Social Exclusion in Education in Latin America and the Caribbean

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Foreword

By most accounts, recent reforms in the education sector throughout Latin America and the Caribbean have incorporated more children than at any other time in the past. Overall, on every measure of inputs, schools are better off today than 40 years ago. There are more schools at all levels; teachers are better trained; textbooks are widely and more equitably distributed. Outcome measures, at least on the surface, tend to be encouraging as well. Cohorts currently in school represent all socioeconomic and ethnic backgrounds, enter school earlier, attend school for longer periods of time and complete ever-higher levels of education. Through such expansion, average schooling attainment has been raised.

That said, however, the benefits of educational expansion and reform have not been equitably distributed throughout societies. Benefits largely remain skewed towards the upper end of the scale to an extreme uncommon in other regions of the world, thus leaving many poor, ethnic and racial minorities, and other marginal groups shortchanged.

Although there is some evidence to suggest that gaps in educational attainment between different population groups throughout the region are shrinking, a detailed accounting of the current levels of social exclusion in education and factors contributing to them largely remains a pending task. Few data have been systematically collected, analyzed and used as empirical reference points against which policies and programs can be designed, targeted and implemented. This study takes a first step towards closing this knowledge gap. It provides a quantitative and qualitative accounting and profiling of social exclusion in education in Latin America and the Caribbean. Drawing from the micro-data of household surveys, it produces a state of the art inventory of indicators and contextual factors intervening in the delivery of a quality education at all levels to socially excluded groups, particularly ethnic and racial minorities and the poor. Included here are detailed analyses of the education profile these populations exhibit relative to other populations, their access to a quality education and the levels of attainment they achieve, and the extent to which specific targeting mechanisms are effective in mitigating structural inequities in opportunity.

Preliminary results indicate that severe income inequality and poverty remain by far the most important sources of unequal outcomes in education in Latin America. Ethnic, racial and residential segregation do preserve a noticeable influence, however, in shaping those outcomes.

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Introduction

The past 40 years have been witness to a major expansion of educational access in Latin America and the Caribbean. School enrollment rates among young people have increased steadily during the period, and some areas have experienced dramatic increases in enrollment growth, even doubling or tripling the numbers of children in school. A significant portion of this expansion is no doubt due to steady population growth, which means more resources are needed just to keep up with the ever-increasing numbers of school-aged children. But the expansion of schooling in the region has not been simply the result of a school construction campaign implemented to keep up with growing populations. Education is increasingly viewed as playing a central role in determining both individual (through wages and incomes) and national (economic growth and development) well-being. The public discourse is replete with references to the primacy of education among political, private sector and community leaders. Given the overarching goal of governments to deliver on long-standing promises of improved quality of life for all citizens, educational access has come to matter more as an indicator of progress, development and opportunity.

In addition to providing services to a higher percentage of young people, schools in the region are also better off today on virtually any input measure. There are more schools at all levels; teachers are better trained; and textbooks are more equitably distributed, with better quality in content. Trends in outcome measures, at least on the surface, tend to be encouraging as well. Cohorts currently in school represent all socioeconomic and ethnic backgrounds, enter school earlier, attend school for longer periods of time and complete ever-higher levels of education. With more children spending more time in schools that have more resources, it seems safe to conclude that overall achievement has increased as well.

However, despite these concrete accomplishments in expanding access and raising quality, it cannot be said that all individuals in the region enjoy equal access to educational opportunities or receive the same payoffs to time spent in school. School quality is still highly correlated with student background, which means that poor children have to spend more time in school—with the attendant out of pocket and opportunity costs—in order to keep up with children from middle and upper income backgrounds. These differences in human capital translate into large differences in payoffs to education later in life, and Latin American labor markets show high returns to certain levels of education (namely secondary and tertiary).

These stubbornly persistent inequalities, when viewed in terms of quality and coverage of schooling as well as the payoffs to education for individuals, highlight the central challenge facing policymakers in the region: guaranteeing equal opportunities for quality education for all. The costs of social exclusion are high, and not just for individual members of marginalized communities. Societies that are marked by social exclusion and inequality are less able to create the conditions that are required for the kind of sustained, equitable economic growth that forms the cornerstone of economic development. This does not mean that a more equitable educational system guarantees growth and a better distribution of income. But recent public policy successes, namely in East Asia, provide compelling evidence of a positive link between a broad-based incorporation of all populations into the education sector and equitable growth and competitiveness (IDB, 2000; World Bank, 1993).

What do we know about the dynamics of social exclusion, especially in education, in Latin America and the Caribbean? There is certainly a lot of interest in the topic, as demonstrated by recent edited volumes by Behrman, Gaviria and Székely (2002), Winkler and Cueto (2004) and Reimers (2000). These previous studies are especially useful for their detail at the national level, and they convincingly demonstrate—sometimes dramatically—the lack of improvement in human devel-

opment indicators for certain sectors of these societies. Simply stated, we should avoid placing too much emphasis on overall trends in coverage and quality since the reality in the region is that these improvements are not being experienced by all sectors of society.

With so much information accumulating from context-specific studies of social exclusion in individual countries, our ability to draw general conclusions improves each day. Nevertheless, there are two areas where more work is required. The first concerns the causal dynamics of exclusion, especially as they relate to *intentional* actions by certain groups to limit opportunities for others. This is a difficult—and politically sensitive—topic to analyze in an empirical sense, thus prompting many studies to take an outcomes-based approach focusing on the indicators most closely associated with exclusion (e.g. low levels of attainment and achievement). There is also a need for more comparable indicators of exclusion in the region in order to better synthesize trends and findings. This means working with available data sets, especially household surveys, but also requires more explicitly comparative research frameworks that take advantage of the existence of variation between countries.

In this paper we use recently collected household survey data from more than 20 countries in Latin America and the Caribbean to build on this existing literature and take stock of social exclusion in education in a cross-national context. We do not pretend to resolve the considerable empirical and theoretical challenges involved in identifying socially exclusive mechanisms that operate in these societies. Our approach therefore continues in the same vein as most others, and focuses on the distribution of outcomes. This is done primarily through descriptive tables highlighting "gaps" in attainment, enrollment rates and earnings between different groups, augmented by multivariate analysis and a section on policy that focuses on how actions by policymakers can redress inequalities. Our main contribution is in terms of coverage. The scope has no precedent in the region, and even as a largely descriptive exercise this makes for a unique opportunity to consider the many faces of exclusion.

We begin in the second section of this report with a general discussion of the issue and the underlying dynamics of social exclusion. In the third section we construct a series of indicators that can be used to profile social exclusion in the region and bring in econometric analysis. The fourth section focuses on the policy arena and the ways in which governments in the region have attempted to redress inequalities in education. The fifth section presents a summary and highlights future directions.

Social Exclusion: Analytical Framework

CONCEPTUAL OVERVIEW AND POLICY FRAMEWORK

The roots of economic inequality in Latin America and the Caribbean—generally considered to be the highest in the world—can be traced back to the colonial period. The historical trajectory of political and economic exclusion in the region no doubt plays a crucial role in understanding the dynamics of current social exclusion in education, and has been the subject of numerous studies (e.g. Smith, 1990; Frank, 1979). In fact, it is precisely the historical "embeddedness" of many of the factors that lead to inequality (including extremely unequal access to land, concentrated political power and discriminatory cultural beliefs) that greatly complicate the public policy task of equalizing educational opportunities.

We use the same definition of social exclusion put forth by Jere Behrman, Alejandro Gaviria and Miguel Székely (2002) in their edited volume of articles devoted to social exclusion in Latin America and the Caribbean. They define social exclusion as "the denial of equal access to opportunities imposed by certain groups of society upon others" (2002, pg. 11). Groups can be distinguished by race, ethnicity, religion, geographic location and socioeconomic status, among other categories. Two important characteristics of social exclusion are that individuals largely interact within groups, and that group membership has a "sizeable impact" on opportunities (pg. 12). Examples of social exclusion, according to these conditions, abound in the region as opportunity structures vary between ethnic, racial, geographic and socioeconomic groups.

The dynamics of social exclusion are inherently cumulative. They begin in the pre-natal and infancy period of life, where some mothers have access to quality pre- and post-natal care while others have little or no access to formal health care. They continue during the early school period, as the schooling experiences of some children begin at the pre-school level as early as 2 or 3 years of age, while others never even enroll in school or begin schooling at age 8 or 9 (or older). The schooling environment—conditional on enrollment—also plays an important role in the social exclusion sequence, namely through quality mechanisms that affect learning efficiency and the decision to remain enrolled. Finally, these processes continue during the "productive" (i.e. working) period of life, both as a result of activities such as training that enhance human capital as well as through labor market conditions that affect the returns to a given level of education.

For sociologists these processes are commonly situated within models of intergenerational transmission of inequality (Mare, 1980). In most countries there is little question that the degree of inclusion or exclusion for a given generation is correlated with the experiences of previous generations, and the Latin American region has, historically, been characterized by low levels of intergenerational mobility. This is best evidenced by the effect of parental education and occupation status on the schooling and work outcomes of their children. Recent work by Behrman, Gaviria and Székely (2001) finds that these factors weigh more heavily in Latin America compared with the United States. In addition to the evidence that links schooling and occupation with parental characteristics, researchers have adopted analytical frameworks that are more explicit about choices made by households at different stages of the lifespan (Cameron and Heckman, 1997; Socias, 2004, Strauss and Thomas, 1995). In both cases, the cumulative effects of exclusion are central to understanding individual well being, especially for adolescents and adults who have passed through more of these different stages.

From a policy standpoint a crucial issue in this discussion is the idea of "policy entrance points" that arise at different stages of an individual life course. These interventions are well known, and include everything from targeted pre-natal care for poor women and de-worming pills for at-risk

children to policies that expand access to higher education for poor students or provide job training for working adults. However, once again the "cumulativeness" of these dynamics weighs heavily because the success of a given policy action in time *t* is going to be affected by policy actions in previous points in time (*t-1, t-2,* etc.). For example, legal interventions in labor markets that require firms to hire more ethnic minorities with equal education levels may have limited impact if few minorities attain the necessary educational credentials. In other cases an apparently socially inclusive initiative may actually result in more exclusion. An example is a policy that devotes public resources to providing free access to higher education in a society where most poor people fail to make it out of primary school.

Our depiction of a life course that is affected by policy actions is hardly controversial. But if we return to our working definition of social exclusion (see above) we are immediately faced with a conceptual dilemma that has consequences for our research agenda. Simply stated, how can we analyze the extent to which certain groups of society *deny opportunities* for other groups? One obvious complication concerns the operationalization of group membership. But even setting this aside, the identification of specific instances of *intentional* denial of opportunities and discrimination is an ambitious research query, especially for a cross-sectional study of this nature. Econometric methods allow for indirect estimates of, say, the extent to which certain kinds of individuals are discriminated against in the workplace (Oaxaca, 1973). But we have even fewer tools for applying this idea to outcomes like per-student spending on education or the distribution of health clinics in a given society.

And it is precisely these kinds of policymaking dynamics that are of interest to us, since it is largely through institutions and the underlying tensions between them that opportunity structures are defined. As the structure of any given set of institutions (e.g., composition of the economy, distribution of political and economic power, regime type) vary, so too do opportunity structures or, for our purposes, educational opportunities (see Buchanan and Tollison, 1972; Bates, 1988; North, 1990; Kochar, 2000; Gradstein, 2003). This in turn highlights the need for a framework for understanding why some countries, or states or municipalities or regions, have public institutions (such as educational institutions) that more actively push for "inclusion" (Bowman, 1984; Ramirez and Boli, 1987; Carnoy, Gove and Marshall, 2005). This is clearly beyond the scope of this analysis, but, before we turn to a more outcomes-based approach for understanding social exclusion, it is important to highlight recent directions in this field.

RESEARCH METHODOLOGY

The simplest way to measure exclusion is to define a "gap" in an outcome like school enrollment rates, grade attainment or earnings:

$$\Delta_y = \overline{X}_{1y} - \overline{X}_{2y} \quad (1)$$

where the difference in outcome *y* is measured as the simple difference of means between two groups (1 and 2). These kinds of differences can be manipulated to say more about inequality, like taking the difference in educational attainment between the first (most poor) and fifth (most wealthy) quintiles of the income distribution. The size of this difference can then be taken as an indicator of the degree of inclusiveness, where large gaps are associated with socially exclusive societies. When the researcher only has one country in one point in time the utility of the gap is somewhat limited. But when multiple countries are available, or multiple periods of time, then these differences can be presented in tabular form as a general comparative framework for understanding the distribution of opportunity in a given region or country. Since we have cross-sectional data, we begin the analysis of each outcome with these kinds of "league tables" of social exclusion.

Besides their inherent weakness as relative—rather than absolute—measures,[1] inequality indi-

[1] For example, a society with near uniform poverty may score high in terms of "inclusiveness," while another society where even the poorest segment enjoys a relatively high (absolute) standard of living may be more "exclusionary." Socialist countries—like Cuba—are highly inclusive, yet relatively poor, while industrialized countries—especially the United States—

cators also have little to say about the mechanisms that underlie the observed differences. This is why the bulk of quantitative research in development is more focused on a multivariate equation of the form:

$$Y_i = \beta'_X X_i + \beta'_C C_i + \varepsilon_i \quad (2)$$

where micro-data are used to estimate the determinants of outcome Y for individual i as a function of a vector of individual characteristics X and a vector of control variables for things like region or year. The advantage of (2) compared with (1) is that it provides more information on the proximate mechanisms that *appear* to explain observed differences in earnings or educational attainment. And the increasing availability of household survey data in recent decades in developing countries has made it possible to estimate these kinds of equations using an abundance of information on individuals and their home environments.

The equation in (2) is clearly a more useful framework for conducting policy analysis. But as a causal framework for understanding exclusion it suffers from two general limitations. First there is the problem referred to earlier, which is our inability to capture intentional actions by certain groups that limit opportunities for others. This does not mean that the micro-data approach is entirely incapable of addressing this crucial aspect of the social exclusion "sequence"; the Kochar (2000) article referred to above is one example of how survey data can be used to make inferences about actions by certain groups. Nevertheless, other kinds of data (especially qualitative and historical) are likely to be more useful for establishing these kinds of relationships.

A second problem with the equation in (2) is that the relationships between the X and Y variables are not necessarily causal. For example, high ability individuals may attain the most education and earn the most income, but it may be ability that explains both variables rather than education explaining earnings *per se*. In other words, an important variable is (unintentionally) omitted from the equation. Another form of "omitted variable bias" is likely to confound interpretation of family background variables on outcomes like schooling and earnings. One of the fundamental findings of hundreds of studies of grade attainment among young people can be termed the "poverty explanation", where children from families with low levels of income and parental education are likely to attain less schooling than others. In a structural sense the slope of the family background variable on this outcome is important, since it provides a rough indication about both the distribution of opportunity and the prospects of upward mobility. But from an econometric and policy standpoint these are difficult relations to interpret because it is likely that poverty directly affects schooling, but it also seems likely that children from low socioeconomic status (SES) (socioeconomic status) families have access to the worst schools, or live in the most dangerous neighborhoods, etc. So it is easy to overstate the direct influence of poverty on this particular outcome, which may in turn overstate the potential effectiveness of certain kinds of policy interventions.

In recent years, better survey data has made it possible to estimate more "policy-friendly" versions of (2) that include specific features of the opportunity structure as covariates of outcomes like enrollment and grade attainment:

$$Y_i = \beta'_X X_i + \beta'_C C_i + \beta'_P P + \varepsilon_i \quad (3)$$

which is the same as (2) only now there is a vector of policy instruments P. For schooling outcomes for young people these commonly include things like distance to the nearest school, physical measures of school quality (leaky roofs, electricity, etc.) and (occasionally) information on targeted interventions such as a scholarship. For earnings there are far fewer options, although one important line of investigation centers on the relationship between school quality and earnings (Birdsall and Behrman, 1983; Bedi and Edwards, 2002). For researchers interested in schooling, these new and improved surveys mean that they are better able to situate schooling outcomes within the larger environment that households face when deciding whether or not to send children to school. These studies also go well with an

have higher levels of inequality and apparent "exclusion" but a higher absolute standard of living.

already large (and growing) body of information about the covariates of academic achievement (Fuller and Clarke, 1994; Glewwe, 2002).

The equation in (3) is a clear improvement on (2), but it too suffers from some concerns about omitted variable bias. For example, if well equipped schools are also able to attract the most capable teachers, then significant parameters for variables like the physical condition of the school may incorrectly suggest that investments in physical infrastructure are an effective way of improving schooling outcomes. This criticism is related to our larger conceptual problem with interpreting these kinds of econometric estimates, since specific actions by certain groups to limit opportunities for others may lay behind the *distribution* of variables like school access, quality, scholarships, etc. Once again, in the average empirical analysis we simply have no way of establishing if certain groups are being intentionally discriminated against.

The unfortunate reality is that researchers are never likely to have all of the variables that affect these outcomes in their databases, and treating features of the policy environment as endogenously placed outcomes in their own right—while conceptually necessary in most contexts—is exceedingly demanding empirically. This, of course, limits the utility of these findings, both in terms of understanding the immediate causes of low attainment or earnings, as well as how the determinants are distributed in the first place.

Our original intention in this paper was to focus on estimating equations like those in (3) for outcomes such as enrollment, overall attainment, attainment "efficiency" and earnings. However, one of the principal challenges of carrying out cross-sectional analysis concerns data availability. Despite recent improvements in the information that is available to researchers in the region, our surveys have little information on policy levers. For instance, it is not uncommon for these surveys to ask enrolled students about the distance they travel to school, but the same question is not put to non-enrolled children. Missing values are another problem in some cases. So, except for a few exceptions in the fifth section, the majority of our econometric work is devoted to estimating equations like (2). As we have stated repeatedly, this kind of analysis—which can be called structural in a sociological sense only (and not in the econometric sense)—has some limitations when it comes to providing concrete policy findings and recommendations. But as an exercise that traces out the contours of social exclusion in the region along several important dimensions, and does this in a comparative manner with roughly 20 countries, we feel the primarily descriptive framework has utility.

THE DATA

Table 1 shows a list of the countries used in the analysis together with the survey years. In most cases the data are from 1999-2001 and include both urban and rural residents.

Indicators of Social Exclusion in Education

This section focuses on indicators of social exclusion in Latin America and the Caribbean. As was argued before, there is no question that inequality and exclusion are serious problems in the region, and this study is by no means the first to deal with the topic. But what is missing is a top to bottom accounting of the issue in education using comparable data from household surveys and other sources. This requires, above all else, a series of indicators that capture distinct components of social exclusion. We make extensive use of household survey data to consider specific indicators of exclusion related to school enrollment, grade attainment and individual earnings. The analysis of these outcomes consists of descriptive statistic comparisons augmented by multivariate analysis of the type defined by equation (2) in the previous section. With the descriptive tables followed by multivariate analysis the reader will get a feel for both the distribution of social exclusion in education in the region and the individual circumstance variables that are the strongest predictors of each outcome. This is important information in its own right. But it will also provide a useful transition point for the forth section when we move from this largely descriptive depiction of exclusion and consider how specific policy features can affect these outcomes.

