.363	0.298	0.268	0.261
Bolivia											
Urban											
1993	0.477	0.242	0.183	0.137	0.843	0.568	0.387	0.367	0.303	0.272	0.259
1997	0.497	0.251	0.190	0.142	0.861	0.580	0.395	0.372	0.309	0.278	0.265
2002	0.485	0.255	0.195	0.149	0.886	0.590	0.406	0.376	0.311	0.282	0.268
National											
1997	0.552	0.271	0.205	0.155	0.945	0.635	0.432	0.403	0.331	0.297	0.286
2002	0.578	0.277	0.209	0.157	0.982	0.653	0.450	0.413	0.342	0.314	0.313
Brazil											
1990	0.648	0.302	0.233	0.181	0.998	0.666	0.460	0.425	0.363	0.344	0.354
1998	0.607	0.292	0.226	0.175	0.977	0.651	0.449	0.414	0.356	0.350	0.395
2003	0.569	0.279	0.214	0.164	0.949	0.639	0.436	0.402	0.344	0.346	0.399
Chile											
1990	0.501	0.267	0.206	0.160	0.908	0.604	0.415	0.385	0.319	0.289	0.275
1998	0.518	0.270	0.209	0.161	0.912	0.607	0.418	0.384	0.318	0.289	0.276
2003	0.476	0.258	0.199	0.153	0.888	0.590	0.406	0.376	0.312	0.283	0.269
Colombia											
ENH-Urban											
1992	0.456	0.238	0.181	0.137	0.822	0.555	0.379	0.367	0.310	0.289	0.299
2000	0.546	0.276	0.212	0.163	0.933	0.628	0.427	0.409	0.343	0.320	0.341
ECH-Urban											
2000	0.492	0.263	0.203	0.157	0.911	0.605	0.415	0.381	0.323	0.307	0.325
2004	0.518	0.263	0.201	0.153	0.905	0.609	0.415	0.396	0.321	0.299	0.316
Costa Rica											
1992	0.406	0.195	0.140	0.097	0.715	0.485	0.333	0.326	0.262	0.223	0.199
1997	0.412	0.199	0.144	0.100	0.725	0.493	0.338	0.324	0.260	0.221	0.195
2003	0.464	0.223	0.164	0.118	0.794	0.538	0.368	0.345	0.278	0.241	0.219
Dominican Rep.											
2000	0.494	0.240	0.179	0.132	0.853	0.575	0.393	0.365	0.297	0.262	0.243
2004	0.464	0.238	0.179	0.133	0.841	0.567	0.386	0.360	0.295	0.263	0.246
Ecuador											
1994	0.468	0.243	0.183	0.137	0.873	0.587	0.399	0.377	0.305	0.267	0.248
1998	0.497	0.253	0.191	0.144	0.905	0.603	0.414	0.379	0.310	0.275	0.258
2003	0.464	0.233	0.173	0.126	0.839	0.566	0.386	0.361	0.293	0.258	0.242
El Salvador											
1991	0.481	0.237	0.176	0.129	0.853	0.575	0.392	0.367	0.297	0.260	0.240
2000	0.491	0.234	0.172	0.124	0.844	0.567	0.388	0.369	0.295	0.252	0.227
2003	0.472	0.224	0.164	0.116	0.822	0.556	0.380	0.358	0.286	0.244	0.218
Guatemala											
2000	0.480	0.255	0.194	0.147	0.890	0.592	0.407	0.377	0.309	0.276	0.259
Haiti											
2001	0.558	0.285	0.221	0.171	0.973	0.646	0.443	0.406	0.334	0.300	0.283
Honduras											
Eph 1											
1992	0.522	0.247	0.185	0.136	0.873	0.590	0.402	0.372	0.304	0.270	0.251
1997	0.503	0.249	0.187	0.139	0.890	0.600	0.408	0.379	0.310	0.275	0.257
Eph 2											
1997	0.476	0.239	0.178	0.131	0.852	0.574	0.391	0.369	0.300	0.263	0.241
2003	0.515	0.258	0.196	0.147	0.883	0.596	0.406	0.383	0.315	0.281	0.263
Jamaica											
1990	0.639	0.257	0.189	0.135	0.924	0.624	0.434	0.397	0.311	0.260	0.226
1999	0.626	0.269	0.200	0.146	0.961	0.650	0.444	0.408	0.334	0.308	0.317
2002	0.610	0.275	0.205	0.150	0.974	0.658	0.449	0.419	0.345	0.316	0.318
Mexico											
1992	0.478	0.255	0.195	0.149	0.894	0.600	0.407	0.375	0.308	0.276	0.264
1996	0.474	0.241	0.181	0.135	0.856	0.577	0.393	0.364	0.297	0.264	0.248
2002	0.467	0.232	0.173	0.126	0.834	0.563	0.384	0.362	0.290	0.256	0.239
Nicaragua											
1993	0.548	0.261	0.195	0.144	0.919	0.620	0.422	0.391	0.318	0.281	0.261
1998	0.475	0.244	0.183	0.136	0.876	0.584	0.401	0.379	0.308	0.271	0.251
2001	0.478	0.249	0.188	0.142	0.886	0.589	0.404	0.375	0.310	0.279	0.263
Panama											
1995	0.545	0.257	0.192	0.141	0.900	0.609	0.416	0.385	0.306	0.262	0.233
2003	0.572	0.265	0.200	0.149	0.922	0.623	0.426	0.393	0.321	0.285	0.269
Paraguay											
1997	0.557	0.256	0.190	0.138	0.920	0.621	0.425	0.395	0.319	0.281	0.261
2002	0.557	0.259	0.193	0.141	0.927	0.625	0.426	0.392	0.318	0.281	0.262
Peru											
1997	0.514	0.243	0.180	0.131	0.871	0.589	0.402	0.378	0.306	0.267	0.243
2002	0.502	0.247	0.185	0.137	0.885	0.590	0.407	0.382	0.312	0.274	0.251
Suriname											
1999	0.493	0.253	0.191	0.143	0.849	0.573	0.390	0.370	0.291	0.244	0.212
Uruguay											
1989	0.366	0.181	0.130	0.089	0.680	0.459	0.313	0.311	0.252	0.217	0.193
1998	0.401	0.194	0.140	0.097	0.709	0.485	0.331	0.320	0.257	0.218	0.191
2003	0.418	0.203	0.148	0.105	0.728	0.495	0.340	0.325	0.265	0.230	0.207
Venezuela											
1989	0.376	0.184	0.131	0.090	0.683	0.463	0.316	0.318	0.265	0.243	0.246
1998	0.433	0.209	0.152	0.107	0.762	0.517	0.355	0.338	0.272	0.233	0.210
2000	0.408	0.194	0.140	0.097	0.709	0.481	0.331	0.320	0.259	0.222	0.199
2003	0.430	0.205	0.149	0.104	0.745	0.506	0.347	0.332	0.267	0.229	0.207

Source: Own calculations based on household surveys.

Table 4.5
Pure income polarisation
Household per capita income
Urban areas

	Urban										
	Wolfson	EGR (2) α			EGR (3) α			DER α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Argentina											
15 cities											
1992	0.410	0.204	0.150	0.107	0.730	0.494	0.339	0.334	0.284	0.269	0.289
1998	0.485	0.228	0.168	0.121	0.803	0.545	0.373	0.355	0.294	0.270	0.272
28 cities											
1998	0.488	0.230	0.170	0.122	0.808	0.548	0.376	0.359	0.300	0.274	0.277
2004	0.500	0.233	0.172	0.123	0.828	0.560	0.384	0.363	0.298	0.268	0.261
Bolivia											
Urban											
1993	0.477	0.242	0.183	0.137	0.843	0.568	0.387	0.366	0.303	0.272	0.258
1997	0.497	0.251	0.190	0.142	0.861	0.580	0.395	0.372	0.309	0.278	0.265
2002	0.485	0.255	0.195	0.149	0.886	0.590	0.406	0.376	0.311	0.282	0.268
National											
1997	0.487	0.249	0.189	0.143	0.859	0.578	0.393	0.367	0.303	0.272	0.258
2002	0.485	0.255	0.195	0.149	0.886	0.590	0.406	0.376	0.311	0.282	0.268
Brazil											
1990	0.615	0.290	0.223	0.171	0.966	0.651	0.444	0.409	0.348	0.334	0.352
1998	0.594	0.284	0.218	0.168	0.952	0.641	0.437	0.405	0.347	0.340	0.383
2003	0.556	0.276	0.212	0.162	0.936	0.631	0.430	0.404	0.346	0.344	0.409
Chile											
1990	0.505	0.262	0.201	0.154	0.892	0.600	0.409	0.380	0.314	0.283	0.268
1998	0.519	0.268	0.206	0.158	0.906	0.609	0.415	0.381	0.316	0.287	0.274
2003	0.478	0.257	0.198	0.152	0.885	0.589	0.405	0.378	0.312	0.282	0.267
Colombia											
ENH-Urban											
1992	0.456	0.238	0.181	0.137	0.822	0.555	0.379	0.367	0.310	0.289	0.299
2000	0.546	0.276	0.212	0.163	0.933	0.628	0.427	0.409	0.343	0.320	0.341
ECH-Urban											
2000	0.492	0.263	0.203	0.157	0.911	0.605	0.415	0.381	0.323	0.307	0.325
2004	0.518	0.263	0.201	0.153	0.905	0.609	0.415	0.387	0.321	0.299	0.316
Costa Rica											
1992	0.410	0.199	0.145	0.102	0.716	0.486	0.333	0.323	0.263	0.228	0.205
1997	0.401	0.194	0.140	0.098	0.705	0.483	0.329	0.319	0.257	0.219	0.193
2003	0.447	0.212	0.155	0.109	0.767	0.521	0.357	0.340	0.275	0.237	0.213
Dominican Rep.											
2000	0.465	0.234	0.176	0.130	0.837	0.565	0.386	0.359	0.294	0.260	0.241
2004	0.490	0.250	0.191	0.145	0.868	0.585	0.399	0.369	0.305	0.274	0.259
Ecuador											
1994	0.432	0.233	0.175	0.130	0.829	0.557	0.379	0.358	0.292	0.258	0.240
1998	0.460	0.247	0.187	0.141	0.869	0.576	0.396	0.372	0.305	0.274	0.262
2003	0.477	0.235	0.175	0.129	0.839	0.566	0.387	0.362	0.296	0.263	0.249
El Salvador											
1991	0.432	0.218	0.161	0.116	0.793	0.535	0.365	0.346	0.281	0.248	0.232
2000	0.439	0.216	0.159	0.114	0.765	0.518	0.355	0.343	0.278	0.240	0.218
2003	0.416	0.208	0.152	0.108	0.761	0.514	0.351	0.337	0.272	0.235	0.213
Guatemala											
2000	0.520	0.264	0.202	0.154	0.903	0.608	0.414	0.386	0.318	0.286	0.272
Haiti											
2001	0.760	0.322	0.250	0.195	1.051	0.704	0.492	0.440	0.370	0.344	0.340
Honduras											
Eph 1											
1992	0.476	0.241	0.180	0.133	0.839	0.567	0.387	0.365	0.294	0.254	0.228
1997	0.453	0.237	0.178	0.132	0.838	0.564	0.383	0.365	0.298	0.265	0.249
Eph 2											
1997	0.453	0.231	0.172	0.127	0.829	0.557	0.379	0.358	0.293	0.261	0.242
2003	0.506	0.235	0.175	0.127	0.852	0.576	0.393	0.368	0.300	0.264	0.246
Jamaica											
1990	0.584	0.248	0.181	0.129	0.917	0.625	0.431	0.391	0.303	0.249	0.212
1999	0.667	0.286	0.215	0.158	0.987	0.657	0.449	0.417	0.342	0.316	0.337
2002	0.693	0.292	0.219	0.162	1.030	0.696	0.475	0.440	0.373	0.360	0.399
Mexico											
1992	0.456	0.250	0.192	0.147	0.855	0.574	0.390	0.370	0.307	0.279	0.270
1996	0.449	0.233	0.175	0.130	0.828	0.558	0.380	0.353	0.290	0.260	0.246
2002	0.423	0.218	0.162	0.118	0.776	0.524	0.358	0.344	0.281	0.249	0.233
Nicaragua											
1993	0.508	0.244	0.182	0.133	0.877	0.592	0.404	0.374	0.305	0.268	0.249
1998	0.469	0.242	0.183	0.137	0.861	0.570	0.392	0.378	0.310	0.275	0.256
2001	0.467	0.252	0.192	0.146	0.901	0.589	0.405	0.383	0.319	0.290	0.277
Panama											
1995	0.505	0.239	0.178	0.130	0.844	0.571	0.391	0.364	0.291	0.251	0.225
2003	0.503	0.245	0.184	0.136	0.850	0.575	0.393	0.365	0.294	0.256	0.232
Paraguay											
1997	0.471	0.236	0.176	0.129	0.839	0.565	0.386	0.365	0.295	0.257	0.235
2002	0.459	0.229	0.169	0.122	0.837	0.563	0.384	0.361	0.294	0.258	0.238
Peru											
1997	0.419	0.214	0.158	0.114	0.776	0.524	0.357	0.339	0.277	0.244	0.224
2002	0.413	0.223	0.167	0.124	0.802	0.535	0.368	0.350	0.289	0.257	0.240
Suriname											
1999	0.493	0.253	0.191	0.143	0.849	0.573	0.390	0.370	0.291	0.244	0.212
Uruguay											
1989	0.366	0.181	0.130	0.089	0.680	0.459	0.313	0.311	0.252	0.217	0.193
1998	0.401	0.194	0.140	0.097	0.709	0.485	0.331	0.320	0.257	0.218	0.191
2003	0.418	0.203	0.148	0.105	0.728	0.495	0.340	0.325	0.265	0.230	0.207
Venezuela											
1989	0.345	0.175	0.126	0.088	0.644	0.435	0.296	0.298	0.244	0.213	0.194
1998	0.440	0.215	0.159	0.114	0.756	0.513	0.351	0.336	0.272	0.239	0.218
2000	0.394	0.190	0.137	0.095	0.702	0.475	0.323	0.317	0.257	0.222	0.199
2003	0.409	0.204	0.150	0.107	0.727	0.493	0.337	0.327	0.266	0.232	0.212

Source: Own calculations based on household surveys.

Table 4.6
Pure income polarisation
Household per capita income
Rural areas

	Rural										
	Wolfson	EGR (2)			EGR (3)			DER			
		α			α			α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Bolivia											
National											
1997	0.739	0.327	0.253	0.197	1.126	0.741	0.510	0.464	0.407	0.405	0.445
2002	0.741	0.296	0.221	0.163	1.035	0.701	0.480	0.438	0.373	0.365	0.393
Brazil											
1990	0.515	0.259	0.196	0.147	0.887	0.598	0.408	0.384	0.321	0.296	0.299
1998	0.503	0.254	0.192	0.144	0.905	0.603	0.415	0.384	0.322	0.299	0.303
2003	0.516	0.246	0.184	0.135	0.864	0.583	0.398	0.379	0.312	0.282	0.278
Chile											
1990	0.431	0.279	0.223	0.180	0.959	0.627	0.427	0.386	0.329	0.308	0.301
1998	0.375	0.217	0.164	0.123	0.799	0.528	0.359	0.338	0.285	0.260	0.247
2003	0.380	0.228	0.175	0.134	0.821	0.541	0.367	0.353	0.294	0.267	0.253
Costa Rica											
1992	0.385	0.183	0.130	0.087	0.686	0.469	0.320	0.310	0.249	0.212	0.187
1997	0.387	0.183	0.131	0.089	0.688	0.467	0.318	0.311	0.251	0.214	0.192
2003	0.421	0.208	0.152	0.108	0.768	0.518	0.352	0.341	0.272	0.231	0.203
Dominican Rep.											
2000	0.429	0.217	0.161	0.116	0.774	0.524	0.358	0.342	0.275	0.235	0.209
2004	0.407	0.197	0.143	0.100	0.707	0.481	0.331	0.320	0.258	0.221	0.195
Ecuador											
1994	0.443	0.223	0.165	0.119	0.845	0.567	0.383	0.369	0.299	0.261	0.242
1998	0.471	0.224	0.163	0.114	0.840	0.562	0.381	0.368	0.295	0.253	0.228
2003	0.413	0.201	0.145	0.100	0.754	0.508	0.344	0.335	0.271	0.234	0.213
El Salvador											
1991	0.414	0.205	0.147	0.102	0.780	0.527	0.357	0.345	0.278	0.239	0.215
2000	0.457	0.206	0.146	0.098	0.762	0.523	0.358	0.344	0.271	0.223	0.189
2003	0.476	0.221	0.160	0.111	0.818	0.554	0.377	0.360	0.284	0.236	0.204
Guatemala											
2000	0.411	0.206	0.150	0.107	0.770	0.516	0.352	0.339	0.274	0.237	0.214
Haiti											
2001	0.443	0.214	0.155	0.109	0.797	0.537	0.364	0.352	0.281	0.240	0.213
Honduras											
Eph 1											
1992	0.466	0.226	0.167	0.121	0.800	0.542	0.371	0.348	0.282	0.247	0.225
1997	0.477	0.232	0.172	0.124	0.847	0.572	0.390	0.370	0.300	0.262	0.242
Eph 2											
1997	0.457	0.227	0.168	0.122	0.817	0.552	0.376	0.357	0.289	0.253	0.230
2003	0.414	0.203	0.148	0.104	0.749	0.508	0.348	0.335	0.274	0.239	0.218
Jamaica											
1990	0.588	0.274	0.203	0.148	0.931	0.626	0.427	0.403	0.313	0.259	0.222
1999	0.589	0.252	0.184	0.131	0.933	0.632	0.432	0.398	0.326	0.300	0.314
2002	0.552	0.256	0.188	0.135	0.908	0.615	0.420	0.390	0.305	0.254	0.219
Mexico											
1992	0.489	0.226	0.165	0.117	0.814	0.552	0.378	0.359	0.292	0.255	0.236
1996	0.436	0.225	0.166	0.120	0.827	0.554	0.375	0.361	0.293	0.257	0.238
2002	0.452	0.245	0.184	0.137	0.903	0.596	0.405	0.393	0.324	0.289	0.275
Nicaragua											
1993	0.487	0.229	0.167	0.118	0.846	0.569	0.389	0.374	0.302	0.261	0.237
1998	0.448	0.221	0.160	0.113	0.828	0.554	0.375	0.364	0.296	0.258	0.236
2001	0.404	0.201	0.146	0.102	0.746	0.497	0.341	0.330	0.267	0.231	0.208
Panama											
1995	0.538	0.236	0.171	0.119	0.863	0.586	0.402	0.374	0.300	0.260	0.241
2003	0.541	0.251	0.187	0.137	0.893	0.604	0.413	0.382	0.312	0.276	0.258
Paraguay											
1997	0.616	0.257	0.190	0.136	0.903	0.610	0.420	0.389	0.316	0.280	0.267
2002	0.589	0.296	0.229	0.178	1.028	0.682	0.467	0.421	0.354	0.329	0.328
Peru											
1997	0.428	0.208	0.151	0.106	0.745	0.505	0.345	0.334	0.269	0.230	0.205
2002	0.386	0.188	0.135	0.094	0.691	0.467	0.319	0.313	0.254	0.219	0.195

Source: Own calculations based on household surveys.

Table 4.7
Pure income polarisation
Household equivalised income
National statistics

	National										
	Wolfson	EGR (2)			EGR (3)			DER			
		α			α			α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Argentina											
15 cities											
1992	0.386	0.193	0.141	0.100	0.694	0.471	0.323	0.322	0.262	0.226	0.202
1998	0.443	0.215	0.158	0.114	0.764	0.518	0.355	0.341	0.276	0.240	0.220
28 cities											
1998	0.447	0.217	0.160	0.115	0.770	0.522	0.358	0.343	0.276	0.237	0.212
2004	0.462	0.220	0.161	0.115	0.787	0.532	0.365	0.346	0.279	0.242	0.219
Bolivia											
Urban											
1993	0.444	0.233	0.175	0.130	0.812	0.548	0.373	0.354	0.292	0.260	0.243
1997	0.465	0.241	0.182	0.136	0.829	0.559	0.381	0.361	0.298	0.267	0.251
2002	0.441	0.242	0.185	0.141	0.854	0.569	0.391	0.369	0.304	0.273	0.257
National											
1997	0.521	0.256	0.192	0.142	0.912	0.613	0.418	0.383	0.312	0.276	0.256
2002	0.538	0.261	0.195	0.143	0.949	0.629	0.430	0.404	0.333	0.301	0.290
Brazil											
1990	0.619	0.292	0.225	0.174	0.972	0.655	0.447	0.406	0.338	0.310	0.301
1998	0.582	0.283	0.218	0.168	0.949	0.633	0.437	0.398	0.330	0.303	0.298
2003	0.533	0.270	0.207	0.158	0.919	0.619	0.422	0.389	0.320	0.292	0.284
Chile											
1990	0.476	0.260	0.201	0.156	0.886	0.589	0.405	0.377	0.313	0.283	0.269
1998	0.491	0.262	0.202	0.156	0.889	0.592	0.407	0.378	0.313	0.283	0.270
2003	0.454	0.251	0.193	0.148	0.864	0.574	0.394	0.364	0.303	0.276	0.263
Colombia											
ENH-Urban											
1992	0.428	0.227	0.172	0.129	0.792	0.535	0.365	0.345	0.282	0.250	0.231
2000	0.515	0.264	0.202	0.155	0.904	0.608	0.414	0.381	0.312	0.280	0.266
ECH-Urban											
2000	0.456	0.248	0.189	0.144	0.874	0.581	0.399	0.376	0.309	0.279	0.268
2004	0.489	0.251	0.190	0.142	0.874	0.589	0.401	0.374	0.307	0.273	0.259
Costa Rica											
1992	0.373	0.183	0.131	0.090	0.683	0.462	0.315	0.311	0.249	0.211	0.185
1997	0.382	0.187	0.134	0.093	0.689	0.467	0.318	0.313	0.251	0.213	0.187
2003	0.438	0.212	0.155	0.110	0.763	0.518	0.354	0.340	0.273	0.233	0.209
Dominican Rep.											
2000	0.465	0.231	0.172	0.127	0.824	0.556	0.380	0.354	0.289	0.254	0.233
2004	0.439	0.227	0.170	0.126	0.808	0.545	0.372	0.352	0.288	0.255	0.236
Ecuador											
1994	0.432	0.230	0.171	0.126	0.840	0.563	0.380	0.359	0.291	0.254	0.232
1998	0.458	0.238	0.178	0.131	0.870	0.577	0.393	0.374	0.302	0.265	0.245
2003	0.433	0.219	0.161	0.115	0.802	0.541	0.369	0.349	0.282	0.244	0.221
El Salvador											
1991	0.444	0.222	0.163	0.117	0.814	0.549	0.374	0.346	0.280	0.242	0.217
2000	0.457	0.219	0.160	0.112	0.806	0.541	0.368	0.356	0.283	0.240	0.211
2003	0.441	0.212	0.153	0.106	0.788	0.532	0.362	0.344	0.275	0.234	0.207
Guatemala											
2000	0.441	0.237	0.179	0.134	0.844	0.568	0.386	0.369	0.300	0.265	0.245
Haiti											
2001	0.538	0.278	0.215	0.167	0.961	0.637	0.437	0.404	0.330	0.295	0.277
Honduras											
Eph 1											
1992	0.483	0.235	0.174	0.126	0.835	0.565	0.386	0.366	0.296	0.258	0.235
1997	0.472	0.233	0.173	0.126	0.852	0.575	0.392	0.367	0.295	0.256	0.233
Eph 2											
1997	0.440	0.225	0.166	0.120	0.813	0.549	0.374	0.354	0.287	0.251	0.229
2003	0.481	0.242	0.182	0.135	0.846	0.571	0.389	0.367	0.300	0.265	0.245
Jamaica											
1990	0.572	0.244	0.176	0.123	0.881	0.599	0.411	0.387	0.303	0.251	0.215
1999	0.550	0.249	0.182	0.129	0.914	0.619	0.422	0.395	0.320	0.288	0.286
2002	0.574	0.259	0.190	0.135	0.942	0.637	0.435	0.409	0.336	0.305	0.301
Mexico											
1992	0.448	0.243	0.185	0.140	0.863	0.580	0.394	0.368	0.301	0.267	0.248
1996	0.443	0.230	0.172	0.127	0.823	0.555	0.378	0.356	0.288	0.252	0.231
2002	0.432	0.220	0.163	0.118	0.799	0.540	0.368	0.345	0.279	0.242	0.218
Nicaragua											
1993	0.513	0.247	0.183	0.133	0.883	0.596	0.407	0.384	0.310	0.270	0.246
1998	0.440	0.227	0.169	0.123	0.838	0.557	0.381	0.363	0.295	0.258	0.236
2001	0.441	0.233	0.175	0.130	0.841	0.559	0.384	0.369	0.303	0.268	0.249
Panama											
1995	0.510	0.243	0.180	0.131	0.866	0.586	0.401	0.373	0.295	0.251	0.221
2003	0.525	0.251	0.188	0.138	0.887	0.599	0.409	0.378	0.306	0.267	0.244
Paraguay											
1997	0.518	0.242	0.177	0.127	0.886	0.597	0.406	0.379	0.305	0.265	0.241
2002	0.516	0.245	0.182	0.132	0.891	0.601	0.410	0.382	0.309	0.271	0.250
Peru											
1997	0.479	0.229	0.168	0.119	0.835	0.564	0.385	0.361	0.292	0.253	0.228
2002	0.472	0.234	0.174	0.127	0.851	0.574	0.391	0.372	0.301	0.263	0.240
Suriname											
1999	0.452	0.235	0.175	0.129	0.816	0.554	0.374	0.358	0.281	0.235	0.203
Uruguay											
1989	0.345	0.173	0.124	0.085	0.646	0.436	0.297	0.297	0.243	0.210	0.189
1998	0.374	0.183	0.132	0.091	0.672	0.460	0.313	0.306	0.247	0.211	0.186
2003	0.380	0.190	0.139	0.098	0.688	0.467	0.320	0.311	0.254	0.222	0.201
Venezuela											
1989	0.348	0.169	0.119	0.080	0.638	0.433	0.295	0.297	0.243	0.209	0.188
1998	0.403	0.196	0.141	0.098	0.725	0.491	0.334	0.323	0.259	0.222	0.197
2000	0.376	0.181	0.129	0.088	0.670	0.458	0.312	0.307	0.247	0.210	0.185
2003	0.397	0.191	0.138	0.095	0.704	0.477	0.325	0.317	0.254	0.216	0.189

Source: Own calculations based on household surveys.

Table 4.8
Pure income polarisation
Household equivalised income
Urban areas

	Urban										
	Wolfson	EGR (2)			EGR (3)			DER			
		α			α			α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Argentina											
15 cities											
1992	0.386	0.193	0.141	0.100	0.694	0.471	0.323	0.322	0.262	0.226	0.202
1998	0.443	0.215	0.158	0.114	0.764	0.518	0.355	0.341	0.276	0.240	0.220
28 cities											
1998	0.447	0.217	0.160	0.115	0.770	0.522	0.358	0.343	0.276	0.237	0.212
2004	0.462	0.220	0.161	0.115	0.787	0.532	0.365	0.346	0.279	0.242	0.219
Bolivia											
Urban											
1993	0.444	0.233	0.175	0.130	0.812	0.548	0.373	0.354	0.292	0.260	0.243
1997	0.465	0.241	0.182	0.136	0.829	0.559	0.381	0.361	0.298	0.267	0.251
2002	0.441	0.242	0.185	0.141	0.854	0.569	0.391	0.369	0.304	0.273	0.257
National											
1997	0.455	0.237	0.179	0.134	0.824	0.555	0.378	0.356	0.292	0.260	0.242
2002	0.441	0.242	0.185	0.141	0.854	0.569	0.391	0.369	0.304	0.273	0.257
Brazil											
1990	0.589	0.281	0.216	0.166	0.943	0.636	0.434	0.399	0.330	0.299	0.286
1998	0.561	0.275	0.211	0.162	0.926	0.624	0.426	0.391	0.325	0.298	0.294
2003	0.538	0.268	0.205	0.156	0.909	0.612	0.417	0.386	0.320	0.293	0.287
Chile											
1990	0.484	0.256	0.197	0.151	0.872	0.587	0.400	0.372	0.308	0.278	0.263
1998	0.497	0.260	0.200	0.153	0.883	0.594	0.404	0.378	0.312	0.281	0.267
2003	0.456	0.249	0.191	0.146	0.861	0.573	0.394	0.369	0.305	0.275	0.260
Colombia											
ENH-Urban											
1992	0.428	0.227	0.172	0.129	0.792	0.535	0.365	0.345	0.282	0.250	0.231
2000	0.515	0.264	0.202	0.155	0.904	0.608	0.414	0.381	0.312	0.280	0.266
ECH-Urban											
2000	0.456	0.248	0.189	0.144	0.874	0.581	0.399	0.376	0.309	0.279	0.268
2004	0.489	0.251	0.190	0.142	0.874	0.589	0.401	0.374	0.306	0.273	0.259
Costa Rica											
1992	0.381	0.189	0.137	0.096	0.684	0.464	0.318	0.313	0.253	0.218	0.194
1997	0.381	0.185	0.133	0.092	0.673	0.460	0.314	0.308	0.248	0.212	0.186
2003	0.426	0.203	0.148	0.104	0.740	0.503	0.345	0.328	0.265	0.228	0.204
Dominican Rep.											
2000	0.439	0.226	0.168	0.123	0.810	0.547	0.374	0.350	0.285	0.251	0.231
2004	0.461	0.239	0.181	0.136	0.835	0.563	0.384	0.362	0.299	0.266	0.248
Ecuador											
1994	0.403	0.221	0.166	0.122	0.798	0.537	0.365	0.348	0.284	0.250	0.231
1998	0.427	0.236	0.179	0.135	0.835	0.553	0.380	0.363	0.298	0.266	0.252
2003	0.448	0.223	0.166	0.120	0.807	0.545	0.372	0.347	0.282	0.246	0.224
El Salvador											
1991	0.402	0.207	0.151	0.108	0.761	0.514	0.350	0.333	0.271	0.236	0.214
2000	0.408	0.203	0.149	0.106	0.733	0.493	0.338	0.331	0.269	0.233	0.210
2003	0.392	0.196	0.142	0.100	0.729	0.491	0.333	0.322	0.261	0.226	0.204
Guatemala											
2000	0.475	0.250	0.190	0.144	0.865	0.581	0.396	0.375	0.308	0.276	0.263
Haiti											
2001	0.742	0.320	0.247	0.192	1.044	0.706	0.486	0.436	0.366	0.341	0.336
Honduras											
Eph 1											
1992	0.452	0.228	0.169	0.123	0.805	0.544	0.371	0.354	0.284	0.244	0.218
1997	0.424	0.224	0.166	0.122	0.803	0.540	0.367	0.351	0.285	0.249	0.227
Eph 2											
1997	0.420	0.219	0.162	0.118	0.791	0.532	0.363	0.345	0.281	0.247	0.227
2003	0.460	0.223	0.164	0.118	0.817	0.553	0.377	0.353	0.285	0.248	0.227
Jamaica											
1990	0.546	0.235	0.170	0.118	0.874	0.595	0.410	0.382	0.296	0.241	0.203
1999	0.593	0.265	0.197	0.143	0.944	0.630	0.431	0.404	0.327	0.293	0.294
2002	0.626	0.277	0.206	0.150	1.002	0.678	0.463	0.430	0.361	0.346	0.381
Mexico											
1992	0.425	0.240	0.184	0.140	0.825	0.554	0.376	0.356	0.296	0.268	0.255
1996	0.419	0.223	0.166	0.122	0.797	0.538	0.366	0.343	0.281	0.248	0.230
2002	0.398	0.206	0.152	0.110	0.741	0.501	0.342	0.326	0.265	0.230	0.208
Nicaragua											
1993	0.478	0.231	0.171	0.125	0.842	0.569	0.389	0.364	0.295	0.258	0.237
1998	0.428	0.228	0.171	0.127	0.822	0.549	0.373	0.365	0.298	0.263	0.242
2001	0.433	0.237	0.179	0.135	0.858	0.560	0.382	0.371	0.308	0.278	0.264
Panama											
1995	0.472	0.228	0.169	0.122	0.813	0.550	0.377	0.347	0.280	0.242	0.217
2003	0.467	0.233	0.174	0.128	0.820	0.555	0.379	0.355	0.286	0.248	0.224
Paraguay											
1997	0.437	0.227	0.169	0.124	0.805	0.544	0.372	0.355	0.283	0.242	0.215
2002	0.432	0.214	0.156	0.110	0.794	0.533	0.362	0.343	0.278	0.243	0.221
Peru											
1997	0.392	0.200	0.147	0.105	0.739	0.500	0.341	0.329	0.269	0.237	0.218
2002	0.390	0.212	0.158	0.116	0.771	0.514	0.353	0.333	0.276	0.248	0.232
Suriname											
1999	0.452	0.235	0.175	0.129	0.816	0.554	0.374	0.358	0.281	0.235	0.203
Uruguay											
1989	0.345	0.173	0.124	0.085	0.646	0.436	0.297	0.297	0.243	0.210	0.189
1998	0.374	0.183	0.132	0.091	0.672	0.460	0.313	0.306	0.247	0.211	0.186
2003	0.380	0.190	0.139	0.098	0.688	0.467	0.320	0.311	0.254	0.222	0.201
Venezuela											
1989	0.309	0.159	0.113	0.077	0.600	0.406	0.276	0.283	0.233	0.203	0.184
1998	0.397	0.202	0.148	0.105	0.720	0.488	0.334	0.323	0.263	0.229	0.209
2000	0.367	0.178	0.127	0.086	0.665	0.451	0.307	0.306	0.248	0.213	0.191
2003	0.375	0.191	0.139	0.098	0.689	0.467	0.320	0.312	0.255	0.222	0.201

Source: Own calculations based on household surveys.