INDICATORS OF SOCIAL EXCLUSION IN EDUCATION

We start with some simple measures of both the "stock" and "flow" of education in the region. These include: current enrollment, grade attainment in completed years and the number of grades completed by age ("grade for age") for young people. We also trace the evolution of attainment differentials by comparing this measure for several different cohorts of adults and in different survey years. In addition to the descriptive work, multivariate statistical analysis is used to model each dependent variable as a function of the "differentiator" variables. The age groupings borrow from Filmer (1999), and use 6-11, 12-14 and 15-19 for enrollment, attainment and grade-for-age, and 20-30, 31-40 and 41-50 for grade attainment among adult cohorts. For each measure we have four differentiators: gender, high SES/low SES, urban/rural and "community."

The last category is clearly the most problematic, as there are few comparable categories in the region and it is not always the case that the surveys asked participants to describe themselves in terms of race or ethnicity (or language). There is no such thing as an official classification of these concepts, and two popular groupings (race and ethnicity) are of course different and, furthermore, are subject to political, social and cultural constructions. For example, race is a concept rooted in supposed physical differences for specific groups ("individual races"), but unlike differences between species, it is *not* the case that physical traits like skin or hair color are specific to these groups. Ethnicity is more associated with culture and, as is the case with race, members of different ethnic groups can share many traits. For our purposes we use the term community as a general differentiator variable, but for the specific comparisons that follow we have to rely on the terminology used by individual surveys and, by extension, the "self-description" by participants according to race, ethnicity or language. Our use of these particular grouping variables should not be interpreted as condoning this kind of categorization, but rather reflects the reality that these social constructs exist in these societies and, furthermore, their existence may have serious consequences in the context of exclusion.[2]

With current enrollment by age cohort we have our most basic indicator of social inclusion in education. In some countries the various differentiator variables will have an immediate impact

[2] This discussion benefited from the input of Carlos Perafán of the Indigenous Peoples and Community Development Unit (SDS/IND) of the IDB.

on this outcome, even for children aged 6-11. But when countries have near universal primary school enrollment rates (i.e., Chile) the impacts of each will be largely restricted to upper age groups, especially for current enrollment. Grade for age is computed by dividing the number of years of completed education by the difference between the child's current age and 6, the age of entry into school in most countries. This is a measure of both access and efficiency, since children with little access to formal schooling (especially at higher levels) and those who have failed many times will have low scores, while those students who enter at age 6 and complete grade after grade without repeating will have values at or near 1.0 (meaning one grade completed for year). In a region that leads the world in grade repetition (Schiefelbein, 1989; Marshall, 2003) this is another important dimension of social exclusion to be considered.

Current Enrollment

Tables 2 through 3 begin the work with the current enrollment outcome, defined simply as Yes/No for whether or not the child is enrolled in school this year. We begin with gender in Table 2. The first result that stands out is that, on average, there is little differentiation in the region by gender for the youngest children. In fact, in almost all cases the boy is moderately *less* likely to be currently enrolled than the girl for the 6-11 age group. However, as we move through the cohorts this story changes, somewhat. For 12-14 year olds the gap favors boys in roughly half of the countries, and in Guatemala and Bolivia—two countries with large indigenous populations—the gaps are on the order of 7.6 and 6.0 points, respectively. For the oldest age group (15-19) the results reveal still larger magnitudes of differences by gender, but the trend of higher enrollment rates for boys in the middle age cohort does not continue in the oldest cohort. In some countries, namely El Salvador, Guatemala, Haiti and Bolivia, girls fare worse. But in others, girls are more likely to be enrolled, and in some cases the differences are large.

The data in Tables 3 and 4 tell a more consistent story, as the only differences between countries concern the magnitude of the differentiation—not the direction. For income, the gap between the poorest (Quintile 1) and wealthiest (Quintile 5) sectors starts out below 10 percent in most countries for 6-11 year olds and steadily increases. The greatest exclusion is found in Central America where already in the youngest cohort the gaps between quintiles are on an order of 15-20 percent in El Salvador, Guatemala and Honduras. Not surprisingly, these steadily increase in virtually all countries in the region as we move through the higher age cohorts. For the oldest children the gap between quintiles is quite large, generally on an order of 20 to 30 percent.

The pattern for urban-rural, broken down in Table 4, is nearly identical to the socioeconomic status story told in Table 3. Once again for the youngest cohorts the gaps between areas—while real—are generally not large, especially outside of Central America. With so much school construction at the primary level, and near universal enrollment for this age group in some countries, this result is not surprising. But, once again, the gap begins to steadily grow as we move through the age cohorts.

Table 5 presents the results from the multivariate analysis designed to synthesize the preceding discussion. As noted earlier, we are estimating a simple equation and the purpose is more descriptive—albeit descriptive in a multivariate way—than causal. For each country and age group the 0-1 enrollment outcome is regressed on to gender, a 0-1 measure for being in the poorest quintile (1=yes), and urban-rural residence (1=rural). Our community variables are not included here because of inconsistent measurement and availability, but are returned to below in a separate subsection. Also, the surveys include no rural residents in Argentina or Uruguay. The coefficients in Table 5 are marginal effects calculated at sample means, with bold indicating statistical significance at the 0.05 level.[3] The coefficients should be interpreted as changes, in percentage

[3] Robust standard errors are used to compute the significance level that correct for clustering by household. Sample weights are used in all estimations.

points, of being enrolled given a one unit change in the independent variable.

For gender we see few significant parameters in the youngest cohort, and the significant coefficients in the older cohorts are mostly found in the Central American region. With these coefficients we can draw some tentative conclusions about gender, and the main one is that it appears that girls' schooling suffers relative to boys' in only a handful of countries in the region. In fact, for the oldest cohort *it is the boy* who is less likely to be enrolled in six countries. We will return to this finding below in more detail.

The next result that stands out in Table 5 is that place of residence strongly co-varies with enrollment. The coefficients for the urban-rural dummy variable are consistently the largest in all countries, with the only exception being for the 6-11 cohort where the poverty quintile dummy has roughly the same sized effect.[4] In other words, for young people it does not appear that physical access is a major issue, at least compared with other features of poverty. But with older cohorts this story changes, in some cases quite dramatically. In five countries (Guatemala, Honduras, Nicaragua, Bolivia and Ecuador) the marginal effect of residence on enrollment for children aged 15-19 is greater than 25 percent. The only coefficient for being poor that approaches this size is for Uruguay, where the sample is for urban residents only.

Once again we must be realistic about interpreting a variable like rural residence that is likely to be correlated with multiple unmeasured features of rural life, not just the distance to the nearest school. Rural children may have to work more at home, or the increasing (by age group) coefficients for rural may result from lower rates of primary school completion. Nevertheless, the issue of physical access is an important one from a policy standpoint, and not only because a lack of availability of middle and secondary schools raises the costs of attainment for older children in rural areas. Supply constraints at these levels can also affect primary school completion rates, especially when primary school completion is valued mainly for the "option" of continuing on to the next level (Lavy, 1996; Carnoy, 2001).

The best way to test the idea that physical access underlies these results for the rural variable is to include in the regression a measure of how long it takes to get to school and observe the coefficient for rural when controlling for distance. If it loses size and significance we could conclude that access is the principal mechanism that explains the urban-rural gap. Unfortunately, most surveys measure distance only for *enrolled* students, so this kind of exercise is impossible for the enrollment outcome. Its utility for measuring attainment is greatly reduced because we have to restrict the analysis to enrolled students.

Table 6 presents the results of another exercise that examines physical access as a covariate of enrollment. The same enrollment equation is estimated for the oldest cohort (ages 15-19), only now it is repeated only for those children who have completed primary school. With a few exceptions, the results show that there is little difference in the size and significance of the rural coefficient comparing the whole sample with the primary school complete sample. In other words, the rural dummy does not disappear when we restrict the analysis to primary school completers, as we would expect if the mechanism that explains why older, rural children are so much less likely to be enrolled is because they have not completed primary school. This certainly gives the physical access explanation more support, but we are unable to entirely resolve this question for the simple reason that we cannot rule out other influences in rural areas.

Grade Attainment and Grade-for-Age

Summary data on grade attainment are presented in Tables 7 thru 10. Not surprisingly, the results are similar to those for enrollment. The Central American countries have the lowest attainment levels, as three countries (Guatemala, Honduras and Nicaragua) have at least one group of 15-19 year olds with less than six years of completed education. For the gender gaps, detailed in Table

[4] These kinds of comparisons between coefficients are somewhat problematic since we need to take into account the distribution of variables like residence.

7, the results are also similar compared with enrollment. One pattern that deserves mention, however, is that the gaps favoring boys are smaller for attainment than enrollment. In other words, in countries like El Salvador, where boys aged 12-19 are more likely to be enrolled in school, they do not complete more grades than girls. This means that grade completion efficiency for girls is higher (this is addressed more directly below with the grade-for-age outcome).

The gaps by income quintile (Table 8) and urban-rural residence (Table 9) once again start out relatively small among young people and increase steadily. For children aged 15-19 the gaps in some countries are on an order of three full years of completed education. When the gap is divided by attainment for the poorest students the difference between quintiles 1 and 5 represents as much as 75 percent of their average attainment.

The multivariate results for attainment are presented in Table 10. As expected, the overall flavor is similar to that encountered for enrollment, only now the dependent variable is treated as a continuous measure and ordinary least squares (OLS) regression analysis is used.[5] But there is one interesting difference between Tables 5 and 10. For enrollment, the largest marginal effects were generally attributable to residence (urban versus rural). But for the attainment outcome, at least in some countries (Costa Rica, Panama, Chile and Paraguay), the poverty measure has more weight. Yet again, this result touches on completion rates since the implication is that simple access may have a large effect on being enrolled, but that socioeconomic background has a larger overall effect via its impact on the number of years of schooling the child completes.

The final schooling outcome, grade-for-age, is presented in Tables 11 through 14. This is a measure of efficiency, and the numbers refer to the number of grades completed per year from the age of 6 onward. One issue that affects the comparability of these results is the age when students enter school. For example, we see that efficiency is lower in Costa Rica than in El Salvador. But if Costa Rican children are entering first grade at age 7, and Salvadorian children are entering as early as age 5, then these kinds of cross-country comparisons are problematic. In most countries the official age for beginning the first grade is 6 or 7, but the data are not entirely comparable even if we calculate this measure based on the official age in each country because it is the *real* age when children enter, not the official age, that matters. So we use age 6 and divide the total number of completed grades by the difference between the current age and 6 (age minus 6).

For gender the results for efficiency are even more positive for girls. It was already shown in Table 2 that gender differences in enrollment are inconsistent across countries because, in most, it is the girl who is actually more likely to be enrolled. The results in Table 11 show less inconsistency because in almost all cases the girl has completed grades in a more efficient manner. The reason for this is simple: girls are less likely to fail a grade and repeat than boys. And in almost all of the countries where boys were more likely to be enrolled, the age-for-grade number is higher for girls. Guatemala, Bolivia and Peru are the only exceptions, but in these countries the gaps in efficiency between boys and girls are negligible, and much smaller than the gaps in enrollment rates.

The multivariate results are summarized in Table 14. For gender the numbers correspond to what was previously shown, as the only significant results for girls (meaning a negative coefficient) are found in Guatemala and Bolivia. Among the youngest cohort the strongest predictor of efficiency is social class. In the older co-

[5] For both outcomes (attainment and grade-for-age) there are other analytical options. An ordered probit estimator can be used since attainment, especially for young people, is an ordered outcome. There is also the issue of censored schooling histories for currently enrolled students, which suggests the need for hazard estimators. For grade-for-age there is censoring at 0 and 1, which means that a tobit with upper and lower limits is feasible. Additional estimations were obtained with these models and the results were not much different, so the OLS results are used in both cases for simplicity of interpretation and presentation.

horts the effects of rural residence are predominant.

Schooling and Community

Latin America and the Caribbean is a highly diverse region, both between and within countries. So any discussion of social exclusion must include this dimension, which we refer to under the general heading of community. However, this is easier said than done, at least for the present data summation exercise, for two reasons. The first problem is largely definitional, since our diversity measures must include components of (self-described) race, ethnicity and language. Each is a potential differentiator variable, but compared with gender or urban/rural residence they are harder to classify. For race there are general categories but many possible variations, and people may be understandably reluctant to choose a single option. Language is more straightforward to measure, but as an indicator of ethnicity it is also problematic since many people are bilingual, or people who do not speak an indigenous language may still consider themselves to be indigenous.

The second problem is perhaps a function of the first, and concerns the relative scarcity of race and ethnicity indicators in survey data in the region. For example, in Peru and Mexico there is no way to identify non-Spanish speakers, while in Colombia there is no way to identify Afro-Colombians. Previous experiences with measuring these variables, especially for race, may have resulted in discontinuing them in surveys. A more troubling possibility is that their omission reflects a reluctance to tackle issues of social exclusion. Or, at the other extreme, policymakers may feel that there is no public policy justification for collecting demographic data of this sort because of a perceived *lack* of discrimination.

Regardless of the explanation, the fact that out of more than 20 surveys in the region we can only present summary data by community (including language) for a handful of countries highlights one of the difficulties of carrying out research on social exclusion in the region. Our inability to identify racial, ethnic and language groups, many of which are likely to reside in relatively poor and at-risk communities, cannot be justified by measurement concerns. As we referred to earlier, these classifications exist as social constructions, even if the genetic (or other) basis for their existence is weak. So researchers must have access to these classifications in order to consider the extent to which group membership appears to have consequences in these societies.

There is certainly evidence that the community categories matter. In Tables 15 and 16 we replicate the previous descriptive and multivariate analyses for enrollment and grade attainment in four countries with data on self-described race, language and ethnicity. In Table 15 we see that there are gaps in enrollment rates between self-described Caucasians (Bolivia and Brazil), Ladinos (Guatemala) and Spanish-only speakers (Paraguay) compared with other racial, ethnic and language groups. These gaps start out small for young children and steadily increase, and in some cases are quite large. However, the marginal effect of these categories on the probability of being enrolled, when controlling gender, SES and rural residence, varies considerably among these four examples. In Bolivia the enrollment gap between indigenous and Caucasian disappears when controlling for these variables, and in Brazil the raw differences are reduced by more than half (although they are still significant) when taking into account these other variables. For Guatemala and Paraguay the story is different, as large marginal effects—sometimes larger than the raw differences—remain even after controlling for gender, SES and residence.

The pattern is similar for attainment, although there is, across the board, a more substantial total effect of race/ethnicity/language on attainment. In other words, the relatively small marginal differences in enrollment probabilities in Bolivia and Brazil are considerably larger (and more significant) for attainment. Once again we see large marginal differences in attainment by the various groupings for Guatemala and Paraguay.

When controls for socioeconomic background and residence fail to reduce much of the raw gap

in enrollment and attainment—which is certainly the case in Guatemala and Paraguay—then the public policy imperative of tackling this issue is obvious. The challenge, as in many areas of policymaking and research, lies in the identification of specific mechanisms that underlie these results. Do indigenous Guatemalans perceive a lack of utility for schooling, perhaps because of anticipated discrimination or a lack of access to wage-paying labor? Or are their children in effect "pushed out" because their schools are underfunded and unable to provide a decent learning environment, or are too remote to attend? These are hard questions to answer. And even in Bolivia and Brazil, where the marginal effects of the group categories are reduced (sometimes considerably) when controlling for background, we should avoid the literal interpretation of this as evidence of social inclusiveness. Discrimination against indigenous Bolivians or Afro-Brazilians may result in them having lower SES or being concentrated in rural areas, which will not turn up directly in our estimations but still be exclusionary.

Sweeping conclusions for the region are unwarranted with data from four countries, and our ability to provide a complete story about social exclusion along these racial, ethnic and language group dimensions even within each of these countries is limited. Nevertheless, the results highlight some important dynamics and, at the least, the need to have similar kinds of data available in other contexts and for other outcomes, like achievement (see McEwan, 2004).

Grade Attainment Among Adults: Another Take on Gender Equality

The summary tables and multivariate analysis detailed earlier (Tables 2 and 5) show that girls and boys are treated equally in Latin American and the Caribbean, at least in terms of school enrollment probabilities and grade attainment, a result that may come as a surprise to some readers. One take is that the degree of bias against women and "machismo" in Latin America is overstated, and that these data for children are representative of historical trends. But the data in Table 17 belie this assertion, and demonstrate that equal schooling between boys and girls is a fairly recent phenomenon. In fact, there are only three countries in the entire region where women aged 41-50 report more completed schooling than men in the same cohort, whereas in Table 7 we see that in only three countries do boys aged 6-19 have more years of schooling than girls.

Can we attribute this fairly dramatic reversal in gender equality for schooling to public policy? If the answer is yes then it surely represents a profound accomplishment for the region's governments in the name of social inclusion. In recent years there is no question that schooling for girls has become a focus point in policy discussions, and these discussions have been backed up in some countries by policies such as scholarships for girls. It is also possible that the expansion of schooling places—at all levels—has helped to equalize schooling, although this assumes that physical access has, historically, affected girls more than boys.[6] But we must also not rule out structural changes in the economy and labor markets as well as changing cultural beliefs about education as instigators of greater gender equality. As young women perceive more opportunities to work, and as their families are more inclined to see them grow up and leave the home to pursue work opportunities, household demand for education will increase accordingly. Also, the disposition of parents to see their girls acquire the same amount of education as the boys has probably also evolved during this period, perhaps in part because of public education campaigns that stress the importance of education for both sexes.

There are additional reasons to avoid sweeping conclusions about gender equity in the region, at least based on the summaries in Tables 2 and 7. With better data on other topics, such as the treatment of girls in the classroom (or playground) and the overall "conditioning" characteristics of the average school in the region, we could well tell a different story according to an-

[6] If parents are more concerned about letting girls walk long distances to school, or stay with extended family or in a boarding school in order to attend middle and secondary levels, then the expansion of schooling places at all levels will contribute to a more equitable distribution of schooling by gender.

thropological or social-psychological aspects of gender relations. Discrimination may also affect micro-decisions in subtle ways, since older girls may be staying in school longer because of anticipated labor market discrimination, or their access to wage labor may be limited, thus resulting in more time to study.

In sum, for educational outcomes like enrollment and attainment the Latin American and Caribbean region can boast of being more inclusive than exclusive when it comes to gender. The fact that this has come about largely in the last 10-20 years is evidence of the role that policy can play in equalizing opportunity, and the overall significance of this accomplishment looms large when we compare Latin America with other regions of the world. But it also bears mentioning that these indicators only tell one part of the story, and we are still left with the question of how are women able to put their schooling to use in the labor market, which is addressed in more detail below.

Schooling and Social Exclusion: Inter-temporal Comparisons

In the Introduction we referred to the positive trends in schooling in the region, at least in terms of coverage. Now that we have presented the various education outcomes that are of interest in the context of exclusion we can take a step back and see how these indicators have evolved over time. Since our main interest lies in presenting the most up to date information, this kind of inter-temporal comparison is included to establish some trend information, but is not the focus of this report.

In Tables 18 and 19 (and Figure 1) we present gaps in enrollment rates and grade attainment, by age group and country, between 1990 and 2000. In some cases the surveys are from slightly different years, but in most cases they refer to this ten-year period. Overall, the results support our claim that coverage is improving. In most countries the gaps are positive, meaning that in 2000 a higher percentage of children were enrolled (or had higher attainment) compared with 1990. The exceptions are Colombia and Ecuador, which are two countries that have experienced varying degrees of political upheaval during this period.