Table 4.9
Pure income polarisation
Household equivalised income
Rural areas

	Rural										
	Wolfson	EGR (2)			EGR (3)			DER			
		α			α			α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Bolivia											
National											
1997	0.738	0.314	0.241	0.185	1.092	0.722	0.498	0.455	0.392	0.379	0.399
2002	0.716	0.289	0.214	0.156	1.008	0.684	0.470	0.433	0.368	0.350	0.362
Brazil											
1990	0.494	0.249	0.189	0.142	0.856	0.576	0.393	0.365	0.301	0.270	0.254
1998	0.456	0.238	0.180	0.134	0.864	0.575	0.395	0.369	0.306	0.275	0.262
2003	0.463	0.228	0.168	0.121	0.822	0.555	0.379	0.356	0.289	0.254	0.234
Chile											
1990	0.398	0.266	0.213	0.172	0.922	0.603	0.410	0.383	0.323	0.300	0.292
1998	0.355	0.208	0.157	0.118	0.776	0.512	0.348	0.339	0.284	0.257	0.245
2003	0.355	0.220	0.168	0.129	0.798	0.526	0.357	0.343	0.289	0.263	0.251
Costa Rica											
1992	0.357	0.171	0.120	0.079	0.655	0.446	0.302	0.303	0.242	0.202	0.174
1997	0.359	0.173	0.123	0.082	0.655	0.445	0.303	0.301	0.242	0.205	0.179
2003	0.397	0.198	0.143	0.099	0.737	0.497	0.338	0.329	0.263	0.223	0.196
Dominican Rep.											
2000	0.407	0.207	0.151	0.108	0.747	0.504	0.342	0.330	0.267	0.229	0.204
2004	0.388	0.187	0.135	0.094	0.680	0.463	0.318	0.311	0.252	0.216	0.192
Ecuador											
1994	0.405	0.211	0.153	0.108	0.814	0.547	0.370	0.363	0.295	0.256	0.233
1998	0.451	0.215	0.154	0.106	0.814	0.546	0.371	0.358	0.287	0.246	0.221
2003	0.383	0.188	0.134	0.091	0.716	0.483	0.328	0.323	0.259	0.221	0.195
El Salvador											
1991	0.393	0.192	0.136	0.092	0.747	0.505	0.343	0.334	0.267	0.225	0.197
2000	0.433	0.196	0.138	0.091	0.734	0.504	0.345	0.333	0.262	0.216	0.182
2003	0.453	0.210	0.150	0.102	0.790	0.535	0.364	0.351	0.276	0.230	0.197
Guatemala											
2000	0.381	0.193	0.140	0.097	0.736	0.493	0.334	0.323	0.264	0.229	0.206
Haiti											
2001	0.409	0.199	0.142	0.097	0.757	0.510	0.347	0.340	0.272	0.229	0.202
Honduras											
Eph 1											
1992	0.445	0.215	0.158	0.113	0.769	0.522	0.358	0.344	0.277	0.239	0.214
1997	0.458	0.221	0.162	0.115	0.813	0.550	0.375	0.353	0.286	0.248	0.224
Eph 2											
1997	0.435	0.215	0.159	0.114	0.786	0.532	0.363	0.345	0.279	0.243	0.221
2003	0.395	0.190	0.137	0.094	0.715	0.484	0.330	0.322	0.263	0.229	0.207
Jamaica											
1990	0.562	0.256	0.189	0.136	0.892	0.601	0.411	0.390	0.303	0.249	0.211
1999	0.524	0.234	0.168	0.116	0.889	0.602	0.411	0.387	0.313	0.284	0.289
2002	0.524	0.240	0.174	0.123	0.871	0.589	0.400	0.378	0.295	0.244	0.209
Mexico											
1992	0.460	0.220	0.160	0.114	0.799	0.541	0.370	0.355	0.288	0.251	0.229
1996	0.410	0.210	0.154	0.110	0.789	0.529	0.358	0.346	0.280	0.244	0.224
2002	0.425	0.231	0.172	0.126	0.874	0.578	0.392	0.386	0.317	0.280	0.261
Nicaragua											
1993	0.468	0.218	0.157	0.109	0.818	0.550	0.375	0.359	0.289	0.248	0.222
1998	0.430	0.209	0.150	0.103	0.805	0.539	0.365	0.355	0.287	0.249	0.226
2001	0.379	0.186	0.133	0.091	0.707	0.472	0.321	0.321	0.260	0.224	0.202
Panama											
1995	0.500	0.223	0.159	0.109	0.824	0.558	0.381	0.364	0.291	0.247	0.218
2003	0.505	0.232	0.171	0.122	0.845	0.572	0.392	0.366	0.297	0.259	0.235
Paraguay											
1997	0.573	0.244	0.177	0.124	0.859	0.583	0.401	0.378	0.303	0.260	0.236
2002	0.577	0.281	0.215	0.164	1.004	0.666	0.456	0.428	0.354	0.322	0.314
Peru											
1997	0.409	0.194	0.140	0.096	0.709	0.483	0.330	0.322	0.259	0.221	0.195
2002	0.368	0.177	0.126	0.086	0.652	0.445	0.304	0.299	0.244	0.210	0.187

Source: Own calculations based on household surveys.

Table 4.10
Spearman rank correlation coefficients
Pure income polarisation indices and Gini coefficient

					EGR (2)			EGR (3)			DER			
			Gini	WLF	α			α			α			
					1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Gini			1	0.90	0.95	0.93	0.88	0.99	0.98	0.99	0.97	0.93	0.92	0.85
Wolfson				1	0.90	0.86	0.79	0.89	0.92	0.92	0.96	0.92	0.88	0.84
EGR (2)		1			1	0.99	0.96	0.96	0.97	0.96	0.96	0.95	0.95	0.90
	α	1.3				1	0.99	0.95	0.95	0.94	0.94	0.93	0.94	0.90
		1.6					1	0.91	0.90	0.90	0.89	0.89	0.92	0.88
EGR (3)		1						1	0.98	0.99	0.97	0.94	0.94	0.88
	α	1.3							1	0.99	0.99	0.96	0.94	0.88
		1.6								1	0.99	0.95	0.93	0.87
DER		0.25									1	0.97	0.95	0.90
	α	0.5										1	0.99	0.96
		0.75											1	0.98
		1												1

Source: Own calculations based on household surveys

Table 4.11
Changes (%) in polarisation measures and Gini coefficient

				DER			
	Wolfson	EGR (2)	EGR (3)	0.25	0.5	0.75	Gini
Argentina							
1992-1998	18.1	11.8	10.1	6.1	3.5	0.1	11.5
1998-2004	2.6	1.3	2.5	1.0	-0.5	-2.4	0.9
1992-2004	21.9	14.1	13.5	8.6	4.9	-0.6	12.4
Bolivia							
1993-1997 (urb.)	4.2	3.7	2.1	1.6	2.0	2.3	-0.5
1997-2002	4.7	2.1	3.9	2.5	3.4	5.7	3.6
1993-2002	8.8	5.8	6.0	4.1	5.4	8.0	3.1
Brazil							
1990-1998	-6.4	-3.0	-2.1	-2.6	-1.9	1.6	-2.0
1998-2003	-6.2	-4.7	-2.9	-2.8	-3.3	-1.2	-2.6
1990-2003	-12.2	-7.6	-4.9	-5.3	-5.2	0.4	-4.6
Chile							
1990-1998	3.5	1.4	0.5	-0.4	-0.2	0.1	0.6
1998-2003	-8.2	-4.4	-2.7	-2.0	-2.0	-2.2	-1.6
1990-2003	-5.0	-3.1	-2.2	-2.3	-2.2	-2.1	-1.0
Colombia							
1992-2000	19.6	15.6	13.6	11.5	10.7	10.8	13.6
2000-2004	5.2	-0.1	-0.7	3.8	-0.4	-2.6	-0.1
1992-2004	24.9	15.5	12.9	15.3	10.2	8.2	13.5
Costa Rica							
1992-1997	1.7	2.0	1.4	-0.4	-0.7	-0.8	0.6
1997-2002	12.5	12.0	9.5	6.6	7.1	8.8	9.1
1992-2003	14.5	14.3	11.0	6.1	6.3	7.9	9.8
El Salvador							
1991-2003	-2.0	-5.4	-3.6	-2.7	-4.0	-6.0	-3.3
Honduras							
1992-1997	-3.7	0.7	2.0	1.6	1.8	1.9	2.1
1997-2003	8.2	8.0	3.7	3.9	5.1	6.9	2.3
1992-2003	4.6	8.8	5.6	5.5	6.9	8.8	4.4
Jamaica							
1990-1999	-2.1	4.7	4.0	2.8	7.4	18.2	-3.0
1999-2002	-2.5	2.1	1.4	2.7	3.2	2.8	8.7
1990-2002	-4.5	6.9	5.4	5.6	10.8	21.6	5.5
Mexico							
1992-1996	-0.8	-5.6	-4.2	-2.9	-3.5	-4.4	-2.7
1996-2002	-1.6	-3.7	-2.7	-0.5	-2.5	-3.2	-6.2
1992-2002	-2.5	-9.1	-6.8	-3.4	-5.9	-7.4	-8.7
Nicaragua							
1993-1998	-13.3	-6.8	-4.7	-3.0	-3.0	-3.4	-4.4
1998-2001	0.8	2.2	1.1	-1.1	0.5	3.0	0.6
1993-2001	-12.6	-4.7	-3.7	-4.1	-2.4	-0.5	-3.8
Panama							
1995-2003	4.9	3.3	2.5	2.0	4.7	9.0	1.7
Paraguay							
1997-2002	0.1	1.0	0.8	-0.6	-0.5	0.2	1.3
Peru							
1997-2002	-2.4	1.7	1.6	1.0	1.8	2.7	1.6
Uruguay							
1989-1998	9.7	7.2	4.3	3.2	1.8	0.5	3.9
1998-2003	4.0	4.2	2.7	1.5	3.0	5.4	1.9
1989-2003	14.1	11.7	7.1	4.7	4.9	5.9	5.9
Venezuela							
1989-1998	15.1	13.9	11.5	6.2	2.5	-3.9	10.9
1998-2003	-0.8	-1.9	-2.2	-1.7	-1.7	-1.8	-2.0
1989-2003	14.2	11.7	9.0	4.4	0.7	-5.6	8.7

Source: Own estimates based on household surveys

Table 4.12
Changes (%) in polarisation measures and Gini coefficient

				DER			
	Wolfson	EGR (2)	EGR (3)	0.25	0.5	0.75	Gini
Change in index (%)							
South America	4.9	4.8	4.6	2.5	1.1	0.7	4.5
Central America	0.5	0.6	0.5	0.4	0.8	1.7	-0.3
Latin America	2.1	3.1	2.9	1.9	1.7	2.5	2.5
Change in coefficient of variation of index (%)							
Latin America	-35.7	-28.8	-25.4	-17.5	-9.1	4.3	-24.3

Source: Own estimates based on household surveys

Table 5.1
Pure income polarisation
Individual labour income (earnings)

	Wolfson	EGR (2) α			EGR (3) α			DER α			
		1	1.3	1.6	1	1.3	1.6	0.25	0.5	0.75	1
Argentina											
15 cities											
1992	0.341	0.173	0.124	0.085	0.634	0.429	0.294	0.330	0.290	0.265	0.249
1998	0.377	0.200	0.147	0.106	0.734	0.495	0.335	0.346	0.283	0.244	0.217
28 cities											
1998	0.392	0.201	0.147	0.104	0.739	0.498	0.338	0.335	0.276	0.239	0.213
Bolivia											
Urban											
1993	0.455	0.249	0.190	0.145	0.878	0.575	0.396	0.372	0.315	0.301	0.328
1997	0.479	0.255	0.196	0.150	0.876	0.590	0.401	0.377	0.316	0.293	0.302
2002	0.447	0.243	0.183	0.137	0.879	0.588	0.397	0.370	0.303	0.272	0.267
National											
1997	0.497	0.260	0.198	0.151	0.924	0.621	0.422	0.405	0.342	0.328	0.365
2002	0.507	0.247	0.183	0.132	0.930	0.626	0.424	0.394	0.323	0.295	0.307
Brazil											
1990	0.626	0.297	0.229	0.176	0.988	0.660	0.455	0.479	0.486	0.620	1.036
1998	0.543	0.284	0.221	0.172	0.943	0.628	0.432	0.485	0.506	0.675	1.181
2003	0.494	0.272	0.212	0.167	0.906	0.602	0.414	0.476	0.536	0.797	1.572
Chile											
1990	0.429	0.259	0.203	0.160	0.884	0.584	0.399	0.394	0.363	0.394	0.511
1998	0.459	0.268	0.208	0.162	0.906	0.601	0.412	0.402	0.381	0.421	0.570
2003	0.452	0.262	0.205	0.161	0.887	0.588	0.402	0.412	0.389	0.441	0.607
Colombia											
ENH-Urban											
1992	0.380	0.222	0.171	0.131	0.743	0.502	0.345	0.372	0.323	0.301	0.295
2000	0.388	0.243	0.186	0.142	0.823	0.548	0.367	0.397	0.393	0.470	0.729
ECH-Urban											
2000	0.347	0.225	0.172	0.131	0.799	0.531	0.355	0.396	0.379	0.449	0.663
2004	0.353	0.219	0.166	0.126	0.816	0.546	0.369	0.396	0.377	0.436	0.637
Costa Rica											
1992	0.313	0.164	0.116	0.078	0.640	0.431	0.292	0.297	0.245	0.218	0.211
1997	0.346	0.172	0.122	0.081	0.677	0.457	0.311	0.306	0.246	0.208	0.181
2003	0.371	0.195	0.142	0.100	0.729	0.489	0.331	0.335	0.276	0.247	0.241
Dominican Rep.											
2000	0.441	0.238	0.180	0.135	0.814	0.549	0.374	0.359	0.293	0.258	0.236
2004	0.450	0.222	0.167	0.123	0.778	0.526	0.359	0.345	0.281	0.243	0.219
Ecuador											
1994	0.463	0.236	0.175	0.128	0.880	0.585	0.399	0.366	0.302	0.274	0.281
1998	0.468	0.233	0.172	0.125	0.883	0.590	0.399	0.378	0.309	0.277	0.276
2003	0.404	0.204	0.147	0.101	0.785	0.528	0.357	0.362	0.320	0.332	0.422
El Salvador											
1991	0.385	0.206	0.150	0.105	0.774	0.520	0.351	0.349	0.301	0.294	0.324
2000	0.403	0.211	0.156	0.113	0.752	0.508	0.346	0.340	0.282	0.256	0.255
2003	0.408	0.223	0.166	0.122	0.791	0.529	0.356	0.350	0.291	0.266	0.265
Guatemala											
2000	0.504	0.246	0.182	0.133	0.919	0.611	0.417	0.403	0.330	0.298	0.311
Haiti											
2001	0.907	0.347	0.272	0.214	1.143	0.762	0.526	0.482	0.431	0.445	0.529
Honduras											
Eph 1											
1992	0.445	0.216	0.158	0.114	0.812	0.546	0.370	0.366	0.304	0.278	0.283
1997	0.466	0.234	0.173	0.125	0.864	0.576	0.389	0.386	0.323	0.302	0.322
Eph 2											
1997	0.449	0.230	0.174	0.130	0.845	0.562	0.386	0.361	0.302	0.281	0.291
2003	0.494	0.226	0.164	0.115	0.846	0.571	0.388	0.373	0.304	0.272	0.269
Jamaica											
1990	0.317	0.172	0.123	0.084	0.656	0.437	0.300	0.303	0.253	0.227	0.213
1999	0.249	0.135	0.094	0.063	0.650	0.440	0.301	0.297	0.257	0.241	0.242
2002	0.339	0.202	0.152	0.113	0.710	0.463	0.318	0.318	0.266	0.241	0.232
Mexico											
1992	0.437	0.243	0.183	0.137	0.878	0.580	0.394	0.374	0.316	0.308	0.355
1996	0.466	0.231	0.172	0.125	0.844	0.569	0.387	0.362	0.305	0.292	0.330
2002	0.446	0.215	0.157	0.110	0.813	0.546	0.371	0.368	0.311	0.309	0.387
Nicaragua											
1993	0.524	0.238	0.174	0.123	0.891	0.602	0.409	0.392	0.318	0.284	0.278
1998	0.477	0.246	0.183	0.134	0.914	0.604	0.412	0.386	0.313	0.278	0.265
2001	0.493	0.257	0.194	0.145	0.949	0.627	0.426	0.395	0.325	0.296	0.289
Panama											
1995	0.420	0.214	0.157	0.112	0.786	0.527	0.357	0.354	0.283	0.240	0.212
2003	0.428	0.225	0.165	0.117	0.852	0.573	0.388	0.387	0.338	0.340	0.409
Paraguay											
1997	0.414	0.214	0.155	0.109	0.827	0.549	0.372	0.367	0.301	0.270	0.269
2002	0.478	0.219	0.157	0.108	0.863	0.576	0.394	0.364	0.300	0.269	0.262
Peru											
1997	0.441	0.212	0.152	0.104	0.821	0.552	0.375	0.362	0.292	0.255	0.242
2002	0.479	0.236	0.173	0.124	0.911	0.606	0.414	0.384	0.312	0.278	0.264
Suriname											
1999	0.341	0.190	0.142	0.104	0.716	0.480	0.324	0.320	0.264	0.238	0.233
Uruguay											
1989	0.373	0.182	0.129	0.087	0.702	0.474	0.322	0.314	0.251	0.212	0.186
1998	0.409	0.204	0.149	0.105	0.747	0.504	0.343	0.333	0.266	0.226	0.198
2003	0.431	0.210	0.151	0.104	0.796	0.537	0.366	0.349	0.283	0.249	0.233
Venezuela											
1989	0.298	0.152	0.104	0.066	0.628	0.427	0.288	0.360	0.394	0.535	0.905
1998	0.369	0.192	0.140	0.099	0.705	0.477	0.325	0.331	0.286	0.275	0.292
2000	0.301	0.164	0.115	0.076	0.641	0.434	0.293	0.321	0.297	0.308	0.352
2003	0.344	0.173	0.122	0.080	0.676	0.459	0.310	0.327	0.286	0.278	0.297

Source: Own estimates based on household surveys

Table 5.2
Returns to college education in terms of hourly wages
Coefficients of a Mincer equation

Country	Return	Country	Return	Country	Return
Argentina		**Costa Rica**		**Peru**	
EPH-15 cities		1992	0.81	ENAHO 1	
1992	0.56	2003	0.92	1997	0.59
1998	0.78	**Ecuador**		1999	0.63
EPH - 28 cities		ECV		ENAHO 2	
1998	0.76	1994	0.62	2001	0.68
2003	0.78	1998	0.66	2002	0.73
Bolivia		ENEMDU		**Uruguay**	
Urban		2003	0.65	1989	0.18
1993	0.96	**El Salvador**		1998	0.69
1997	1.18	1991	0.37	2004	0.71
2002	1.18	2003	0.79	**Venezuela**	
National		**Honduras**		1989	0.52
1997	1.15	1992	0.65	1998	0.59
2002	1.27	1997	0.82	2003	0.66
Brazil		2003	0.69		
1990	0.81	**Mexico**			
1993	0.85	1992	0.76		
1998	0.96	1996	0.57		
2003	1.06	2002	0.64		
Chile		**Nicaragua**			
1990	0.92	1993	0.44		
1998	1.01	1998	0.74		
2003	0.98	2001	0.97		
Colombia		**Panama**			
ENH-Urban		1995	0.81		
1992	0.84	2001	1.01		
2000	1.01	2003	0.88		
ECH-Urban		**Paraguay**			
2000	1.05	1997	0.86		
2004	1.04	2001	0.83		
		2003	0.74		

Source: Gasparini et al. (2006) based on household surveys.

Table 6.1
Gini coefficient of years of education and gap of years of education by income quintiles

Country	Year	(10-20)			(21-30)			(31-40)		
		Q5-Q1	Q5/Q1	Gini	Q5-Q1	Q5/Q1	Gini	Q5-Q1	Q5/Q1	Gini
Argentina	2004	2.0	1.3	0.215	4.6	1.5	0.166	6.1	1.7	0.197
Bolivia (nac.)	2002	2.8	1.5	0.257	6.7	2.2	0.288	8.6	3.2	0.363
Brazil	2003	3.2	1.7	0.284	6.5	2.2	0.277	7.5	2.9	0.346
Chile	2003	1.1	1.2	0.216	4.4	1.4	0.136	5.6	1.6	0.178
Colombia (urb.)	2004	2.0	1.3	0.233	3.6	1.4	0.194	5.6	1.8	0.262
Costa Rica	2003	2.4	1.5	0.239	6.1	2.0	0.249	6.4	2.1	0.267
Dominican Rep.	2004	2.3	1.4	0.263	5.2	1.8	0.270	5.6	1.9	0.302
Ecuador	2003	2.1	1.3	0.230	4.6	1.6	0.256	5.9	2.0	0.306
El Salvador	2003	2.9	1.6	0.323	6.1	2.2	0.327	6.6	2.4	0.399
Honduras	2003	3.1	1.8	0.323	5.9	2.5	0.350	6.7	3.0	0.413
Jamaica	2002	0.2	1.0	0.205	0.6	1.1	0.107	0.9	1.1	0.114
Mexico	2002	2.2	1.3	0.227	5.4	1.7	0.264	6.0	1.9	0.308
Nicaragua	2001	3.4	1.9	0.364	5.7	2.4	0.382	5.6	2.8	0.428
Panama	2003	2.8	1.5	0.247	7.3	2.1	0.240	7.7	2.2	0.261
Paraguay	2003	2.2	1.4	0.256	5.6	1.9	0.264	6.8	2.4	0.304
Peru	2003	3.4	1.7	0.263	6.8	2.2	0.259	6.9	2.4	0.309
Uruguay	2004	2.2	1.3	0.213	5.9	1.8	0.191	6.6	1.9	0.214
Venezuela	2003	1.8	1.3	0.246	4.6	1.6	0.244	5.3	1.8	0.267

Source: Own estimates based on household surveys.

Table 6.2
Net enrolment rates
Primary, secondary and tertiary levels

	Primary						Secondary						Tertiary					
	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural
Argentina																		
EPH- 15 cities																		
1992	0.97	0.99	0.014	1.015	0.001		0.50	0.85	0.354	1.711	-0.093		0.17	0.47	0.297	2.709	-0.080	
1995	0.98	1.00	0.018	1.019	-0.001		0.56	0.94	0.386	1.692	-0.059		0.12	0.56	0.441	4.753	-0.114	
1998	0.98	1.00	0.016	1.016	-0.004		0.68	0.98	0.297	1.437	-0.040		0.08	0.61	0.524	7.433	-0.097	
EPH - 28 cities																		
1998	0.98	1.00	0.013	1.014	-0.003		0.66	0.97	0.301	1.453	-0.046		0.09	0.59	0.499	6.711	-0.101	
2003	0.99	1.00	0.007	1.007	-0.002		0.77	0.97	0.205	1.267	-0.039		0.13	0.69	0.563	5.471	-0.106	
EPH-C																		
2004	0.98	1.00	0.018	1.019	-0.005		0.66	0.96	0.298	1.448	-0.042		0.11	0.65	0.536	5.704	-0.093	
Bolivia																		
Urban																		
1993	0.94	0.98	0.048	1.051	0.010		0.74	0.86	0.127	1.172	0.053		0.18	0.44	0.252	2.372	0.050	
1997	0.96	0.99	0.029	1.030	-0.011		0.73	0.94	0.214	1.294	-0.022		0.17	0.46	0.289	2.692	0.008	
2002	0.96	0.99	0.029	1.030	0.003		0.80	0.87	0.074	1.092	0.019		0.13	0.51	0.383	3.975	0.014	
National																		
1997	0.89	0.98	0.085	1.095	0.008	0.086	0.41	0.81	0.400	1.968	0.009	0.399	0.05	0.32	0.264	5.950	0.001	0.198
2002	0.88	0.98	0.105	1.120	0.008	0.062	0.43	0.84	0.405	1.932	0.002	0.334	0.02	0.38	0.356	17.588	-0.013	0.223
Brazil																		
1990	0.73	0.98	0.242	1.330	-0.020	0.182	0.07	0.61	0.540	8.830	-0.065	0.216	0.01	0.27	0.268	47.211	-0.023	0.087
1998	0.90	0.99	0.090	1.099	-0.005	0.047	0.16	0.79	0.639	5.112	-0.111	0.282	0.01	0.38	0.367	35.092	-0.029	0.107
2003	0.96	1.00	0.040	1.042	-0.006	0.020	0.32	0.90	0.573	2.772	-0.089	0.286	0.02	0.50	0.477	22.978	-0.044	0.148
Chile																		
1990	0.95	0.99	0.038	1.040	-0.004	0.057	0.50	0.78	0.287	1.578	-0.036	0.329	0.05	0.43	0.381	9.207	0.014	0.165
1998	0.97	1.00	0.026	1.027	-0.004	0.029	0.51	0.80	0.290	1.565	-0.039	0.208	0.09	0.67	0.580	7.347	-0.025	0.243
2003	0.99	1.00	0.010	1.011	-0.002	0.015	0.63	0.81	0.183	1.291	-0.034	0.131	0.13	0.68	0.547	5.276	-0.003	0.248
Colombia																		
ENH-Urban																		
1992	0.88	0.97	0.095	1.108	-0.009		0.63	0.87	0.242	1.386	-0.037		0.14	0.43	0.292	3.072	-0.013	
2000	0.92	0.98	0.056	1.060	-0.004		0.63	0.85	0.218	1.345	-0.013		0.17	0.60	0.427	3.512	0.029	
ECH-Urban																		
2000	0.89	0.99	0.108	1.122	-0.017		0.65	0.89	0.235	1.359	-0.020		0.18	0.55	0.371	3.082	-0.002	
2004	0.95	0.99	0.033	1.035	-0.012		0.69	0.93	0.239	1.345	-0.057		0.24	0.52	0.275	2.135	-0.035	
Costa Rica																		
1992	0.86	0.92	0.066	1.077	0.007	0.038	0.34	0.70	0.357	2.054	-0.030	0.301	0.07	0.25	0.180	3.441	-0.015	0.201
1997	0.91	0.99	0.077	1.085	-0.005	0.031	0.30	0.76	0.454	2.498	-0.062	0.289	0.04	0.31	0.266	7.549	-0.026	0.155
2003	0.96	1.00	0.034	1.036	-0.004	0.026	0.42	0.89	0.472	2.132	-0.082	0.227	0.03	0.41	0.380	13.316	-0.043	0.136
Dominican R.																		
2000	0.94	1.00	0.059	1.063	-0.012	0.026	0.18	0.66	0.483	3.646	-0.111	0.278	0.05	0.42	0.367	7.981	-0.096	0.164
2004	0.96	0.99	0.031	1.033	-0.011	-0.009	0.28	0.68	0.409	2.482	-0.149	0.185	0.05	0.41	0.359	8.094	-0.055	0.118
Ecuador																		
ECV																		
1994	0.88	0.98	0.105	1.119	0.000	0.030	0.27	0.76	0.487	2.776	-0.040	0.376	0.08	0.27	0.192	3.498	-0.018	0.166
1998	0.91	0.99	0.085	1.094	-0.035	0.041	0.33	0.87	0.538	2.621	-0.060	0.343	0.05	0.35	0.301	7.141	-0.027	0.160
ENEMDU																		
2003	0.93	0.99	0.062	1.067	-0.009	0.027	0.49	0.81	0.320	1.653	-0.011	0.323	0.07	0.33	0.257	4.759	-0.042	0.203
El Salvador																		
1991	0.63	0.91	0.279	1.440	0.002	0.223	0.09	0.47	0.384	5.439	-0.025	0.288	0.00	0.08	0.073	22.620	0.001	0.046
2000	0.76	0.97	0.210	1.276	-0.006	0.121	0.08	0.48	0.400	5.858	-0.023	0.248	0.03	0.40	0.371	12.319	0.001	0.200
2003	0.80	0.95	0.154	1.193	-0.019	0.094	0.14	0.52	0.383	3.809	-0.037	0.261	0.07	0.31	0.244	4.593	-0.006	0.184
Guatemala																		
2000	0.71	0.94	0.229	1.322	0.048	0.107	0.10	0.55	0.448	5.601	0.026	0.357	0.02	0.27	0.251	17.292	-0.008	0.171
Haiti																		
2001	0.72	0.87	0.147	1.203	-0.016	0.120	0.15	0.30	0.151	1.994	0.003	0.119	0.01	0.07	0.058	9.438	0.021	0.028
Honduras																		
1992	0.78	0.93	0.146	1.186	-0.024	0.075	0.09	0.50	0.408	5.309	-0.038	0.244	0.01	0.15	0.140	22.136	0.007	0.088
1997	0.77	0.94	0.170	1.220	-0.025	0.082	0.11	0.50	0.386	4.515	-0.050	0.288	0.00	0.17	0.165	84.551	-0.006	0.106
2003	0.79	0.96	0.170	1.215	-0.012	0.076	0.12	0.61	0.491	5.011	-0.067	0.335	0.01	0.25	0.240	33.041	-0.025	0.136
Jamaica																		
1990	1.00	1.00	0.000	1.000	-0.006	-0.002	0.73	0.65	-0.076	0.895	-0.002	0.123	0.01	0.02	0.010	2.267	-0.018	0.012
1999	0.97	0.97	-0.004	0.996	-0.003	-0.002	0.73	0.75	0.017	1.024	-0.085	0.053	0.02	0.02	0.005	1.286	-0.032	0.051
2002	1.00	1.00	-0.001	0.999	-0.004	0.005	0.73	0.89	0.168	1.232	-0.062	0.030						
Mexico																		
1992	0.87	0.97	0.099	1.113	0.004	0.070	0.29	0.79	0.504	2.735	-0.032	0.364	0.04	0.26	0.221	6.965	0.047	0.140
1996	0.94	0.99	0.046	1.049	-0.001	0.024	0.50	0.88	0.381	1.763	-0.005	0.355	0.07	0.30	0.222	4.020	0.034	0.146
2002	0.97	0.99	0.021	1.022	0.007	0.009	0.55	0.88	0.332	1.601	-0.022	0.188	0.08	0.33	0.252	4.338	0.009	0.174

Source: Own estimates based on household surveys

Figure 6.2 (cont.)
Net enrolment rates
Primary, secondary and tertiary levels

	Primary						Secondary						Tertiary					
	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Male-Female	Urban-rural
Nicaragua																		
1993	0.91	0.99	0.077	1.085	-0.002	0.036	0.17	0.60	0.425	3.451	-0.029	0.380	0.02	0.09	0.071	4.605	0.004	0.041
1998	0.76	0.95	0.190	1.250	-0.048	0.110	0.19	0.60	0.412	3.165	-0.141	0.391	0.00	0.16	0.159	33.740	-0.001	0.099
2001	0.82	0.97	0.154	1.188	-0.018	0.111	0.20	0.69	0.491	3.461	-0.123	0.392	0.01	0.30	0.297	39.560	-0.040	0.149
Panama																		
1995	0.93	1.00	0.063	1.067	-0.015	0.037	0.39	0.94	0.547	2.396	-0.096	0.329	0.01	0.42	0.409	30.420	-0.056	0.183
2003	0.92	1.00	0.076	1.083	-0.002	0.046	0.48	0.94	0.463	1.972	-0.080	0.323	0.05	0.53	0.480	11.559	-0.101	0.207
Paraguay																		
1997	0.89	0.99	0.106	1.120	-0.004	0.032	0.30	0.80	0.499	2.664	-0.063	0.260	0.01	0.32	0.304	24.033	-0.037	0.134
2002	0.89	0.97	0.081	1.092	-0.007	0.029	0.43	0.79	0.358	1.832	-0.048	0.236	0.07	0.38	0.317	5.676	-0.080	0.147
2003	0.90	0.98	0.087	1.097	-0.005	0.053	0.43	0.78	0.353	1.820	-0.039	0.222	0.03	0.34	0.306	9.760	-0.074	0.145
Peru																		
1997	0.89	0.99	0.098	1.110	0.008	0.068	0.35	0.89	0.548	2.578	0.005	0.384	0.05	0.44	0.393	8.554	-0.050	0.230
2002	0.95	1.00	0.051	1.054	0.000	0.032	0.51	0.95	0.441	1.869	0.047	0.291	0.05	0.47	0.419	9.698	-0.024	0.201
Uruguay																		
1989	0.98	0.97	-0.009	0.991	-0.003		0.51	0.94	0.433	1.855	-0.061		0.05	0.30	0.247	5.759	-0.042	
1998	0.98	1.00	0.019	1.019	-0.001		0.55	0.96	0.411	1.749	-0.058		0.02	0.47	0.449	19.861	-0.096	
2003	0.98	0.98	0.001	1.001	0.003		0.66	0.97	0.302	1.454	-0.070		0.08	0.64	0.567	8.419	-0.102	
2004	0.98	0.99	0.014	1.014	0.003		0.65	0.97	0.322	1.492	-0.062		0.06	0.64	0.579	11.280	-0.093	
Venezuela																		
1989	0.86	0.97	0.115	1.133	-0.016		0.43	0.70	0.274	1.645	-0.165		0.11	0.35	0.239	3.237	-0.088	
1998	0.92	0.98	0.062	1.067	-0.009		0.39	0.74	0.348	1.892	-0.138		0.11	0.42	0.308	3.790	-0.084	
2000	0.93	0.98	0.052	1.056	-0.011		0.42	0.72	0.293	1.689	-0.119		0.12	0.42	0.308	3.637	-0.121	
2003	0.92	0.98	0.063	1.069	-0.014		0.47	0.79	0.324	1.695	-0.124		0.14	0.52	0.383	3.696	-0.115	

Source: Own estimates based on household surveys

Table 6.3
Educational mobility index

	13-19	20-25		13-19	20-25
Argentina			**El Salvador**		
EPH-15 cities			1991	0.78	0.76
1995	0.87	0.79	2000	0.75	0.73
1998	0.87	0.78	2003	0.78	0.71
EPH - 28 cities			**Guatemala**		
1998	0.86	0.77	2000	0.75	0.71
2003	0.89	0.80	**Haiti**		
Bolivia			2001	0.89	0.84
Urban			**Honduras**		
1993	0.87	0.87	1992	0.81	0.70
1997	0.90	0.80	1997	0.79	0.66
2002	0.89	0.83	2003	0.78	0.70
National			**Jamaica**		
1997	0.78	0.69	1990	0.96	0.87
2002	0.82	0.71	1999	0.97	0.98
Brazil			2002	0.99	0.87
1990	0.74	0.71	**Mexico**		
1998	0.77	0.71	1992	0.85	0.78
2003	0.81	0.75	1996	0.84	0.78
Chile			2002	0.85	0.73
1990	0.88	0.81	**Nicaragua**		
1998	0.89	0.77	1993	0.77	0.78
2003	0.92	0.79	1998	0.76	0.74
Colombia			2001	0.78	0.72
ENH-Urban			**Panama**		
1992	0.83	0.79	1995	0.82	0.74
2000	0.86	0.78	2003	0.83	0.74
ECH-Urban			**Paraguay**		
2000	0.85	0.77	1997	0.83	0.77
2004	0.85	0.76	2002	0.85	0.75
Costa Rica			**Peru**		
1992	0.81	0.73	1997	0.79	0.81
1997	0.82	0.75	2002	0.82	0.79
2003	0.83	0.73	**Uruguay**		
Dominican R.			1989	0.90	0.80
2000	0.78	0.77	1998	0.86	0.76
2004	0.82	0.79	2003	0.82	0.69
Ecuador			**Venezuela**		
ECV			1989	0.84	0.77
1994	0.79	0.76	1998	0.90	0.78
1998	0.78	0.71	2000	0.89	0.76
ENEMDU					
2003	0.81	0.73			

Source: Own estimates based on household surveys

Table 6.4
Public school attendance
Share of students in public institutions

	Primary					Secondary					Tertiary				
	Q1	Q5	Q5-Q1	Q5/Q1	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Urban-rural	Q1	Q5	Q5-Q1	Q5/Q1	Urban-rural
Argentina															
2004	0.94	0.33	-0.62	0.35		0.91	0.40	-0.51	0.44		0.89	0.70	-0.19	0.79	
Bolivia															
Urban															
1993	0.92	0.37	-0.55	0.41		0.91	0.37	-0.54	0.41		0.73	0.21	-0.52	0.29	
1997	0.94	0.40	-0.55	0.42		0.93	0.30	-0.62	0.33		0.87	0.46	-0.41	0.53	
2002															
National															
1997	0.99	0.58	-0.41	0.59	-0.18	0.94	0.44	-0.50	0.47	-0.25	0.81	0.53	-0.28	0.66	-0.28
Chile															
1990	0.98	0.41	-0.57	0.42	-0.08	0.98	0.68	-0.30	0.69	-0.06	0.53	0.49	-0.04	0.92	-0.08
1998	0.97	0.47	-0.50	0.48	0.01	0.98	0.67	-0.30	0.69	-0.01	0.42	0.53	0.12	1.28	-0.06
2003	0.99	0.58	-0.40	0.59	-0.07	0.99	0.62	-0.37	0.63	-0.07	0.47	0.41	-0.07	0.86	-0.02
Colombia															
ENH-Urban															
1992	0.72	0.18	-0.54	0.25		0.62	0.18	-0.44	0.29		0.44	0.24	-0.20	0.54	
2000	0.79	0.24	-0.54	0.31		0.77	0.18	-0.60	0.23		0.33	0.20	-0.12	0.63	
ECH-Urban															
2000	0.83	0.30	-0.53	0.36		0.74	0.32	-0.42	0.43		0.35	0.23	-0.12	0.66	
2004	0.95	0.46	-0.49	0.49		0.86	0.48	-0.38	0.56		0.34	0.38	0.04	1.11	
Costa Rica															
2003	0.99	0.60	-0.39	0.61	-0.11	1.00	0.72	-0.28	0.72	-0.10	0.69	0.43	-0.25	0.63	-0.09
Dominican R.															
2004	0.92	0.41	-0.50	0.45	-0.21	0.88	0.50	-0.38	0.57	-0.17	0.59	0.36	-0.23	0.62	-0.09
El Salvador															
1991	0.97	0.57	-0.40	0.59	-0.25	0.87	0.47	-0.40	0.54	-0.23	0.73	0.32	-0.41	0.44	-0.23
2000	0.97	0.48	-0.49	0.49	-0.25	0.79	0.37	-0.42	0.47	-0.24	0.25	0.23	-0.02	0.92	-0.42
2003	0.95	0.61	-0.34	0.64	-0.21	0.84	0.49	-0.35	0.58	-0.26	0.37	0.26	-0.11	0.70	-0.37
Guatemala															
2000	0.96	0.65	-0.31	0.68	-0.20	0.51	0.27	-0.24	0.52	-0.16	0.70	0.44	-0.25	0.64	-0.35
Haiti															
2001	0.31	0.19	-0.12	0.62	-0.06	0.29	0.21	-0.08	0.72	-0.13	0.76	0.25	-0.52	0.32	-0.06
Jamaica															
1999	0.99	0.83	-0.16	0.84	-0.08	0.97	1.00	0.03	1.03	-0.05	1.00	1.00	0.00	1.00	-0.06
2002	0.93	0.88	-0.06	0.94	-0.05	0.98	0.97	-0.01	0.99	0.00					-0.09
Mexico															
1992	0.99	0.65	-0.34	0.66	-0.09	0.89	0.60	-0.29	0.67	-0.11	0.73	0.58	-0.15	0.79	-0.27
1996	0.98	0.73	-0.25	0.75	-0.08	0.95	0.81	-0.15	0.85	-0.07	0.85	0.63	-0.22	0.74	-0.11
2002	0.97	0.70	-0.27	0.72	-0.10	0.96	0.69	-0.27	0.72	-0.12	0.79	0.63	-0.16	0.80	0.17
Nicaragua															
1993	0.98	0.73	-0.26	0.74	-0.13	0.82	0.66	-0.16	0.81	0.00	0.91	0.69	-0.22	0.76	-0.19
1998	0.95	0.66	-0.29	0.69	-0.16	0.81	0.47	-0.34	0.58	-0.14	0.25	0.43	0.18	1.70	-0.24
2001	0.97	0.63	-0.34	0.65	-0.16	0.81	0.49	-0.32	0.61	-0.17	0.11	0.13	0.02	1.16	-0.35
Paraguay															
1997	0.98	0.52	-0.47	0.53	-0.21	0.92	0.54	-0.37	0.59	-0.28	0.67	0.44	-0.23	0.65	0.02
2002	0.97	0.51	-0.46	0.52	-0.16	0.97	0.57	-0.40	0.59	-0.16	0.41	0.44	0.03	1.08	-0.06
2003	0.96	0.49	-0.47	0.51	-0.23	0.93	0.52	-0.41	0.56	-0.24	0.44	0.37	-0.07	0.85	0.04
Peru															
1997	0.99	0.52	-0.47	0.52	-0.18	0.99	0.62	-0.37	0.63	-0.11	0.76	0.32	-0.44	0.42	-0.25
2002	1.00	0.61	-0.39	0.61	-0.14	0.99	0.58	-0.41	0.59	-0.13	0.90	0.46	-0.43	0.52	-0.22
Uruguay															
1998	0.99	0.40	-0.59	0.40		0.99	0.49	-0.50	0.49		0.99	0.86	-0.13	0.87	
2003	0.99	0.41	-0.58	0.42		0.99	0.58	-0.42	0.58		0.98	0.83	-0.15	0.84	
2004	0.99	0.38	-0.61	0.38		0.99	0.51	-0.48	0.51		0.99	0.84	-0.15	0.85	

Source: Own estimates based on household surveys

Table 7.1
Housing ownership
Share of households owning the dwelling and the lot

				National				Urban			
	Rural	Urban	National	Q1	Q5	Q5-Q1	Q5/Q1	Q1	Q5	Q5-Q1	Q5/Q1
Argentina											
EPH-15 cities											
1992		0.73		0.62	0.74	0.12	1.19	0.62	0.74	0.12	1.19
1998		0.71		0.58	0.76	0.18	1.31	0.58	0.76	0.18	1.31
EPH - 28 cities											
1998		0.70		0.56	0.76	0.20	1.35	0.56	0.76	0.20	1.35
2004		0.68		0.57	0.74	0.17	1.30	0.57	0.74	0.17	1.30
Bolivia											
Urban											
1993		0.56		0.48	0.63	0.15	1.31	0.48	0.63	0.15	1.31
2002		0.51		0.42	0.54	0.12	1.29	0.42	0.54	0.12	1.29
National											
2002	0.84	0.53	0.64	0.86	0.57	-0.29	0.66	0.47	0.57	0.09	1.20
Brazil											
1992	0.58	0.65	0.63	0.56	0.70	0.14	1.25	0.59	0.70	0.11	1.19
1998	0.65	0.70	0.69	0.63	0.74	0.11	1.18	0.64	0.74	0.10	1.15
2003	0.66	0.70	0.69	0.63	0.76	0.13	1.20	0.64	0.75	0.11	1.17
Chile											
1996	0.53	0.65	0.63	0.49	0.68	0.19	1.38	0.51	0.68	0.16	1.32
1998	0.56	0.67	0.65	0.53	0.71	0.18	1.34	0.55	0.71	0.16	1.29
2003	0.61	0.66	0.65	0.54	0.68	0.14	1.26	0.55	0.68	0.14	1.25
Colombia											
ECV-National											
2003	0.59	0.46	0.49	0.43	0.55	0.12	1.27	0.27	0.54	0.27	2.01
ECH-Urban											
2004		0.59	0.59	0.58	0.63	0.05	1.09	0.58	0.63	0.05	1.09
Dominican Rep.											
2000	0.80	0.62	0.68	0.73	0.68	-0.05	0.93	0.62	0.65	0.03	1.06
2004	0.78	0.61	0.67	0.70	0.64	-0.05	0.93	0.58	0.62	0.05	1.08
Ecuador											
ECV											
1994	0.78	0.62	0.68	0.73	0.68	-0.05	0.93	0.55	0.66	0.11	1.20
1998	0.78	0.60	0.67	0.76	0.63	-0.13	0.83	0.64	0.61	-0.03	0.95
ENEMDU											
2003	0.80	0.62	0.70	0.71	0.70	-0.01	0.98	0.57	0.66	0.09	1.15
El Salvador											
1991	0.66	0.63	0.64	0.65	0.71	0.06	1.09	0.56	0.70	0.14	1.26
2003	0.75	0.66	0.69	0.71	0.72	0.01	1.02	0.62	0.72	0.10	1.16
Guatemala											
ENCOVI											
2000	0.78	0.61	0.71	0.68	0.74	0.05	1.08	0.40	0.69	0.29	1.72
ENEI											
2002	0.80	0.60	0.72	0.87	0.69	-0.18	0.79	0.64	0.62	-0.02	0.96
Haiti											
2001	0.81	0.45	0.67	0.55	0.62	0.07	1.12	0.39	0.42	0.03	1.08
Honduras											
1992	0.82	0.67	0.76	0.81	0.74	-0.07	0.91	0.66	0.72	0.06	1.09
2003	0.75	0.62	0.69	0.69	0.69	0.00	1.00	0.64	0.67	0.03	1.05
Jamaica											
1996	0.72	0.51	0.61	0.57	0.66	0.08	1.14	0.48	0.56	0.08	1.16
2002	0.71	0.51	0.62	0.65	0.58	-0.08	0.88	0.58	0.55	-0.03	0.95
Mexico											
1992	0.38	0.66	0.59	0.52	0.69	0.17	1.33	0.67	0.71	0.04	1.05
2002	0.49	0.67	0.63	0.56	0.70	0.14	1.24	0.60	0.69	0.09	1.16
Nicaragua											
1998	0.74	0.82	0.79	0.74	0.82	0.08	1.11	0.77	0.84	0.07	1.09
2001	0.79	0.77	0.77	0.76	0.82	0.06	1.09	0.70	0.82	0.12	1.17
Paraguay											
1997	0.86	0.71	0.77	0.87	0.73	-0.14	0.84	0.73	0.70	-0.03	0.96
2003	0.83	0.74	0.78	0.82	0.77	-0.05	0.93	0.75	0.75	0.00	1.00
Peru											
ENAHO 1											
1997	0.86	0.61	0.70	0.81	0.67	-0.14	0.83	0.55	0.67	0.12	1.23
1999	0.87	0.66	0.72	0.81	0.73	-0.08	0.91	0.56	0.73	0.17	1.31
ENAHO 2											
2001	0.83	0.66	0.72	0.78	0.71	-0.07	0.91	0.53	0.72	0.19	1.36
2003	0.86	0.70	0.76	0.85	0.75	-0.10	0.88	0.69	0.76	0.07	1.10
Suriname											
1999		0.67		0.71	0.59	-0.11	0.84	0.71	0.59	-0.11	0.84
Uruguay											
1989		0.67	0.67	0.39	0.84	0.45	2.15	0.39	0.84	0.45	2.14
1998		0.69	0.69	0.44	0.83	0.39	1.88	0.44	0.83	0.39	1.88
2004		0.67	0.67	0.40	0.82	0.42	2.05	0.40	0.82	0.42	2.05
Venezuela											
1989		0.65	0.76	0.80	0.72	-0.08	0.90	0.67	0.66	-0.01	0.98
1998		0.75	0.78	0.76	0.78	0.03	1.04	0.71	0.78	0.07	1.09
2003		0.76	0.75	0.78	0.72	-0.06	0.93	0.86	0.72	-0.14	0.83

Source: Own estimates based on household surveys

Table 7.2
Access to a water source in the house or lot

				National				Urban			
	Rural	Urban	National	Q1	Q5	Q5-Q1	Q5/Q1	Q1	Q5	Q5-Q1	Q5/Q1
Argentina											
EPH-15 cities											
1992		0.97		0.93	1.00	0.07	1.07	0.93	1.00	0.07	1.07
1998		0.98		0.94	1.00	0.06	1.07	0.94	1.00	0.06	1.07
EPH - 28 cities											
1998		0.98		0.93	1.00	0.07	1.08	0.93	1.00	0.07	1.08
2003		0.99		0.93	1.00	0.06	1.07	0.93	1.00	0.06	1.07
Bolivia											
Urban											
1993		0.86		0.73	0.96	0.23	1.31	0.73	0.96	0.23	1.31
2002		0.90		0.88	0.97	0.10	1.11	0.88	0.97	0.10	1.11
National											
1997	0.29	0.89	0.65	0.39	0.89	0.49	2.26	0.80	0.96	0.15	1.19
2002	0.54	0.91	0.77	0.51	0.92	0.41	1.81	0.88	0.96	0.08	1.09
Brazil											
1992	0.77	0.96	0.92	0.78	0.99	0.22	1.28	0.86	1.00	0.14	1.16
1998	0.78	0.98	0.94	0.83	1.00	0.17	1.20	0.92	1.00	0.08	1.08
2003	0.81	0.98	0.96	0.88	1.00	0.11	1.13	0.94	1.00	0.05	1.06
Chile											
1990	0.46	0.98	0.88	0.80	0.96	0.16	1.20	0.94	1.00	0.06	1.06
1996	0.50	0.99	0.91	0.82	0.97	0.16	1.19	0.96	0.99	0.04	1.04
1998	0.52	0.99	0.92	0.84	0.98	0.14	1.16	0.97	1.00	0.03	1.03
2003	0.58	0.99	0.93	0.90	0.99	0.08	1.09	0.98	1.00	0.02	1.02
Colombia											
ECV-National											
2003				0.72	0.96	0.23	1.32	0.94	0.99	0.05	1.05
ECH-Urban											
2004		0.90	0.90	0.88	0.95	0.07	1.08	0.88	0.95	0.07	1.08
Dominican Rep.											
2000	0.49	0.86	0.74	0.56	0.87	0.31	1.55	0.76	0.92	0.16	1.21
2004	0.56	0.83	0.74	0.56	0.88	0.32	1.57	0.70	0.92	0.21	1.30
Ecuador											
ECV											
1994	0.40	0.74	0.59	0.41	0.79	0.39	1.95	0.62	0.87	0.24	1.39
1998	0.50	0.84	0.70	0.55	0.86	0.31	1.55	0.76	0.90	0.14	1.18
ENEMDU											
2003	0.54	0.89	0.73	0.64	0.87	0.23	1.36	0.84	0.95	0.11	1.13
El Salvador											
1991	0.17	0.72	0.46	0.21	0.76	0.55	3.69	0.45	0.89	0.44	1.96
2003	0.34	0.74	0.59	0.39	0.81	0.41	2.04	0.59	0.88	0.30	1.51
Guatemala											
ENCOVI											
2000	0.54	0.88	0.69	0.55	0.85	0.30	1.54	0.78	0.97	0.19	1.24
ENEI											
2002	0.65	0.92	0.76	0.71	0.88	0.17	1.24	0.82	0.96	0.15	1.18
Haiti											
2001	0.08	0.23	0.14	0.09	0.25	0.16	2.85	0.15	0.35	0.20	2.36
Honduras											
1992	0.09	0.39	0.22	0.06	0.50	0.44	8.85	0.18	0.64	0.47	3.68
2003	0.14	0.54	0.34	0.13	0.66	0.54	5.31	0.32	0.76	0.44	2.39
Jamaica											
1990	0.19	0.57	0.41	0.50	0.50	0.00	1.01	0.60	0.56	-0.04	0.93
1996	0.23	0.63	0.44	0.46	0.60	0.14	1.30	0.59	0.73	0.13	1.23
2002	0.23	0.66	0.42	0.50	0.55	0.05	1.10	0.63	0.78	0.15	1.24
Mexico											
1992	0.63	0.93	0.86	0.68	0.96	0.28	1.42	0.89	0.97	0.07	1.08
2002	0.70	0.96	0.90	0.75	0.99	0.24	1.32	0.90	0.99	0.10	1.11
Nicaragua											
1993	0.28	0.86	0.62	0.35	0.85	0.50	2.42	0.80	0.92	0.12	1.15
1998	0.31	0.84	0.61	0.37	0.79	0.42	2.15	0.65	0.92	0.27	1.41
2001	0.26	0.84	0.61	0.37	0.83	0.46	2.26	0.68	0.93	0.25	1.37
Paraguay											
1997	0.21	0.80	0.55	0.13	0.88	0.76	6.90	0.39	0.94	0.55	2.42
2003	0.50	0.91	0.74	0.45	0.92	0.47	2.04	0.76	0.98	0.22	1.29
Peru											
ENAHO 1											
1997	0.18	0.80	0.59	0.22	0.86	0.65	4.00	0.62	0.90	0.28	1.45
1999	0.27	0.83	0.65	0.32	0.90	0.58	2.80	0.73	0.92	0.20	1.27
ENAHO 2											
2001	0.36	0.78	0.64	0.39	0.85	0.46	2.19	0.62	0.88	0.26	1.43
2003	0.29	0.78	0.61	0.31	0.89	0.58	2.89	0.56	0.91	0.35	1.62
Suriname											
1999		0.87		0.88	0.93	0.05	1.05	0.88	0.93	0.05	1.05
Uruguay											
1989		0.93	0.93	0.79	0.99	0.20	1.25	0.79	0.99	0.20	1.25
1998		0.97	0.97	0.93	0.99	0.06	1.06	0.93	0.99	0.06	1.06
2004		0.99	0.99	0.97	1.00	0.03	1.03	0.97	1.00	0.03	1.03
Venezuela											
1989		1.00	0.92	0.83	0.98	0.15	1.18	0.98	1.00	0.01	1.01
1998		0.99	0.93	0.87	0.97	0.10	1.11	0.97	1.00	0.03	1.03
2003		0.99	0.92	0.86	0.97	0.11	1.12	0.97	0.99	0.02	1.02

Source: Own estimates based on household surveys

Table 7.3
Access to electricity in the house

				National				Urban			
	Rural	Urban	National	Q1	Q5	Q5-Q1	Q5/Q1	Q1	Q5	Q5-Q1	Q5/Q1
Argentina											
EPH-15 cities											
1992											
1998		1.00		0.99	1.00	0.01	1.01	0.99	1.00	0.01	1.01
EPH - 28 cities											
1998		1.00		0.98	1.00	0.02	1.02	0.98	1.00	0.02	1.02
2003		1.00		0.98	1.00	0.02	1.02	0.98	1.00	0.02	1.02
Bolivia											
Urban											
1993		0.96		0.93	0.99	0.06	1.07	0.93	0.99	0.06	1.07
2002		0.90						0.86	0.95	0.09	1.10
National											
1997	0.25	0.96	0.67	0.34	0.92	0.58	2.68	0.89	0.99	0.10	1.12
2000	0.25	0.96	0.70	0.25	0.95	0.70	3.81	0.91	1.00	0.08	1.09
Brazil											
1990	0.56	0.98	0.88	0.68	0.99	0.31	1.46	0.91	1.00	0.09	1.10
1998	0.73	0.99	0.94	0.84	1.00	0.16	1.20	0.97	1.00	0.03	1.03
2003	0.82	1.00	0.97	0.92	1.00	0.08	1.09	0.98	1.00	0.02	1.02
Chile											
1990	0.63	0.99	0.92	0.86	0.97	0.11	1.12	0.97	1.00	0.03	1.03
1998	0.82	1.00	0.97	0.94	1.00	0.06	1.06	0.99	1.00	0.01	1.01
2003	0.87	1.00	0.98	0.97	1.00	0.02	1.02	0.99	1.00	0.01	1.01
Colombia											
ECV-National											
2003				0.89	0.99	0.11	1.12	0.99	1.00	0.01	1.01
ECH-Urban											
2004		0.91	0.91	0.89	0.95	0.06	1.07	0.89	0.95	0.06	1.07
Dominican Rep.											
2000	0.74	0.97	0.89	0.72	0.97	0.26	1.36	0.89	0.99	0.09	1.11
2004	0.80	0.96	0.90	0.81	0.97	0.16	1.20	0.91	0.98	0.08	1.09
Ecuador											
ECV											
1994	0.71	0.99	0.87	0.71	0.96	0.25	1.35	0.98	1.00	0.02	1.02
1998	0.82	1.00	0.93	0.81	0.99	0.18	1.22	0.99	1.00	0.01	1.01
ENEMDU											
2003	0.86	0.99	0.93	0.87	0.98	0.11	1.12	0.97	1.00	0.02	1.02
El Salvador											
1991	0.44	0.94	0.70	0.43	0.92	0.49	2.13	0.79	0.99	0.19	1.24
2003	0.60	0.91	0.79	0.56	0.95	0.39	1.70	0.78	0.98	0.20	1.25
Guatemala											
ENCOVI											
2000	0.57	0.94	0.73	0.49	0.89	0.40	1.81	0.83	0.98	0.14	1.17
ENEI											
2002	0.67	0.96	0.79	0.60	0.92	0.32	1.53	0.84	0.99	0.15	1.17
Haiti											
2001	0.10	0.62	0.31	0.18	0.56	0.38	3.19	0.37	0.84	0.46	2.24
Honduras											
1992	0.31	0.90	0.57	0.31	0.84	0.52	2.66	0.74	0.98	0.25	1.34
2003	0.38	0.95	0.66	0.36	0.92	0.56	2.53	0.84	0.99	0.15	1.18
Jamaica											
1990	0.51	0.81	0.69	0.71	0.83	0.11	1.16	0.79	0.88	0.08	1.11
1996	0.67	0.86	0.77	0.70	0.91	0.21	1.29	0.81	0.93	0.12	1.15
2002	0.82	0.93	0.87	0.87	0.92	0.06	1.06	0.91	0.98	0.07	1.08
Mexico											
1992	0.76	0.99	0.93	0.78	0.98	0.20	1.26	0.96	0.99	0.03	1.03
2002	0.92	0.99	0.98	0.92	1.00	0.07	1.08	0.97	1.00	0.03	1.03
Nicaragua											
1993	0.42	0.93	0.72	0.44	0.94	0.50	2.14	0.82	0.98	0.16	1.20
1998	0.40	0.91	0.69	0.41	0.88	0.47	2.16	0.72	0.99	0.26	1.36
2001	0.41	0.92	0.72	0.47	0.91	0.44	1.94	0.79	0.98	0.20	1.25
Paraguay											
1997	0.72	0.98	0.86	0.68	0.98	0.30	1.44	0.89	1.00	0.11	1.13
2003	0.85	0.98	0.93	0.81	0.98	0.18	1.22	0.91	1.00	0.08	1.09
Peru											
ENAHO 1											
1997	0.24	0.92	0.69	0.23	0.95	0.72	4.06	0.69	0.97	0.28	1.41
1999	0.29	0.95	0.74	0.36	0.97	0.62	2.74	0.89	0.99	0.10	1.11
ENAHO 2											
2001	0.28	0.92	0.70	0.35	0.94	0.59	2.70	0.79	0.98	0.19	1.24
2003	0.27	0.94	0.70	0.33	0.96	0.63	2.92	0.81	0.97	0.16	1.20
Suriname											
1999		0.99		0.99	0.99	0.00	1.00	0.99	0.99	0.00	1.00
Uruguay											
1989		0.97	0.97	0.88	1.00	0.11	1.13	0.88	1.00	0.11	1.13
1998		0.99	0.99	0.97	1.00	0.03	1.03	0.97	1.00	0.03	1.03
Venezuela											
1989		1.00	0.97	0.93	0.99	0.06	1.07	1.00	1.00	0.00	1.00
1998		0.99	0.96	0.97	0.99	0.02	1.02	1.00	1.00	0.00	1.00
2003		0.96	0.97	0.96	0.96	0.00	1.00	0.96	0.96	0.01	1.01

Source: Own estimates based on household surveys

Table B.1
Household per capita incomes by deciles
Venezuela, 1989 and 2003

	1989		2003			
Deciles	Mean	CV	Mean	CV	D Mean	D CV
1	0.186	0.061	0.138	0.057	-26%	-7%
2	0.330	0.033	0.281	0.034	-15%	4%
3	0.438	0.031	0.394	0.033	-10%	7%
4	0.550	0.034	0.505	0.034	-8%	0%
5	0.674	0.037	0.627	0.038	-7%	2%
6	0.815	0.045	0.775	0.049	-5%	11%
7	0.986	0.055	0.956	0.057	-3%	3%
8	1.217	0.079	1.220	0.096	0%	21%
9	1.605	0.161	1.670	0.179	4%	12%
10	3.205	2.193	3.437	2.295	7%	5%

Source: Own estimates based on household surveys
Note: CV=coefficient of variation