How large are the differences or, in other words, how quickly has progress been made during this decade? In some cases the differences are quite dramatic, but in most countries the differences suggest steady—if not dramatic—improvement. Nevertheless, to fully digest these numbers in terms of size we need to consider the demographic realities of this period. Even during this relatively short timeframe the numbers of children in these various categories has grown substantially in many countries in the region. So the fact that enrollment rates and grade attainment have, generally, improved even while the number of children has increased raises the significance of these results.

Schooling and Social Exclusion: Country Rankings

With so much data on enrollment, attainment and grade-for-age it is easy to lose sight of the social exclusion "story" we are telling here. This is especially the case when we move from general summaries—largely the focus in previous sections—to comparisons among countries. Before we even begin the task of assessing exclusion on an inter-country basis we must state—strongly—the difficulty of these kinds of comparisons using household survey data. Our data have many similarities, and most survey designs are based on experiences in other countries. But we cannot assume equally representative samples or similar data quality, and even small differences along these dimensions could portend large problems in the validity of the conclusions we draw.

So, comparability caveats aside, what countries are the most socially inclusive (or exclusive) in the Latin American and Caribbean region? In Tables 20 and 21 we present some league tables where countries in the region are ranked from most to least *inclusive*. This is done for only two of the differentiator variables (SES and urban/rural) because for gender we know that in most countries girls fare as well (or better) than

boys,[7] and for community we have few cases to consider. For each table we only consider the enrollment and attainment outcomes (and not grade-for-age) and leave out the enrollment outcome for the oldest age cohort because of potential problems with interpretation.[8] For each country the size of the gap between quintile or urban-rural is computed in raw form, and then each is ranked from one (most inclusive or smallest gap) to 17 (15 for urban-rural). The final ranking is based on the average of the five category rankings.

For comparing social inclusion in education by socioeconomic background the most egalitarian societies in the region are Chile, Argentina and Costa Rica—not a surprise. With the exception of Bolivia, the most exclusive countries are located in Central America. There are some positive surprises in Table 20, especially Peru (ranked fourth), and some surprises that are more troubling (such as Mexico and Brazil).

How does a result rate as surprising or not? Primarily by the exclusion ranking relative to the ranking in the United Nations Human Development Index (HDI) and per capita income, each of which is included in the right hand side of Tables 20 and 21.

There are some notable differences when we turn to social inclusion by urban-rural residence, which is presented in Table 21 for fewer countries because of the urban-only sampling in some countries. As before, Chile is near the top, and the Central American region is at the bottom. Costa Rica and Peru have slipped somewhat relative to the others, while Venezuela, Panama and especially Mexico are now noticeably higher in terms of inclusiveness. In the case of Mexico the new position is still lower than would be predicted by the HDI or average income, but it is much closer than in Table 20. For Venezuela and Panama the discrepancy between their actual ranking and expected position based on the HDI or income suggests concerted efforts to invest in the schooling or rural residents.

In an earlier section we questioned the ability of spending measures, as commonly reported in fiscal summaries, to tell us much about social exclusion. Since we now have a series of exclusion measures for each country we can test this proposition more directly. In Table 22 we present correlation coefficients (Pearson's *r* and Spearman's *rho*) between spending (total public spending in education as a percentage of GDP and total budget by level),[9] the HDI and income measures and our exclusion rankings. The results indicate that spending as a percentage of GDP and the total budget can be used as indicators of exclusion, as neither is significantly correlated with actual exclusion (according to the survey data). However, the results for the percentage of spending in education by level do reveal some significant relationships. In fact, the most interesting finding in Table 22 is the power of secondary spending (as a percent of total education spending) to differentiate between countries in terms of exclusion. For example, when a higher share of resources are devoted to secondary schooling the country's ranking on our exclusion measures goes down (meaning it gets better). The same is definitely not true for primary schooling, which is not surprising since the countries that are devoting the most resources to primary are the ones that have the most work in front of them to raise attainment levels. But there is no evidence of a linear relationship be-

[7] In fact, it is not obvious how such a ranking would be constructed for gender. For example, if girls are 20 percent more likely to be enrolled in a country, is this indicative of high gender equality? This kind of question raises a point that has not been addressed so far. The data showing that girls are more likely to be enrolled and are finishing more grades than boys—while encouraging, especially given historical trends in these kinds of outcomes—highlight a potential public policy issue, namely, problems with male schooling. In other words, a policy focus on female enrollment and attainment may become less and less necessary, depending on the sustainability of these efforts, while in some contexts these kinds of efforts may be needed to address early drop out or high rates of repetition for boys.

[8] For example, a country with an efficient middle and secondary school system may have fewer older children enrolled than one that has an inefficient system where many older children are still enrolled. So attainment is preferable for the older children in our samples.

[9] Data drawn from UNESCO, 2004.

tween spending by level and exclusion, as the amount devoted to tertiary is insignificant.

Is there something intrinsically important about secondary schooling? It could be argued that this is the critical level in many countries, especially where primary completion rates have reached 80-100 percent. Also, the amount available for secondary spending is likely to be influenced by demographics and tertiary entrance policies, so our simple bivariate relationships are no doubt capturing other differences between these countries. The other finding that merits discussion in Table 22 is that the correlation between exclusion and the HDI (and income rankings) is quite high (ρ=0.85 for exclusion and the HDI and ρ=0.72 for exclusion and income). So, in addition to using the breakdown of spending we can rely, to some extent, on these general measures of well-being to provide clues about the degree of inclusion in education in each country.

RETURNS TO EDUCATION

Some of the most observable features of social exclusion have been detailed in the third section. Children that reside in rural areas or come from poor homes accumulate less human capital than urban residents and wealthier children. We know from a large empirical literature linking education levels with fertility and the health and education of offspring, among other things, that these lower attainment levels are likely to have consequences that stretch beyond the lifetime of the current generation. But there are also likely to be more immediate consequences related to labor markets.

There are three, interrelated, aspects of labor markets that are of interest here. First, what are the factors that determine access to wage paying labor? Two, conditional on finding work, how well does grade attainment predict earnings? Finally, how do other characteristics determine earnings? In an equitable society, children would not be differentiated much by social class, would have equal access to quality schooling at all levels, and both their access to wage-paying labor and monetary earnings as adults would be largely determined by the skills they acquired in school, their ability and dedication. The reality in Latin America and the Caribbean is different, and we have already demonstrated unequal outcomes in education, even if we have been unable to explain why these differences exist. But the story does not end here, since we cannot conclude that low access to schooling is the *only* reason why poor people in the region earn so little. First, there is the issue of quality, which we consider in the following section. Even when poor people have physical access to schools, the quality may be so low that few real skills are obtained. Additionally, features of labor markets may also work to enhance social exclusion. In rural areas the returns to schooling may be artificially low because of government interventions in agricultural markets (i.e., price controls) or other market imperfections. Ethnic minorities or women may also suffer from discrimination.

If poor people or ethnic minorities are realizing little return on their education investment, then their low levels of grade attainment may be a rational response to the prevailing conditions. This is an important point that is frequently lost in policy discussions. Poor people, or girls or ethnic minorities, may terminate their schooling before completing grade 6 because of poverty or the need to work. But they may also be leaving because they perceive few concrete benefits to staying in school, either because they are learning little in a low quality environment or do not expect to get a job when they are older (perhaps because of discrimination). We will return to this question of price versus demand in determining educational attainment in the next section when the policy discussion on social exclusion is presented. But the important point for now is that labor market conditions, in addition to exerting a direct effect on social exclusion via access and returns to wage labor, may also have indirect effects on exclusion via their effects on school attainment. Simply stated, exclusionary labor markets not only result from exclusionary school systems, but they may also *contribute* to unequal outcomes in schooling.

In this section we consider two separate earnings outcomes and the dynamics that explain social differentiation in our sample countries. The first outcome is a simple, 0-1 variable for whether or not the person reports earning wage income of

any kind. The second outcome—their actual earnings—is analyzed using traditional earnings equation analysis.

Determinants of Reporting Income

A crucial component of earning a wage is obtaining a job that pays a wage, although defining wage earning labor is a difficult task. For instance, should we consider a single mother who owns a small garden and sells some of the product at the market a wage earner? With data on type of work (common in household survey data) this analysis can be restricted to certain kinds of work activities. For this analysis we use a broad measure that includes any reported income, regardless of source.[10]

In addition to definitional issues there are some conceptual features of this kind of analysis that are somewhat problematic. The most prominent is the conflict between a more microeconomic approach to working, where individuals supply their labor on the market, versus a more structural, sociological approach that focuses on labor demand. For instance, if a woman is less likely to report earning any income, even when controlling for her education level, how should we interpret this? If she has to juggle work in the home with labor market activities, then she may be less employable because she can only work part time—a demand issue. Or she may be weighing the importance of her work in the home and comparing this with the returns from a job and deciding that it is better to stay at home—an apparent supply side response. In neither case is social exclusion an *obvious* presence, even if women are equally educated as men in these countries. One could argue that any hiring bias against women who are raising a family is exclusionary, or that the expected benefits stream that women calculate when deciding to supply their labor on the market takes into account discrimination. But these are dimensions of this particular outcome that we simply cannot address using household survey data.

[10] We also used a more restrictive measure of reporting earnings based on the number of hours of labor reported. The results were not that different.

So our analysis of who reports work income is limited to largely sketching out the contours of participation in the labor market. This is done by regressing the dependent variable (1=report any income) on to gender, urban/rural, age, education and regional controls. For the whole sample we estimate two models, one using education dummies (with education of 1-3 years as the excluded category) and the other with a single, linear measure of years of completed education. These results are presented in Table 23. The results in Table 24 are for separate estimations by urban and rural residence. As before, each coefficient represents the marginal effect of a one-unit increase in the independent variable on the probability of reporting income, interpreted at the sample means. Coefficients in bold are significant at the 0.05 level.

The first result that stands out in Table 23 is the large, marginal effect of gender on the probability of reporting income of any kind. This variable is significant in every country, and again it should be pointed out that these regressions are controlling for age, education, place of residence and region. In some countries, especially in the Caribbean and Central America, the coefficients are large. How can we interpret these results? The answer is carefully, as once again we are confronted with the question of whether or not the average woman is being excluded from work or simply choosing not to work. But at the least these data demonstrate the unequal *participation*—if not necessarily unequal *access*—in labor markets in the region.

Perhaps the most striking result in Table 23 is that the highest and lowest levels of education are consistently significant predictors of reporting income, but for grade levels 4-6 and 7-9 the same is true in only a few countries. In almost every country a person with higher levels of education is significantly more likely to report income than a person with only 1-3 years of education (the excluded category), while those individuals with no years of education are significantly less likely to report income. Also, in almost every country the linear measure of education in years is significant. But the linearity of this relationship is questionable, since in almost

half of the countries the dummies for 4-6 and 7-9 years of education are insignificant in comparison with the excluded category. In other words, the probability of obtaining income depends on education only at the extremes (high and low). For the rest of the population it does not matter if one has four, six or even nine years of completed education, his/her chances of reporting income are the same as those persons with 1-3 years of education.

The numbers in Table 23 also clearly show that rural residents are less likely to report earning income. As expected, this tendency is stronger in countries where there is a higher degree of rural subsistence farming (Guatemala, Bolivia, etc.). The rural-urban dichotomy is an important one for this analysis, so we repeat these regressions by area of residence. These results, summarized in Table 24, first demonstrate that the gender differentials in labor force participation are stronger in rural areas. In almost all countries women who live in rural communities are more than 30 percent less likely than men to report income, although it should be noted that in urban areas the coefficients are almost all larger than 20.

By interacting education with place of residence we do not illuminate the work-education relationship. In fact, the results for the education dummies in Table 24 are even more uneven. Once again those with higher education—a small percentage in most countries, especially in rural areas—are clearly obtaining jobs. But for the middle levels of schooling the relationship is less clear. For the separate regression that uses the linear measure of education (far right columns) the results show that in urban areas the marginal return to each year of schooling is slightly steeper, on average, than in rural areas. This suggests that in urban areas there is a more clear differentiation by education level, which is consistent with deeper labor markets that require a more diverse skill set.

The results in Tables 23 and 24 highlight the difficulty of analyzing the consequences of educational attainment in the context of social exclusion. It was made clear in previous sections that many poor and rural children are dropping out of school before completing grade 6 or grade 9—a fact that many would point to as the *sine qua non* of social exclusion in the region. But our results show that there are few countries where having education levels of 4-9 years significantly predicts obtaining income, compared with having only 1-3 years. This suggests—and again the reader is reminded of our limited ability to consider this question in a causal way—that individuals and their families may be taking into account the impact that an extra 2 or 3 years of schooling will have on labor market chances and are deciding against continuing.

The significance of these results also depends on the distribution of educational attainment in each country. For example, the large coefficient for no education in Uruguay (Table 23) is not particularly meaningful given the low numbers of individuals with no education; the same is not true in Bolivia or Guatemala. At the other extreme the high probability of obtaining income for those with post-secondary education in poor countries or rural areas is indicative of the high returns to these credentials for the relatively small number of individuals who obtain them. We will return to this in the next section when we turn to earnings.

Earnings Equations

Having considered the entrance into money-paying labor we now turn our attention to the dynamics of earnings for those who report income. This sequence is a difficult one to understand in an empirical sense given the complicating influences of self-selection bias and other unobservable forces that influence whether or not people earn any income in the first place. The consequences of our inability to incorporate the "decision" to work or not into the earnings analysis will be serious if there are pronounced differences between people who earn income and those who do not. This is likely to be the case along some dimensions (like innate ability) that are not well measured in our data, and if these unmeasured influences are correlated with variables that do appear in the regression (like education) then the resulting coefficients are likely to be biased. Since our stated purpose is to sketch out the contours of social exclusion our

inability to sort out issues of causality in the various earnings equations does not mean we should not proceed; it does mean, once again, that the reader is cautioned about the limits of the analysis that follows.

We compute wages for individuals based on reported income and hours of work and regress the natural log of this measure on to gender, urban-rural, experience, education and regional controls.[11] Ordinary least squares (OLS) regression is used to obtain the estimates, although in separate exercises we estimated models that control for selection. Since the results are not much different we present the OLS results only. The coefficients are interpreted as the percentage change in income for each unit change in the independent variable or, in the case of the education dummies, the percentage difference in income with this level of education versus having only 1-3 years of education. Coefficients in bold are significantly different from zero at the 0.05 confidence level.

Table 26 presents the results for the whole sample. Compared with reporting income the gender differential is much smaller, and in some countries there is actually no significant difference between male and female earnings when controlling for education, experience, etc. However, a comparison of Tables 25 and 23 reveals an inverse relationship between the two gender coefficients; the gender gap in earnings is smaller in those countries where the gender gap in reporting income is the greatest. This is imperfect evidence of selection bias, but nonetheless should serve as an important reminder of the (likely) symbiotic relationship between these two outcomes.

Rural residents earn less, *ceteris paribus*, in all countries. In some countries (Costa Rica, Colombia, Panama) the discrepancy is on an order of 10-15 percent, but in the majority of the countries the difference is around 20 percent. The effects of residing in a rural area are more consistent across estimations, as there is little evidence of an inverse relationship between the size of the coefficients in the reporting income and earnings regressions.

A crucial component of any discussion of social exclusion is the relationship between earnings and education. In Table 25 we see that education levels strongly predict earnings. Furthermore, the impact of educational attainment on earnings, at least in this general model, is immediate. In every country an individual with 4-6 years of schooling earns at least 8 percent more than someone who only completed 1-3 years, and in some cases the boost is as much as 45 percent. There are big jumps at each level, especially for high school (10-12 years) and higher education. When measured in linear form (far right column) the returns range from 6 to 23 percent more income for each additional year of schooling, with most countries in the 10-12 percent range.

The most important conclusion to be drawn from Table 25 is that there are apparently large benefits for obtaining education in these countries, conditional on actually earning money. Compared with the previous analyses for earning income these results are more encouraging, since they demonstrate the existence of positive returns to even low levels of schooling. But these returns are likely to fall as more and more individuals complete these levels, and the high returns to secondary and tertiary education are evidence of a dynamic mismatch between supply and demand for individuals with different education levels. In the context of exclusion, this is an important, if not surprising, finding. For those individuals who are able to best navigate their way through the cumulative stages of human capital formation in order to attain the best credentials, the payoffs are large. But why are so few able to make it? The likely answers are poverty, low quality and low access—we have already presented extensive evidence linking some of these variables with enrollment and attainment. But one point that is easily lost is the following: Getting more people through primary and even middle schooling will not necessarily result in dramatic changes in the income distri-

[11] This is a more general measure for considering exclusion than a measure based on labor force participation (based on hours worked or type of job). However, the overall flavor of the results does not change much depending on the choice of income measure.

bution if this additional human capital does not provide them with adequate skills they need either to be productive in the labor market or to continue their schooling at higher levels. In other words, the high returns enjoyed by the relatively few who are completing higher levels of schooling will not necessarily be maintained as more and more individuals obtain these credentials, especially if these new graduates come from lower quality schools.

We can test this last proposition, imperfectly, using the same data in Tables 25, 26 and 27. Figures 2 through 6 show scatterplots for the actual average rate of return coefficient (i.e. the linear relationship) by the mean level of education in each country. This is done for the whole sample (Figure 2) and then separately by gender and area of residence. Is it true that countries with higher levels of education have lower returns? Overall the results in Figures 2, 3 and 4 demonstrate no discernible relationship between education level and returns for the whole sample and by gender. But in Figure 5 there is a negative relationship between the average returns in urban areas and the average education level in urban areas.

Earnings and Community

Table 28 presents the determinants of hourly wages for a few countries, including information on race and ethnicity. The results demonstrate that indigenous peoples in Bolivia and Guatemala and non-whites in Brazil earn significantly less than whites. The differences are considerable, even when controlling for education and experience. One unexpected finding is that in Brazil non-whites are actually more likely to report income. This could reflect, to some degree, a leisure effect where whites in Brazil have less need to work. But it also highlights, once again, the interpretational difficulties when carrying out separate analyses of reporting income and actual income.

Policy and Social Exclusion in Education

We can draw two conclusions from the extensive list of indicators and tables summarized in previous sections. First, the empirical evidence describing large gaps in both access and returns to education demonstrates the magnitude of social exclusion in the region, even if our ability to identify the exact mechanisms that result in exclusion for some groups is limited. This finding is hardly surprising, and this concept paper is largely based on the assumption that these kinds of inequities exist. But the tables in the third section provide a better idea of both the distribution of opportunities in the region and, to a lesser extent, the differentiator variables that matter the most.

The second conclusion is that these outcomes are not uniform, as some countries in the region have achieved higher degrees of inclusion than others. The existence of this kind of variation is also not surprising. But its existence is crucial for understanding the role of public policy in redressing inequalities and guaranteeing social inclusion. This also provides a good segue into the present section where we move away from comparable indicators of exclusion and enter the policy realm, primarily for education outcomes like school attendance. For instance, what kinds of actions have policymakers taken to redress inequalities in educational opportunities? How effective have these efforts been?

Despite the improvements that have been made in data availability and quality in recent years, we have few surveys that contain good information on the supply side (e.g., schools, teachers, etc.). So we rely on an empirical framework that is less complete than we had originally hoped, at least in terms of coverage. The information we are able to use from these surveys is augmented with secondary information from scholarly articles in journals and elsewhere, and from a UNESCO initiative in the late 1990s to measure student achievement in the region. This is not a comprehensive review of the evidence. Instead, it is a conceptual review of how policymakers have addressed issues of exclusion, especially in education, and how researchers have assessed the effectiveness of these efforts.