Table B.2
DER index by region

	α				α				α				α				α				α			
	0.25	0.5	0.75	1	0.25	0.5	0.75	1	0.25	0.5	0.75	1	0.25	0.5	0.75	1	0.25	0.5	0.75	1	0.25	0.5	0.75	1
Argentina		**GBA**				**Pampeana**				**Cuyo**				**NOA**				**Patagonia**				**NEA**		
15 cities																								
1992	0.324	0.267	0.237	0.223	0.316	0.258	0.222	0.198	0.317	0.257	0.222	0.198	0.333	0.270	0.235	0.212	0.322	0.259	0.220	0.192				
1998	0.361	0.294	0.261	0.250	0.330	0.272	0.246	0.247	0.329	0.266	0.228	0.203	0.356	0.288	0.249	0.225	0.341	0.277	0.243	0.231	0.366	0.296	0.258	0.234
28 cities																								
1998	0.361	0.294	0.261	0.250	0.331	0.265	0.224	0.195	0.337	0.274	0.239	0.217	0.356	0.287	0.248	0.223	0.341	0.277	0.243	0.231				
2004	0.365	0.298	0.263	0.251	0.346	0.283	0.253	0.245	0.336	0.267	0.226	0.198	0.356	0.286	0.246	0.220	0.353	0.280	0.235	0.205	0.353	0.284	0.243	0.216
Bolivia		**Chuquisaca**				**La Paz**				**Cochabamba**				**Oruro**				**Potosi**				**Tarija**				**Santa Cruz**			
Urban																												
1993	0.368	0.291	0.246	0.216	0.377	0.312	0.283	0.271	0.377	0.316	0.291	0.286	0.340	0.273	0.233	0.206	0.365	0.294	0.256	0.232	0.327	0.262	0.222	0.195	0.335	0.281	0.255	0.243
1997	0.349	0.284	0.248	0.229	0.389	0.328	0.303	0.295	0.369	0.306	0.277	0.265	0.346	0.287	0.258	0.245	0.349	0.277	0.232	0.201	0.336	0.273	0.243	0.233	0.352	0.284	0.245	0.219
2002	0.415	0.349	0.324	0.322	0.365	0.294	0.256	0.232	0.361	0.291	0.252	0.227	0.365	0.285	0.238	0.206	0.341	0.274	0.233	0.206	0.347	0.278	0.238	0.210	0.382	0.308	0.269	0.245
National																												
1997	0.460	0.408	0.422	0.484	0.404	0.331	0.298	0.288	0.409	0.337	0.308	0.303	0.390	0.316	0.279	0.261	0.346	0.277	0.235	0.208	0.404	0.334	0.306	0.299	0.381	0.313	0.280	0.265
2002	0.536	0.531	0.648	0.905	0.392	0.319	0.284	0.270	0.432	0.372	0.370	0.415	0.387	0.301	0.251	0.217	0.411	0.319	0.263	0.225	0.383	0.301	0.254	0.222	0.395	0.313	0.269	0.241
		Beni				**Pando**																		
Urban																								
1993	0.328	0.279	0.259	0.255																				
1997	0.324	0.256	0.211	0.179																				
2002	0.347	0.276	0.234	0.206	0.359	0.264	0.206	0.166																
National																								
1997	0.359	0.281	0.233	0.199	0.396	0.328	0.300	0.292																
2002	0.359	0.283	0.237	0.206	0.365	0.286	0.239	0.206																
Brazil		**Norte**				**Nordeste**				**Sudeste**				**Sur**				**Centro-Oeste**						
1990	0.410	0.344	0.319	0.319	0.421	0.363	0.349	0.364	0.398	0.332	0.305	0.302	0.394	0.326	0.295	0.284	0.414	0.349	0.326	0.326				
1998	0.401	0.337	0.311	0.309	0.414	0.356	0.345	0.369	0.393	0.331	0.308	0.316	0.385	0.319	0.289	0.279	0.413	0.350	0.331	0.335				
2003	0.377	0.313	0.288	0.289	0.407	0.344	0.325	0.343	0.391	0.328	0.305	0.310	0.369	0.303	0.271	0.259	0.399	0.334	0.310	0.311				
Chile		**1**				**2**				**3**				**4**				**5**				**6**				**7**		
1990	0.380	0.318	0.291	0.281	0.369	0.297	0.258	0.234	0.376	0.314	0.286	0.275	0.366	0.302	0.271	0.256	0.366	0.301	0.269	0.252	0.347	0.282	0.247	0.225	0.396	0.335	0.312	0.307
1998	0.352	0.284	0.242	0.215	0.371	0.313	0.291	0.288	0.357	0.296	0.266	0.255	0.363	0.304	0.278	0.267	0.369	0.301	0.265	0.244	0.359	0.301	0.274	0.263	0.356	0.296	0.267	0.252
2003	0.363	0.296	0.256	0.230	0.331	0.274	0.244	0.230	0.332	0.267	0.227	0.200	0.380	0.318	0.289	0.276	0.333	0.272	0.239	0.219	0.323	0.263	0.230	0.208	0.363	0.303	0.275	0.262
		8				**9**				**10**				**11**				**12**				**13**						
1990	0.386	0.321	0.293	0.282	0.397	0.330	0.300	0.287	0.399	0.337	0.314	0.307	0.356	0.296	0.268	0.257	0.365	0.300	0.269	0.253	0.386	0.320	0.290	0.278				
1998	0.395	0.328	0.298	0.286	0.410	0.344	0.319	0.315	0.363	0.295	0.259	0.237	0.413	0.351	0.326	0.322	0.381	0.320	0.290	0.276	0.390	0.324	0.295	0.284				
2003	0.375	0.310	0.278	0.263	0.407	0.343	0.315	0.306	0.367	0.304	0.274	0.260	0.368	0.295	0.253	0.227	0.368	0.305	0.273	0.259	0.388	0.326	0.301	0.291				
Colombia		**Atlántica**				**Oriental**				**Central**				**Pacífica**				**Bogotá**						
ENH-Urban																								
1992	0.332	0.270	0.236	0.214	0.323	0.265	0.233	0.213	0.340	0.276	0.242	0.222	0.362	0.295	0.259	0.238	0.373	0.304	0.268	0.248				
2000	0.369	0.306	0.278	0.269	0.345	0.277	0.239	0.214	0.377	0.301	0.261	0.236	0.380	0.311	0.278	0.267	0.404	0.325	0.286	0.262				
ECH-Urban																								
2000	0.365	0.297	0.262	0.242	0.351	0.288	0.258	0.245	0.352	0.289	0.258	0.246	0.419	0.354	0.329	0.328	0.402	0.336	0.310	0.307				
2004	0.351	0.287	0.254	0.238	0.392	0.328	0.305	0.310	0.380	0.309	0.276	0.270	0.356	0.285	0.244	0.217	0.400	0.331	0.301	0.290				
Costa Rica		**1**				**2**				**3**				**4**				**5**				**6**						
1992	0.316	0.254	0.217	0.191	0.329	0.265	0.229	0.206	0.301	0.242	0.206	0.183	0.333	0.263	0.220	0.190	0.296	0.240	0.206	0.184	0.337	0.274	0.238	0.216				
1997	0.311	0.252	0.216	0.191	0.339	0.274	0.237	0.215	0.322	0.258	0.220	0.193	0.343	0.278	0.244	0.224	0.305	0.247	0.213	0.192	0.320	0.258	0.222	0.200				
2003	0.338	0.273	0.237	0.214	0.371	0.293	0.247	0.217	0.324	0.260	0.222	0.195	0.350	0.281	0.240	0.213	0.318	0.257	0.221	0.198	0.354	0.282	0.239	0.210				
Dominican Rep.		**Distrito**				**Santiago**				**Cibao**				**Suroeste**				**Sureste**						
2000	0.365	0.299	0.265	0.247	0.338	0.275	0.239	0.216	0.341	0.278	0.243	0.224	0.351	0.282	0.241	0.214	0.325	0.264	0.229	0.209				
2004	0.382	0.316	0.282	0.264	0.328	0.266	0.231	0.208	0.329	0.270	0.238	0.218	0.336	0.270	0.231	0.205	0.338	0.274	0.238	0.213				
Ecuador		**Costa**				**Sierra**				**Oriente**														
1994	0.359	0.290	0.253	0.233	0.391	0.322	0.291	0.280	0.413	0.346	0.327	0.339												
1998	0.378	0.306	0.273	0.259	0.394	0.320	0.281	0.262	0.387	0.303	0.251	0.215												
2003	0.359	0.293	0.258	0.239	0.363	0.294	0.257	0.237	0.360	0.290	0.251	0.227												
El Salvador		**Occidental**				**Central 1**				**Central 2**				**Oriental**				**Area Metrop. SS**						
1991	0.340	0.276	0.240	0.218	0.345	0.276	0.237	0.212	0.354	0.283	0.241	0.215	0.369	0.297	0.258	0.236	0.337	0.277	0.246	0.230				
2000	0.349	0.275	0.228	0.195	0.330	0.259	0.214	0.181	0.355	0.278	0.230	0.196	0.364	0.288	0.242	0.212	0.340	0.279	0.247	0.227				
2003	0.355	0.284	0.243	0.218	0.335	0.264	0.219	0.187	0.362	0.289	0.248	0.225	0.372	0.293	0.244	0.211	0.337	0.275	0.243	0.225				
Guatemala		**Urbano metropolitano**				**Resto Urbano**				**Resto rural**														
2000	0.393	0.322	0.290	0.282	0.353	0.288	0.252	0.232	0.339	0.274	0.237	0.214												
Haiti		**Ouest**				**Sud Est**				**Nord**				**Nord Est**				**Artibonite**				**Centre**		
2001	0.394	0.324	0.292	0.278	0.336	0.268	0.228	0.202	0.404	0.330	0.293	0.274	0.420	0.350	0.325	0.328	0.406	0.337	0.306	0.296	0.366	0.297	0.261	0.242
		Sud				**Grand Anse**																		
2001	0.342	0.268	0.222	0.190	0.341	0.275	0.238	0.216																
Honduras		**Metropolitana**				**Norte**				**Occidente**				**Sur**				**Oriente**				**Central**		
Eph 1																								
1992	0.353	0.284	0.245	0.221	0.361	0.294	0.257	0.235	0.370	0.304	0.272	0.258	0.359	0.280	0.231	0.197	0.354	0.288	0.252	0.233	0.347	0.276	0.234	0.205
1997	0.359	0.296	0.264	0.249	0.331	0.271	0.237	0.217	0.385	0.317	0.285	0.270	0.415	0.344	0.315	0.312	0.405	0.336	0.306	0.293	0.355	0.282	0.240	0.211
Eph 2																								
1997	0.360	0.296	0.263	0.246	0.328	0.268	0.233	0.211	0.381	0.316	0.285	0.271	0.390	0.319	0.283	0.273	0.382	0.314	0.281	0.264	0.364	0.297	0.262	0.243
2003	0.357	0.288	0.249	0.225	0.347	0.284	0.248	0.227	0.335	0.270	0.232	0.206	0.380	0.314	0.282	0.267	0.374	0.310	0.280	0.267	0.352	0.290	0.259	0.242
Jamaica		**KMA**				**Other Towns**				**Rural Areas**														
1990	0.367	0.283	0.230	0.192	0.416	0.318	0.255	0.211	0.403	0.313	0.259	0.222												
1999	0.426	0.354	0.333	0.355	0.379	0.289	0.232	0.193	0.398	0.326	0.300	0.314												
2002	0.426	0.326	0.267	0.227	0.432	0.360	0.336	0.351	0.390	0.305	0.254	0.219												
Mexico		**Noroeste**				**Norte**				**Noreste**				**Centro-Occidente**				**Centro-Este**						
1992	0.369	0.293	0.249	0.220	0.365	0.290	0.248	0.220	0.410	0.334	0.297	0.276	0.364	0.301	0.269	0.254	0.391	0.325	0.294	0.284				
1996	0.334	0.273	0.240	0.222	0.356	0.293	0.261	0.244	0.355	0.283	0.240	0.212	0.347	0.280	0.244	0.220	0.372	0.304	0.271	0.255				
2002	0.338	0.270	0.229	0.201	0.350	0.283	0.246	0.225	0.357	0.301	0.276	0.267	0.353	0.286	0.246	0.219	0.354	0.284	0.246	0.222				
		Sur				**Oriente**				**Península de Yucatán**														
1992	0.370	0.301	0.268	0.256	0.371	0.297	0.254	0.225	0.351	0.281	0.241	0.215												
1996	0.376	0.308	0.274	0.255	0.373	0.310	0.281	0.271	0.408	0.330	0.291	0.268												
2002	0.376	0.304	0.265	0.245	0.344	0.279	0.245	0.224	0.341	0.274	0.234	0.207												
Nicaragua		**Managua**				**Pacífico**				**Central**				**Atlántico**										
1993	0.375	0.305	0.268	0.250	0.392	0.320	0.284	0.266	0.378	0.306	0.269	0.249	0.368	0.300	0.263	0.242								
1998	0.385	0.320	0.291	0.280	0.344	0.278	0.241	0.218	0.364	0.294	0.255	0.233	0.411	0.341	0.309	0.297								
2001	0.401	0.337	0.309	0.300	0.339	0.281	0.251	0.236	0.342	0.281	0.248	0.228	0.352	0.291	0.261	0.247								
Panama		**Oriental**				**Metropolitana**				**Central**				**Occidental**										
1995	0.415	0.319	0.261	0.221	0.367	0.292	0.250	0.222	0.402	0.328	0.293	0.277	0.364	0.293	0.253	0.229								
2003	0.388	0.308	0.263	0.234	0.366	0.295	0.255	0.230	0.378	0.311	0.278	0.262	0.370	0.304	0.272	0.254								
Paraguay		**Asuncion**				**Central Urbano**				**Central Rural**				**Resto Urbano**				**Resto Rural**						
1997	0.344	0.277	0.238	0.212	0.313	0.254	0.218	0.195	0.291	0.242	0.209	0.186	0.394	0.324	0.290	0.274	0.393	0.320	0.285	0.274				
2002	0.365	0.298	0.264	0.247	0.329	0.261	0.218	0.188	0.347	0.271	0.220	0.183	0.371	0.302	0.266	0.247	0.443	0.372	0.347	0.348				
Peru		**Costa urbana**				**Sierra urbana**				**Selva urbana**				**Costa rural**				**Sierra rural**				**Selva rural**				**Lima Metrop.**			
1997	0.306	0.248	0.212	0.188	0.314	0.254	0.217	0.191	0.322	0.260	0.224	0.201	0.319	0.260	0.225	0.202	0.333	0.268	0.230	0.206	0.327	0.261	0.218	0.189	0.347	0.287	0.257	0.241
2002	0.300	0.247	0.218	0.199	0.325	0.265	0.230	0.208	0.314	0.259	0.229	0.209	0.286	0.235	0.203	0.181	0.319	0.260	0.225	0.203	0.285	0.235	0.205	0.185	0.361	0.302	0.275	0.263
Suriname		**1**				**2**				**3**				**4**				**5**				**6**						
1999	0.353	0.271	0.219	0.182	0.356	0.273	0.221	0.183	0.376	0.281	0.218	0.174	0.411	0.293	0.220	0.170	0.341	0.243	0.179	0.135	0.383	0.270	0.198	0.149				
		7				**8**																		
1999	0.254	0.202	0.162	0.132	0.348	0.264	0.205	0.163																
Uruguay		**Montevideo**				**Interior Norte**				**Interior Centro Norte**				**Interior Centro Sur**				**Interior Sur**						
1989	0.292	0.237	0.203	0.179	0.333	0.273	0.240	0.222	0.346	0.287	0.258	0.243	0.290	0.237	0.205	0.183	0.274	0.228	0.200	0.182				
1998	0.314	0.250	0.210	0.183	0.304	0.247	0.211	0.186	0.307	0.249	0.213	0.189	0.292	0.238	0.205	0.182	0.292	0.236	0.201	0.176				
2003	0.328	0.264	0.226	0.200	0.277	0.230	0.201	0.182	0.302	0.249	0.218	0.198	0.294	0.242	0.211	0.191	0.283	0.234	0.203	0.182				
Venezuela		**Capital**				**Central**				**Centro Occidental**				**Zuliana**				**Los Andes**				**Nor - Oriental**				**Guayana**			
1989	0.303	0.249	0.218	0.200	0.287	0.234	0.200	0.176	0.303	0.249	0.218	0.200	0.288	0.235	0.201	0.176	0.317	0.257	0.221	0.200	0.293	0.240	0.207	0.186	0.297	0.245	0.213	0.191
1998	0.338	0.273	0.235	0.212	0.316	0.252	0.211	0.183	0.333	0.267	0.228	0.201	0.306	0.245	0.206	0.178	0.320	0.256	0.216	0.188	0.335	0.266	0.224	0.195	0.329	0.265	0.225	0.198
2000	0.315	0.255	0.219	0.196	0.300	0.244	0.211	0.190	0.321	0.258	0.219	0.193	0.319	0.255	0.215	0.187	0.308	0.248	0.211	0.186	0.318	0.256	0.220	0.196	0.329	0.262	0.221	0.192
2003	0.330	0.267	0.231	0.209	0.304	0.244	0.206	0.180	0.336	0.270	0.232	0.209	0.339	0.268	0.226	0.196	0.306	0.247	0.210	0.185	0.346	0.276	0.234	0.206	0.338	0.267	0.223	0.192

Source: Own calculations based on household surveys

Table B.3
DER index (α=0.5) by region

#	Country	Region	DER α=0.5	#	Country	Region	DER α=0.5	#	Country	Region	DER α=0.5
1	Uruguay	Interior Norte	0.230	51	Costa Rica	4	0.281	101	Colombia	Central	0.309
2	Uruguay	Interior Sur	0.234	52	Costa Rica	6	0.282	102	**Guatemala**	**National**	**0.309**
3	Peru	Costa rural	0.235	53	Bolivia	Beni	0.283	103	Chile	Region 8	0.310
4	Peru	Selva rural	0.235	54	Mexico	Norte	0.283	104	**Nicaragua**	**National**	**0.310**
5	Uruguay	Interior CS	0.242	55	Argentina	Pampeana	0.283	105	Honduras	Oriente	0.310
6	Venezuela	Central	0.244	56	Honduras	Norte	0.284	106	Panama	Central	0.311
7	Venezuela	Los Andes	0.247	57	Argentina	NEA	0.284	107	**Peru**	**National**	**0.312**
8	Peru	Costa urbana	0.247	58	El Salvador	occidental	0.284	108	**Chile**	**National**	**0.312**
9	Uruguay	Interior CN	0.249	59	Mexico	Centro-Este	0.284	109	Bolivia	Santa Cruz	0.313
10	Costa Rica	5	0.257	60	Colombia	Pacifica	0.285	110	Brazil	Norte	0.313
11	Peru	Selva urbana	0.259	61	**El Salvador**	**National**	**0.286**	111	Honduras	Sur	0.314
12	Costa Rica	3	0.260	62	Bolivia	Pando	0.286	112	**Honduras**	**National**	**0.315**
13	Peru	Sierra rural	0.260	63	Mexico	Centro-Occidente	0.286	113	Dominican Rep	Distrito Nacional	0.316
14	Paraguay	Centro Urb	0.261	64	Argentina	NOA	0.286	114	**Paraguay**	**National**	**0.318**
15	Haiti	Nord Ouest	0.262	65	Colombia	Atlantica	0.287	115	Chile	Region 4	0.318
16	Chile	Region 6	0.263	66	Guatemala	Resto urb	0.288	116	Bolivia	Potosí	0.319
17	Uruguay	Montevideo	0.264	67	Honduras	Metropolitana	0.288	117	Bolivia	La Paz	0.319
18	El Salvador	central1	0.264	68	El Salvador	central2	0.289	118	**Panama**	**National**	**0.321**
19	**Uruguay**	**National**	**0.265**	69	**Mexico**	**National**	**0.290**	119	**Colombia**	**National**	**0.321**
20	Peru	Sierra urbana	0.265	70	Ecuador	oriente	0.290	120	Guatemala	Urb-metro	0.322
21	Dominican Rep	Distrito	0.266	71	Honduras	Central	0.290	121	Haiti	Ouest	0.324
22	Dominican Rep	Santiago	0.266	72	Bolivia	Cochabamba	0.291	122	Chile	Region 13	0.326
23	**Venezuela**	**National**	**0.267**	73	**Suriname**	**National**	**0.291**	123	Jamaica	KMA	0.326
24	Chile	Region 3	0.267	74	Nicaragua	Atlántico	0.291	124	Colombia	Oriental	0.328
25	Venezuela	Capital	0.267	75	El Salvador	oriental	0.293	125	Brazil	Sudeste	0.328
26	Argentina	Cuyo	0.267	76	Ecuador	costa	0.293	126	Haiti	Nord	0.330
27	Venezuela	Guayana	0.267	77	**Ecuador**	**National**	**0.293**	127	Colombia	Bogotá	0.331
28	Haiti	Sud	0.268	78	Costa Rica	2	0.293	128	Brazil	Centro-Oeste	0.334
29	Haiti	SudEst	0.268	79	Ecuador	sierra	0.294	129	**Haiti**	**National**	**0.334**
30	Venezuela	Zuliana	0.268	80	Panama	Metropolitana	0.295	130	Nicaragua	Managua	0.337
31	Dominican Rep	Cibao	0.270	81	**Dominican Rep**	**National**	**0.295**	131	Haiti	Artibonite	0.337
32	Dominican Rep	Suroeste	0.270	82	Chile	Region 11	0.295	132	**Bolivia**	**National**	**0.342**
33	Venezuela	Centro Occidental	0.270	83	Chile	Region 1	0.296	133	Chile	Region 9	0.343
34	Mexico	Noroeste	0.270	84	Haiti	Centre	0.297	134	Brazil	Nordeste	0.344
35	Honduras	Occidente	0.270	85	Paraguay	Asuncion	0.298	135	**Brazil**	**National**	**0.344**
36	Paraguay	Centro Rur	0.271	86	Argentina	GBA	0.298	136	**Jamaica**	**National**	**0.345**
37	Chile	Region 5	0.272	87	**Argentina**	**National**	**0.298**	137	Haiti	NordEst	0.350
38	Costa Rica	1	0.273	88	Bolivia	Oruro	0.301	138	Jamaica	Other Towns	0.360
39	Mexico	Yucatan	0.274	89	Mexico	Noreste	0.301	139	Paraguay	Resto rur	0.372
40	Chile	Region 2	0.274	90	Bolivia	Tarija	0.301	140	Bolivia	Chiquisaca	0.400
41	Dominican Rep	Sureste	0.274	91	Paraguay	Resto urb	0.302				
42	Guatemala	Resto rur	0.274	92	Peru	Lima Metrop.	0.302				
43	Haiti	Grand Anse	0.275	93	Brazil	Sur	0.303				
44	El Salvador	amss	0.275	94	Chile	Region 7	0.303				
45	Venezuela	Nor - Oriental	0.276	95	Mexico	Sur	0.304				
46	**Costa Rica**	**National**	**0.278**	96	Chile	Region 10	0.304				
47	Mexico	Oriente	0.279	97	Panama	Occidental	0.304				
48	Argentina	Patagonia	0.280	98	Jamaica	Rural	0.305				
49	Nicaragua	Pacífico	0.281	99	Chile	Region 12	0.305				
50	Nicaragua	Central	0.281	100	Panama	Oriental	0.308				

Source: Own calculations based on household surveys.

Table B.4
Middle-income group
Share middle-income group in population and income
Ratio of mean and median top 50% with respect to overall median

	Share of middle group in…		Ratio w.r.t. median income	
	Population	Income	Mean	Median top 50%
Argentina				
15 cities				
1992	0.26	0.17	1.4	2.7
1998	0.24	0.14	1.6	3.6
28 cities				
1998	0.22	0.14	1.6	3.5
2004	0.21	0.12	1.6	3.9
Bolivia				
Urban				
1993	0.24	0.14	1.7	4.1
1997	0.24	0.13	1.8	4.4
2002	0.24	0.13	1.8	4.7
National				
1997	0.21	0.11	1.8	4.8
2002	0.19	0.10	1.8	5.5
Brazil				
1990	0.19	0.09	2.1	6.7
1998	0.20	0.10	2.0	6.3
2003	0.20	0.11	1.9	5.6
Chile				
1990	0.23	0.12	1.8	5.1
1998	0.23	0.12	1.9	5.1
2003	0.24	0.13	1.8	4.5
Colombia				
ENH-Urban				
1992	0.25	0.15	1.6	3.7
2000	0.21	0.11	1.9	5.0
ECH-Urban				
2000	0.24	0.13	1.8	4.4
2004	0.23	0.12	1.8	4.7
Costa Rica				
1992	0.25	0.18	1.4	2.5
1997	0.25	0.17	1.4	2.7
2003	0.24	0.15	1.5	3.1
Dominican Rep.				
2000	0.22	0.13	1.7	4.1
2004	0.24	0.14	1.7	4.0
Ecuador				
1994	0.25	0.15	1.6	3.9
1998	0.21	0.10	1.9	5.6
2003	0.23	0.14	1.6	3.7
El Salvador				
1991	0.23	0.14	1.6	3.8
2000	0.22	0.14	1.6	3.7
2003	0.22	0.14	1.5	3.4
Guatemala				
2000	0.24	0.13	1.7	4.5
Haiti				
2001	0.21	0.11	1.9	5.5
Honduras				
Eph 1				
1992	0.22	0.13	1.7	4.2
1997	0.21	0.12	1.7	4.1
Eph 2				
1997	0.23	0.14	1.7	3.8
2003	0.22	0.13	1.7	4.4
Jamaica				
1990	0.15	0.09	1.8	2.8
1999	0.18	0.10	1.7	2.7
2002	0.18	0.10	1.8	3.2
Mexico				
1992	0.24	0.13	1.7	4.3
1996	0.24	0.14	1.7	4.0
2002	0.23	0.14	1.6	3.7
Nicaragua				
1993	0.21	0.12	1.8	4.7
1998	0.23	0.13	1.7	4.0
2001	0.23	0.13	1.8	4.2
Panama				
1995	0.20	0.12	1.7	4.6
2003	0.20	0.11	1.8	5.0
Paraguay				
1997	0.18	0.10	1.7	4.4
2002	0.19	0.10	1.8	4.2
Peru				
1997	0.21	0.12	1.7	4.1
2002	0.21	0.12	1.7	4.1
Suriname				
1999	0.28	0.17	1.7	4.0
Uruguay				
1989	0.27	0.20	1.3	2.5
1998	0.26	0.18	1.4	2.7
2003	0.25	0.17	1.4	2.9
Venezuela				
1989	0.26	0.19	1.3	2.5
1998	0.24	0.16	1.5	3.0
2000	0.25	0.18	1.4	2.7
2003	0.24	0.16	1.4	2.9

Source: Own calculations based on household surveys.
Note: The middle income group is defined as those individuals whose household per capita incomes are in an interval around the median of the income distribution (in the range of 75 and 125 percent of the median).

Table B.5
DER decomposition
Alienation (Gini), identification and correlation effects

Country	Year		0.5			
		Gini	i	c	i.c	**DER**
Uruguay	2003	0.449	0.730	0.808	0.590	0.265
Venezuela	2003	0.462	0.709	0.814	0.577	0.267
Costa Rica	2003	0.490	0.716	0.794	0.568	0.278
El Salvador	2003	0.509	0.703	0.797	0.561	0.286
Suriname	1999	0.528	0.702	0.785	0.551	0.291
Mexico	2002	0.514	0.729	0.780	0.569	0.292
Ecuador	2003	0.517	0.737	0.768	0.567	0.293
Dominican Rep	2004	0.514	0.755	0.760	0.573	0.295
Argentina	2004	0.507	0.733	0.802	0.588	0.298
Guatemala	2000	0.545	0.761	0.746	0.568	0.309
Nicaragua	2001	0.543	0.770	0.741	0.570	0.310
Peru	2002	0.543	0.745	0.770	0.574	0.312
Chile	2003	0.540	0.783	0.738	0.577	0.312
Honduras	2003	0.542	0.757	0.769	0.581	0.315
Paraguay	2002	0.571	0.729	0.764	0.557	0.318
Panama	2003	0.561	0.736	0.776	0.571	0.321
Colombia	2004	0.551	0.772	0.774	0.597	0.329
Haiti	2001	0.592	0.762	0.741	0.565	0.334
Bolivia	2002	0.601	0.749	0.760	0.569	0.342
Jamaica	2002	0.599	0.732	0.788	0.576	0.345
Brazil	2003	0.576	0.799	0.763	0.610	0.351

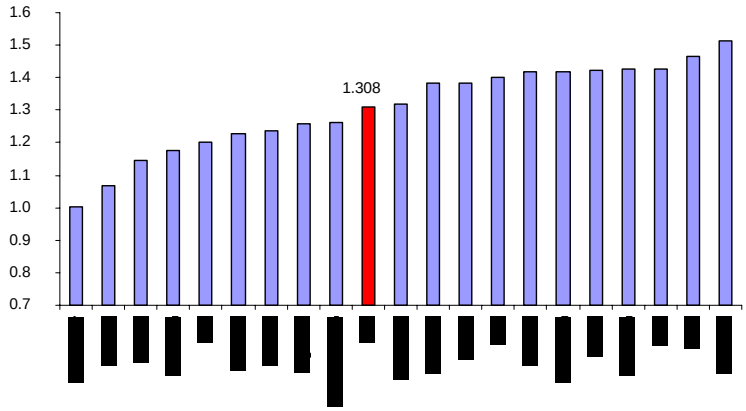
Notes: a=alienation (Gini coefficient)
i=identification
c=correlation
Source: Own calculations based on household surveys

Table B.6
Decomposition of changes in the DER
Alienation (Gini), identification and correlation effects

Country	Year	α=0	α=0.25				α=0.5				α=0.75				α=1			
		a	i	c	i.c	**Pol**	i	c	i.c	**Pol**	i	c	i.c	**Pol**	i	c	i.c	**Pol**
Argentina	92-04	+	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-
Bolivia	97-02	+	-	-	-	+	+	-	-	+	+	-	+	+	+	+	+	+
Brazil	90-03	-	-	+	+	-	-	+	+	-	+	+	+	-	+	+	+	+
Chile	90-03	-	+	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-
Colombia	92-04	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Costa Rica	92-03	+	-	-	-	+	+	-	-	+	+	-	-	+	+	-	+	+
Dominican Rep	00-04	-	+	-	-	-	+	-	+	-	+	-	+	+	+	-	+	+
Ecuador	94-03	-	-	-	-	-	-	+	-	-	+	+	+	-	+	+	+	-
El Salvador	91-03	-	-	+	+	-	-	+	-	-	-	+	-	-	-	+	-	-
Honduras	97-03	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+
Jamaica	90-02	+	+	-	-	+	+	-	+	+	+	-	+	+	+	+	+	+
Mexico	92-02	-	-	+	+	-	-	+	+	-	-	+	-	-	-	+	-	-
Nicaragua	93-01	-	+	-	-	-	+	-	+	-	+	-	+	-	+	-	+	+
Panama	95-03	+	+	-	+	+	+	-	+	+	+	-	+	+	+	+	+	+
Paraguay	97-02	+	+	-	-	-	+	-	-	-	+	-	-	+	+	-	-	+
Peru	97-02	+	+	-	-	-	+	-	-	-	+	-	-	+	+	-	-	+
Uruguay	89-03	+	-	-	-	+	+	-	-	+	+	-	+	+	+	-	+	+
Venezuela	89-03	+	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-

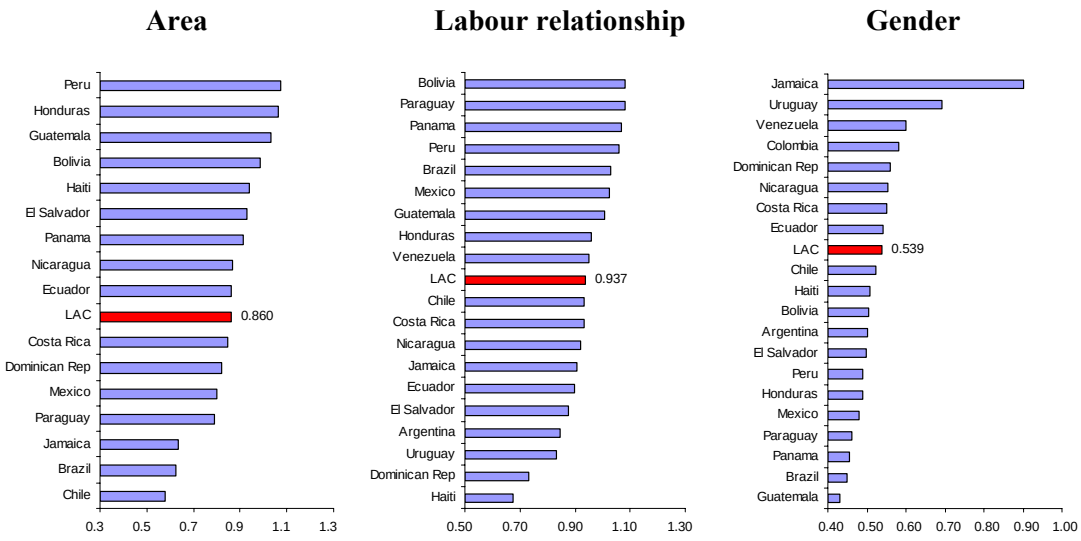
Notes: a=change in alienation (Gini coefficient)
i=change in identification
c=change in correlation
Pol = change in polarisation
Source: Own calculations based on household surveys

Figure 4.1
Income polarisation by education
Gradín Group Polarisation measure (α= 1, β= 1)
Last survey available for each country

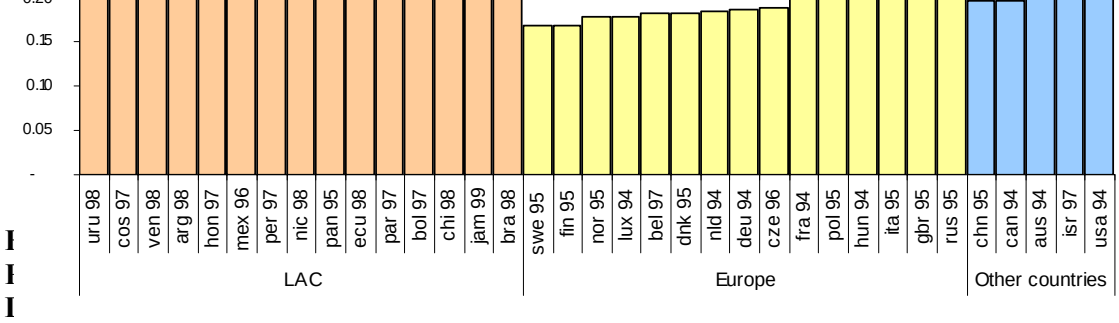


Source: Own calculations based on household surveys

Figure 4.2
Income polarisation by area, labour relationship and gender
Gradín Group Polarisation measure (α= 1, β= 1)
Last survey available for each country



Source: Own calculations based on household surveys



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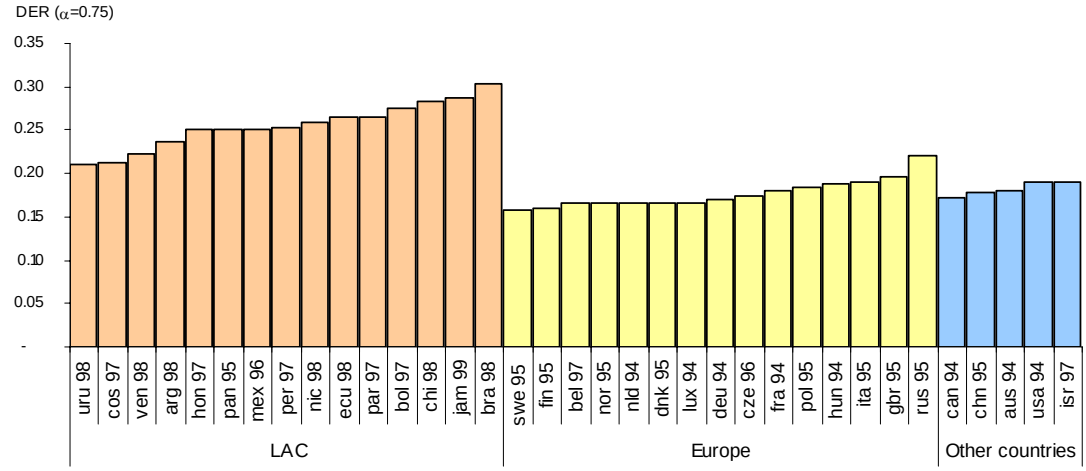
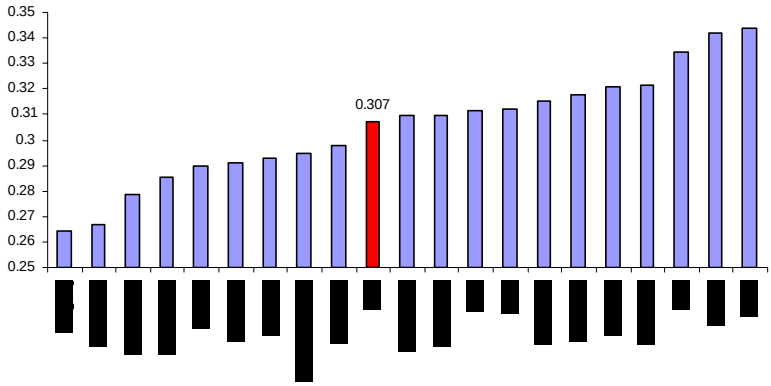


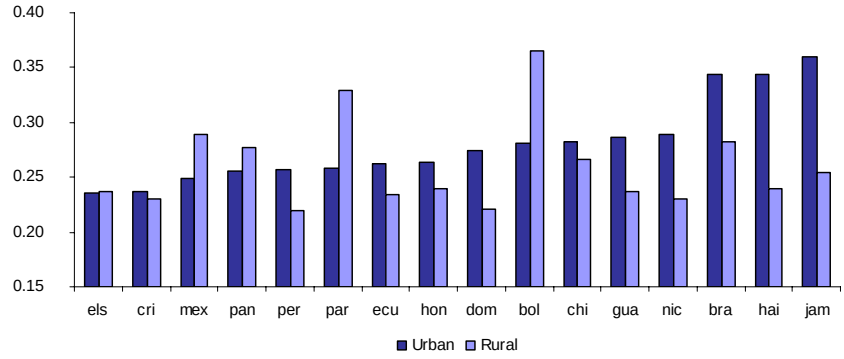
Source: Duclos, Esteban and Ray (2004) and own calculations based on household surveys.