The data summarized in Table 29 provide a useful way of beginning this discussion. The results are taken from a commonly available question in household surveys put to dropouts or their parents: Why is the child not currently enrolled in school? The answers for children aged 6-18 are grouped into six categories: cannot afford school or have to work, family problems, sickness, physical access, not interested and other. For explaining non-enrollment the biggest influence is the combined category of poverty and work demands. This is not surprising, and these kinds of pressures are clearly increasing with age. The same is not true for physical access, however, which decreases as a determinant of dropout with age. This result is somewhat counterintuitive, at least if we assume that physical access is likely to have a larger effect on older students who want to continue their schooling in middle and secondary schools. Part of the explanation is that access also includes "having a teacher," which is more likely to be a problem in small primary schools.

In Guatemala the survey asks enrolled students who report being recently absent why they missed school. With these data we get our first glimpse of the impact of the child's health on schooling, as a considerable group of children report missing school due to sickness, especially in the youngest cohort.

The categories in Table 29 are fairly general responses, and different conclusions about the underlying causes can be drawn in some cases. But these data are useful for the present discussion because they define two general categories of reasons for not going to school. The first is the most obvious, and can generally be termed the "poverty explanation." Some households cannot afford more schooling, either because of the out-of-pocket expenses or because the child's time is too valuable to spend in school. But a significant proportion of children—or their parents—indicate

that they are simply not interested in going to school or sending their children to school. This is especially true for older children, where in four countries in Table 29 roughly 20 percent (or more) of non-enrolled children cite not wanting to go to school as the reason.

This dichotomy between not being able to afford schooling, and not wanting to go, provides a useful way for considering the role of policy in redressing inequalities in enrollment rates and attainment. Our approach borrows from Birdsall (1985), and divides policy levers into two general categories. The first refers to policies that address the price of schooling, such as school construction, scholarships and school feeding programs. These kinds of interventions are commonly justified by the high direct and indirect costs of education. But school attendance can also be stimulated by increasing the demand for education, usually by increasing the expected returns or addressing supply-side problems (like quality, environment, etc).[12] This is, to be sure, a difficult link to make based on the kinds of responses in Table 29, since we cannot be sure that the reluctance to take advantage of the local school is attributable to not perceiving much utility. Environmental factors—fights, sexual advances from students or teachers, boring classrooms—can affect demand regardless of the household's perception of the utility of schooling in general. On the other hand, responses like "have to work" could be driven as much by demand concerns as price concerns if the household perceives few benefits to schooling, thus increasing the *relative* attractiveness of the work option.

Despite the difficulty in distinguishing the influence of each group of variables on school attendance decisions, there is little question that, from a policy standpoint, the price and demand concerns predict different responses. We now turn to some examples of each.

[12] Another approach to this issue is detailed in Handa (2002), who looks at the effects (and cost-effectiveness) of supply-side interventions in the form of school construction versus demand-side interventions that focus on raising household income or parental education levels.

REDUCING THE PRICE OF SCHOOLING

Improving Access

The achievement of near-universal physical access to primary schooling in almost all countries in the region represents a significant public policy success in Latin America and the Caribbean during the last 20 years. This, of course, is not the same as universal primary schooling based on attainment, which is a reality in few countries in the region. But, the percentage of households that lack a primary school within a reasonable walking distance has declined dramatically. A significant part of this expansion, especially in rural Central America, has occurred outside of the traditional realm in the form of community schools modeled loosely on the *Escuela Nueva* experience in Colombia. The end result is that the poorest children of these societies have opportunities for gaining basic skills that were largely unavailable for many of their parents.

Nevertheless, the fact that upwards of 25 percent of non-enrolled children aged 6-11 cite distance to the school or lack of a teacher (Table 29) as the reason for non-enrollment highlights both the challenges that remain in guaranteeing physical access for the most isolated communities and the need to include more than just proximity in any discussion of access. In addition to being within walking distance, schools must also have places for students in all grades and teachers to teach them. In some areas the demands of single-teacher schools results in primary school being terminated at grade 4.

Poor children, especially in rural areas, also lose access because of teacher absences and school closings. In recent years the magnitude of this problem—and its consequences—have been detailed in both individual studies (e.g. Bedi and Marshall, 2002) and as part of organized, cross-national research efforts (Chadbury, et al., 2004; Rogers, et al., 2002; and Alcazar et al. 2003). One of the fundamental findings from these studies is that most enrolled children miss more days of school because of school closings and teacher absences than because of sickness or work demands.

Class size is another school quality variable that affects access for the simple reason that crowded classrooms reduce the child's access to the teacher.[13] And in poor parts of Latin America and the Caribbean, especially marginal urban areas, class sizes are frequently pushing the physical capacities of the classroom. There is some evidence that class size affects enrollment and attainment, at least in rural Guatemala (Marshall, 2005) and South Africa (Case and Deaton, 1999). Another component of our broad definition of access concerns the availability of advanced levels of schooling. As referred to earlier, Lavy's (1996) work in Ghana and others have shown that the completion of lower levels of schooling may depend on the physical availability of the next level. In a region where primary school completion rates vary widely among different groups of children, this issue is certainly relevant for considering the dynamics of exclusion. Unfortunately, with available household survey data it may be easy to miss this constraint because middle- and secondary school-aged children who are not in school, and did not complete primary school, are not likely to cite access constraints at higher levels as the reason for leaving.

Scholarships

The Latin America and Caribbean region has seen more experimentation with scholarships designed to increase poor student attendance and grade attainment than any other region in the world. This can be traced back to the original *bolsa escola* experiences in Brazil during the 1980s, and in subsequent years the scholarship idea—also called conditional cash transfers (CCT)—has spread. There are three reasons why the CCT route is a popular one. First, based on the extensive evidence supporting the poverty explanation in household surveys, a natural policy lever to address low levels of schooling is to attack the costs head on with targeted interventions. Second, politicians like these kinds of programs because they provide high "political consumption value" in the form of direct contact with poor people and a visible public response to the needs of marginalized sectors of society.

Finally, there is evidence that well implemented CCT interventions can have significant impacts on enrollment and attainment. One of the most carefully evaluated programs in the region is PROGRESA (later known as OPORTUNIDADES) in Mexico. In addition to its scope—more than two million families in 31 states—the PROGRESA intervention was phased in with random assignment of communities. This greatly facilitates evaluation, since most other studies (e.g. Rogers et al., 1997) have to account for targeting at both the individual and community level. Recent evaluations of PROGRESA, such as Schultz (2004), show moderate impacts of the program on primary school enrollments and fairly large impacts on middle and secondary school enrollment probabilities. With simulations it is possible to show how these impacts translate into more attainment with a healthy internal rate of return based on increased earnings throughout the lifetime of the individual.

The allure of the CCT is its ability to target poor peoples and communities, and its growing popularity in developing countries is at least in part due to the positive press generated by PROGRESA (Krueger, 2002) and *bolsa escola*. Nevertheless, there are some reasons to be cautious about the impact of these kinds of programs on social exclusion. For example, in their study of the impact of *bolsa escola* in Brazil, Bourguignon, et al. (2003) find that just like PROGRESA, this program has had success in enrolling students in school who would otherwise leave. But these increases do not translate into large reductions in poverty or inequality. Their results highlight some conceptual issues that merit discussion in the context of evaluating the effectiveness of scholarships. The first concerns the alignment between the scholarship intervention and the causes of low attendance and/or dropout. If poor children, or ethnic or language minorities, are exiting the system because of work demands then even a small payment each month may be able to change behavior since

[13] This will depend on the methodology used in the classroom. For instance, in a "teacher centered" classroom the number of students may have little impact on learning if the teacher is simply dictating. But when teachers are more active and involved with the students then the student-teacher ratio is likely to matter more.

young children are not likely to earn that much money. But what if children are not in school because they refuse to go (see Table 29), or because their parents perceive few benefits? This could have the effect of increasing the size of the "optimal" CCT because households may be more reluctant to change behaviors.

There is one scenario along these lines that is particularly problematic, especially from a cost-benefit standpoint. If the child is no longer in school because the parents perceive that he/she is not learning, then not only may a relatively large scholarship be required to change behaviors, but the positive impact attributable to the intervention will be small. This dependency of CCTs on learning taking place inside the school walls is of critical importance for evaluating their effectiveness. And, unfortunately, for the poorest communities in the region the quality of the local school may be limited.

The purpose of raising these issues is not to discredit the CCT option. Instead, we want to highlight some issues that are crucial to understanding the necessary conditions for CCT programs to achieve long-term impacts. One last issue remains, and in this case we have some data from the region to consider: program targeting and implementation. There are many reasons to be concerned about cash and in-kind transfer programs undertaken in developing countries. Teachers or directors may ask for kickbacks for selecting children to participate, or parents may have their children repeat grades to get more benefits, or even change names and re-enroll them. Evidence of these kinds of problems is scant and largely anecdotal, and again the PROGRESA experience is encouraging in terms of transparency. But there is still the issue of who is targeted.

The data in Table 30 are taken from household survey questions put to currently enrolled children. For a series of interventions, ranging from the provision of free medical services in the school to an individually targeted cash transfer, we show the distribution of the recipients by SES quintile. We then estimate simple probit models where each 0-1 outcome is modeled as a function of gender, age, urban-rural residence and a dummy variable for being in the poorest quintile. These latter two coefficients are presented in the far right columns.

The results for these three countries are, for the most part, encouraging. In each case the poorest quintiles receive the largest share of the services. And the results from the multivariate analysis show the highly targeted nature of these programs in rural areas. Of the three countries the Mexican PROGRESA program appears to have the tightest alignment with poverty. But the questions for El Salvador and Paraguay were more general questions, instead of referring to specific programs, so some caution is urged in interpreting these results.

INCREASING DEMAND FOR SCHOOLING

Policy Context and the Distribution of Learning

In the current education policy arena few topics receive more attention than school quality. Despite important strides that have been made in improving the provision of learning materials and training teachers, there is much room for improvement in terms of school quality. Evidence on this count, at least in a strictly comparative sense, is not abundant; a few countries in the region have taken part in international tests like TIMSS and PISA, with less than stellar results. In the context of social exclusion the quality issue plays a key part in determining why some groups excel and others are left behind. First, the differences in quality between schools attended by different groups (poor, wealthy, ethnic minorities, rural-urban, etc.) contribute to large human capital gaps in skills and abilities. But a growing body of evidence demonstrates how school quality also affects enrollment and attainment. So, in addition to reducing the *efficiency* of the schooling investment, low quality schools may also reduce the *size* of the schooling investment.

This last point is easily overlooked. For many policymakers, let alone politicians, it is easy to blame poverty—or uneducated parents—for children leaving school. Furthermore, by situat-

ing the causes of "under-schooling" within the household and attempting to influence household behavior, actions like conditional cash transfers have the effect—intentionally or unintentionally—of drawing attention away from public responsibility for providing quality education for all. One potential consequence of this scenario, already referred to, is that decision-makers may be addressing the wrong policy breakdown in some cases.

So how inclusive is the provision of quality schooling in Latin America and the Caribbean? One place to start is with the distribution of learning. Table 31 presents summaries taken from the UNESCO Latin American Laboratory's (LLECE) 1997 application of standardized exams in language and mathematics for third and fourth grade students in 7 of the 13 surveyed countries. Using LLECE data we are able to construct differentiator variables for gender, low- and high-SES and urban-rural; no information was collected on community for the individual participants in the survey. For each test subject we present the raw difference by group in standardized terms. For gender we see that, on average, girls score higher on language while boys score higher on mathematics. For socio-economic status the differences are considerably larger, and approach one standard deviation (or more) in five of the seven countries. In other words, already by grades 3 and 4 there are sizeable differences in accumulated knowledge in these societies. The exception is Cuba, which has a much more compressed distribution of learning. For the urban-rural differences the results are significant, if not as large as the SES differences.

The data in Table 31 gives us our first glimpse of supply-side differences in schools along the dimensions that matter most, namely, the factors that predict learning. This, in turn, highlights two subsequent lines of research. The first is beyond the purview of the present study and concerns the distribution of supply-side differences in school quality and, more specifically, the degree to which exclusion is a result of intentional actions. But the second line is more accessible here, even if our survey data have some limitations: What school, teacher and classroom characteristics predict staying in school longer, and how does the distribution of these variables vary by social class and place of residence?

School Quality, Learning and Attendance

The kinds of learning gaps depicted in Table 31 are likely to have consequences throughout the lifetime of individuals. But another troubling possibility is that low quality schools predict low learning that, in turn, has the effect of reducing the amount of time that certain kinds of children spend in school. To put this issue more squarely in policy terms, school attendance (including attainment) will be increased by achievement-raising improvements in schools only if households base attendance decisions on their child's learning, or the factors they associate with better schools are really correlated with learning. There is some evidence on this count, although the econometric challenge of establishing a convincing causal argument is considerable. Bedi and Marshall (1999, 2002) and Marshall (2005) show that households, even in poor environs, are responsive to changes in learning in Honduras and Guatemala. Hanushek and Lavy (1996) make a similar argument using longitudinal data in Egypt. These findings are encouraging because, conditional on finding policy-amenable features of schools that predict learning, actions by policymakers that raise learning can affect attendance in the same way that CCTs do.

What are the likely policy-amenable features of schools that predict learning? We leave the issue of the factors that affect learning for other reviews (such as Fuller and Clarke, 1994, and Glewwe, 2002), and instead focus on a small but growing literature that considers how specific features of schools affect attendance decisions. The central challenge in this literature is establishing the ways in which households evaluate the school (or classroom) and schooling in general (Gove, 2005). There is some evidence that enrollment and attainment are responsive to the most observable features of schools, like physical conditions (Glewwe and Jacoby, 1994; Gandhi Kingdon, 2002) and the availability of services (Bedi and Marshall, 2002). Investments in

teachers have also been linked with school attendance in studies by Birdsall (1985) and Handa (2002), among others.

Stocking schools with better facilities and better-trained teachers in the hopes of convincing poor households to lengthen the schooling investment is one way to address schooling gaps. But just as scholarships depend on learning to realize their full potential, so too do investments that upgrade school facilities in hopes of raising attendance. In fact, investments of this kind are made in order to increase learning—not attendance.

Compared with school and teacher characteristics that affect enrollment and attainment there is even less information on school climate. This is unfortunate, because there is little question that the school environment influences enrollment and attainment; this is corroborated somewhat by the attention given school climate as a determinant of dropout in United States high schools (Bryck, et al. 1989). Furthermore, poor students in urban and rural settings are most likely to be affected by things like gang violence and sexual exploitation. So once again the observed correlation between socioeconomic status and school attendance may not necessarily reflect an inability to pay for schooling.

There is some quantitative evidence from the region (and elsewhere) to support these contentions. The same data cited above from the Latin American Laboratory show considerable evidence of student reported fighting. In a much smaller study in rural Guatemala, Marshall (2005) shows that almost 20 percent of dropouts from grades 1-4 cite problems with other students or the teacher as the reason for leaving. In Pakistan, Sawada and Lokshin (2000) find that almost 25 percent of male dropouts from primary school blame physical punishment by the teacher.
It was already shown that a significant portion of older dropouts cited not wanting to go to school as the reason for no longer attending (Table 29). We have already considered why this answer may be driven by low quality schooling or limited expectations about the utility of schooling. But what if these children were learning in the classroom but no longer want to go to school because of environmental problems? Given the lack of information on this topic in the region we can do little more than speculate. But for many poor or racial or ethnic minorities in the region the educational investment is already under pressure because of contextual factors in their lives (namely poverty). This leaves their schooling especially vulnerable to other kinds of problems that take place in the playground or on the walk to school. This highlights the importance of more research into the environmental characteristics of these schools and the extent to which schooling gaps are determined by these problems.

The Distribution of School Quality

We have drawn some tentative links between supply-side features of schools (including learning) and attendance. One last activity remains: how does the distribution of these features vary by our differentiator variables? Once again it bears restating that this framework provides no way of considering intentional exclusion. But using the Latin American Laboratory data we can at least present, in descriptive form, evidence about supply-side variation in quality by social class and place of residence.

Table 32 begins with social class and reveals considerable differences in school characteristics depending on student background. The first two variables (preschool and textbooks) are subject to the critique that they are mainly determined by individual actions instead of school policy features. Nevertheless, there are large differences in preschool attendance in most countries, and in Argentina and Bolivia there are sizeable differences in textbook access by social class. However, the most interesting results in Table 32 are for classroom conditions and climate. For the frequency of problems, like cold (or hot) classrooms or noisy environments, the poorest children in the region consistently report almost three (out of five) problems, which is significantly different in all countries except Cuba. The same is true for student-reported fighting in the school. In almost every case the poorest students are almost twice as likely to report problems with fighting in their school.

In Brazil, Colombia and Mexico poor students are less likely to have a university-educated teacher.

But larger differences are found for learning materials in the classroom. In all countries, again with the exception of Cuba, the teachers of high-SES children report significantly higher indices of materials available in the classroom.

Table 33 repeats this same activity for the rural–urban comparison. Compared with social class the differences are not as consistent, or significant. Nevertheless, in almost all cases rural students (or their teachers) report less favorable conditions for learning.

Conclusions

There is little question that social exclusion is a serious problem in Latin America and the Caribbean, and our analysis of the specifics of exclusion in education adds to a growing body of evidence on this important subject. One of the many inherent challenges in dealing with a topic such as exclusion is placing the results in the proper context. On the one hand, educational provision in the Latin American and Caribbean region is improving, both in terms of coverage and quality. Furthermore, the fact that improvements have taken place against a backdrop of rapid population growth in many countries during recent decades represents a significant public policy accomplishment in the name of human development. Nevertheless, the story changes when we turn from macro trend indicators and focus on the reality experienced by certain groups in these societies, and in some cases the distribution of education and earnings is alarmingly unequal.

Why should we be concerned about inequality and exclusion if overall trends are, on average, positive? There are three reasons why social exclusion in education is a pressing issue for research and policy discussions. First, the nature of the inequalities we refer to are hardly inconsequential in terms of the numbers of individuals involved. In some countries the poor, or ethnic or racial groups, represent significant proportions of the population. Two, from a public policy standpoint the issue of exclusion is of considerable importance because history has shown that improving the lives of marginalized groups often requires sustained, intentional actions by public institutions. Finally, there are dynamic concerns with exclusion, as certain groups may be able to exploit existing inequalities in education, income and political influence to reduce opportunities for others. These kinds of dynamics are difficult to model or describe empirically, but the long history of unequal development in the region justifies constant vigilance in the name of assuring equal access and treatment.

This last point concerning the dynamic implications of inequality is of particular importance; unfortunately, it is also an area where this analysis has comparatively little to offer. Our definition of social exclusion, borrowed from the recent work of Behrman, Gaviria and Székely (2002), stresses the *intentional* denial of opportunities. However, it is hard to identify specific instances where individual groups have intentionally limited opportunities for others. It is also hard to take this sequence one step further and show how the denial of opportunities for some has the effect of increasing the power of others. We simply do not have adequate information to tackle these issues, so our approach instead focuses on outcome-based differences between certain groups in each of our surveyed countries.

Despite this conceptual limitation in our treatment of exclusion, the paper makes two general contributions to the literature. First, there is the scope of the analysis, which uses survey data from more than 20 countries to describe gaps in enrollment, attainment and income between various groups of individuals. The extensive tables covering each outcome not only facilitate comparisons between countries, but for the education indicators it is also possible to consider trends across age groups. Econometric modeling is then brought in to deepen the descriptive analysis and identify the "differentiator" variables (gender, SES, residence, etc.) that appear to have the most power to explain observable differences. The end result is an unprecedented region-wide snapshot of the contours of social exclusion in education.

The second contribution is to highlight the cumulative nature of social exclusion and the role that policy can play in determining the degree of inclusion or exclusion in a given society. The policy framework focuses on two kinds of actions by policymakers. The first group is designed to increase schooling for poor people by making it more affordable through scholarships or free meals. The second group is designed to raise demand for schooling by increasing the expected

returns to time spent in school. The former is the most obvious response to issues of social exclusion, and we include a discussion of their effectiveness as well as a data analysis section that considers targeting of specific programs like scholarships. But making schooling more affordable is not the only way to increase demand, and interventions that increase school quality and provide a more conducive environment for learning can also convince households to invest more in schooling. So we consider both the effectiveness of certain supply-side variables as predictors of school attendance as well as their distribution by social class and urban-rural residence. The results show that the targeting of price-reducing interventions heavily favors poor and rural residents, an encouraging policy outcome in the name of inclusion. Nevertheless, when we turn to the distribution of critical elements of school quality the results show significant advantages for the wealthy and urban sectors.

Some of the specific findings include:

- For school enrollment, grade attainment and grade completion efficiency the results for girls are consistently more positive than boys. Furthermore, this is a fairly recent development, since comparisons of grade attainment among older cohorts reveal few countries where adult women are more educated than men. So on one count—educational coverage—the region can boast of gender inclusiveness that is unequaled in the developing world.

- The gender equality does not extend to labor markets; however, as women are consistently less likely to report working and, conditional on obtaining a job, generally earn less than men, even when controlling for education and experience. The analysis shows that in those countries where women are less likely to report working the differences in earnings compared with men are smaller, whereas when more women report working the gender gap in income is larger.

- For school enrollment probabilities the largest gaps are between urban and rural residents, and for children aged 15-19 the difference (in raw form) is greater than 20 percent in more than half of the countries. The effect of rural residence does not disappear when multivariate analysis is applied to a sample of children who have completed primary school, which suggests that access constraints at middle and secondary levels play a key role in this outcome.

- For grade attainment the strongest predictor is social class, as the raw gaps in attainment between low and high SES children aged 15-19 is greater than two full years in more than half of the surveyed countries.

- For community, loosely defined by (self-reported) race, ethnicity and language categories, the results show large deficiencies in enrollment, attainment and earnings for the indigenous, racial and language minorities. Furthermore, the inclusion of controls for SES and rural residence using multivariate analysis only partially reduces the marginal differences associated with community in some countries, and in others the large differences remain even when taking into account these other variables. These results highlight the importance of additional research in this area; unfortunately, of the 20+ surveys we have at our disposal this kind of information on community is only available in a handful of countries.

- League tables that rank countries from most inclusive to most exclusive show that Argentina, Chile and Costa Rica are the most inclusive. Peru ranks much higher in inclusion than would be expected based on its per capita income or the Human Development Index. Brazil and Mexico rank lower than expected based on the HDI.

- Official data on government expenditures in education are not correlated with actual exclusion based on the survey data. However, the share of government education spending on secondary education is highly correlated with the various exclusion measures in education.

- The probability of reporting income is only significantly affected by having secondary or higher education (positive) or by having no education at all (negative) compared with having 1-3 years of education. Having completed grades 4-9 has only a marginal impact on reporting income in a handful of countries compared with having just 1-3 years.

- For earnings the results corroborate previous studies and show that each year of additional education increases earnings, on average, by about 10 to 12 percent. The results also show that individuals with 4-6 and 7-9 years of education earn significantly more than individuals with just 1-3 years. Large returns are associated with having secondary education or above.

- A brief analysis of policy lever targeting shows that in each surveyed country the distribution of interventions like scholarships is heavily weighted toward poor and rural residents. The PROGRESA program in Mexico appears to be especially efficient in targeting the neediest.

- For the supply side on school quality indicators the results show that wealthy and urban children are more likely to attend preschool, have textbooks, study with a teacher with a college degree and study in a classroom with sufficient learning materials than low SES and rural students. The poorest and rural children also report more problems in their classrooms and, on average, are almost twice as likely to report problems with fighting in their schools.

There are three areas that require more attention in order to deepen our understanding of social exclusion in education. First, as referred to repeatedly in this document, most studies that deal with exclusion (such as this one) focus on gaps or deficiencies among certain groups of individuals and largely avoid the exclusionary dynamics that help explain these outcomes. With the data that are generally available this is the most realistic approach. Nevertheless, to fully comprehend the nature of the problem more analyses of opportunity structures are needed, together with the forces that determine the degree of inclusiveness in a given society.

Second, the research on the causal effects of policy levers on schooling outcomes and earnings is thin, independent of the lack of information on how policy levers are distributed in the first place. The consequences of this problem are potentially serious, for the omission of context in quantitative analysis of schooling may have the effect of overstating the direct influence of household poverty. Researchers must be more explicit about the limits of their analysis when the survey data they are using has no information on the supply side. One way to improve this is to continue the process of upgrading household surveys in the region so they include more information on schooling histories for both enrolled and non-enrolled students. Randomized targeting of policy levers will also help to provide policymakers with valid information about the most effective actions to be taken.

Finally, upgrades in data and information need to go further than just addressing the deficiencies detailed here regarding measures of community and information on schools and other policy levers. Given the cumulative nature of social exclusion the best way to analyze these processes is with true panel data measured at different points in time for the same individuals. Industrialized country experiences with surveys that begin with young people and follow them through their adult lives demonstrate the potential value of this kind of information. There is no question that this kind of data collection presents some serious challenges in the average Latin American and Caribbean country. Nevertheless, the information coming from household surveys and assessment initiatives (e.g. UMCE, 2003) is an imperfect substitute for high quality longitudinal data that focuses on school entrance, grade completion and school-work transitions.

Tables and Figures

Table 1
Countries and Household Surveys Included in Analysis

	Country	Survey date	Level at which the survey is representative
1	Argentina	Oct-2000	Urban area only
2	Belize	Apr-1999	National
3	Bolivia	Nov-Dec-2000	National
4	Brazil	PNAD 1990 - Sept-1999	National
5	Chile	IV Q-2000	National
6	Colombia	1992 ENF-FT - III Q-2000	National
7	Costa Rica	Jul-2000	National
8	Dominican Republic	ENFT 1995 - 2000	National
9	Ecuador	EPED 1990 - Nov-2000	National
10	El Salvador	2000	National
11	Guatemala	Jul-Nov 2000	National
12	Guyana	1999	Urban area only
13	Haiti	2001	Urban area only
14	Honduras	1990 - Sept-1999	National
15	Jamaica	2000	National
16	Mexico	1996 – 2000	National
17	Nicaragua	1993 – 2001	National
18	Panama	1991 EN - Aug- 2000	National
19	Paraguay	1994 - Sept-2000 Aug-2001	National
20	Peru	1991 - IV Q-2000	National
21	Trinidad and Tobago	May-Jun 1992	Urban area only
22	Uruguay	1992 – 2000	Urban area only
23	Venezuela	II Q 2000	National

Source: Household Surveys, Mecovi, CEPAL and IDB.

Table 2
School Enrollment Rates by Gender, Various Age Groups

	Age 6-11			Age 12-14			Age 15-19		
Country:	**Boys**	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	95.4	93.2	2.3	92.1	87.9	4.2	44.9	49.2	(4.3)
Costa Rica	95.9	96.0	(0.2)	83.1	81.5	1.6	71.4	74.8	(3.4)
Dominican Republic	95.1	96.2	(1.1)	96.4	98.1	(1.7)	74.6	75.2	(0.6)
El Salvador	83.4	87.4	(4.0)	83.5	86.9	(3.4)	52.3	52.5	(0.1)
Guatemala	84.2	79.5	4.7	76.5	68.9	7.6	39.5	32.3	7.2
Haiti	59.3	60.3	(1.0)	78.5	79.0	(0.5)	70.3	65.0	5.3
Honduras	81.5	86.0	(4.5)	66.3	70.7	(4.5)	31.8	38.4	(6.6)
Jamaica	92.4	92.6	(0.2)	90.8	91.9	(1.1)	49.1	54.7	(5.6)
Mexico	95.7	97.3	(1.6)	87.8	89.1	(1.3)	47.3	46.8	0.5
Nicaragua	83.5	83.8	(0.3)	79.4	86.2	(6.8)	45.4	55.0	(9.6)
Panama	97.6	98.0	(0.4)	92.9	92.6	0.3	61.2	69.1	(7.9)
Southern Cone:									
Argentina	99.1	99.2	(0.1)	97.8	97.6	0.2	74.9	76.0	(1.1)
Brazil	93.8	94.9	(1.1)	93.8	94.3	(0.5)	67.9	68.4	(0.6)
Chile	97.3	97.2	0.1	97.8	97.9	(0.1)	77.7	76.0	1.7
Paraguay	93.7	95.2	(1.5)	88.5	86.5	2.0	60.5	60.8	(0.3)
Uruguay	98.3	98.5	(0.2)	93.2	94.5	(1.3)	59.8	68.4	(8.6)
Other South America:									
Bolivia	93.7	93.2	0.5	92.2	86.2	6.0	74.0	67.9	6.1
Colombia	91.5	92.7	(1.2)	84.1	85.9	(1.8)	54.1	56.3	(2.1)
Ecuador	93.0	93.7	(0.7)	79.9	80.6	(0.7)	55.3	56.6	(1.3)
Guyana	96.1	97.2	(1.1)	90.4	90.9	(0.5)	48.7	46.7	2.0
Peru	96.9	97.0	(0.1)	92.6	91.3	1.3	57.2	58.6	(1.4)
Venezuela	96.2	96.5	(0.3)	90.5	93.6	(3.1)	55.5	59.6	(4.1)

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: All percentages refer to the percentage of children who are enrolled in school, and gaps are the simple difference of subtracting the female average from the male average. When girls are more likely to be enrolled the gap is in parenthesis.

Table 3
School Enrollment Rates by Income Quintile, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap
Central America, Mexico and the Caribbean:									
Belize	95.8	98.6	2.7	87.5	92.6	5.1	42.2	51.4	9.2
Costa Rica	93.7	98.5	4.7	76.9	96.3	19.3	92.2	98.5	6.3
Dominican Republic	94.0	99.2	5.3	96.1	99.6	3.4	74.8	79.5	4.6
El Salvador	76.9	97.1	20.2	79.6	93.9	14.3	43.8	65.4	21.6
Guatemala	75.5	94.7	19.2	67.7	86.7	19.0	26.1	54.8	28.7
Haiti	55.7	76.4	20.7	75.8	88.4	12.6	64.5	74.2	9.6
Honduras	76.1	92.8	16.7	59.8	84.1	24.3	24.2	50.4	26.2
Jamaica	----	----	----	----	----	----	----	----	----
Mexico	93.6	99.0	5.4	82.0	98.0	16.0	30.7	70.1	39.4
Nicaragua	81.0	89.5	8.4	81.0	83.5	2.5	43.5	47.5	4.0
Panama	96.3	99.6	3.3	83.8	97.1	13.3	46.4	76.8	30.4
Southern Cone:									
Argentina	98.0	99.7	1.7	96.4	99.0	2.6	67.7	87.5	19.8
Brazil	90.7	98.7	8.0	90.9	98.8	7.9	61.3	82.5	21.2
Chile	97.0	97.7	0.7	96.5	98.6	2.1	62.9	63.7	0.8
Paraguay	91.1	98.8	7.7	77.4	94.8	17.4	42.6	74.6	32.0
Uruguay	97.9	100.0	2.1	84.1	97.6	13.6	43.1	83.9	40.8
Other South America:									
Bolivia	90.5	97.4	6.9	71.2	97.1	25.9	38.9	81.7	42.8
Colombia	89.6	96.7	7.1	80.1	92.8	12.7	53.5	66.1	12.6
Ecuador	92.3	96.1	3.8	77.3	90.8	13.5	47.4	78.2	30.8
Peru	94.3	97.6	3.4	86.4	94.4	8.0	49.2	60.1	11.0
Venezuela	93.9	98.1	4.2	88.1	96.4	8.3	50.0	66.6	16.6

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: All percentages refer to the percentage of children who are enrolled in school, and gaps are the simple difference of subtracting the low quintile average from the high quintile average.

Table 4
School Enrollment Rates by Urban-Rural, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Urban	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	96.8	92.5	4.4	95.1	85.4	9.7	60.2	33.6	26.6
Costa Rica	98.0	94.7	3.3	91.6	76.7	14.9	83.3	65.5	17.8
Dominican Republic	96.8	94.0	2.8	98.3	95.8	2.5	76.9	70.0	6.9
El Salvador	91.2	80.0	11.2	90.5	76.6	13.9	64.0	38.9	25.1
Guatemala	89.1	78.3	10.8	83.3	66.5	16.8	55.6	23.8	31.8
Haiti	----	----	----	----	----	----	----	----	----
Honduras	88.5	80.6	7.9	79.3	61.5	17.8	50.1	21.2	28.9
Jamaica	----	----	----	----	----	----	----	----	----
Mexico	97.6	95.3	2.3	92.4	83.9	8.5	55.8	33.9	21.9
Nicaragua	89.1	77.3	11.8	90.9	72.1	18.9	62.4	31.9	30.5
Panama	98.8	96.7	2.1	96.5	88.0	8.5	73.2	52.1	21.1
Southern Cone:									
Argentina	----	----	----	----	----	----	----	----	----
Brazil	95.4	91.2	4.2	95.2	90.5	4.7	70.6	58.9	11.7
Chile	97.5	95.6	1.9	98.4	95.0	3.4	79.5	59.5	20.0
Paraguay	97.1	92.1	5.1	94.6	81.3	13.3	71.2	46.9	24.3
Uruguay	----	----	----	----	----	----	----	----	----
Other South America:									
Bolivia	95.8	90.0	5.8	95.1	80.1	15.0	81.6	46.0	35.6
Colombia	94.6	88.8	5.8	91.3	76.8	14.5	61.8	44.6	17.2
Ecuador	94.4	91.7	2.7	88.0	69.1	18.9	67.0	36.2	30.8
Peru	98.0	95.6	2.4	95.0	87.7	7.3	62.2	50.1	12.1
Venezuela	97.7	96.2	1.5	96.4	91.5	4.9	60.5	57.1	3.4

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: All percentages refer to the percentage of children who are enrolled in school, and gaps are the simple difference of subtracting the rural average from the urban average.

Table 5
Marginal Effects of Child/Family Characteristics on Current Enrollment Probabilities, Various Age Groups

Country:	Being Female			Being Poor			Living in Rural Area		
	Age 6-11	Age 12-14	Age 15-19	Age 6-11	Age 12-14	Age 15-19	Age 6-11	Age 12-14	Age 15-19
Central America, Mexico and the Caribbean:									
Belize	-0.2	-2.8	3.2	-0.8	-0.5	-3.0	**-2.5**	**-8.2**	**-28.2**
Costa Rica	0.6	-1.1	**6.3**	**-2.2**	**-3.4**	**-11.5**	**-2.4**	**-13.8**	**-19.3**
Dominican Republic	1.1	0.8	1.0	**-2.2**	-1.6	2.3	**-2.4**	**-2.0**	**-7.4**
El Salvador	**1.8**	-1.7	**-4.3**	**-9.3**	**-6.2**	**-6.6**	**-7.9**	**-12.1**	**-23.8**
Guatemala	**-4.3**	**-7.9**	**-9.2**	**-8.0**	**-6.6**	**-8.2**	**-6.2**	**-13.7**	**-29.1**
Haiti	-1.7	1.1	-0.9	**-8.5**	**-6.7**	**-8.3**	----	----	----
Honduras	**4.3**	**4.6**	**5.5**	**-8.9**	**-11.1**	**-5.9**	**-5.9**	**-15.3**	**-27.3**
Jamaica	0.4	2.3	2.3	----	----	-----	----	----	----
Mexico	**1.3**	0.6	-1.9	**-3.3**	**-9.8**	**-10.3**	-0.7	**-3.8**	**-17.1**
Nicaragua	0.5	**6.9**	**8.4**	**-6.2**	**-5.4**	**-8.4**	**-10.8**	**-19.1**	**-29.8**
Panama	0.3	-0.6	**6.8**	**-1.3**	**-4.5**	**-11.3**	**-1.5**	**-6.5**	**-17.1**
Southern Cone:									
Argentina	-0.01	-0.3	1.5	**-1.1**	**-2.5**	**-13.0**	----	----	----
Brazil	**1.5**	0.5	0.9	**-4.4**	**-3.2**	**-7.8**	**-1.8**	**-2.7**	**-6.8**
Chile	-0.2	0.1	**-2.5**	-0.3	-0.8	2.2	**-1.8**	**-2.9**	**-10.9**
Paraguay	0.1	-1.9	0.3	-1.1	**-4.0**	**-13.7**	-3.3	**-3.7**	-4.6
Uruguay	0.2	1.3	**9.7**	**-2.1**	**-7.8**	**-30.6**	----	----	----
Other South America:									
Bolivia	-0.3	**-5.6**	-8.1	**-2.1**	**-6.9**	**-9.7**	**-4.6**	**-10.8**	**-30.7**
Colombia	**1.1**	1.7	1.2	**-3.7**	**-5.1**	**-3.9**	**-4.7**	**-13.0**	**-16.2**
Ecuador	0.7	0.8	1.6	-1.6	-3.2	**-4.4**	**-2.2**	**-18.0**	**-29.8**
Guyana	1.1	0.5	-3.3	----	----	----	----	----	----
Peru	1.0	-1.4	1.7	**-1.7**	**-5.5**	**-17.1**	**-4.8**	**-11.1**	**-18.0**
Venezuela	0.3	**3.1**	**4.4**	**-2.6**	**-5.2**	**-10.5**	-0.8	**-3.8**	-0.8

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Coefficients are marginal effects on probability of being currently enrolled taken from binary probit (0=not enrolled, 1=enrolled) estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. The model is estimated separately by country and each of the three age cohorts using only these three variables and a constant.