Figure 4. 4
Pure income polarisation
DER index (α=0.5) for the household per capita income distribution
Last survey available for each country



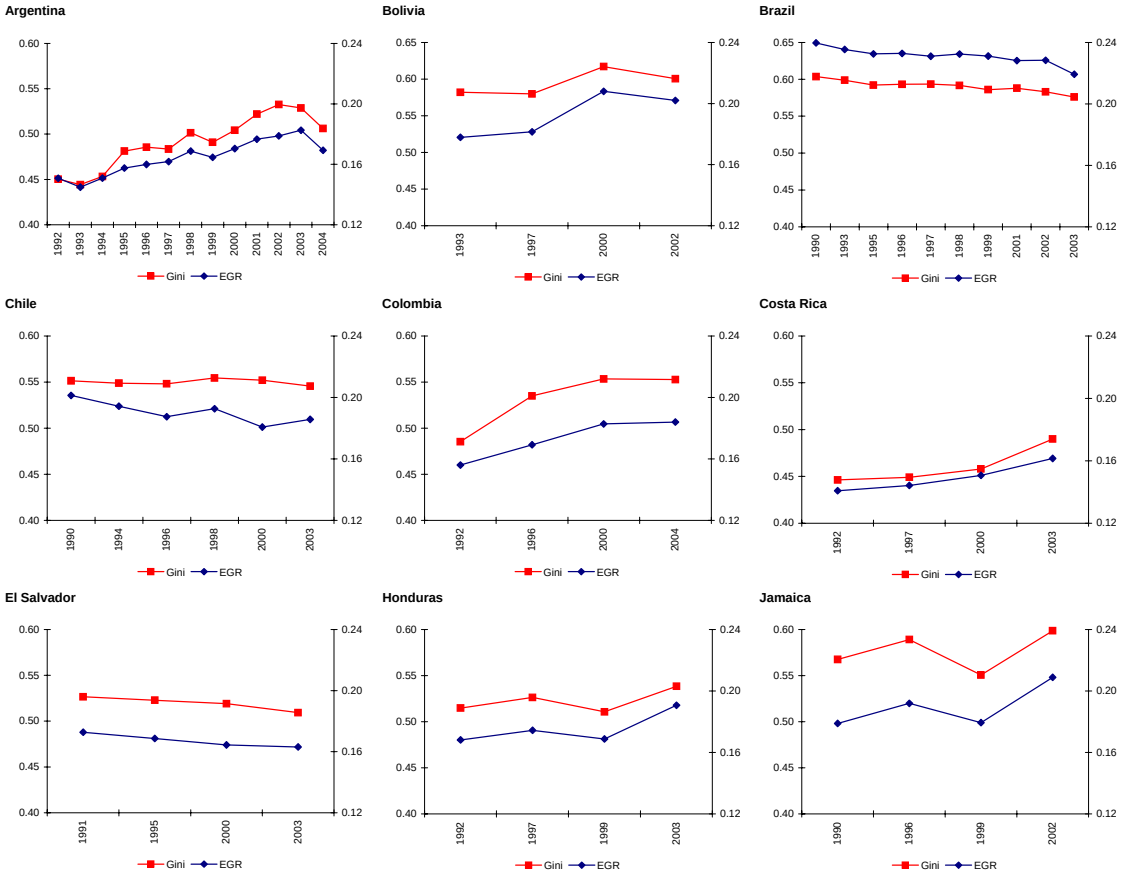
Source: Own calculations based on household surveys

Figure 4.5
Pure income polarisation
DER index (α=0.5) of the household per capita income distribution
Urban and rural areas
Last survey available for each country



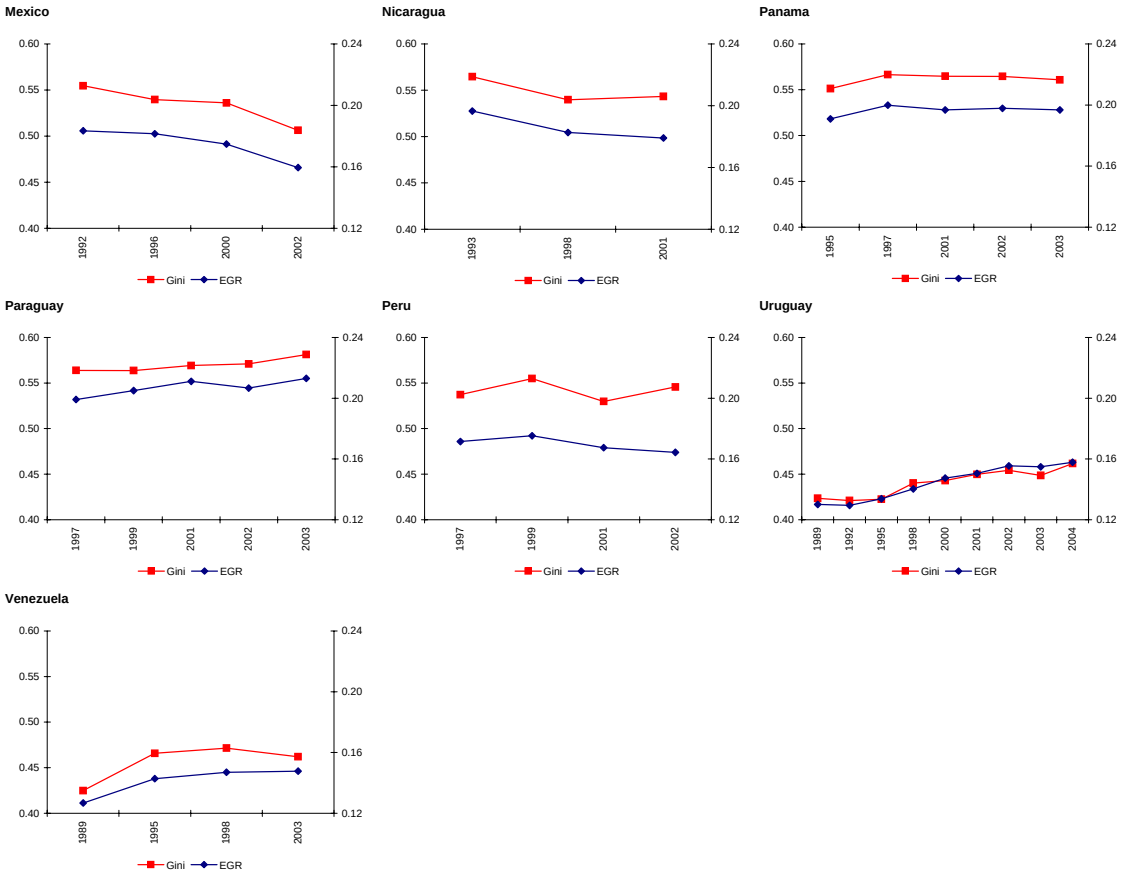
Source: Own calculations based on household surveys

Figure 4.6
Inequality and pure income polarisation
Gini coefficient and EGR polarization index
Household per capita income



Source: Own calculations based on household surveys

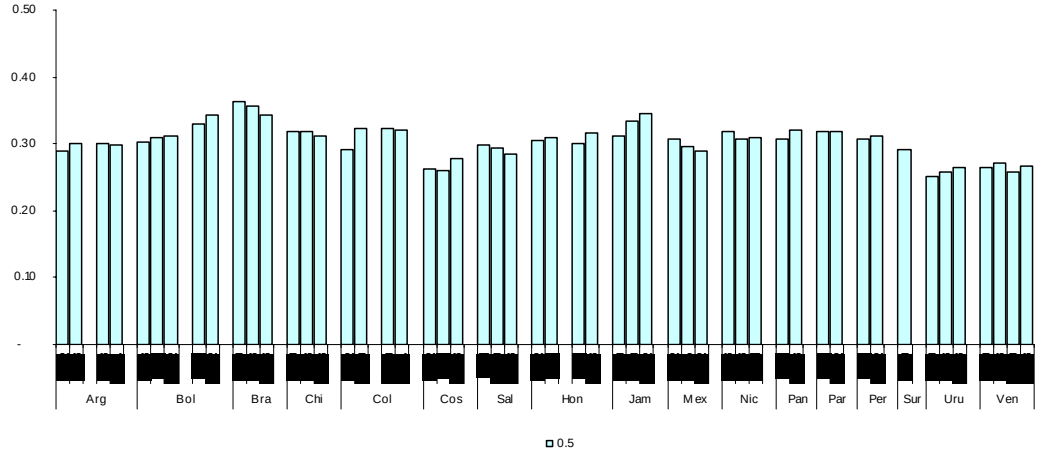
Figure 4.6 (cont.)
Gini coefficient and EGR polarization index



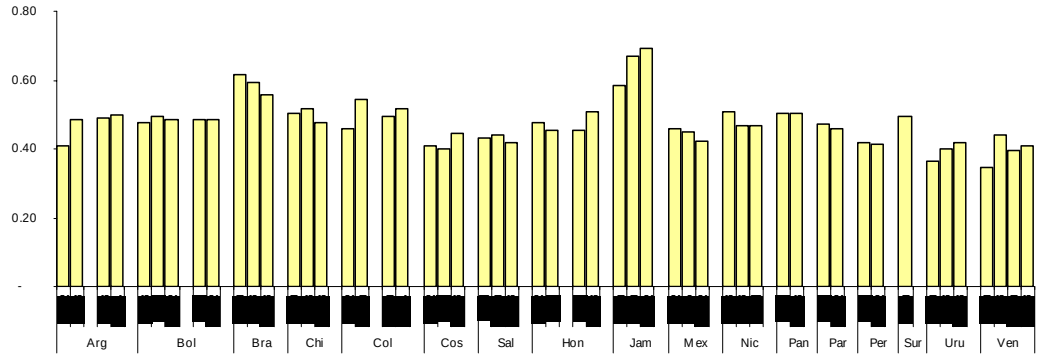
Source: Own calculations based on household surveys.

Figure 4.7
Pure Income Polarisation

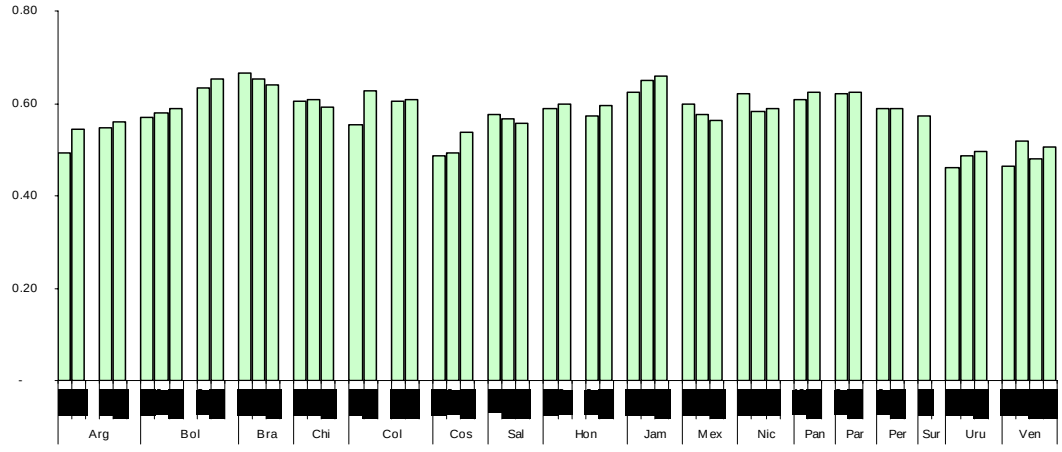
DER index (α =0.5)



Wolfson

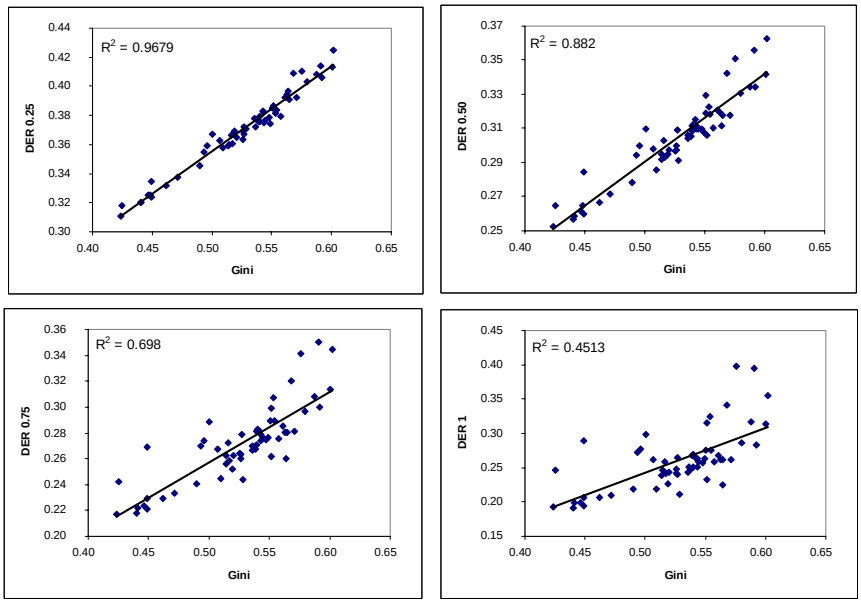


EGR 3 (α=1.3)



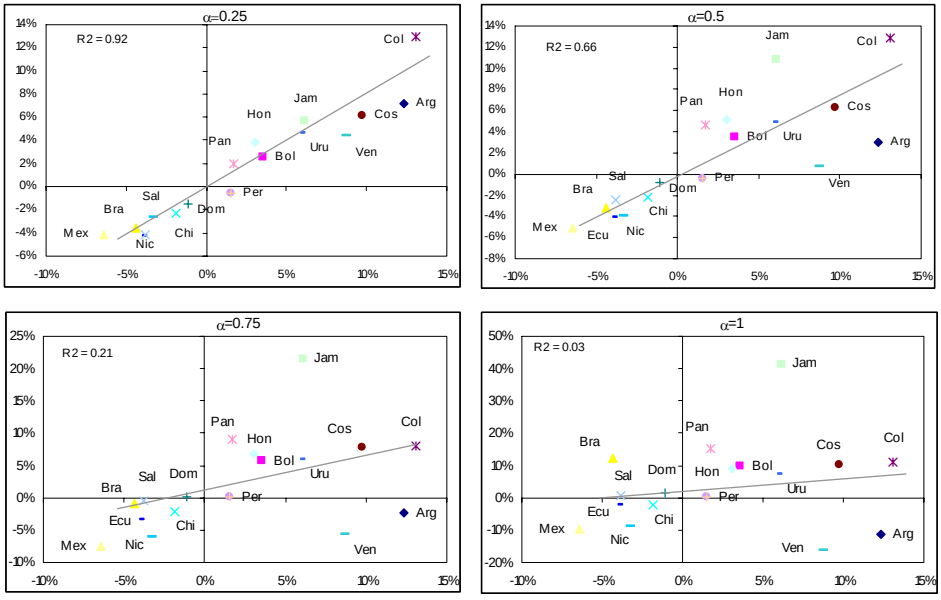
Source: Own calculations based on household surveys.

Figure 4.8
Inequality and polarisation
Gini coefficient and DER with alternative values for parameter α
Last survey available for each country



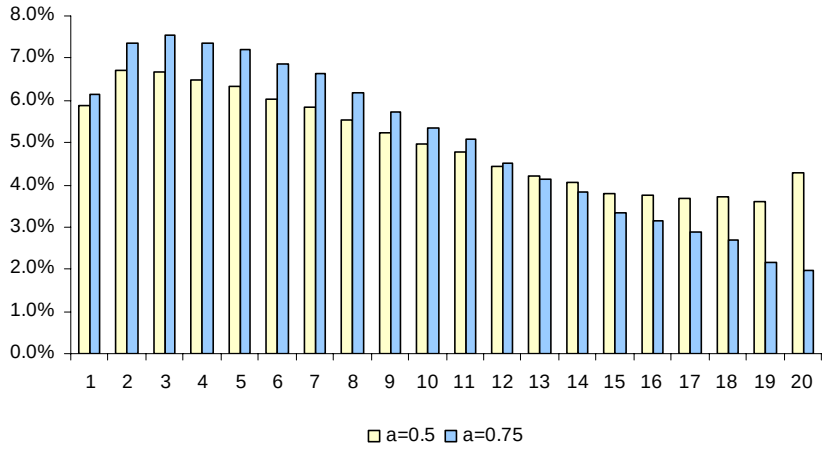
Source: Own calculations based on household surveys

Figure 4.9
Inequality and polarisation changes
Gini coefficient and DER with alternative values for parameter α



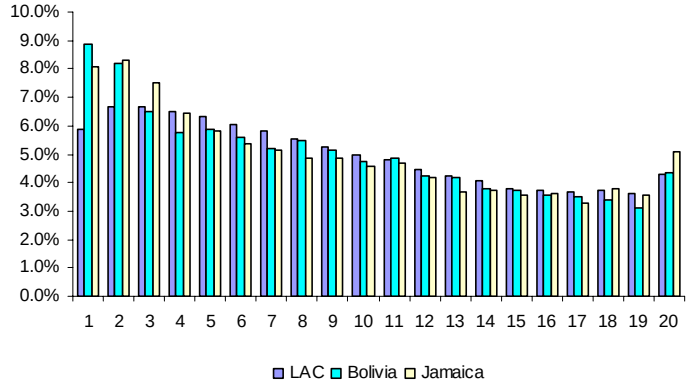
Source: Own calculations based on household surveys.

Figure 4.10
Decomposition of the DER index: participation in DER by vintiles
Mean values across LAC countries
Last survey available for each country



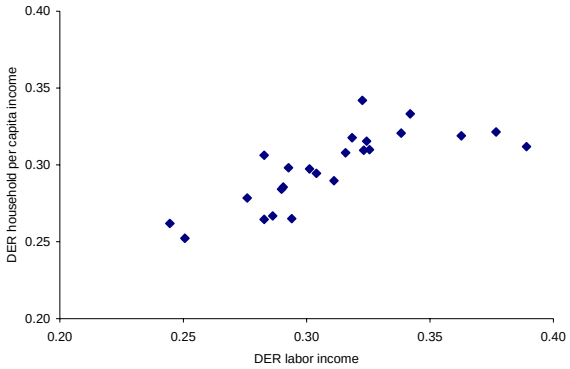
Source: Own calculations based on household surveys

Figure 4.11
Decomposition of the DER index (α=0.5): participation in DER by vintiles
Average for LAC, and values for Bolivia and Jamaica
Last survey available for each country



Source: Own calculations based on household surveys

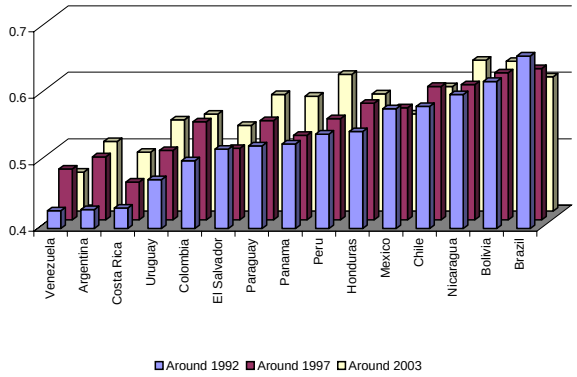
Figure 5.1
Polarisation of labour income and household per capita income
DER (α=0.5)



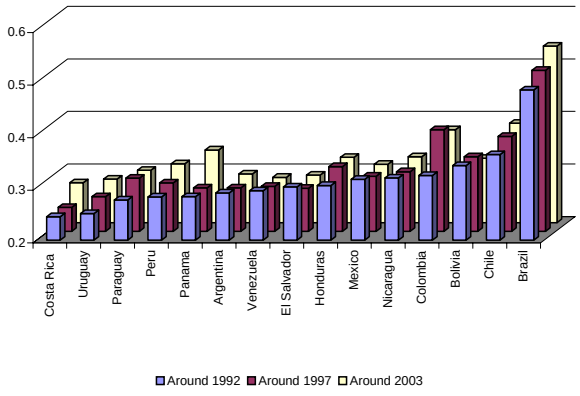
Source: Own calculations based on household surveys

Figure 5.2
Polarisation of labour income
EGR 3 and DER (α=0.5)

EGR 3

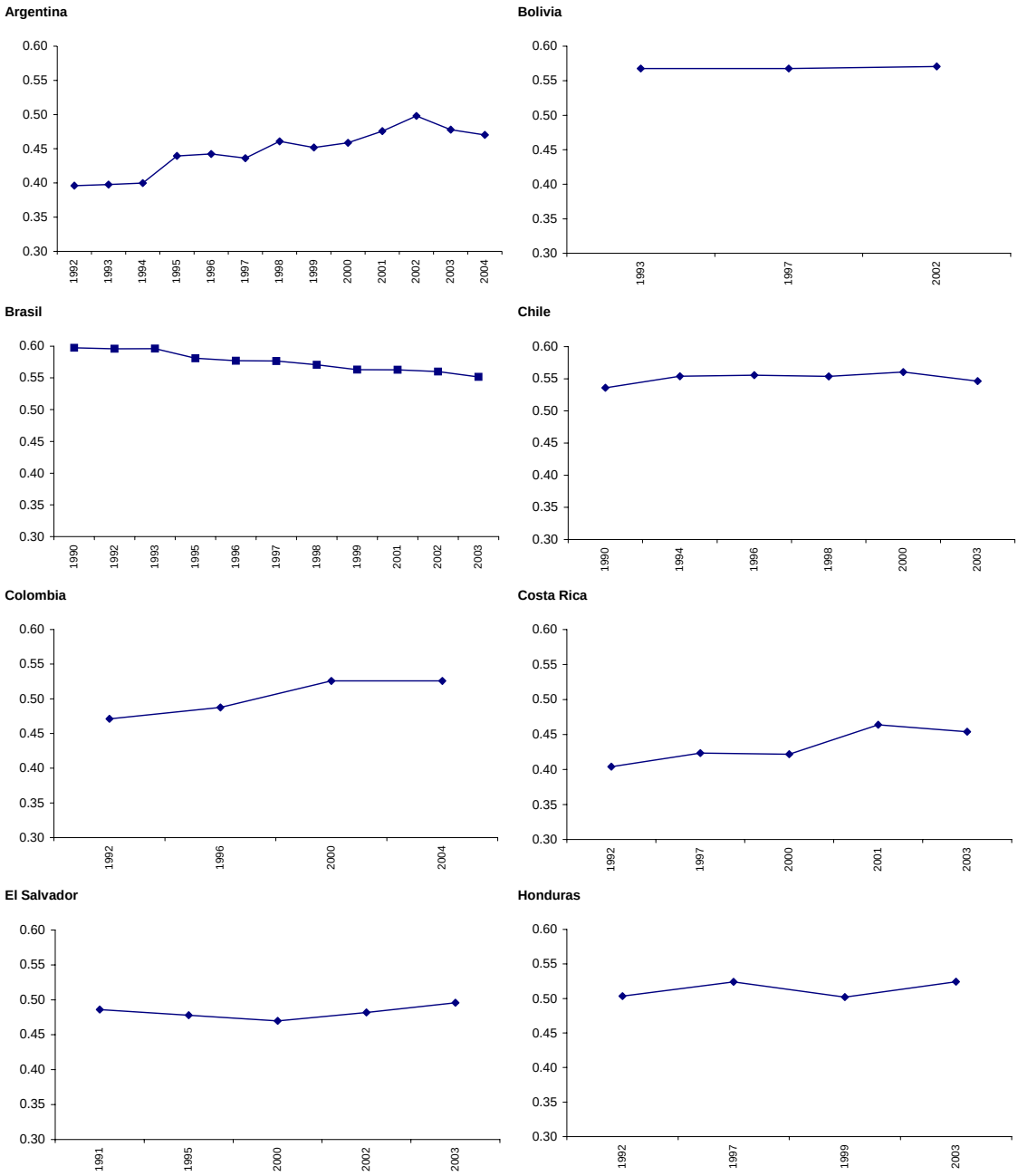


DER 0.5



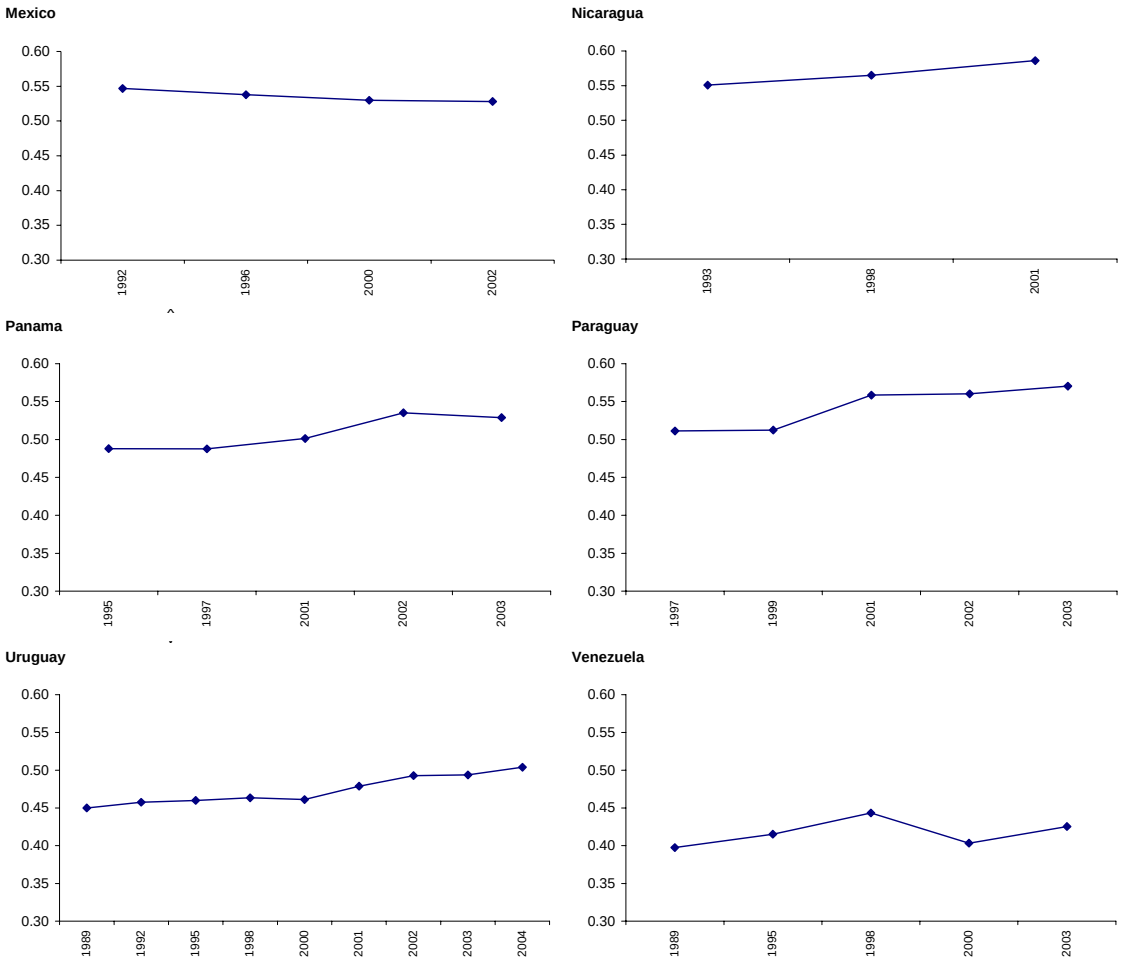
Source: Own calculations based on household surveys

Figure 5.3
Gini coefficient for the distribution of earnings



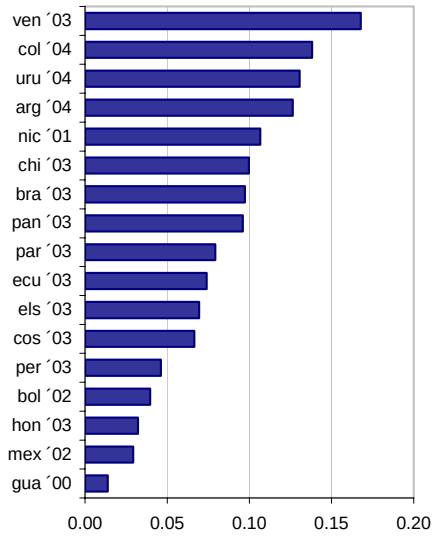
Source: *Gasparini et al*. (2006) based on SEDLAC.

Figure 5.3 (cont.)
Gini coefficient for the distribution of earnings



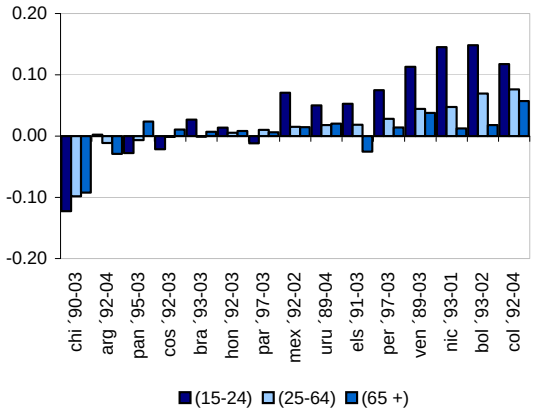
Source: *Gasparini et al*. (2006) based on SEDLAC.

Figure 5.4
Unemployment rates



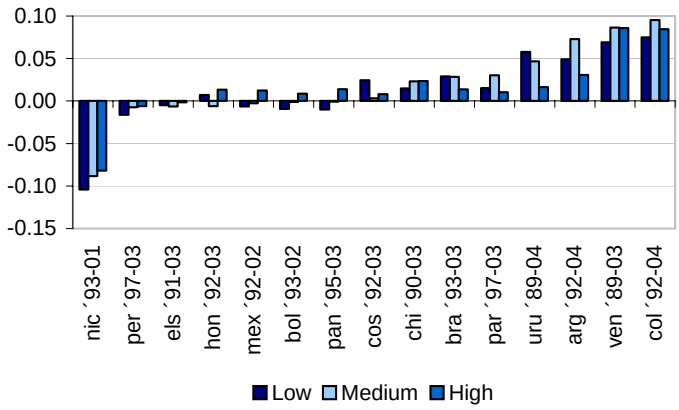
Source: Own calculations based on household surveys

Figure 5.5
Change in unemployment rates by age groups



Source: Own calculations based on household surveys

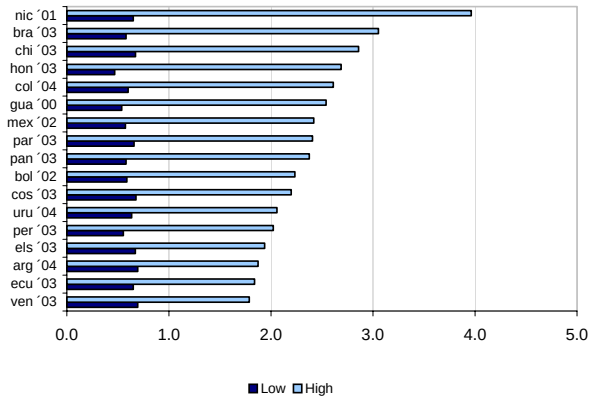
Figure 5.6
Change in unemployment rates by education



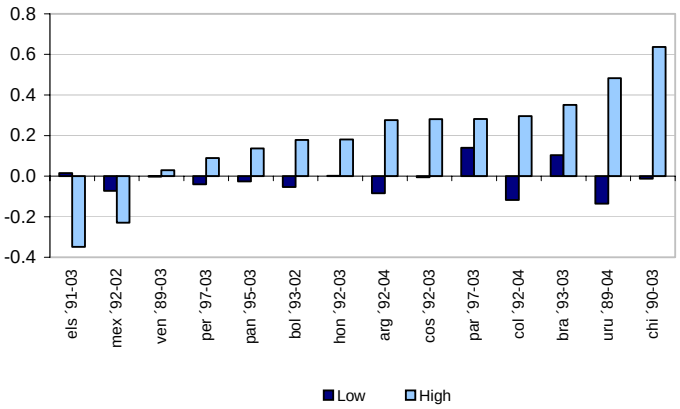
Source: Own calculations based on household surveys

Figure 5.7
Labour income by education

A. Ratios low/medium education and high/medium education

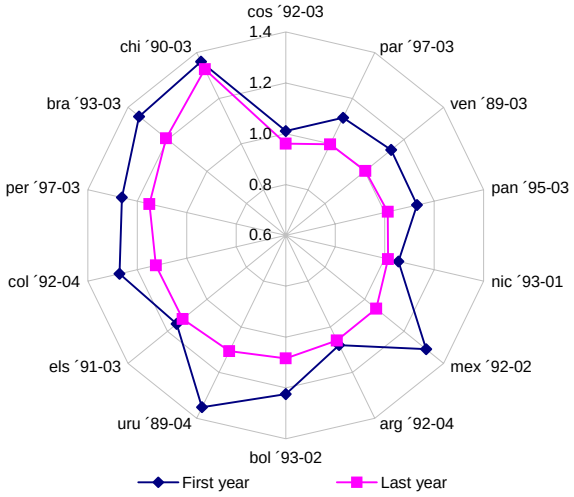


B. Changes in ratios low/medium education and high/medium education



Source: Own calculations based on household surveys

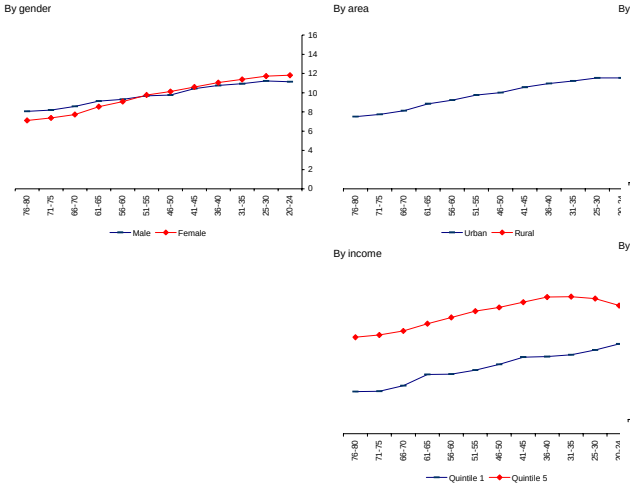
Figure 5.8
Ratio of hourly wages by gender (men/women)



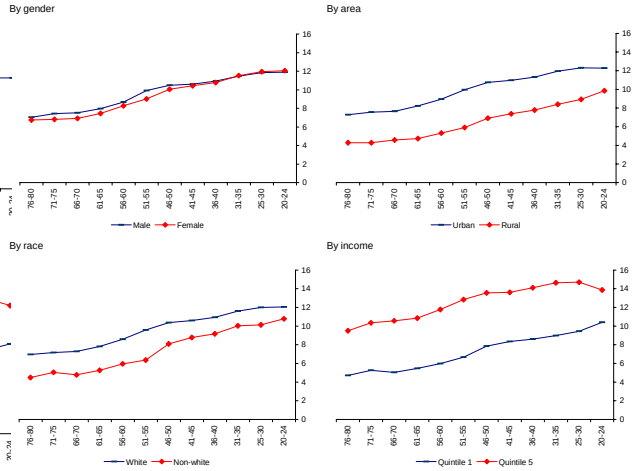
Source: Own calculations based on household surveys