Table 6
Comparisons of Marginal Effects on Probability of Attending School by Primary School Completion, Children Aged 15-19

Country:	Being Female		Being Poor		Living in Rural	
	All	**Primary Complete**	**All**	**Primary Complete**	**All**	**Primary Complete**
Central America, Mexico and the Caribbean:						
Belize	2.5	4.5	-3.5	-2.6	**-28.3**	**-25.5**
Costa Rica	**3.5**	**4.1**	**-11.2**	**-9.8**	**-14.6**	**-13.5**
Dominican Republic	0.4	-2.1	1.6	**5.0**	**-6.6**	1.0
El Salvador	**-4.3**	**-4.4**	**-10.3**	-1.7	**-20.3**	**-11.5**
Guatemala	**-8.8**	-1.0	**-5.8**	-3.2	**-35.0**	**-29.1**
Haiti	**----**	**----**	----	**----**	----	----
Honduras	**5.8**	**5.8**	**-6.0**	-2.9	**-28.8**	**-29.2**
Jamaica	**----**	**----**	**----**	**----**	**----**	**----**
Mexico	-1.1	-0.7	**-4.5**	-0.9	**-23.0**	**-23.1**
Nicaragua	**6.7**	2.7	**-7.4**	**-6.9**	**-30.4**	**-20.4**
Panama	**8.3**	**8.3**	**-12.7**	**-11.3**	**-17.1**	**-14.6**
Southern Cone:						
Argentina	**2.5**	**2.4**	**-13.1**	**-11.6**	----	-----
Brazil	0.7	**-1.7**	**-11.1**	**-2.9**	**-9.2**	0.1
Chile	**-2.4**	**-2.6**	**-5.7**	**-4.8**	**-18.5**	**-16.7**
Paraguay	-2.3	-1.7	**-12.7**	**-11.0**	**-16.4**	**-8.2**
Uruguay	**9.5**	**8.7**	**-29.5**	**-28.2**	----	-----
Other South America:						
Bolivia	**-12.9**	**-9.5**	**-8.4**	-2.9	**-34.9**	**-22.0**
Colombia	0.2	**-2.5**	**-4.4**	-1.3	**-16.5**	-1.2
Ecuador	1.6	1.7	**-7.9**	**-7.3**	**-29.4**	**-28.9**
Peru	-0.9	1.1	1.6	2.8	**-16.4**	**-14.3**
Venezuela	**5.7**	**2.2**	**-8.9**	**-6.0**	-1.0	2.3

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Coefficients are marginal effects on probability of school enrollment using probits. Complete primary is defined as having 6 or more years of schooling. When coefficient is significant at the 0.05 level it is highlighted in bold. The model is estimated separately for each country using only these three variables and a constant.

Table 7
Grade Attainment by Gender, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Boys	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	2.35	2.29	0.06	5.48	5.52	(0.04)	7.05	7.49	(0.44)
Costa Rica	1.71	1.71	0.00	5.29	5.38	(0.09)	7.12	7.53	(0.41)
Dominican Republic	2.02	2.22	(0.20)	4.98	5.59	(0.61)	7.42	8.36	(0.94)
El Salvador	2.09	2.22	(0.13)	5.40	5.61	(0.21)	7.50	7.62	(0.12)
Guatemala	1.24	1.16	0.08	3.72	3.47	0.25	5.43	4.75	0.68
Haiti	1.38	1.46	(0.08)	3.42	3.49	(0.07)	5.52	5.48	0.04
Honduras	1.32	1.45	(0.13)	4.31	4.69	(0.38)	5.73	6.26	(0.52)
Mexico	2.22	2.40	(0.18)	6.11	6.33	(0.22)	8.31	8.34	(0.03)
Nicaragua	1.47	1.68	(0.21)	4.12	4.71	(0.59)	5.58	6.63	(1.05)
Panama	2.10	2.20	(0.10)	5.92	6.30	(0.38)	8.61	9.13	(0.52)
Southern Cone:									
Argentina	2.25	2.23	0.02	6.39	6.55	(0.16)	8.86	9.36	(0.50)
Brazil	2.10	2.24	(0.14)	5.03	5.47	(0.44)	6.73	7.41	(0.69)
Chile	2.36	2.37	(0.01)	6.33	6.37	(0.04)	9.50	9.78	(0.28)
Paraguay	1.84	1.94	(0.10)	4.88	5.13	(0.25)	7.10	7.53	(0.43)
Uruguay	2.35	2.56	(0.21)	6.19	6.37	(0.19)	8.26	9.00	(0.74)
Other South America:									
Bolivia	2.19	2.22	(0.03)	5.86	5.58	0.28	8.62	8.36	0.27
Colombia	1.80	1.87	(0.07)	5.16	5.43	(0.27)	7.58	8.12	(0.54)
Ecuador	2.80	2.92	(0.12)	6.17	6.41	(0.25)	8.29	8.43	(0.15)
Peru	2.12	2.00	0.12	5.68	5.51	0.17	8.50	8.41	0.09
Venezuela	2.31	2.46	(0.15)	5.87	6.28	(0.41)	7.70	8.50	(0.80)

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Attainment is measured by completed years of education beginning in grade 1 of primary school, and gaps are the simple difference of subtracting the female average from the male average. When girls have higher average attainment the gap is in parenthesis.

Table 8
Grade Attainment by Income Quintile, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap
Central America, Mexico and the Caribbean:									
Belize	2.27	2.34	(0.07)	4.07	3.82	0.24	6.14	7.03	(0.89)
Costa Rica	1.46	1.88	0.42	4.82	5.70	0.88	6.08	8.03	1.95
Dominican Republic	2.16	2.66	0.50	5.13	6.55	1.42	8.20	9.51	1.31
El Salvador	1.81	2.69	0.88	4.91	6.64	1.73	6.01	9.28	3.27
Guatemala	1.18	1.40	0.23	3.61	3.91	0.29	5.13	5.60	0.47
Haiti	1.25	2.05	0.81	3.06	4.48	1.42	4.62	7.05	2.43
Honduras	1.12	1.95	0.83	3.93	5.37	1.44	4.81	7.43	2.62
Mexico	2.01	2.54	0.53	5.46	6.84	1.38	6.78	9.28	2.50
Nicaragua	1.40	1.81	0.41	3.94	4.98	1.04	5.17	7.07	1.90
Panama	1.93	2.40	0.47	5.49	6.64	1.15	7.31	9.82	2.51
Southern Cone:									
Argentina	2.15	2.29	0.14	6.20	6.77	0.57	8.35	10.04	1.69
Brazil	1.78	2.63	0.85	4.09	6.59	2.50	5.17	8.89	3.72
Chile	2.23	2.49	0.26	5.99	6.62	0.63	8.94	10.30	1.36
Paraguay	1.64	2.24	0.60	4.48	5.55	1.07	5.92	8.19	2.27
Uruguay	2.20	2.66	0.46	5.59	6.78	1.19	7.01	9.94	2.93
Other South America:									
Bolivia	1.78	2.69	0.91	4.60	6.57	1.97	5.85	9.58	3.73
Colombia	1.64	2.21	0.57	4.92	6.13	1.21	7.26	9.08	1.82
Ecuador	2.65	3.28	0.63	5.98	7.18	1.20	7.53	9.86	2.33
Peru	1.80	2.36	0.56	5.04	5.95	0.91	7.23	9.39	2.16
Venezuela	2.14	2.82	0.68	5.55	6.66	1.11	7.19	9.06	1.87

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Attainment is measured by completed years of education beginning in grade 1 of primary school, and gaps are the simple difference of subtracting the low quintile average from the high quintile average.

Table 9
Grade Attainment by Urban-Rural, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Urban	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	2.41	2.26	0.15	5.70	5.33	0.37	7.74	6.73	1.01
Costa Rica	1.82	1.62	0.20	5.53	5.18	0.35	7.91	6.78	1.13
Dominican Republic	2.26	1.89	0.37	5.62	4.79	0.83	8.62	6.45	2.17
El Salvador	2.41	1.89	0.52	6.18	4.75	1.43	8.77	6.09	2.69
Guatemala	1.58	1.01	0.57	4.58	3.02	1.56	6.98	3.93	3.05
Honduras	1.61	1.24	0.37	5.08	4.12	0.96	7.09	4.99	2.10
Mexico	2.40	2.20	0.20	6.54	5.85	0.69	8.87	7.52	1.35
Nicaragua	1.85	1.24	0.61	5.09	3.52	1.57	7.30	4.33	2.97
Panama	2.24	2.05	0.19	6.33	5.81	0.52	9.44	7.94	1.50
Southern Cone:									
Argentina	----	----	----	----	----	----	----	----	----
Brazil	2.28	1.84	0.44	5.57	4.25	1.32	7.51	5.37	2.14
Chile	2.39	2.26	0.13	6.40	6.02	0.38	9.80	8.53	1.27
Paraguay	1.98	1.80	0.18	5.23	4.80	0.43	7.99	6.40	1.59
Uruguay	----	----	----	----	----	----	----	----	----
Other South America:									
Bolivia	2.47	1.82	0.65	6.22	4.94	1.28	9.35	6.50	2.85
Colombia	2.05	1.55	0.50	5.82	4.62	1.20	8.64	6.59	2.05
Ecuador	2.94	2.75	0.19	6.63	5.80	0.82	9.10	7.04	2.06
Peru	2.19	1.89	0.30	5.99	5.03	0.96	9.14	7.25	1.89
Venezuela	2.37	2.38	(0.01)	6.34	6.03	0.33	8.57	8.02	0.55

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Attainment is measured by completed years of education beginning in grade 1 of primary school, and gaps are the simple difference of subtracting the rural average from the urban average. When rural children have higher average attainment the gap is in parenthesis.

Table 10
Linear Effects of Child/Family Characteristics on Grade Attainment, Various Age Groups

Country:	Being Female			Being Poor			Living in Rural Area		
	Age 6-11	**Age 12-14**	**Age 15-19**	**Age 6-11**	**Age 12-14**	**Age 15-19**	**Age 6-11**	**Age 12-14**	**Age 15-19**
Central America, Mexico and the Caribbean:									
Belize	-0.04	0.20	**0.53**	0.02	0.24	-0.17	**-0.22**	-0.12	**-1.57**
Costa Rica	0.01	**0.12**	**0.42**	**-0.29**	**-0.53**	**-1.01**	**-0.13**	**-0.23**	**-0.90**
Dominican Republic	**0.18**	**0.54**	**0.91**	**-0.31**	**-0.65**	**-1.04**	**-0.32**	**-0.67**	**-1.91**
El Salvador	**0.13**	**0.20**	0.02	**-0.35**	**-0.69**	**-1.34**	**-0.40**	**-1.22**	**-2.33**
Guatemala	-0.06	**-0.29**	**-0.73**	**-0.35**	**-0.86**	**-1.23**	**-0.34**	**-1.03**	**-2.37**
Haiti	0.08	0.02	-0.08	**-0.39**	**-0.85**	**-1.49**	**----**	**----**	**----**
Honduras	**0.13**	**0.38**	**0.42**	**-0.35**	**-0.64**	**-0.88**	**-0.29**	**-0.79**	**-1.85**
Mexico	**0.17**	**0.16**	-0.06	**-0.35**	**-0.61**	**-1.08**	-0.04	**-0.39**	**-0.81**
Nicaragua	**0.21**	**0.57**	**0.84**	**-0.33**	**-0.65**	**-0.96**	**-0.56**	**-1.51**	**-2.51**
Panama	0.10	**0.36**	**0.42**	**-0.23**	**-0.50**	**-1.20**	-0.10	**-0.34**	**-1.08**
Southern Cone:									
Argentina	-0.01	**0.15**	**0.53**	**-0.17**	**-0.41**	**-1.12**	----	----	----
Brazil	**0.17**	**0.44**	**0.75**	**-0.47**	**-1.20**	**-1.74**	**-0.28**	**-0.95**	**-1.51**
Chile	0.01	0.04	**0.29**	**-0.14**	**-0.35**	**-0.72**	**-0.09**	**-0.29**	**-1.07**
Paraguay	0.01	0.11	0.24	**-0.29**	**-0.20**	**-1.05**	0.04	0.10	-0.26
Uruguay	**0.21**	**0.19**	**0.74**	**-0.31**	**-0.74**	**-1.84**	----	----	----
Other South America:									
Bolivia	0.03	-0.27	**-0.39**	**-0.35**	**-0.65**	**-0.92**	**-0.47**	**-0.97**	**-2.38**
Colombia	0.06	**0.27**	**0.44**	**-0.33**	**-0.52**	**-0.71**	**-0.40**	**-1.06**	**-1.86**
Ecuador	**0.12**	**0.24**	**0.18**	**-0.42**	**-0.45**	**-0.78**	-0.09	**-0.71**	**-1.86**
Peru	-0.11	-0.19	0.17	**-0.23**	**-0.36**	-0.22	**-0.19**	**-0.80**	**-2.01**
Venezuela	**0.15**	**0.43**	**0.83**	**-0.42**	**-0.65**	**-1.06**	**0.13**	-0.13	**-0.28**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Coefficients are linear effects on grade attainment using ordinary least squares (OLS) estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. The model is estimated separately by country for each of the three age cohorts using only these three variables and a constant.

Table 11
Grade-for-Age by Gender, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Boys	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**	**Boys**	**Girls**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	0.71	0.70	0.01	0.68	0.70	(0.02)	0.60	0.63	(0.03)
Costa Rica	0.58	0.61	(0.03)	0.75	0.77	(0.02)	0.66	0.69	(0.03)
Dominican Republic	0.83	0.94	(0.11)	0.72	0.80	(0.08)	0.68	0.77	0.09
El Salvador	0.87	0.90	(0.03)	0.78	0.81	(0.03)	0.69	0.70	(0.01)
Guatemala	0.38	0.36	0.02	0.53	0.50	0.03	0.50	0.44	0.06
Haiti	0.56	0.63	(0.06)	0.49	0.51	(0.02)	0.50	0.50	0.00
Honduras	0.48	0.51	(0.03)	0.62	0.67	(0.05)	0.54	0.58	(0.04)
Mexico	0.88	0.94	(0.06)	0.87	0.91	(0.04)	0.76	0.77	(0.01)
Nicaragua	0.57	0.63	(0.06)	0.59	0.68	(0.09)	0.51	0.62	(0.11)
Panama	0.78	0.83	(0.05)	0.84	0.90	(0.06)	0.79	0.84	(0.05)
Southern Cone:									
Argentina	0.85	0.86	(0.01)	0.91	0.93	(0.02)	0.81	0.85	(0.04)
Brazil	0.83	0.88	(0.05)	0.72	0.78	(0.06)	0.62	0.68	(0.06)
Chile	0.90	0.90	0.00	0.91	0.92	(0.01)	0.87	0.89	(0.02)
Paraguay	0.71	0.77	(0.06)	0.70	0.74	(0.04)	0.68	0.72	(0.04)
Uruguay	0.47	0.49	(0.02)	0.43	0.47	(0.04)	0.39	0.39	0.00
Other South America:									
Bolivia	0.87	0.88	(0.01)	0.84	0.80	0.04	0.79	0.77	0.02
Colombia	0.68	0.73	(0.05)	0.74	0.78	(0.04)	0.70	0.75	(0.05)
Ecuador	0.82	0.85	-0.03	0.77	0.80	-0.03	0.70	0.71	-0.02
Peru	0.83	0.81	0.02	0.82	0.80	0.02	0.78	0.77	0.01
Venezuela	0.93	1.00	(0.07)	0.84	0.90	(0.06)	0.71	0.79	(0.08)

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Grade for age is defined by: Number of grades completed/(age-6). Higher values (i.e. 1.0) indicate efficient grade progression. Lower values (i.e. 0) result from never being enrolled or frequent repetition episodes. Gaps refer to the simple difference of subtracting the female average from the male average. When girls have higher grade for age the gap is in parenthesis.

Table 12
Grade-for-Age by Income Quintile, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap	Quintile 1	Quintile 5	Gap
Central America, Mexico and the Caribbean:									
Belize	0.68	0.72	0.04	0.52	0.49	(0.04)	0.53	0.59	0.06
Costa Rica	0.50	0.64	0.14	0.69	0.80	0.11	0.45	0.57	0.12
Dominican Republic	0.95	1.00	0.05	0.75	0.93	0.17	0.76	0.85	0.09
El Salvador	0.75	1.08	0.34	0.71	0.95	0.24	0.57	0.85	0.29
Guatemala	0.75	1.09	0.34	0.71	0.95	0.24	0.32	0.57	0.25
Haiti	0.53	0.86	0.32	0.44	0.65	0.21	0.42	0.64	0.21
Honduras	0.39	0.72	0.33	0.57	0.77	0.20	0.26	0.46	0.20
Mexico	0.78	0.98	0.20	0.79	0.98	0.19	0.45	0.64	0.19
Nicaragua	0.53	0.70	0.17	0.56	0.72	0.16	0.33	0.48	0.15
Panama	0.72	0.91	0.19	0.79	0.93	0.14	0.56	0.69	0.13
Southern Cone:									
Argentina	0.82	0.89	0.07	0.88	0.97	0.08	0.69	0.77	0.08
Brazil	0.72	1.02	0.30	0.59	0.94	0.35	0.13	0.49	0.36
Chile	0.86	0.93	0.07	0.87	0.95	0.08	0.75	0.83	0.08
Paraguay	0.62	0.92	0.30	0.65	0.79	0.14	0.43	0.58	0.15
Uruguay	0.90	1.01	0.11	0.81	0.97	0.16	0.49	0.66	0.17
Other South America:									
Bolivia	0.70	1.04	0.34	0.66	0.93	0.27	0.28	0.55	0.27
Colombia	0.62	0.85	0.23	0.71	0.87	0.16	0.51	0.68	0.17
Ecuador	0.78	0.93	0.15	0.72	0.86	0.13	0.63	0.80	0.17
Peru	0.72	0.87	0.15	0.73	0.86	0.13	0.55	0.68	0.13
Venezuela	0.87	1.10	0.23	0.80	0.95	0.15	0.52	0.67	0.15

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Grade for age is defined by: Number of grades completed/(age-6). Higher values (i.e. 1.0) indicate efficient grade progression. Lower values (i.e. 0) result from never being enrolled or frequent repetition episodes. Gaps refer to the simple difference of subtracting the low income average from the high income average.

Table 13
Grade-for-Age by Urban-Rural, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Urban	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**	**Urban**	**Rural**	**Gap**
Central America, Mexico and the Caribbean:									
Belize	0.73	0.69	0.04	0.71	0.68	0.04	0.66	0.57	0.09
Costa Rica	0.62	0.57	0.05	0.79	0.73	0.06	0.72	0.63	0.09
Dominican Republic	0.94	0.79	0.15	0.81	0.69	0.12	0.79	0.60	0.19
El Salvador	0.99	0.77	0.22	0.89	0.68	0.21	0.80	0.56	0.24
Guatemala	0.49	0.31	0.18	0.65	0.44	0.21	0.64	0.37	0.27
Honduras	0.59	0.44	0.15	0.73	0.59	0.14	0.65	0.47	0.18
Mexico	0.97	0.85	0.12	0.94	0.84	0.10	0.81	0.70	0.11
Nicaragua	0.73	0.45	0.28	0.73	0.50	0.23	0.67	0.40	0.27
Panama	0.84	0.77	0.07	0.89	0.84	0.05	0.86	0.74	0.12
Southern Cone:									
Brazil	0.89	0.75	0.14	0.80	0.61	0.19	0.69	0.50	0.19
Chile	0.91	0.85	0.07	0.92	0.87	0.05	0.89	0.79	0.10
Paraguay	0.81	0.68	0.13	0.76	0.69	0.07	0.76	0.62	0.14
Other South America:									
Bolivia	0.96	0.75	0.21	0.88	0.71	0.17	0.86	0.61	0.25
Colombia	0.78	0.60	0.18	0.83	0.66	0.17	0.79	0.61	0.18
Ecuador	0.87	0.79	0.08	0.83	0.73	0.09	0.77	0.60	0.17
Peru	0.87	0.76	0.11	0.87	0.73	0.14	0.83	0.68	0.15
Venezuela	0.93	0.97	(0.04)	0.90	0.86	0.04	0.78	0.74	0.04

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Grade for age is defined by: Number of grades completed/(age-6). Higher values (i.e. 1.0) indicate efficient grade progression. Lower values (i.e. 0) result from never being enrolled or frequent repetition episodes. Gaps refer to the simple difference of subtracting the rural average from the urban average. When rural children have higher grade for age the gap is in parenthesis.

Table 14
Linear Effects of Child/Family Characteristics on Number of Grades Completed per Year, Various Age Groups

Country:	Being Female			Being Poor			Living in Rural Area		
	Age 6-11	Age 12-14	Age 15-19	Age 6-11	Age 12-14	Age 15-19	Age 6-11	Age 12-14	Age 15-19
Central America, Mexico and the Caribbean:									
Belize	-0.01	0.02	**0.04**	-0.03	0.03	-0.01	**-0.04**	-0.02	**-0.13**
Costa Rica	0.02	**0.02**	**0.04**	**-0.08**	**-0.07**	**-0.08**	-0.02	**-0.03**	**-0.08**
Dominican Republic	**0.11**	**0.07**	**0.08**	**-0.08**	**-0.09**	**-0.08**	**-0.14**	**-0.10**	**-0.17**
El Salvador	**0.04**	**0.03**	0.01	**-0.12**	**-0.10**	**-0.11**	**-0.13**	**-0.17**	**-0.21**
Guatemala	-0.01	**-0.04**	**-0.07**	**-0.12**	**-0.13**	**-0.11**	**-0.10**	**-0.14**	**-0.21**
Haiti	**0.06**	0.02	-0.01	**-0.15**	**-0.12**	**-0.13**	----	----	----
Honduras	**0.03**	**0.06**	**0.04**	**-0.12**	**-0.09**	**-0.07**	**-0.09**	**-0.11**	**-0.16**
Mexico	**0.04**	**0.03**	0.01	**-0.11**	**-0.09**	**-0.09**	**-0.05**	**-0.05**	**-0.06**
Nicaragua	**0.06**	**0.09**	**0.08**	**-0.11**	**-0.10**	**-0.09**	**-0.21**	**-0.22**	**-0.25**
Panama	**0.04**	**0.05**	**0.04**	**-0.07**	**-0.06**	**-0.09**	**-0.04**	**-0.03**	**-0.09**
Southern Cone:									
Argentina	0.02	**0.02**	**0.04**	**-0.05**	**-0.06**	**-0.08**	----	----	----
Brazil	**0.06**	**0.06**	**0.07**	**-0.13**	**-0.17**	**-0.15**	**-0.09**	**-0.13**	**-0.14**
Chile	-0.01	**0.01**	**0.02**	**-0.04**	**-0.04**	**-0.05**	**-0.03**	**-0.04**	**-0.09**
Paraguay	0.01	**0.02**	**0.02**	**-0.11**	-0.02	**-0.08**	0.01	0.02	-0.02
Uruguay	**0.06**	**0.04**	**0.07**	**-0.07**	**-0.10**	**-0.15**	----	----	----
Other South America:									
Bolivia	0.01	-0.04	**-0.04**	**-0.09**	**-0.09**	**-0.07**	**-0.13**	**-0.13**	**-0.21**
Colombia	**0.03**	**0.04**	**0.04**	**-0.11**	**-0.07**	**-0.06**	**-0.12**	**-0.15**	**-0.16**
Ecuador	**0.04**	**0.03**	**0.02**	**-0.14**	**-0.06**	**-0.05**	**-0.06**	**-0.09**	**-0.17**
Peru									
Venezuela	**0.05**	**0.06**	**0.08**	**-0.15**	**-0.09**	**-0.09**	**0.09**	0.01	**-0.02**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Coefficients are linear effects on grade for age using ordinary least squares (OLS) estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. The model is estimated separately by country for each of the three age cohorts using only these three variables and a constant.

Table 15
School Enrollment Rates by Community, Various Age Groups

	Age 6-11			Age 12-14			Age 15-19		
Country:	**Rate**	**Gap**	**marginal**	**Rate**	**gap**	**marginal**	**Rate**	**Gap**	**marginal**
Bolivia:									
Indigenous	93.0	1.0	0.1	87.0	5.0	-0.1	68.0	7.0	-0.5
Caucasian	94.0	----	----	92.0	----	----	75.0	----	----
Brazil:									
Indigenous	94.7	1.3	**-2.4**	88.3	7.7	**-16.2**	75.6	-4.6	-1.2
Black	92.0	4.0	**-2.1**	91.0	5.0	**-4.0**	63.0	8.0	**-1.7**
"Parda"	93.0	3.0	**-1.1**	93.0	3.0	**-1.6**	66.0	5.0	**-1.6**
Caucasian	96.0	----	----	96.0	----	----	71.0	----	----
Guatemala:									
Indigenous	74.8	12.3	**-12.3**	65.9	11.5	**-11.8**	28.2	12.5	**-5.2**
Ladino	87.1	----	----	77.4	----	----	40.7	----	----
Paraguay:									
Speaks Guarani Only	93.0	5.0	**-3.5**	83.0	15.0	**-15.1**	47.0	32.0	**-27.5**
Speaks Guarani and Spanish	97.0	1.0	-3.5	94.0	2.0	**-8.1**	74.0	5.0	-7.3
Speaks Spanish Only	98.0	----	----	98.0	----	----	79.0	----	----
Speaks Other	82.0	16.0	**-18.9**	66.0	32.0	**-46.1**	32.0	47.0	**-43.2**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: See household surveys for more detail on questions; in all cases respondents select the category they feel is most appropriate. For Brazil the category "parda" is loosely defined as a mixture of black and white. Gaps are calculated by subtracting the average for the specific group from the reference category (Caucasian, Ladino or Spanish only speaker). Marginal refers to the coefficient for the community variable in a regression that includes gender, SES and rural-urban controls.

Table 16
Grade Attainment by Community, Various Age Groups

Country:	Age 6-11			Age 12-14			Age 15-19		
	Years	**Gap**	**marginal**	**Years**	**gap**	**marginal**	**Years**	**Gap**	**marginal**
Bolivia:									
Indigenous	2.07	0.36	**-0.18**	5.55	0.43	0.03	8.07	0.94	**-1.05**
Caucasian	2.43	----	----	5.98	----	----	9.01	----	----
Brazil:									
Indigenous	2.04	0.32	**-0.40**	5.28	0.56	**-0.75**	7.36	0.46	**-1.24**
Black	1.92	0.44	**-0.30**	4.42	1.42	**-1.05**	6.11	1.71	**-1.62**
"Parda"	1.99	0.37	**-0.23**	4.73	1.11	**-0.69**	6.30	1.52	**-1.06**
Caucasian	2.36	----	----	5.84	----	----	7.82	----	----
Guatemala:									
Indigenous	0.88	0.56	**-0.56**	2.77	1.40	**-1.41**	3.80	2.17	**-3.34**
Ladino	1.44	----	----	4.17	----	----	5.97	----	----
Paraguay:									
Speaks Guarani Only	1.80	0.29	-0.22	4.76	0.68	**-0.83**	6.45	2.13	**-1.63**
Speaks Guarani and Spanish	2.03	0.06	-0.05	5.47	0.07	-0.13	8.05	0.53	**-0.55**
Speaks Spanish Only	2.09	----	----	5.54	----	----	8.58	----	----
Speaks Other	1.28	0.81	**-0.77**	3.89	1.65	**-1.57**	5.02	3.56	**-3.38**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: See household surveys for more detail on questions; in all cases respondents select the category they felt was most appropriate. For Brazil the category "parda" is loosely defined as a mixture of black and white. Gaps are calculated by subtracting the average for the specific group from the reference category (Caucasian, Ladino or Spanish only speaker). Marginal refers to the coefficient for the community variable in a regression that includes gender, SES and rural-urban controls.

Table 17
Years of Schooling for Adults, Various Age Groups

Country:	Age 20-30			Age 31-40			Age 41-50		
	Men	**Women**	**Gap**	**Men**	**Women**	**Gap**	**Men**	**Women**	**Gap**
Central America,Mexico and the Caribbean:									
Belize	6.52	6.64	(0.11)	6.25	6.17	0.08	5.98	5.60	0.38
Costa Rica	7.78	8.21	(0.43)	8.05	8.11	(0.06)	7.63	7.54	0.09
Dominican Republic	8.35	9.34	(0.99)	8.34	8.44	(0.09)	7.11	6.52	0.60
El Salvador	7.27	6.91	0.36	5.45	4.94	0.51	4.45	3.99	0.46
Guatemala	6.17	4.98	1.19	5.57	3.96	1.61	4.52	3.27	1.25
Haiti	6.69	5.35	1.34	5.00	3.57	1.43	3.12	2.08	1.04
Honduras	6.11	6.56	(0.45)	5.70	5.91	(0.20)	5.18	4.67	0.51
Mexico	8.45	8.15	0.30	7.37	6.77	0.60	6.12	5.78	0.34
Nicaragua	5.86	6.54	(0.68)	5.53	5.43	0.10	4.65	4.37	0.28
Panama	10.13	10.89	(0.75)	9.95	10.67	(0.72)	9.58	9.54	0.04
Southern Cone:									
Argentina	8.90	9.37	(0.47)	7.05	7.05	0.00	6.62	6.73	(0.11)
Brazil	7.05	7.80	-0.75	6.50	6.91	-0.42	3.56	3.64	-0.09
Chile	11.24	11.47	(0.22)	10.48	10.61	(0.13)	10.31	10.07	0.24
Paraguay	8.36	8.49	(0.13)	7.56	7.40	0.16	6.73	6.47	0.26
Uruguay	8.76	9.41	(0.64)	8.61	8.83	(0.23)	8.13	8.41	(0.28)
Other South America:									
Bolivia	9.80	8.86	0.94	9.07	7.12	1.95	7.98	6.50	1.49
Colombia	8.57	8.97	(0.40)	7.71	8.06	(0.36)	7.24	6.94	0.31
Ecuador	7.63	7.54	0.09	9.09	8.91	0.18	8.26	7.58	0.68
Peru	11.42	11.33	0.09	10.28	8.89	1.39	8.68	6.92	1.77
Venezuela	8.02	8.91	(0.89)	7.86	8.26	(0.40)	7.39	7.43	(0.04)

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Attainment is measured by completed years of education beginning in grade 1 of primary school, and gaps are the simple difference of subtracting the female average from the male average. When women have higher average attainment the gap is in parenthesis.

Table 18
School Enrollment Rates 1990 vs. 2000, Various Age Groups

	Age 6-11			Age 12-14			Age 15-19		
Country:	**2000**	**1990**	**Gap**	**2000**	**1990**	**Gap**	**2000**	**1990**	**Gap**
Brazil	96.76	86.73	10.03	94.04	80.04	14.00	68.14	50.63	17.51
Colombia	92.11	93.46	(1.35)	84.96	91.85	(6.90)	55.18	65.45	(10.27)
Dominican Republic	95.65	93.58	2.08	97.28	96.34	0.93	74.53	73.16	1.37
Ecuador	93.35	96.87	(3.52)	80.26	92.34	(12.08)	55.93	70.64	(14.71)
Honduras	83.77	78.15	5.62	68.48	67.55	0.92	35.01	29.46	5.56
Mexico	96.54	96.68	(0.14)	88.41	83.80	4.60	88.41	83.80	4.60
Nicaragua	83.85	64.15	19.70	82.39	63.04	19.35	49.58	35.49	14.09
Panama	97.79	95.20	2.60	92.78	86.52	6.27	65.09	58.22	6.87
Paraguay	94.12	92.55	1.57	87.56	89.24	(1.68)	55.13	56.33	(1.21)
Peru	96.92	95.08	1.85	91.97	93.82	(1.85)	57.89	67.51	(9.62)
Uruguay	98.35	97.80	0.55	93.85	91.67	2.18	63.92	61.61	2.31
Venezuela	96.37	95.94	0.44	92.02	91.67	0.35	57.52	58.83	(1.31)

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: All percentages refer to the percentage of children enrolled in school, and gaps are the simple difference obtained by subtracting the 1990 average from the 2000 average. When children were more likely to be enrolled in 1990 than in 2000 the gap is in parenthesis.

Table 19
Years of Schooling 1990 vs. 2000, Various Age Groups

	Age 6-11			Age 12-14			Age 15-19		
Country:	**2000**	**1990**	**Gap**	**2000**	**1990**	**Gap**	**2000**	**1990**	**Gap**
Brazil	2.48	2.03	0.44	5.24	4.41	0.83	7.08	6.04	1.04
Colombia	1.84	2.05	(0.21)	5.29	5.54	(0.25)	7.86	7.89	(0.03)
Dominican Republic	2.12	2.30	(0.19)	5.28	5.78	(0.49)	7.88	8.16	(0.28)
Ecuador	2.86	2.27	0.59	6.29	6.10	0.19	8.41	8.70	(0.29)
Honduras	1.39	1.22	0.17	4.50	3.96	0.54	6.01	5.17	0.84
Mexico	2.31	1.43	0.88	6.22	4.96	1.26	8.45	6.80	1.65
Nicaragua	1.48	1.38	0.11	4.42	3.58	0.84	6.13	5.00	1.13
Panama	2.15	2.18	(0.03)	6.11	5.91	0.19	8.92	8.50	0.43
Paraguay	1.89	1.56	0.34	5.03	5.26	(0.23)	7.50	7.84	(0.34)
Peru	2.03	1.97	0.06	5.56	5.65	(0.09)	7.92	8.57	(0.66)
Uruguay	2.45	2.16	0.29	6.28	6.14	0.14	8.57	8.30	0.27
Venezuela	2.38	2.35	0.03	6.07	5.90	0.17	8.07	7.77	0.30

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Attainment is measured by completed years of education beginning in grade 1 of primary school, and gaps are the simple difference obtained by subtracting the 1990 average from the 2000 average. When average attainment in 1990 was higher than in 2000 the gap is in parenthesis.

Table 20
Classifying Social Exclusion by Income Quintile Gaps in Enrollment and Attainment

Country:	Age 6-11		Age 12-14		Age 15-19	Final Rank	Rank by HDI	Rank by Income
	Enroll	Attain	Enroll	Attain	Attain			
Chile	1	2	1	2	1	**1**	2	2
Argentina	2	1	2	1	2	**2**	1	1
Costa Rica	7	3	6	3	5	**3**	3	4
Peru	4	7	3	4	6	**3**	10	10
Panama	5	5	8	7	9	**5**	6	8
Venezuela	8	11	5	6	4	**5**	7	9
Uruguay	3	4	10	8	12	**7**	4	5
Colombia	11	8	7	9	3	**8**	9	7
Ecuador	6	10	9	9	8	**9**	12	14
Paraguay	12	9	13	5	7	**10**	11	12
Mexico	9	6	12	11	9	**11**	5	3
Brazil	13	13	4	16	15	**12**	8	6
Honduras	15	12	15	12	11	**13**	15	15
El Salvador	17	14	11	13	13	**14**	13	11
Bolivia	10	15	17	14	16	**15**	14	17
Nicaragua	14	16	16	15	14	**16**	16	16
Guatemala	16	17	14	17	17	**17**	17	13

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Low numbers refer to the most inclusive countries based on the enrollment and attainment gaps presented earlier. The Final Rank ranks each country from most inclusive (1) to least inclusive (17) based on their average on the five indicators of exclusion (enrollment and attainment in ages 6-11 and 12-14 and attainment in 15-19). The Rank by HDI refers to the United Nations Development Program (UNDP) Human Development Indicator ranking, where low numbers indicate high ranking on the HDI index. Rank by Income refers to per capita income, where low numbers refer to high relative per capita income.

Table 21
Classifying Social Exclusion by Urban-Rural Gaps in Enrollment and Attainment

Country:	Age 6-11		Age 12-14		Age 15-19	Final Rank	Rank by HDI	Rank by Income
	Enroll	Attain	Enroll	Attain	Attain			
Venezuela	1	1	3	1	1	**1**	5	7
Chile	2	2	1	3	3	**2**	1	1
Panama	3	4	5	5	5	**3**	4	6
Mexico	4	6	5	6	4	**4**	3	2
Costa Rica	7	6	9	2	2	**5**	2	3
Paraguay	9	3	7	4	6	**6**	9	10
Peru	5	8	4	8	7	**7**	8	8
Ecuador	6	4	14	7	9	**8**	10	12
Brazil	8	10	2	12	11	**9**	6	4
Colombia	10	11	9	10	8	**10**	7	5
Honduras	12	9	13	8	10	**11**	13	13
El Salvador	14	12	8	13	12	**12**	11	9
Bolivia	10	15	11	11	13	**13**	12	15
Guatemala	13	13	12	14	15	**14**	15	11
Nicaragua	15	14	14	15	14	**15**	14	14

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Low numbers refer to the most inclusive countries based on the enrollment and attainment gaps presented earlier. The Final Rank ranks each country from most inclusive (1) to least inclusive (17) based on their average on the five indicators of exclusion (enrollment and attainment in ages 6-11 and 12-14 and attainment in 15-19). The Rank by HDI refers to the United Nations Development Program (UNDP) Human Development Indicator ranking, where low numbers indicate high ranking on the HDI index. Rank by Income refers to per capita income, where low numbers refer to high relative per capita income.

Table 22
Correlation Matrix Between Various Measures of Spending, Human Development and Exclusion

Variables:	Overall Spending on Education as Percent:		Percent of Spending by Level:			Rank According to UNDP:		Rank in Terms of Exclusion Gap:		
	of GDP	of Overall Budget	Primary	Secondary	Tertiary	HDI	Income	Overall	Attain Age 6-11	Attain Age 15-19
Percent of GDP	----	----	----	----	----	----	----	----	----	----
Percent of Spending	0.28	----	----	----	----	----	----	----	----	----
Primary Spending	-0.21	0.29	----	----	----	----	----	----	----	----
Secondary Spending	0.11	-0.22	**-0.90**	----	----	----	----	----	----	----
Tertiary Spending	**0.67**	0.06	-0.31	-0.08	----	----	----	----	----	----
HDI Ranking	-0.21	-0.26	**0.58**	**-0.71**	-0.19	----	----	----	----	----
Income Ranking	-0.12	-0.33	0.35	**-0.54**	-0.13	**0.93**	----	----	----	----
Exclusion Overall	-0.05	-0.24	**0.57**	**-0.66**	-0.08	**0.85**	**0.72**	----	----	----
Exclusion attain 6-11	-0.14	-0.24	**0.58**	**-0.68**	-0.12	**0.91**	**0.82**	**0.90**	----	----
Exclusion attain 15-19	-0.14	-0.31	0.40	**-0.57**	0.18	**0.67**	**0.59**	**0.87**	**0.76**	----

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: All measures are defined in the text or in previous tables. Correlations are based on Pearson's *r* when both variables are continuous (i.e. between percent of pending variables) and Spearman's *rho* when between ranking variables. When correlation is significant at the 0.05 level it is highlighted in bold.