Figure 6.1
Mean years of formal education
For age groups
By gender, area, race and income quintile (last survey)

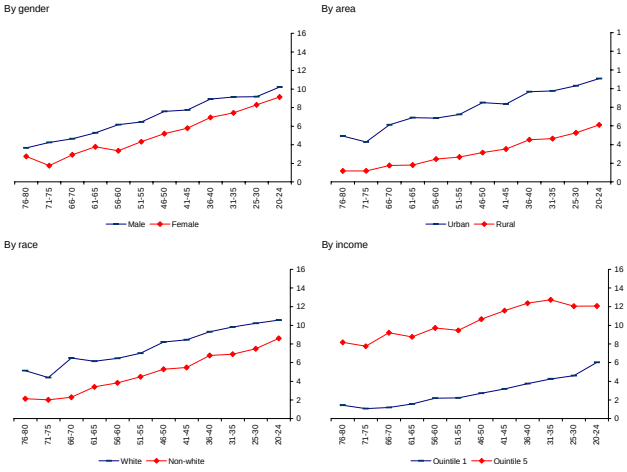
Argentina



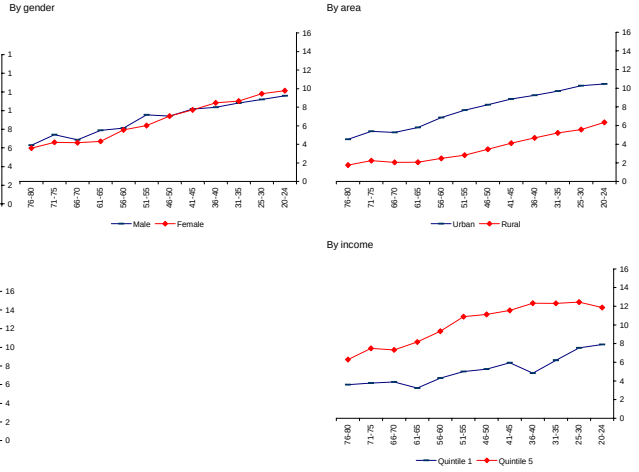
Chile



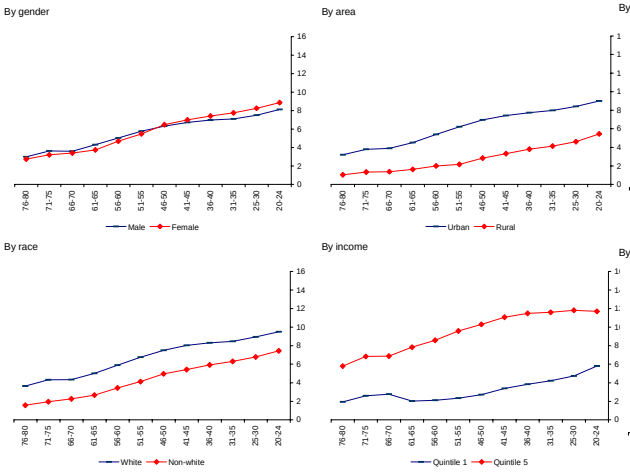
Bolivia



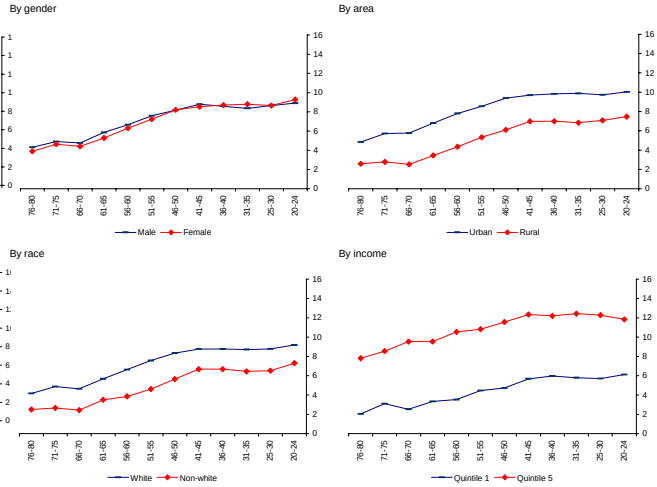
Colombia



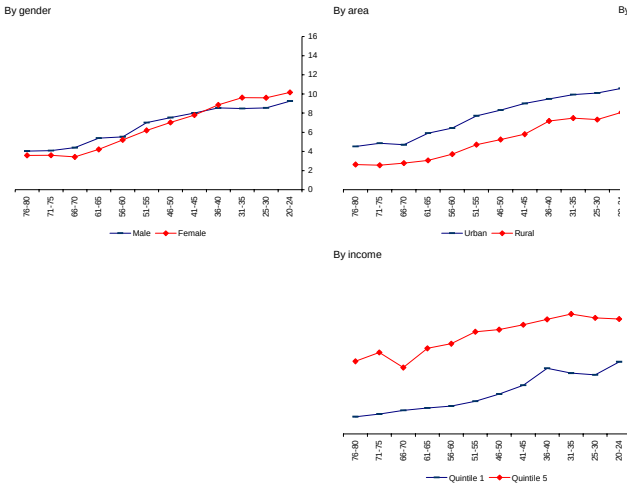
Brazil



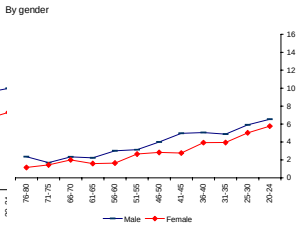
Costa Rica

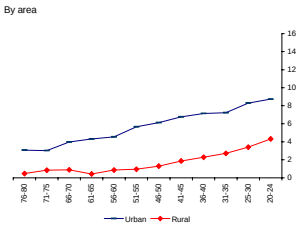


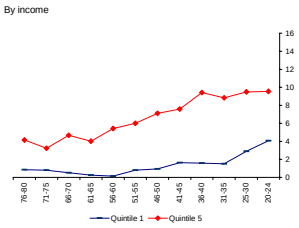
Dominican Republic



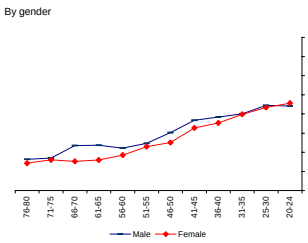
Guatemala

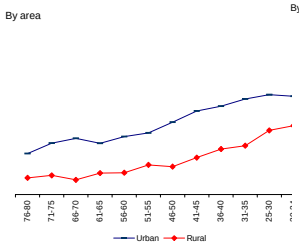


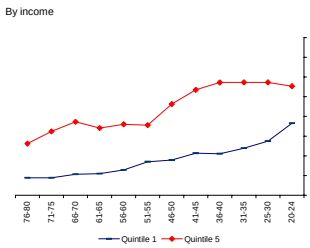




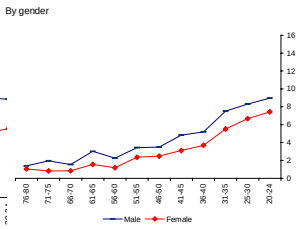
Ecuador

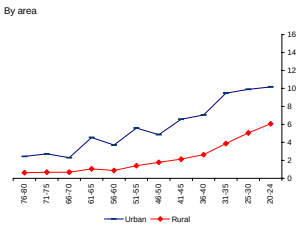


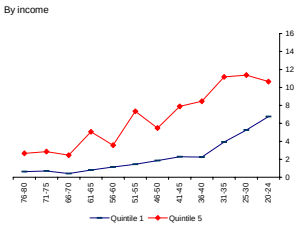




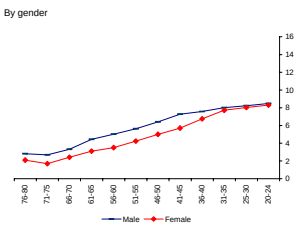
Haiti

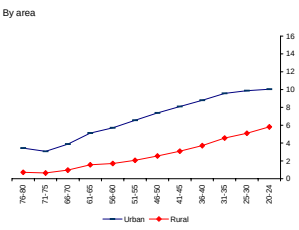


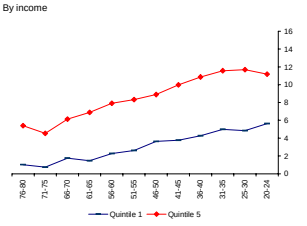




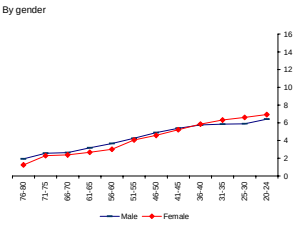
El Salvador

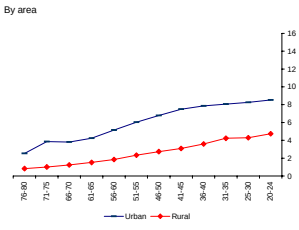


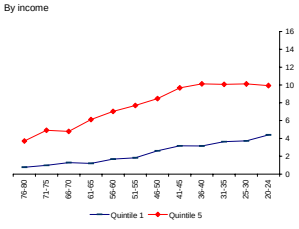




Honduras

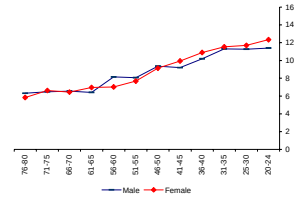




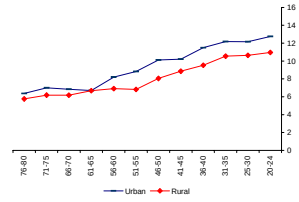


Jamaica

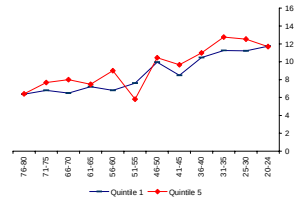
By gender



By area

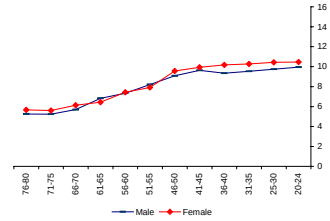


By income

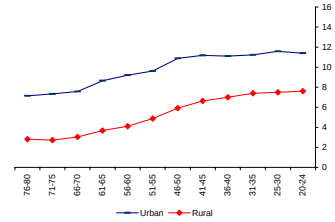


Panama

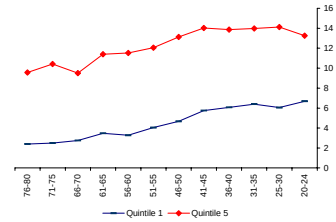
By gender



By area

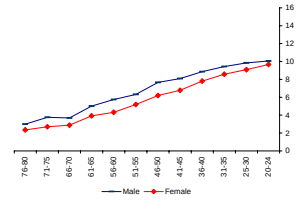


By income

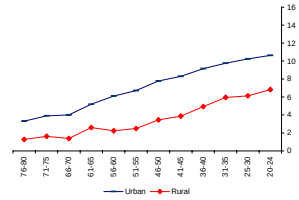


Mexico

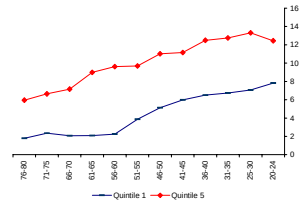
By gender



By area

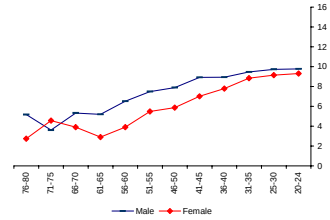


By income

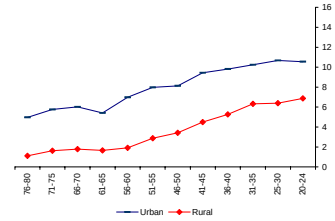


Peru

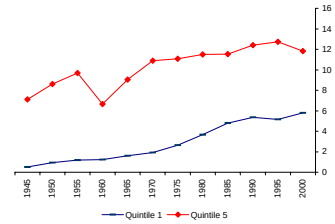
By gender



By area

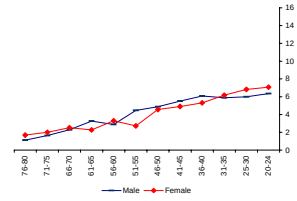


By income

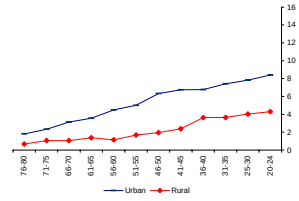


Nicaragua

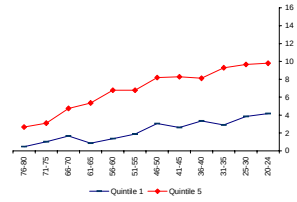
By gender



By area

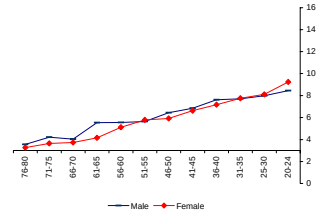


By income

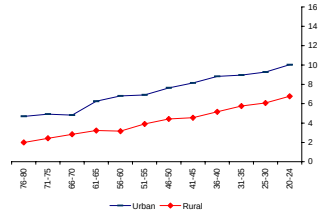


Paraguay

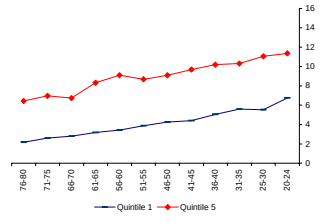
By gender



By area

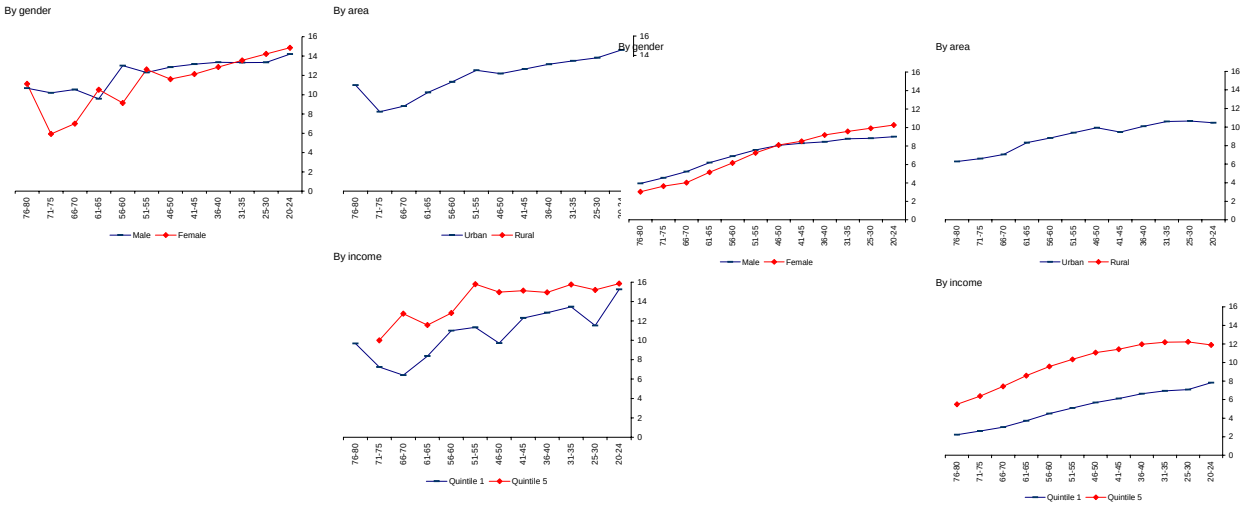


By income

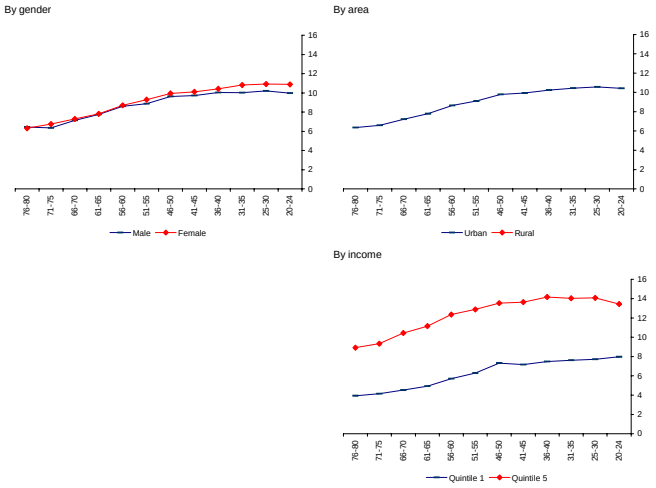


Suriname

Venezuela

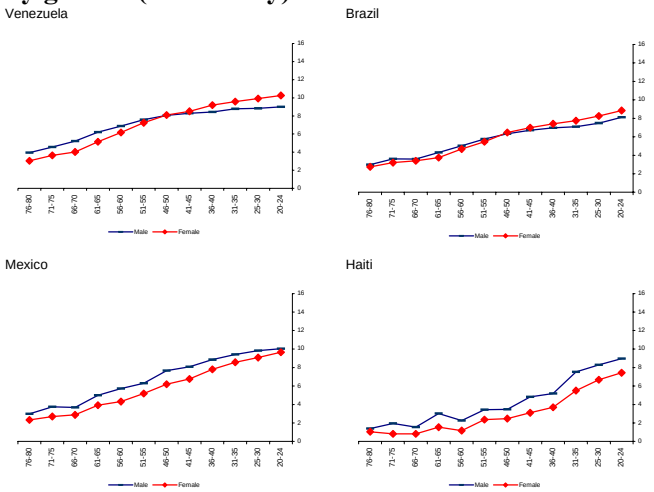


Uruguay



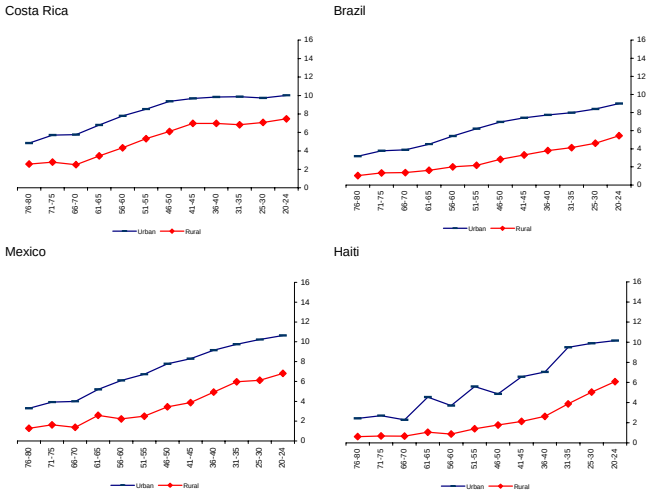
Source: Own estimates based on household surveys.

Figure 6.2
Mean years of formal education
For age groups
By gender (last survey)



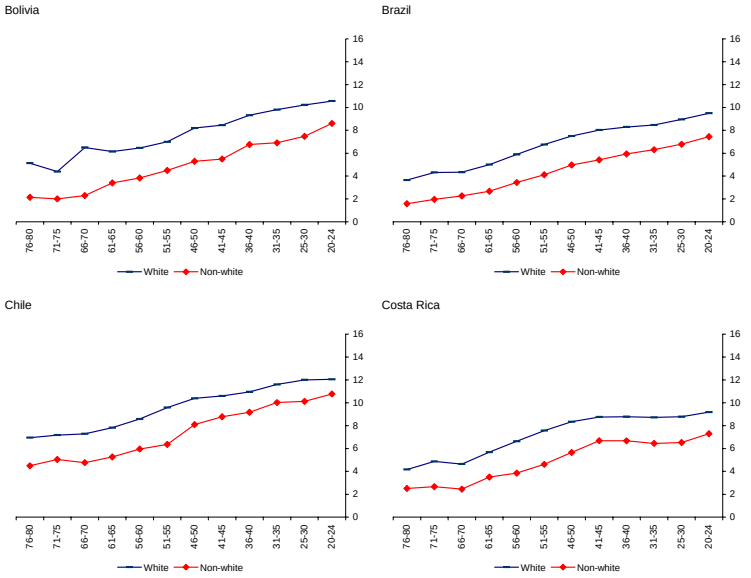
Source: Own estimates based on household surveys.

Figure 6.3
Mean years of formal education
For age groups
By area (last survey)



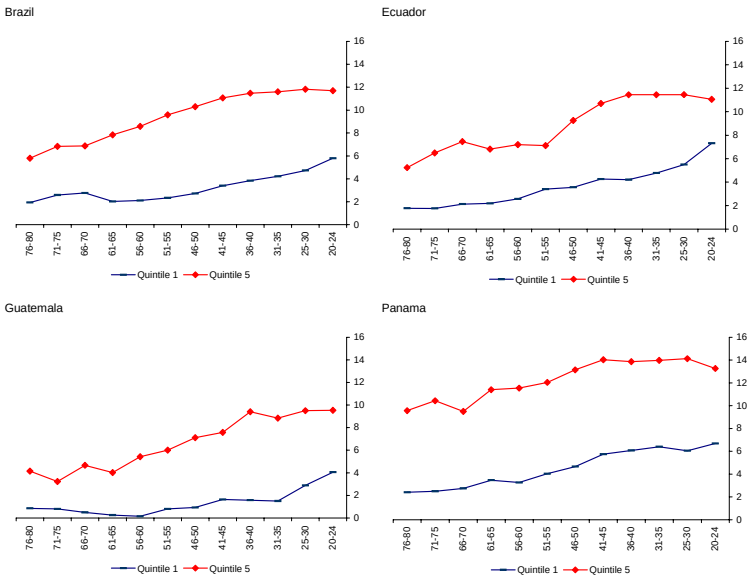
Source: Own estimates based on household surveys.

Figure 6.4
Mean years of formal education
For age groups
By race (last survey)



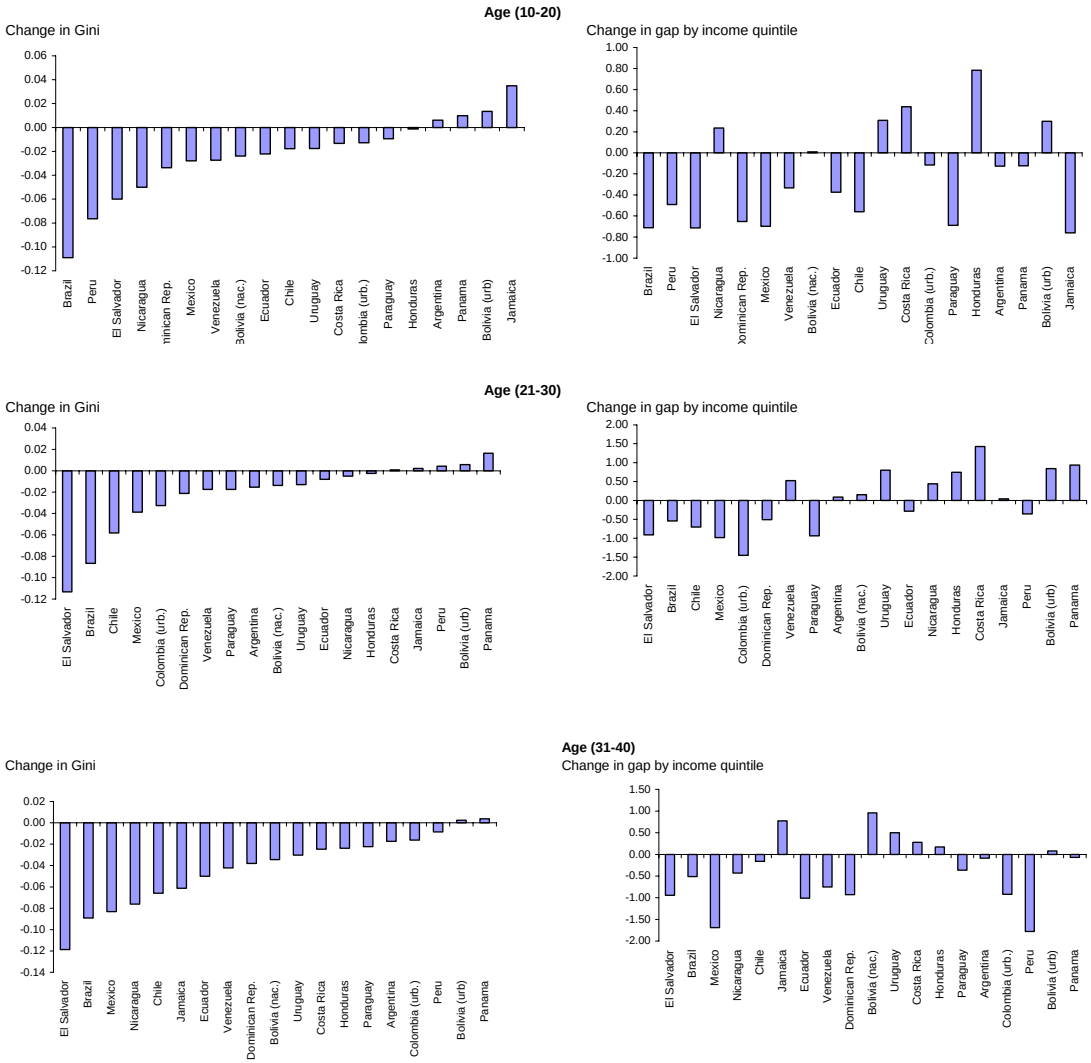
Source: Own estimates based on household surveys.

Figure 6.5
Mean years of formal education
For age groups
By income quintile (last survey)



Source: Own estimates based on household surveys.

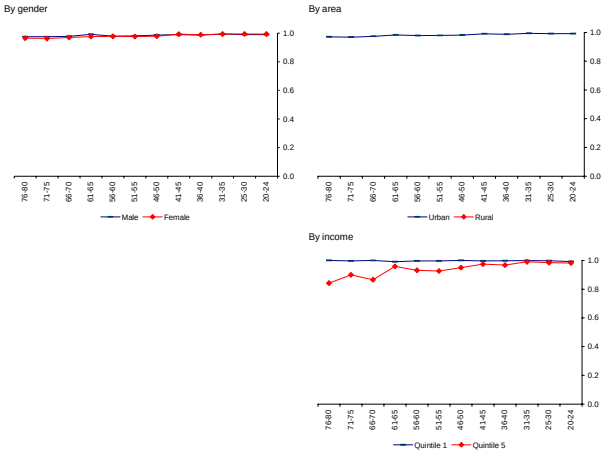
Figure 6.6
Gini coefficient of years of education and gap of years of education by income quintiles
Changes between the first and the latest survey available (mostly early 1990s and early 2000s)



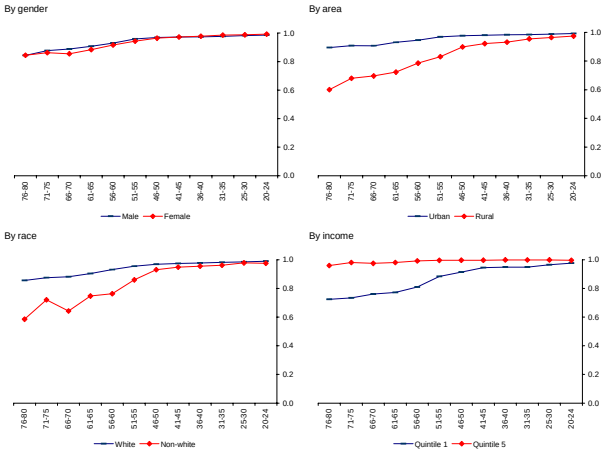
Source: Own estimates based on household surveys.

Figure 6.7
Literacy rates
For age groups
By gender, area, race and income quintile

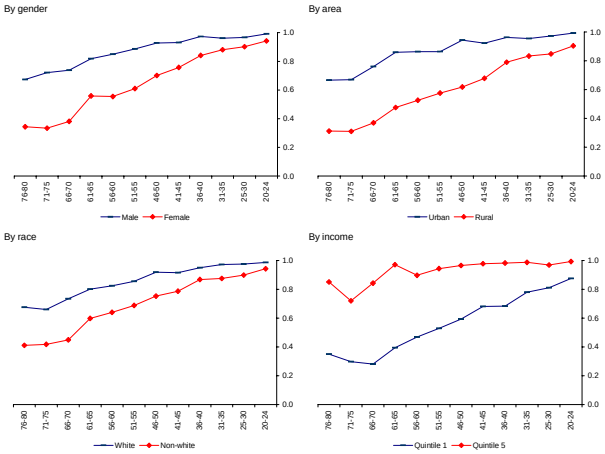
Argentina



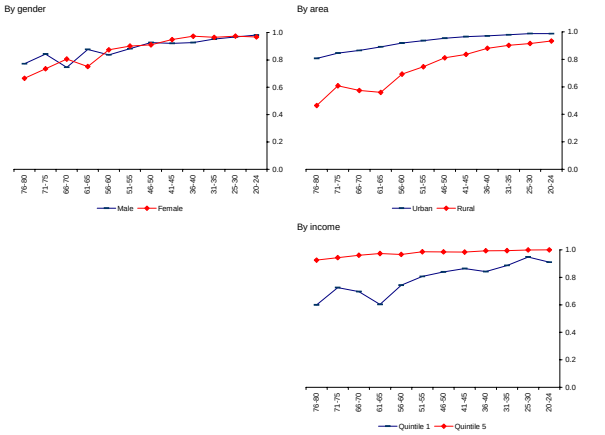
Chile



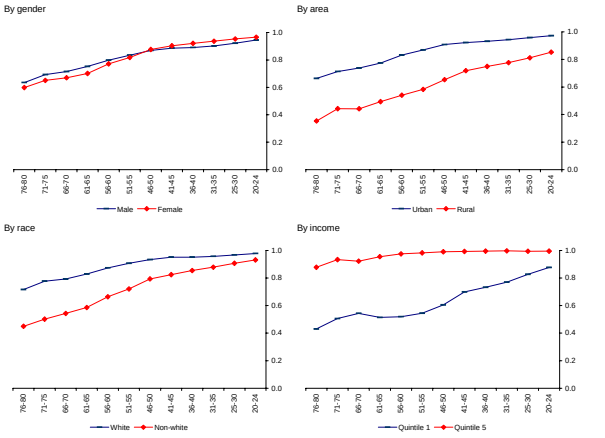
Bolivia



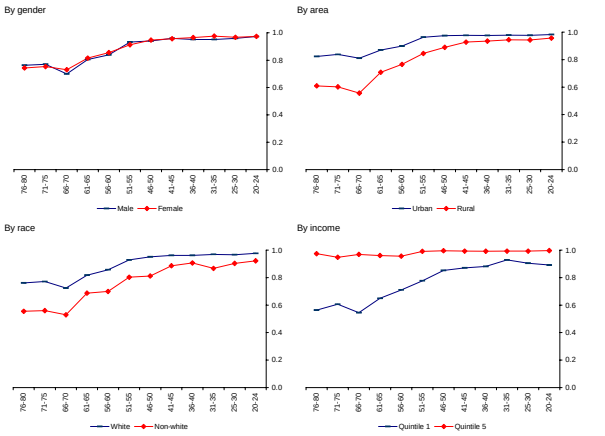
Colombia



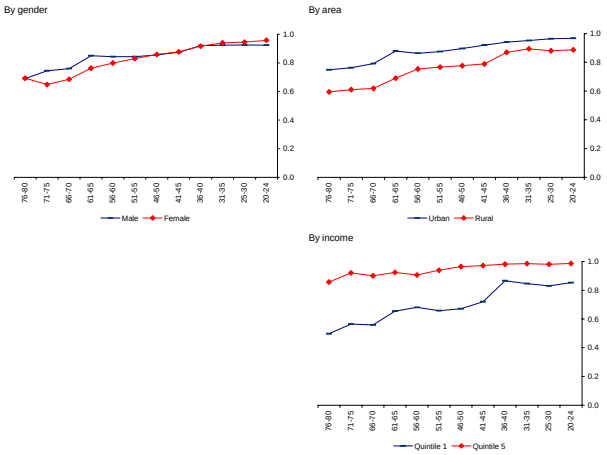
Brazil



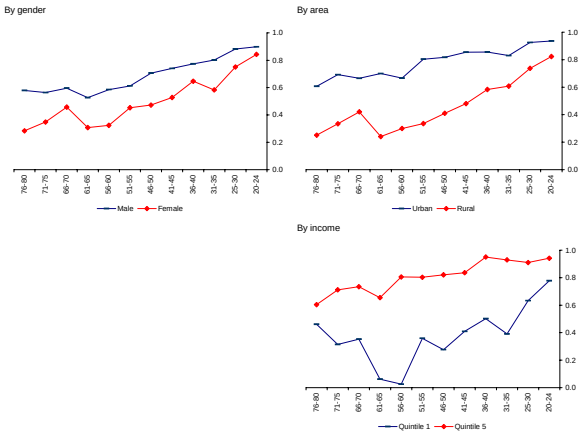
Costa Rica



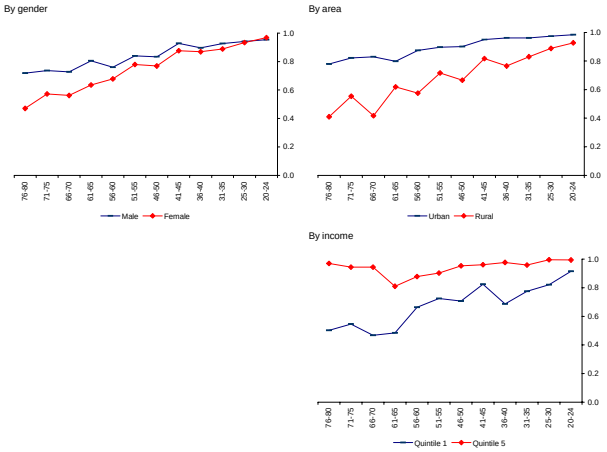
Dominican Republic



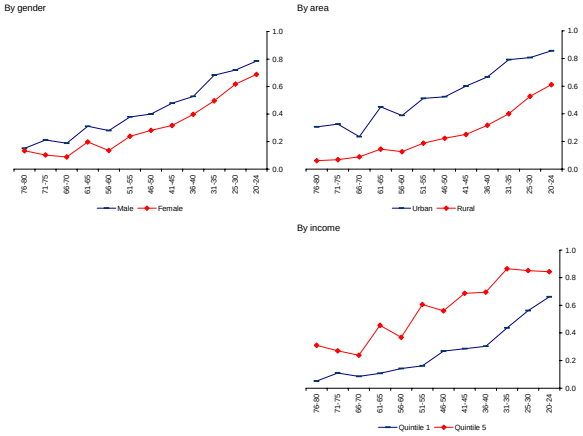
Guatemala



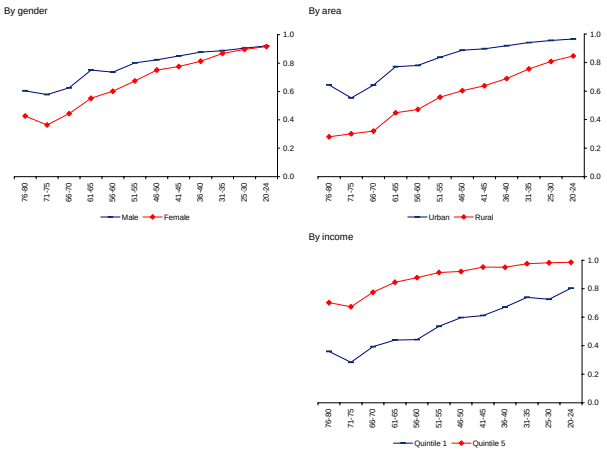
Ecuador



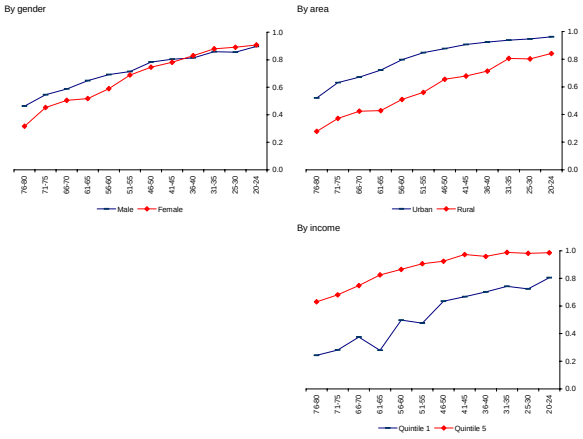
Haiti



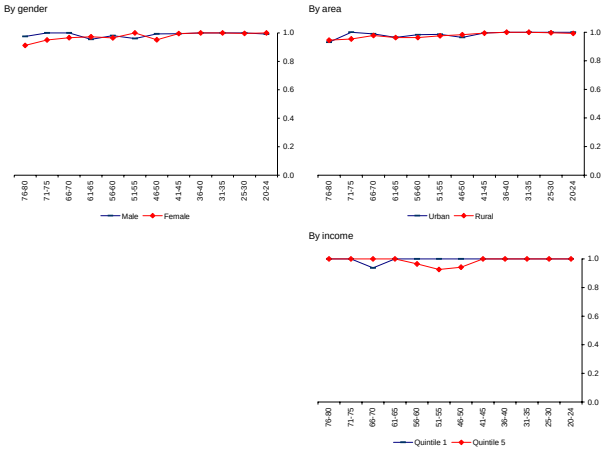
El Salvador



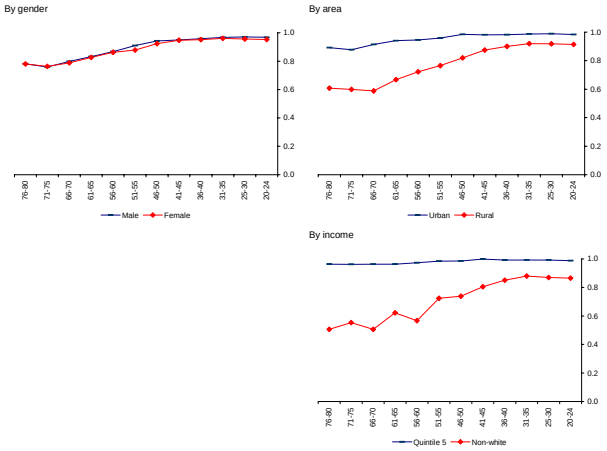
Honduras



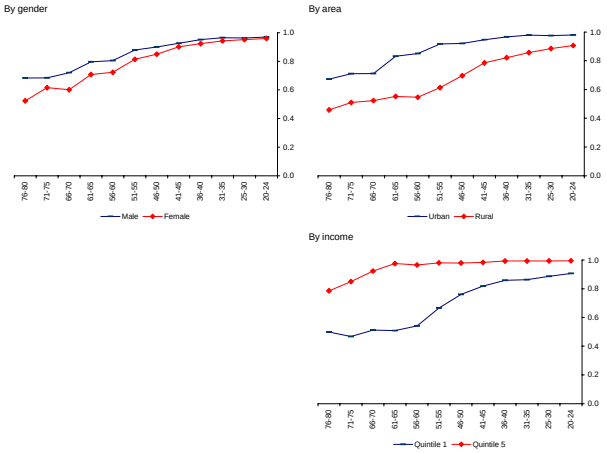
Jamaica



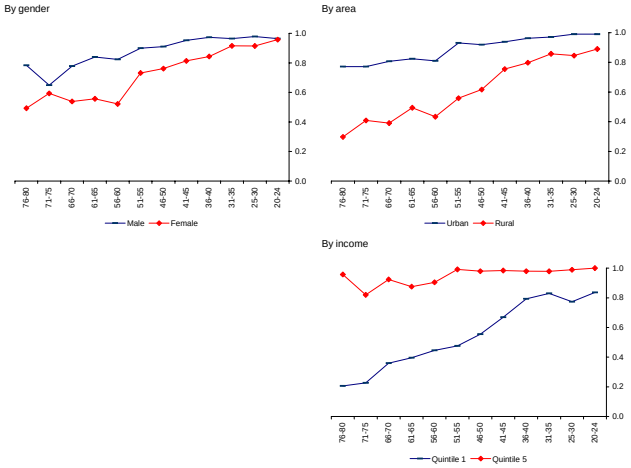
Panama



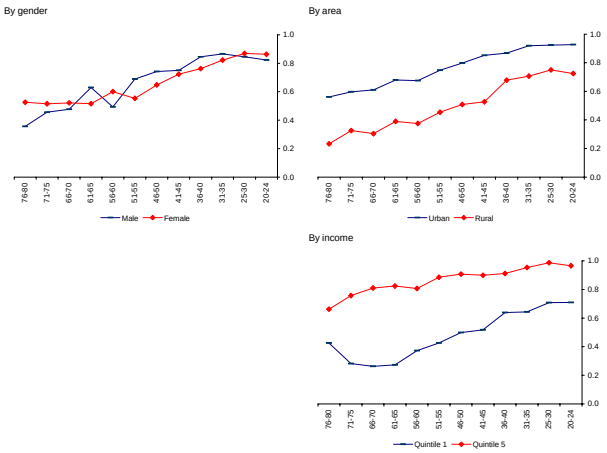
Mexico



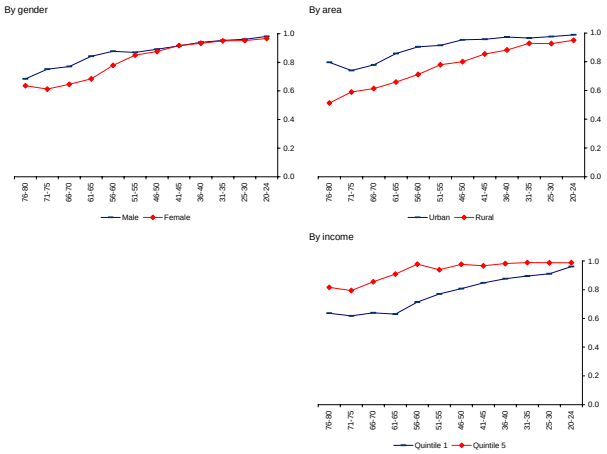
Peru



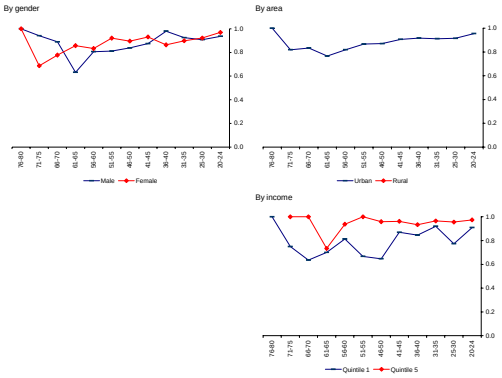
Nicaragua



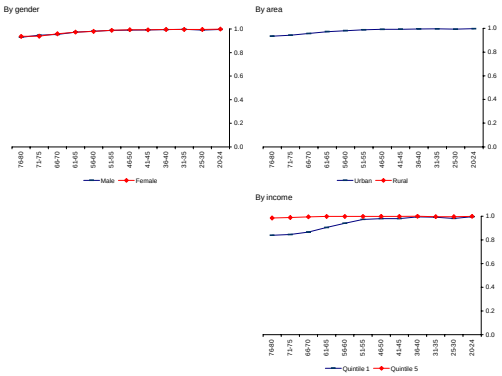
Paraguay



Suriname



Uruguay



Venezuela

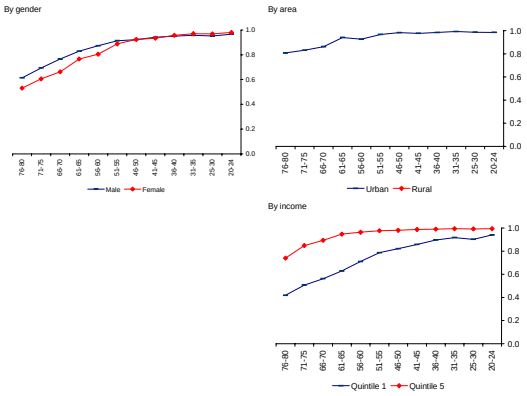
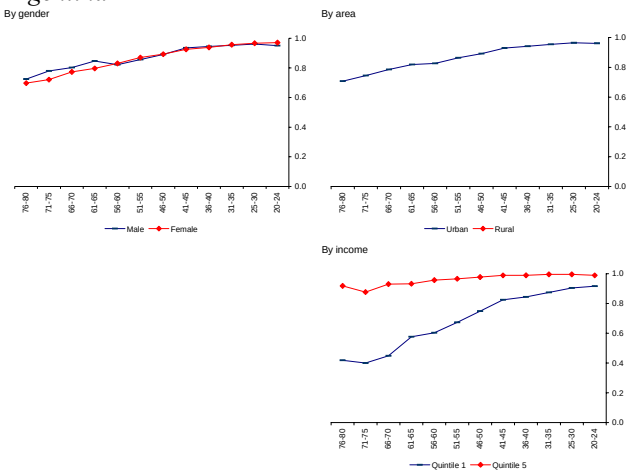
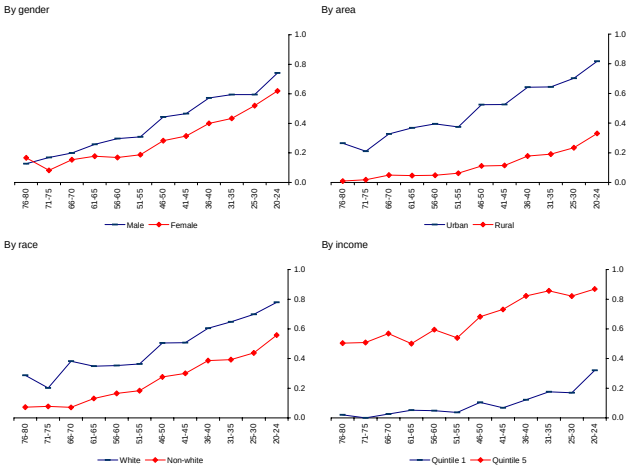


Figure 6.8
Primary completion rates
For age groups
By gender, area, race and income quintile

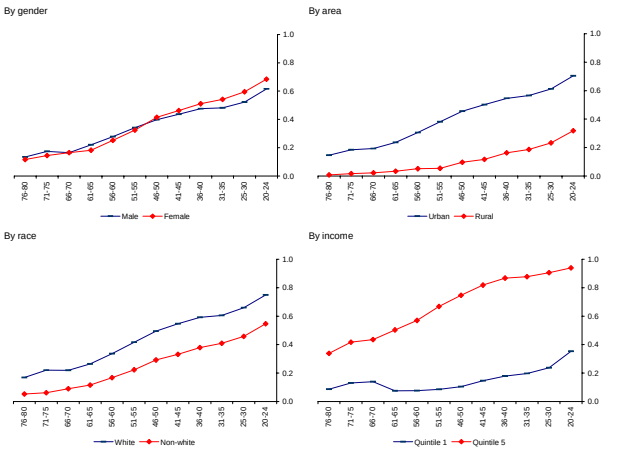
Argentina



Bolivia



Brazil



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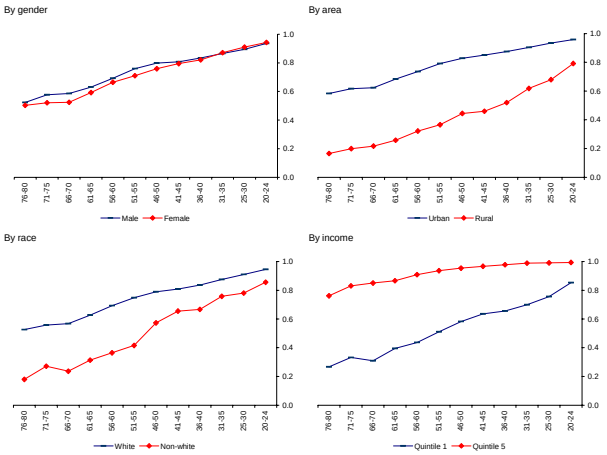

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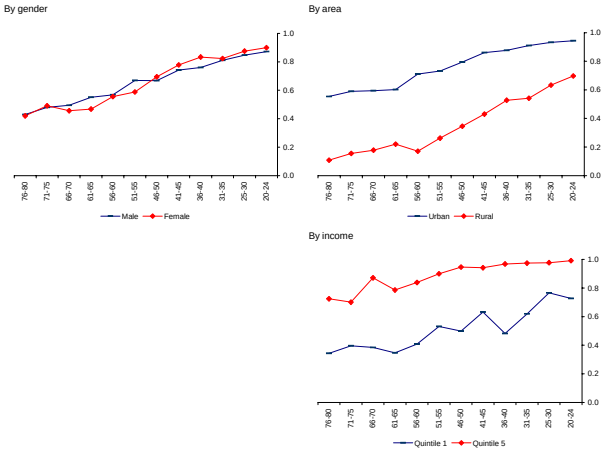

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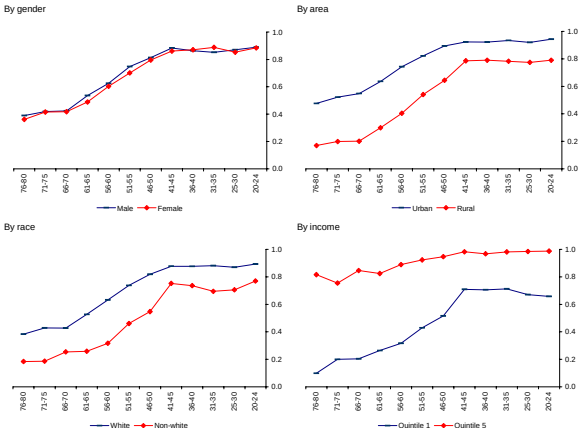
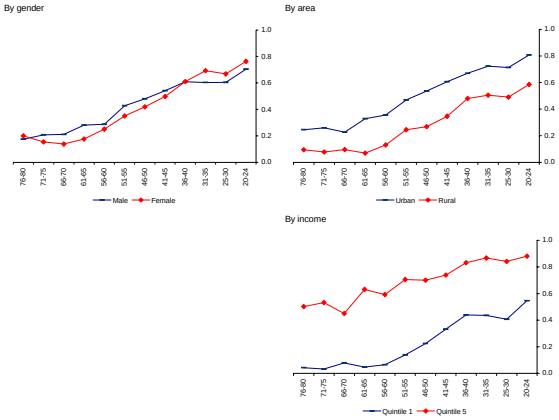
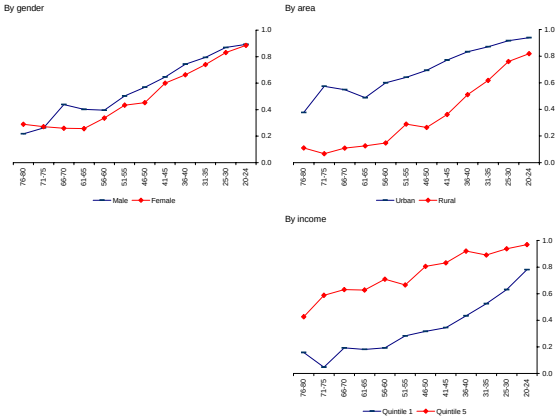


Dominican Republic



Ecuador



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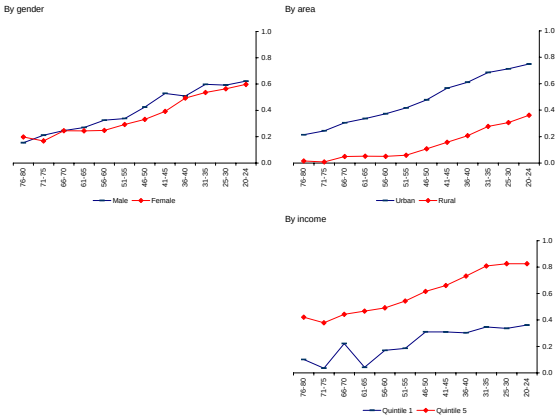

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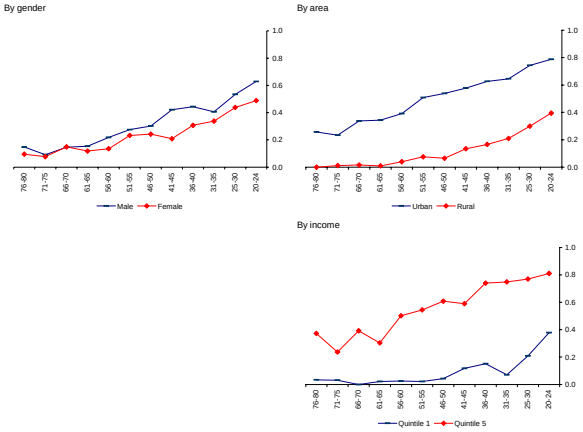

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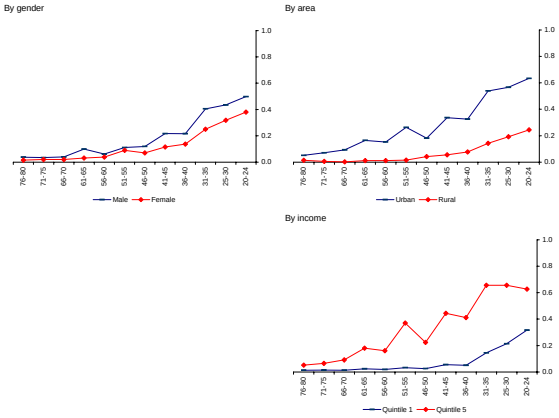
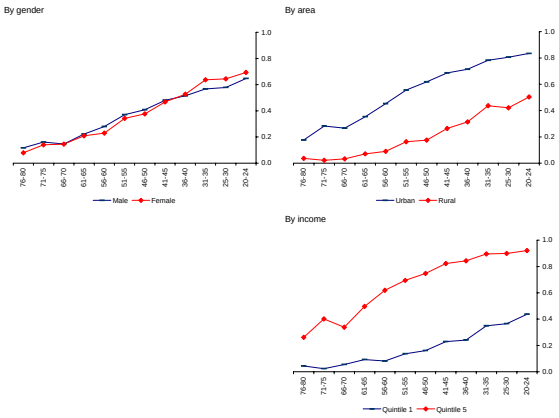


Honduras



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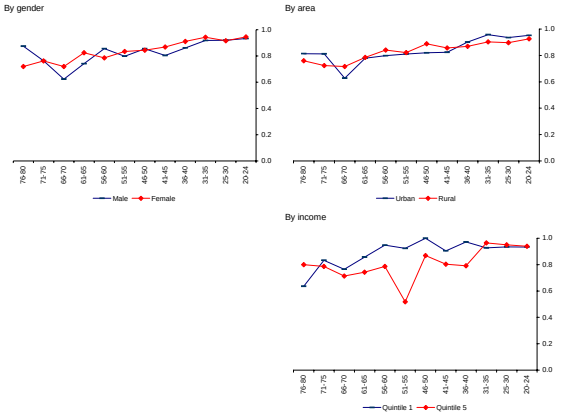

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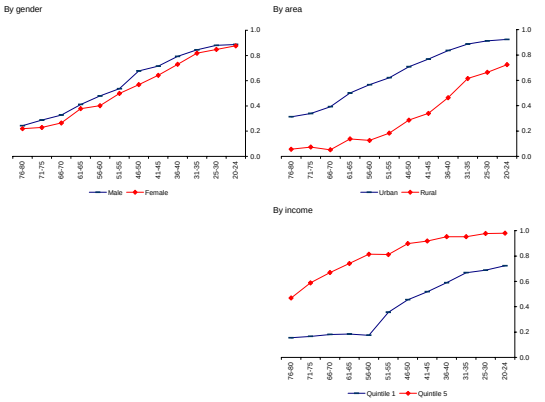

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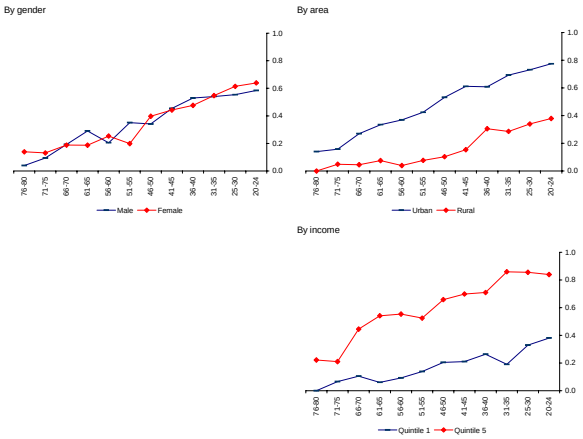

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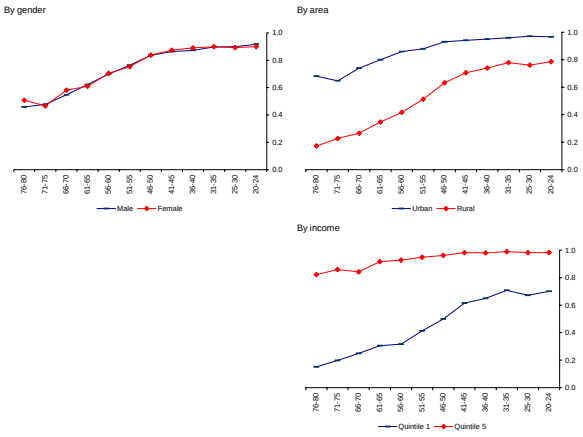

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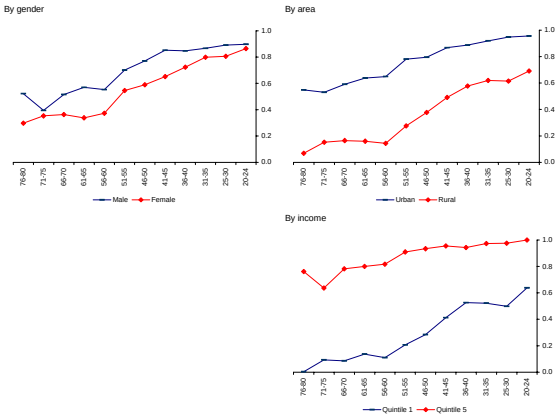

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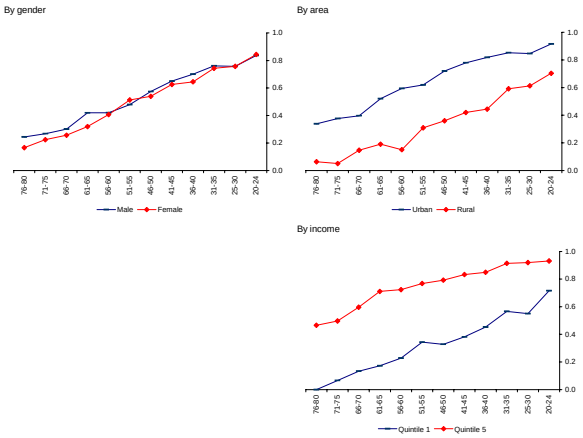

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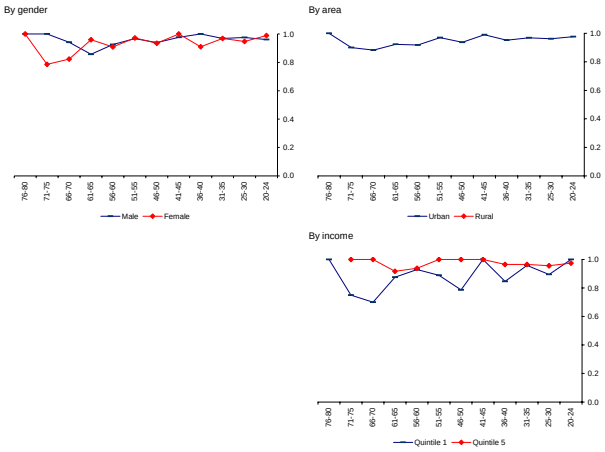

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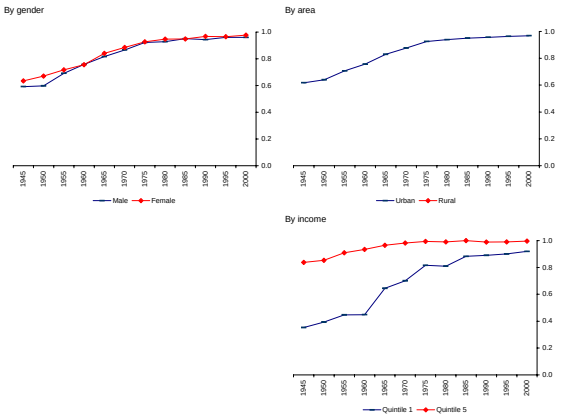
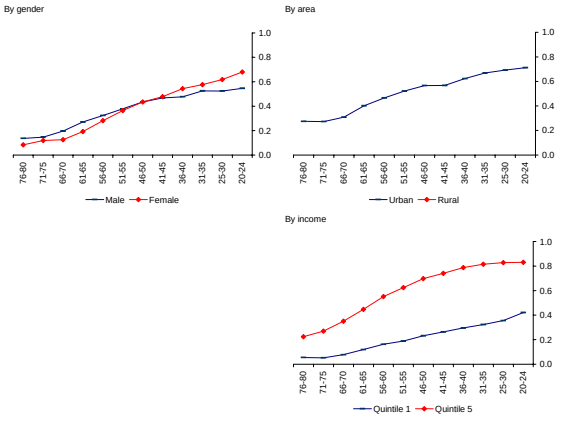
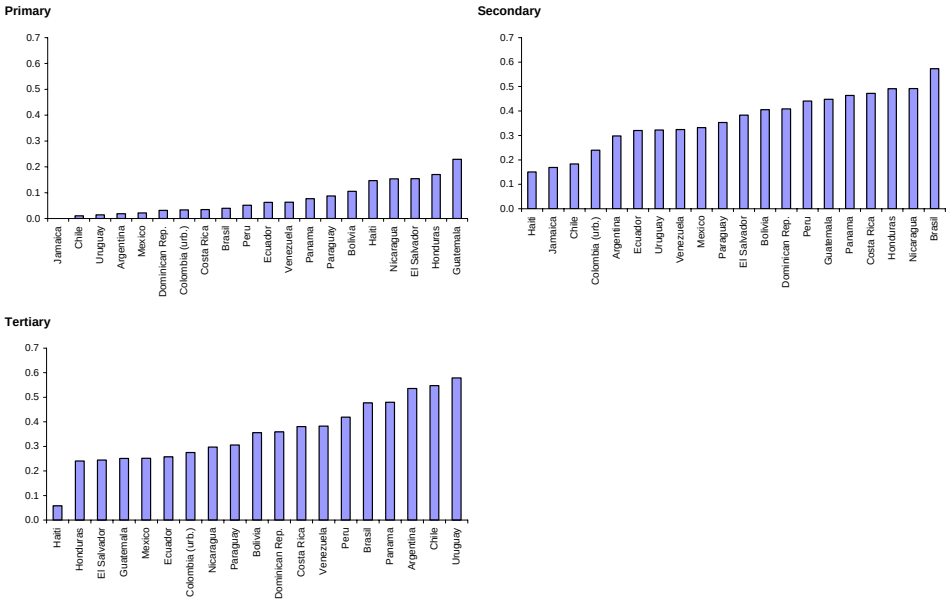


Venezuela



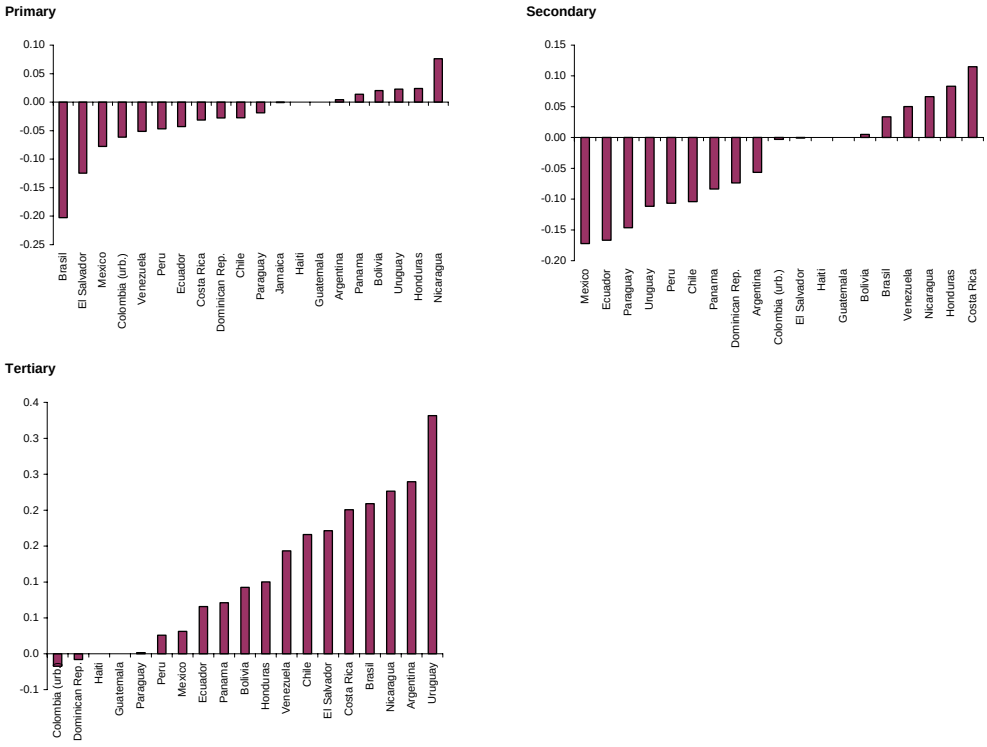
Source: Own estimates based on household surveys.

Figure 6.9
Net enrolment rates – Primary, secondary and tertiary levels
Gaps by income quintiles (Q5-Q1)



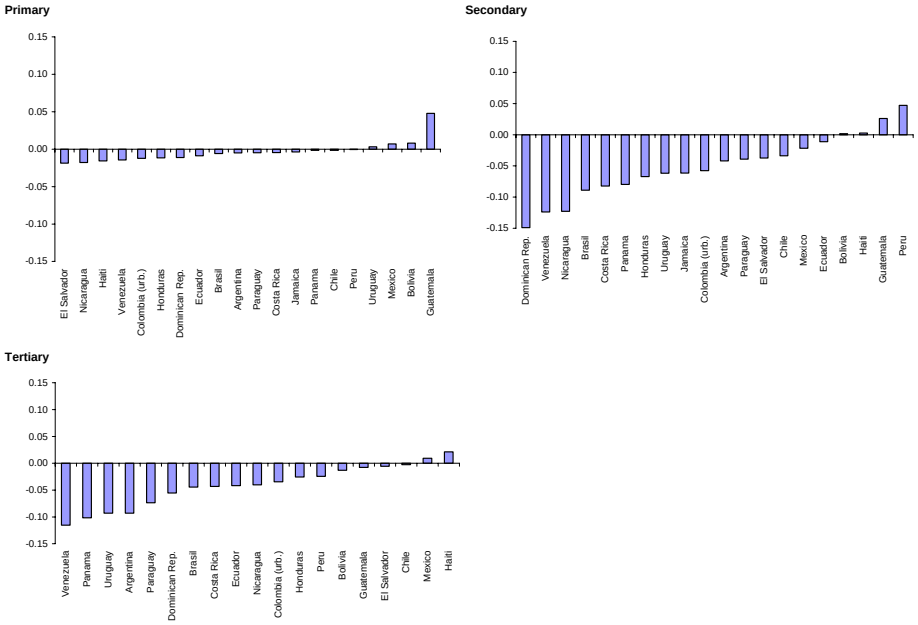
Source: Own estimates based on household surveys.

Figure 6.10
Net enrolment rates – Primary, secondary and tertiary levels
Change in gaps by income quintile



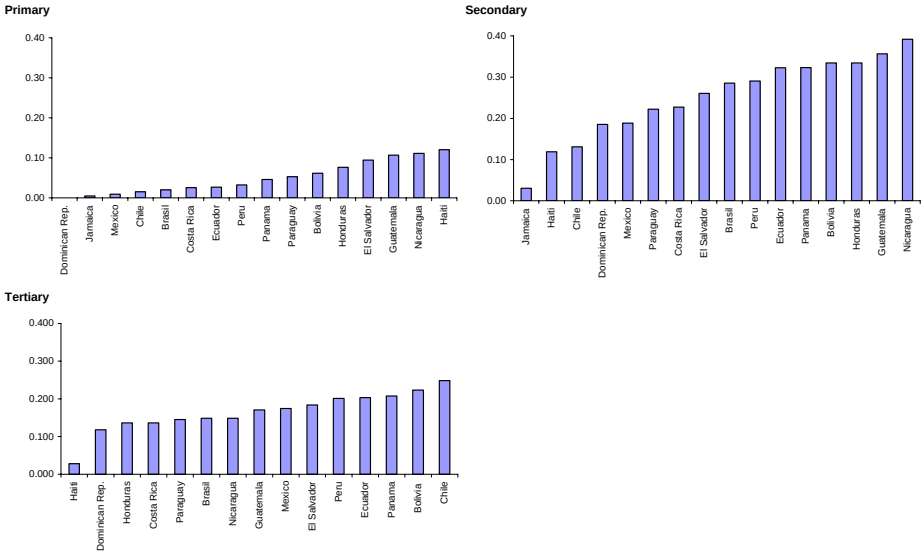
Source: Own estimates based on household surveys.

Figure 6.11
Net enrolment rates – Primary, secondary and tertiary levels
Gaps by gender (Male-Female)



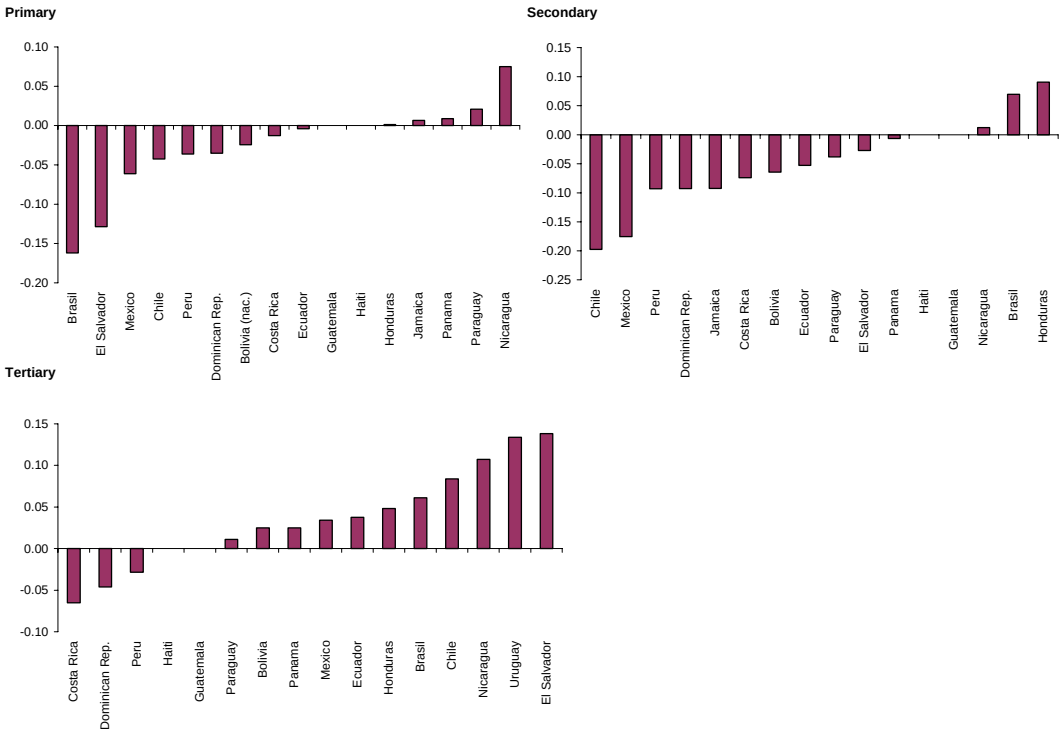
Source: Own estimates based on household surveys.

Figure 6.12
Net enrolment rates – Primary, secondary and tertiary levels
Gaps by area (Urban-Rural)



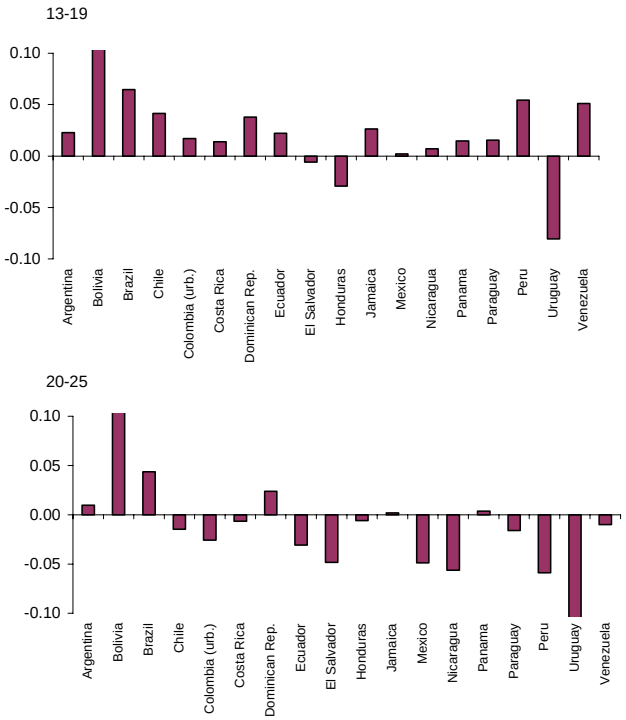
Source: Own estimates based on household surveys.

Figure 6.13
Net enrolment rates – Primary, secondary and tertiary levels
Change in gaps by area



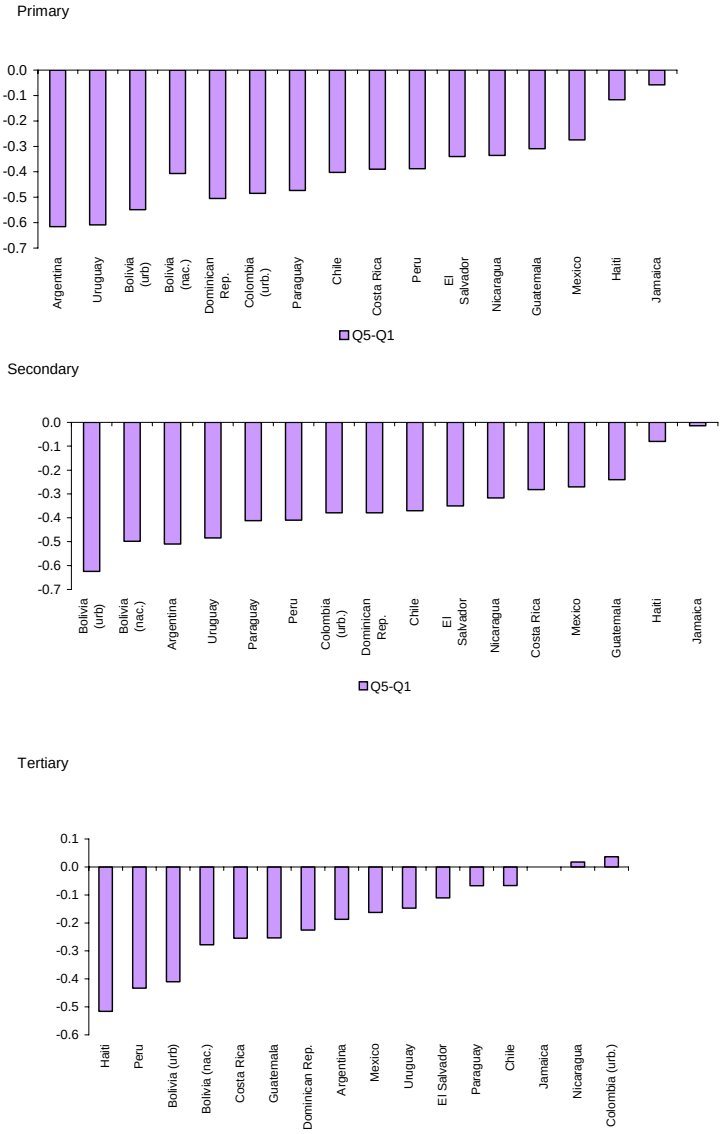
Source: Own estimates based on household surveys.

Figure 6.14
Change in the educational mobility index



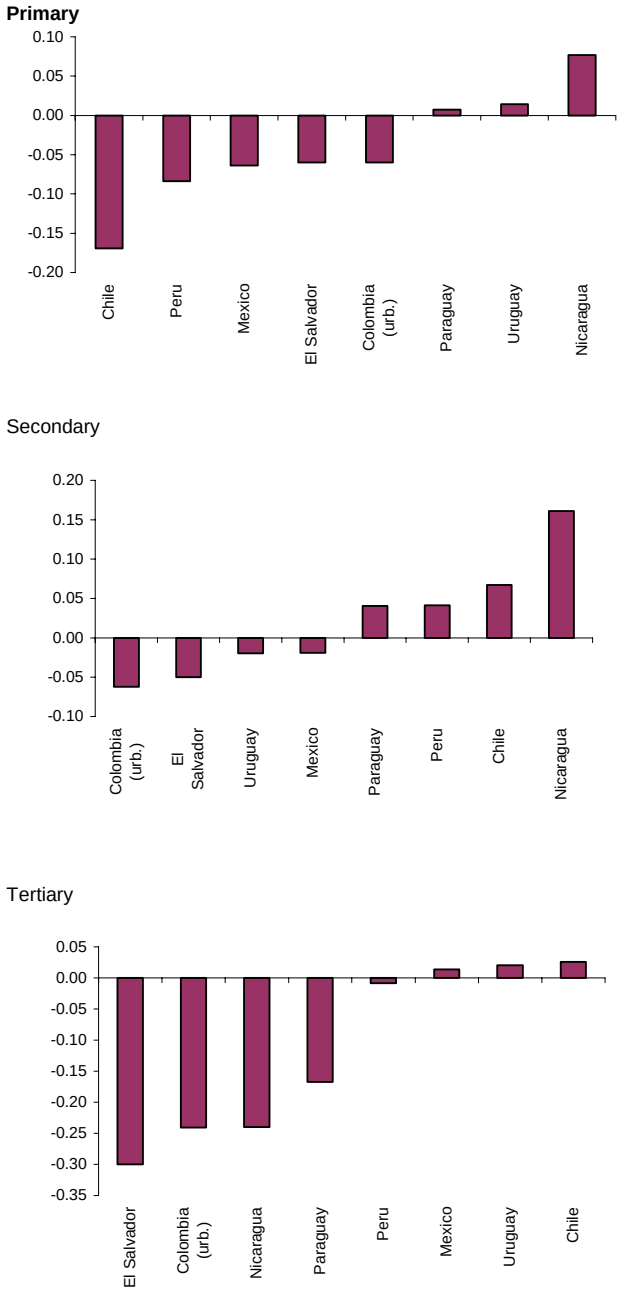
Source: Own estimates based on household surveys.

Figure 6.15
Difference in public school attendance between students in quintile 5 and 1



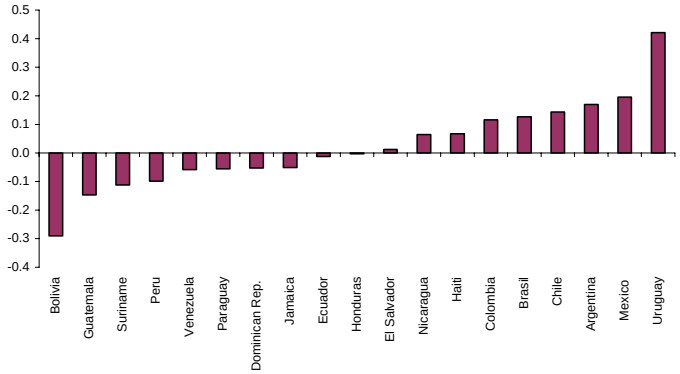
Source: Own estimates based on household surveys.

Figure 6.16
Change in the difference in public school attendance between students in quintile 5 and 1



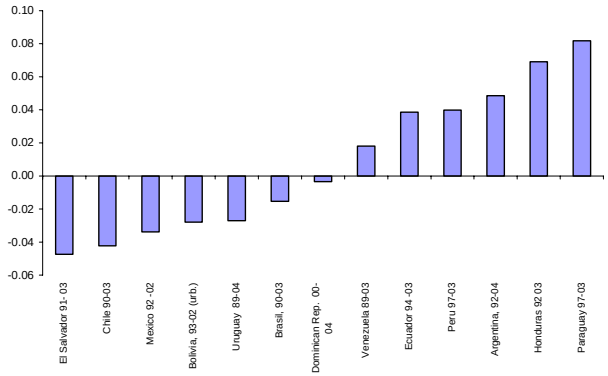
Source: Own estimates based on household surveys.

Figure 7.1
Housing ownership
Difference between quintile 5 and quintile 1



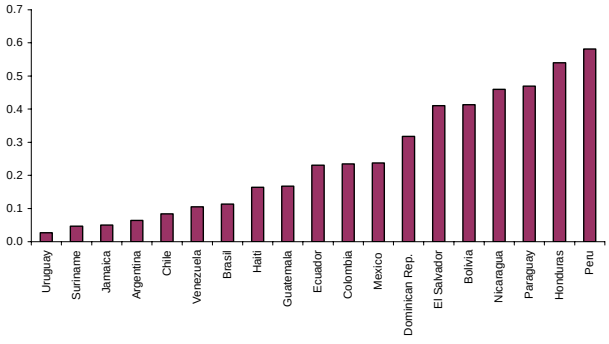
Source: Own estimates based on household surveys.

Figure 7.2
Housing ownership
Changes in the difference between quintile 5 and quintile 1



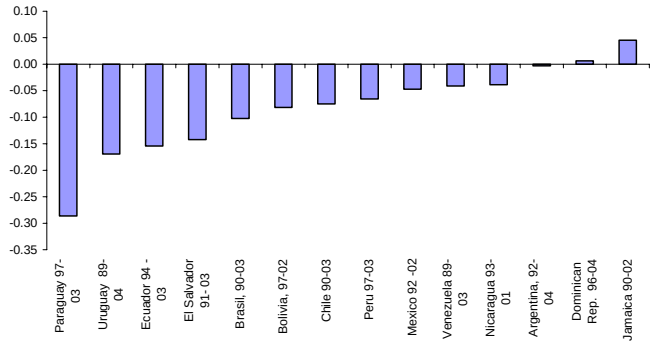
Source: Own estimates based on household surveys.

Figure 7.3
Access to water
Difference between quintile 5 and quintile 1



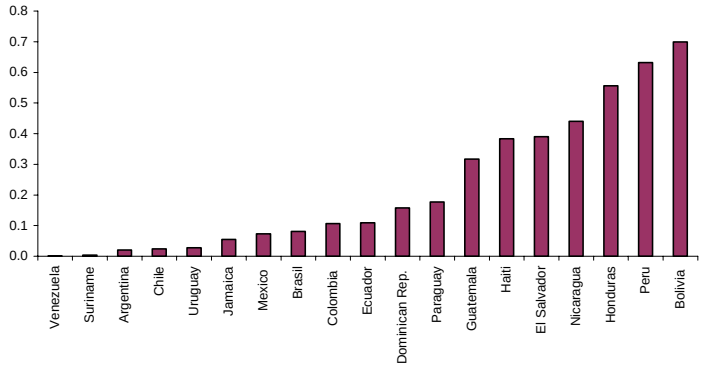
Source: Own estimates based on household surveys.

Figure 7.4
Access to water
Changes in the difference between quintile 5 and quintile 1



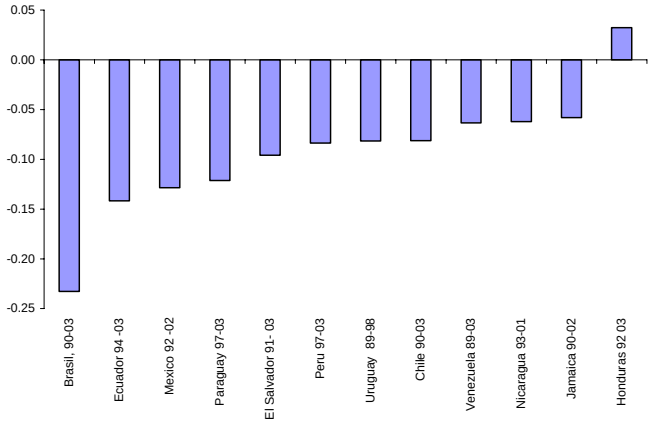
Source: Own estimates based on household surveys.

Figure 7.5
Access to electricity
Difference between quintile 5 and quintile 1



Source: Own estimates based on household surveys.

Figure 7.6
Access to electricity
Changes in the difference between quintile 5 and quintile 1



Source: Own estimates based on household surveys.

Figure B.1
Per capita GDP
Constant prices
Average 1985-2004=100

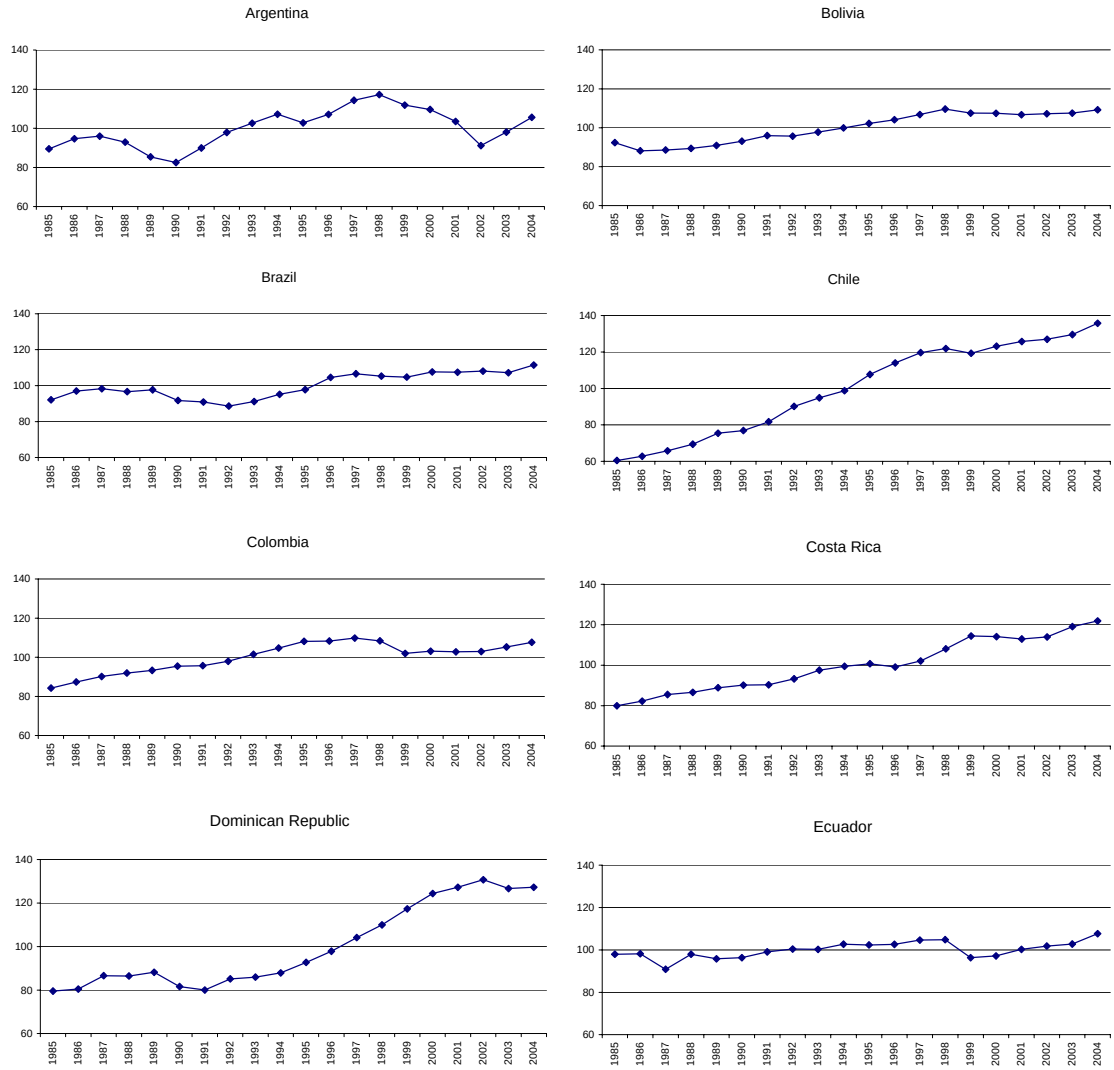


Figure B.1 (cont.)
Per capita GDP
Constant prices
Average 1985-2004=100

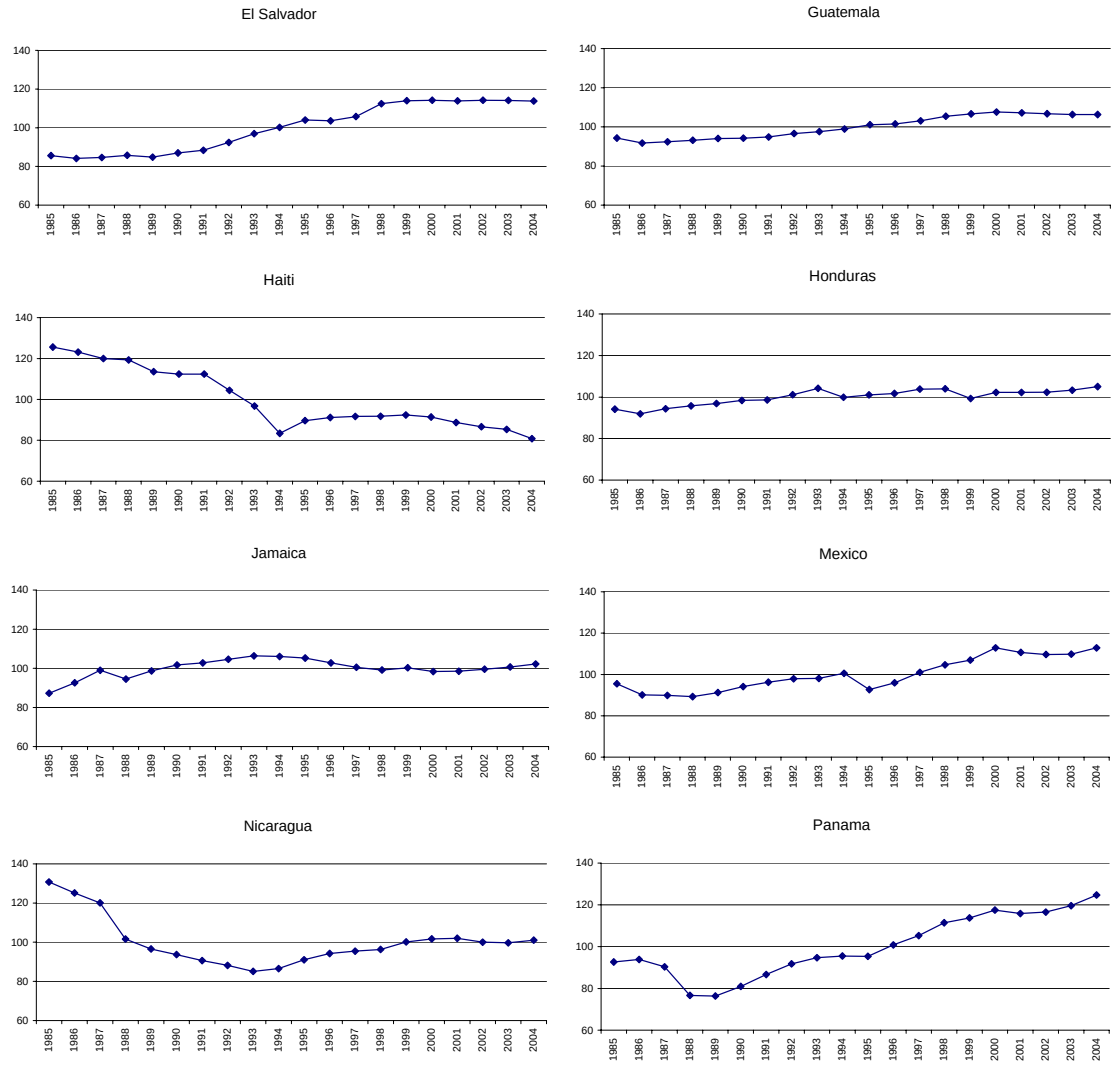


Figure B.1 (cont.)
Per capita GDP
Constant prices
Average 1985-2004=100

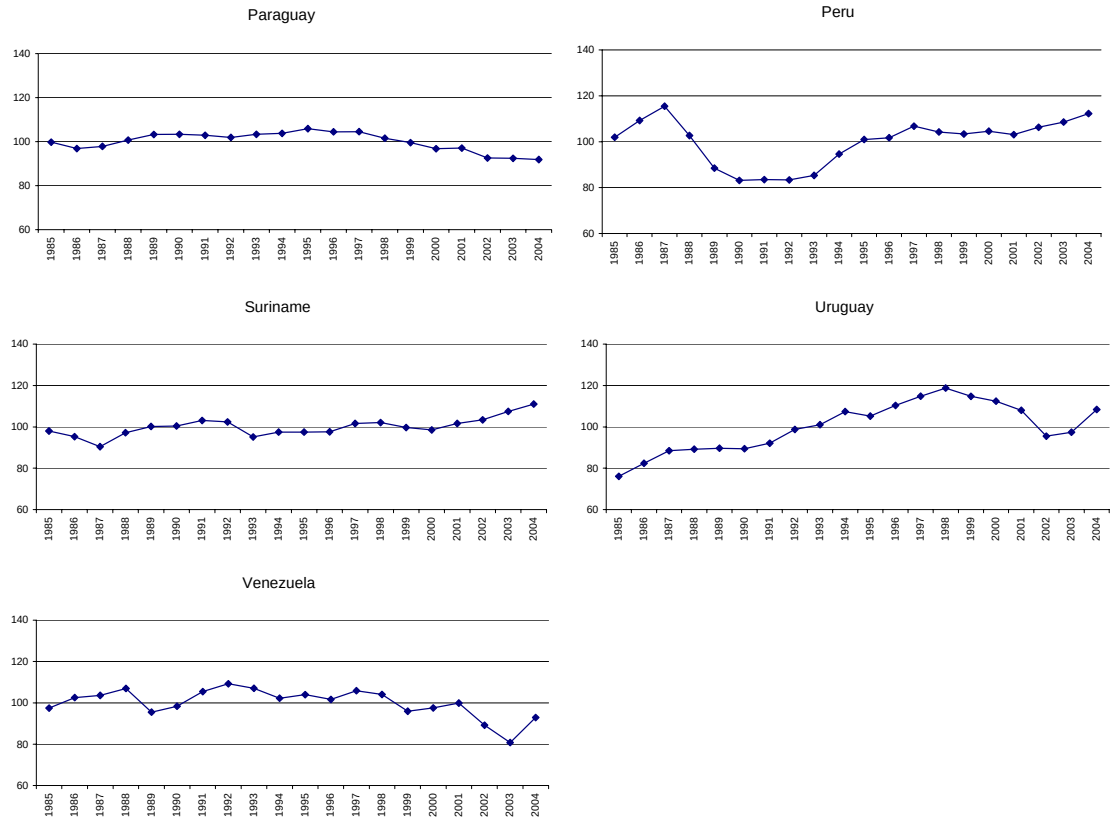
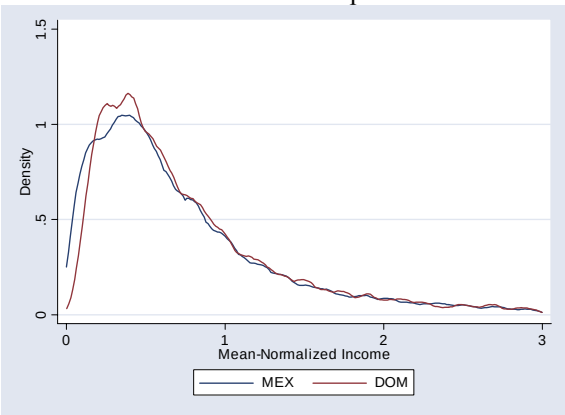
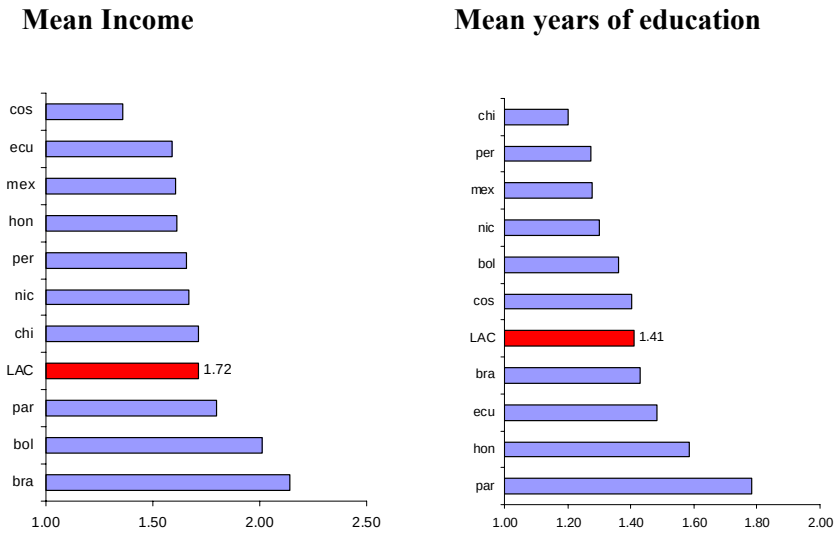


Figure B.2
Household per capita income distribution
Kernel estimation of density functions
Mexico 2002 and Dominican Republic 2004



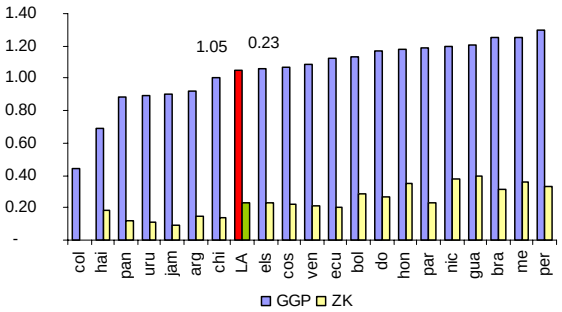
Source: Own estimates based on household surveys.

Figure B.3
Ratios whites/non-whites
Last survey available for each country



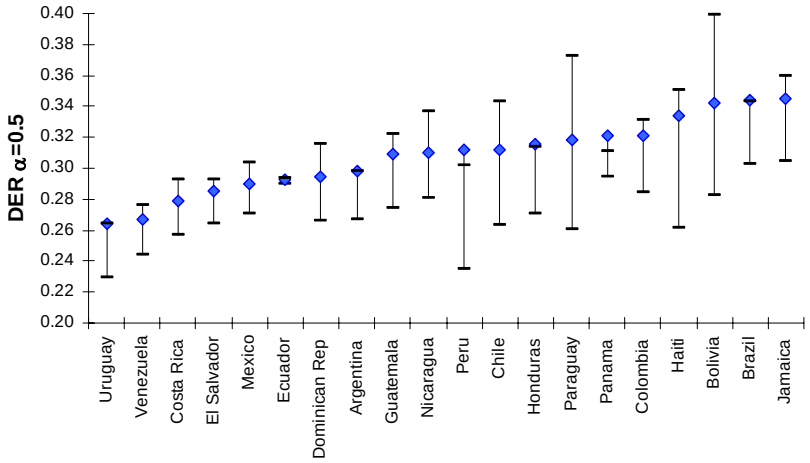
Source: Own calculations based on household surveys

Figure B.4
Income polarisation by basic needs



Source: Own calculations based on household surveys

Figure B.5
DER index (α=0.5)
Minimum, maximum and national value per country



Source: Own estimates based on household surveys.

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Todos los Documentos de Trabajo del CEDLAS están disponibles en formato electrónico en <*www.depeco.econo.unlp.edu.ar/cedlas*>.

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