Table 23
Marginal Effects of Gender, Area, and Education on Probability of Reporting Income, Adults Aged 16-60

Country:	Regression 1 Independent Variables:								Regression 2:
	Female	Rural	No Education	Education 4-6	Education 7-9	Education 10-12	Education 12+		Linear Education
Central America, Mexico and the Caribbean:									
Costa Rica	**-29.0**	**-5.0**	-0.4	1.9	1.3	**4.8**	**21.8**		**1.6**
Dom. Republic	**-42.9**	**-3.7**	**-6.9**	1.7	**3.7**	**4.7**	**18.2**		**1.4**
El Salvador	**-28.0**	**-5.2**	**-3.9**	**2.9**	**2.4**	-0.7	-2.3		0.1
Guatemala	**-34.7**	**-14.4**	**-7.7**	1.6	-3.3	0.6	**7.5**		**0.8**
Haiti	0.46	**----**	-2.6	**4.4**	**8.9**	**14.7**	**28.0**		**1.7**
Honduras	**-23.2**	**-13.9**	0.8	**3.6**	-4.3	**15.5**	**14.7**		**1.2**
Mexico	**-30.0**	**-16.1**	----	**12.8**	**23.5**	**18.7**	**27,7**		**2.3**
Panama	**-24.3**	**-4.9**	**-7.0**	3.3	**3.7**	**8.9**	**26.7**		**2.2**
Southern Cone:									
Brazil	**-16.7**	**-8.8**	**-2.5**	0.8	**1.5**	**9.6**	**16.2**		**1.2**
Chile	**-24.5**	**-6.3**	**----**	**4.6**	**7.9**	**13.0**	**18.0**		**1.9**
Paraguay	**-21.0**	**----**	**----**	-1.1	3.1	6.6	34.1		**1.2**
Uruguay	**-15.7**	----	**-17.3**	2.9	**8.2**	**10.3**	**17.8**		**1.7**
Other South America:									
Bolivia	**-36.6**	**-20.5**	**-13.4**	3.7	3.4	-3.3	-0.4		**0.3**
Colombia	**-13.5**	-0.2	**1.9**	**2.6**	-0.3	**6.2**	**15.4**		**0.9**
Ecuador	**-25.1**	**-6.2**	-2.2	**2.4**	1.9	1.3	**13.2**		**0.9**
Peru	**-2.9**	**-14.7**	-5.0	0.5	3.1	3.2	**11.5**		**0.8**
Venezuela	**-32.6**	1.2	**-6.9**	1.5	**3.5**	**3.4**	**8.6**		**0.8**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Dependent variable is a 0-1 measure where 1 indicates individual reports any income from working, regardless of work type. Coefficients are marginal effects on probability of reporting any income using a probit model. When coefficient is significant at the 0.05 level it is highlighted in bold. In Regression 1 the model is estimated separately for each country using only the education dummy variables (education 1-3 years is excluded), gender, area of residence and region controls. For Regression 2 a linear measure of education (in years) is included instead of the dummies together with gender, area of residence and region controls.

Table 24
Comparisons of Marginal Effects on Probability of Reporting Income by Area, Adults Aged 16-60

Country:	Female		Education 4-6		Education 7-9		Education 10-12		Education 12+		Linear Education	
	Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
Central America, Mexico and the Caribbean:												
Costa Rica	**-35.9**	**-24.2**	0.7	2.5	1.2	1.3	2.8	**5.3**	**24.7**	**20.7**	**1.2**	**1.8**
Dom. Republic	**-58.0**	**-35.4**	1.0	2.2	**7.7**	1.7	6.1	3.1	**23.4**	**15.8**	**1.3**	**1.4**
El Salvador	**-40.8**	**-19.8**	2.6	2.2	-2.6	**3.9**	**-6.2**	1.0	-2.6	-1.2	-0.1	0.1
Guatemala	**-37.5**	**-28.4**	1.5	-0.9	0.2	-5.9	4.4	-2.2	**25.6**	2.5	**1.3**	**0.4**
Honduras	**-23.7**	**-21.1**	**0.4**	**7.5**	**-5.8**	**-2.3**	**25.0**	**14.0**	**34.8**	**14.0**	**1.2**	**1.1**
Mexico	**-32.7**	**-26.6**	**-15.9**	**15.3**	**-6.6**	**25.8**	1.2	**20.3**	5.6	**29.0**	**1.9**	**2.4**
Panama	**-35.0**	**-17.8**	-0.9	**11.6**	-2.2	-2.9	**4.9**	1.8	**23.2**	**19.1**	**1.6**	**2.5**
Southern Cone:												
Brazil	**-22.4**	**-15.2**	-0.1	**1.3**	2.0	**1.6**	**13.1**	**9.4**	**26.6**	**15.9**	**1.3**	**1.2**
Chile	**-36.7**	**-22.5**	**4.4**	**4.4**	**8.6**	**6.9**	**10.4**	**12.8**	**15.9**	**17.7**	**1.1**	**1.5**
Paraguay	**-22.5**	**-17.8**	-1.3	-0.4	5.5	1.5	3.8	6.5	**56.4**	**29.9**	**1.6**	**2.1**
Other South America:												
Bolivia	**-58.0**	**-26.6**	3.8	1.3	-3.7	-3.5	3.8	6.6	**33.9**	-4.8	**1.6**	-0.2
Colombia	**-24.2**	**-7.7**	**0.8**	**4.5**	-3.6	**1.6**	**4.1**	**7.7**	**38.4**	**13.7**	**0.9**	**1.0**
Ecuador	**-31.2**	**-21.8**	-0.4	4.4	-0.4	3.3	0.6	**2.4**	**17.1**	**17.5**	**0.7**	**0.9**
Peru	-3.0	**-3.1**	-1.6	1.0	1.2	1.0	4.0	0.3	**25.3**	6.2	**1.1**	0.6
Venezuela	**-35.0**	-21.1	1.4	4.2	**3.2**	7.9	**2.9**	8.2	**9.5**	**10.2**	**0.9**	**0.8**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Dependent variable is a 0-1 measure where 1 indicates individual reports any income from working, regardless of work type. In Regression 1 the model is estimated separately for each country using only the education dummy variables (education 1-3 years is excluded), gender and region controls. For Regression 2 a linear measure of education (in years) is included instead of the dummies together with gender and region controls.

Table 25
Linear Effects of Gender, Area, and Education on Natural Log of Wage, Adults Aged 16-60

Country:	Regression 1 Independent Variables:								Regression 2:
	Female	Rural	No Education	Education 4-6	Education 7-9	Education 10-12	Education 12+		Linear Education
Central America, Mexico and the Caribbean:									
Costa Rica	**-17.2**	**-10.3**	-1.6	**9.7**	**23.9**	**50.5**	**107.4**		**8.8**
Dom. Republic	**-6.3**	**-21.1**	**-29.5**	**18.4**	**58.0**	**102.0**	**216.4**		**15.7**
El Salvador	**-8.1**	**-28.8**	**-21.3**	**16.6**	**33.5**	**59.1**	**118.4**		**8.3**
Guatemala	**-39.0**	**-18.4**	**-17.5**	**11.1**	**17.3**	**66.0**	**112.1**		**7.1**
Haiti	-3.2	----	**-33.0**	**24.5**	**63.7**	**129.4**	**240.0**		**16.8**
Honduras	**-4.1**	**-19.0**	**-22.6**	**14.4**	**40.5**	**74.8**	**130.2**		**9.3**
Mexico	**-10.0**	**-43.3**	----	**40.5**	**68.2**	**90.4**	**163.2**		**13.3**
Panama	**-24.3**	**-15.5**	**-29.3**	**13.7**	**15.9**	**47.8**	**104.3**		**10.2**
Southern Cone:									
Argentina	**-23.3**	----	----	**25.2**	**56.5**	**135.4**	**264.5**		**23.4**
Brazil	**-30.4**	**-27.9**	-0.4	**14.8**	**35.3**	**74.3**	**160.2**		**9.9**
Chile	**-23.0**	**-23.0**	----	**8.8**	**16.5**	**47.0**	**122.2**		**10.8**
Paraguay	-4.0	**-58.4**	9.5	**46.1**	**62.0**	**91.8**	**168.4**		**12.1**
Uruguay	**-22.6**	----	----	**20.0**	**17.1**	**37.9**	**77.1**		**10.1**
Other South America:									
Bolivia	**-17.2**	**-71.7**	**-27.5**	**22.9**	**36.5**	**57.9**	**142.4**		**10.4**
Colombia	**-7.9**	**-11.9**	**-4.6**	**14.5**	**30.5**	**55.8**	**138.1**		**9.9**
Ecuador	**-25.6**	**-21.8**	**-13.2**	**16.1**	**25.3**	**60.1**	**117.5**		**8.9**
Peru	**-13.5**	**-77.9**	46.6	23.0	**48.1**	**69.2**	**151.5**		**8.9**
Venezuela	**-12.5**	**-18.8**	**-7.5**	**14.4**	**33.7**	**47.0**	**88.3**		**6.1**

Source: Household Surveys, Mecovi, CEPAL and IDB.

Notes: Dependent variable is the natural log of hourly wage based on dividing total work income by reported hours of working. Coefficients are linear effects on grade for age using ordinary least squares estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. In Regression 1 the model is estimated separately for each country using only the education dummy variables (education 1-3 years is excluded), gender, area of residence and region controls. For Regression 2 a linear measure of education (in years) is included instead of the dummies together with gender, area of residence and region controls.

Table 26
Comparisons of Linear Effects on Natural Log of Wage by Gender, Adults Aged 16-60

Country:	Rural		Education 4-6		Education 7-9		Education 10-12		Experience		Linear Education	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Central America, Mexico and the Caribbean:												
Costa Rica	**-9.9**	**-11.3**	**8.3**	**15.3**	**22.4**	**29.6**	**48.4**	**57.0**	**2.8**	**2.5**	**8.2**	**9.7**
Dom. Republic	----	----	**14.2**	**27.1**	**58.0**	**57.2**	**101.5**	**101.0**	**8.5**	**8.6**	**15.6**	**15.6**
El Salvador	**-17.1**	-1.4	**15.4**	**23.0**	**32.5**	**38.1**	**60.0**	**70.4**	**3.9**	**4.1**	**8.0**	**10.0**
Guatemala	**-12.7**	**-27.9**	**12.7**	**9.9**	**20.2**	**16.4**	**58.4**	**80.0**	**3.2**	**2.3**	**6.9**	**7.3**
Haiti	----	----	20.0	**30.3**	**63.7**	**59.7**	**124.0**	**135.9**	**4.6**	3.0	**16.4**	**17.2**
Honduras	**-24.8**	-5.8	**10.1**	**22.8**	**40.4**	**41.4**	**70.9**	**82.5**	**4.1**	**2.6**	**9.1**	**9.4**
Mexico	**-43.8**	**-43.7**	**41.8**	**20.0**	**60.0**	**40.1**	**82.1**	**86.1**	**5.8**	**6.8**	**12.7**	**14.9**
Panama	**-19.1**	**-12.2**	**20.1**	**20.7**	**33.3**	**41.6**	**70.9**	**82.5**	**4.1**	**2.6**	**9.1**	**9.4**
Southern Cone:												
Argentina	----	----	**40.2**	**27.2**	**74.1**	**45.0**	**146.4**	**85.4**	**9.3**	**2.1**	**24.7**	**21.1**
Brazil	**-33.2**	**-16.7**	**14.8**	**14.2**	**36.0**	**33.3**	**71.0**	**77.8**	**6.9**	**5.7**	**9.7**	**10.3**
Chile	----	**-19.4**	**8.6**	**9.9**	**10.4**	0.8	**38.0**	**36.8**	**4.2**	**2.7**	**10.4**	**11.4**
Paraguay	**-38.8**	**-34.3**	**64.4**	-44.5	**77.9**	-13.0	**112.4**	5.2	**4.1**	**4.6**	**13.2**	**9.9**
Uruguay	----	----	**16.6**	**19.6**	**37.4**	**40.8**	**70.8**	**85.5**	**5.9**	**5.4**	**9.2**	**11.1**
Other South America:												
Bolivia	**-80.1**	**-53.5**	**27.5**	16.3	**38.3**	**34.2**	**59.6**	**53.4**	**5.2**	**5.1**	**10.3**	**10.6**
Colombia	**-11.6**	**-13.9**	**14.7**	**14.7**	**29.8**	**32.4**	**52.6**	**60.4**	**3.4**	**2.9**	**9.3**	**10.9**
Ecuador	**-24.4**	**-19.1**	**14.7**	**19.1**	**23.0**	**32.6**	**47.5**	**86.3**	**2.7**	**2.8**	**7.8**	**10.7**
Peru	**-69.3**	**-89.9**	14.0	26.2	39.8	49.2	**56.5**	**76.9**	-1.7	-2.0	**8.4**	**9.5**
Venezuela	**-18.8**	**-18.8**	**18.1**	4.7	**35.4**	**28.3**	**47.1**	**43.4**	**3.6**	**2.2**	**5.5**	**7.0**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Dependent variable is the natural log of hourly wage based on dividing total work income by reported hours of working. Coefficients are linear effects on grade for age using ordinary least squares estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. In Regression 1 the model is estimated separately for each country using only the education dummy variables (education 1-3 years is excluded), area of residence and region controls. For Regression 2 a linear measure of education (in years) is included instead of the dummies together with area of residence and region controls.

Table 27
Comparisons of Linear Effects on Natural Log of Income by Area, Adults Aged 16-60

Country:	Female		Education 4-6		Education 7-9		Education 10-12		Experience		Linear Education	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Central America, Mexico and the Caribbean:												
Costa Rica	**-18.7**	**-16.6**	**8.5**	**9.8**	**20.1**	**26.3**	**48.3**	**52.3**	**2.2**	**3.0**	**7.3**	**9.3**
Dom. Republic	**-7.2**	**-6.1**	**20.3**	**20.0**	**55.4**	**63.1**	**86.8**	**110.1**	**6.1**	**9.7**	**11.4**	**17.3**
El Salvador	**-12.0**	**-15.6**	**14.4**	**18.4**	**32.8**	**33.8**	**57.0**	**64.5**	**2.6**	**4.9**	**6.7**	**9.3**
Guatemala	**-44.9**	**-27.2**	**16.3**	2.9	**34.1**	12.7	**95.0**	**73.0**	**2.0**	**3.5**	**6.4**	**9.0**
Honduras	**4.4**	**-8.1**	7.7	**16.2**	**44.5**	**37.2**	**100.0**	**67.2**	**4.5**	**2.8**	**9.0**	**9.3**
Mexico	**-19.1**	**-8.3**	**30.0**	**22.8**	**54.5**	**50.7**	**91.0**	**68.5**	**6.3**	**6.0**	**14.0**	**13.0**
Panama	**-23.8**	**-24.5**	**23.0**	5.4	**39.2**	**20.5**	**76.6**	**51.1**	**3.7**	**3.9**	**9.4**	**10.5**
Southern Cone:												
Brazil	**-19.9**	**-32.3**	**17.8**	**15.3**	**32.4**	**37.2**	**81.1**	**75.9**	**5.3**	**6.6**	**9.6**	**10.0**
Chile	**-17.1**	**-23.5**	4.1	4.5	**14.3**	**15.5**	**35.1**	**42.6**	**2.6**	**3.8**	**10.8**	**11.1**
Paraguay	-0.2	-8.6	**94.2**	-3.2	**148.6**	2.5	**180.1**	**37.5**	3.3	**4.2**	**15.5**	**10.9**
Other South America:												
Bolivia	4.7	**-25.9**	**38.7**	4.2	**68.1**	11.8	**119.4**	**28.7**	**4.9**	**5.1**	**13.6**	**9.4**
Colombia	**-13.1**	**-6.2**	**11.2**	**15.9**	**25.7**	**31.9**	**59.7**	**55.4**	**3.6**	**2.9**	**8.8**	**10.6**
Ecuador	**-24.9**	**-24.3**	**16.0**	**10.7**	**29.6**	**18.1**	**59.6**	**55.4**	**2.5**	**3.0**	**7.5**	**9.2**
Peru	**-35.6**	-4.7	8.0	27.6	-16.9	**78.1**	26.0	**88.2**	**-5.1**	**-0.1**	**7.4**	**8.6**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Coefficients are linear effects on grade for age using ordinary least squares estimation. When coefficient is significant at the 0.05 level it is highlighted in bold. In Regression 1 the model is estimated separately for each country using only the education dummy variables (education 1-3 years is excluded), gender and region controls. For Regression 2 a linear measure of education (in years) is included instead of the dummies together with gender and region controls.

Table 28
Effects of Community on Earnings Outcomes in Select Countries

Country:	Reporting Income (Probit)	Log of Hourly Wage		
		Whole Sample	Rural	Urban
Bolivia:				
Indigenous	-0.01	**-24.5**	**-25.4**	**-18.9**
Brazil:				
Black	**8.4**	**-21.7**	**-21.1**	**-21.3**
"Parda"	**3.0**	**-14.5**	**-11.8**	**-14.7**
Guatemala:				
Indigenous	**-3.3**	**-20.1**	**-24.3**	**-23.1**
Paraguay:				
Speaks Guarani Only	**-6.1**	**-29.2**	**-53.1**	----*
Speaks Guarani and Spanish	**---***	----*	----*	**12.5**
Speaks Other	1.3	20.8	**36.4**	30.0

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: Non-native means that language spoken in home is not predominant language; in this case for Guatemala non-Spanish.
*Variable dropped due to colinearity.

Table 29
Reasons for not Currently Attending School, Children Aged 6-19

Independent Variable:	No Money or Have to Work	Family Problems	Sickness	School is Far/No Teacher	Do not Want to Go	Other
Not Enrolled:						
Bolivia						
Aged 6-11	20.3	14.2	8.8	17.6	11.9	25.3
Aged 12-14	45.2	15.1	9.6	9.0	19.9	0.1
Aged 15-19	55.5	16.5	3.8	6.3	14.6	3.2
Costa Rica						
Aged 6-11	25.7	----	8.9	15.4	10.7	38.0
Aged 12-14	35.7	----	6.5	8.1	41.5	8.3
Aged 15-19	41.4	----	3.4	4.2	42.2	8.9
Honduras						
Aged 6-11	20.6	6.4	5.9	4.1	5.6	48.0
Aged 12-14	43.0	5.9	6.3	3.5	26.3	14.8
Aged 15-19	44.0	7.9	2.6	3.0	27.6	15.0
Paraguay						
Aged 6-11	22.8	8.6	9.2	24.9	4.3	31.1
Aged 12-14	49.9	5.3	7.3	14.1	18.2	5.0
Aged 15-19	53.5	5.9	2.5	9.7	20.3	8.7
Venezuela						
Aged 6-11	44.4	----	16.9	13.1	4.3	21.3
Aged 12-14	41.1	----	11.6	5.4	32.3	9.6
Aged 15-19	37.2	----	3.5	6.9	26.9	22.6
Being Absent:						
Guatemala						
Aged 6-11	6.5	----	63.6	1.7	6.7	22.2
Aged 12-14	14.5	----	52.2	1.5	5.4	26.5
Aged 15-19	17.8	----	50.0	1.4	4.1	26.7

Source: Household Surveys, Mecovi, CEPAL and IDB.

Table 30
Targeting of Price Reducing Interventions by SES Quintile

Country and Intervention:	Percentage of Total Recipients by SES Quintile:					Sample Prob.	Marginal Effect:	
	Poorest	2	3	4	5		SES	Rural
El Salvador								
Medical	31.6	24.2	20.2	15.5	8.6	26.8	**8.7**	**41.1**
School Meal	34.8	25.3	18.8	13.5	7.6	21.1	**8.7**	**36.7**
Texts	31.8	24.1	19.9	15.1	9.1	22.9	**6.7**	**29.0**
Mexico								
All Scholarships	59.6	23.1	10.9	3.9	2.5	6.3	**6.2**	**25.2**
PROGRESA	66.6	21.9	8.3	2.5	0.7	2.6	**4.8**	**21.6**
Paraguay								
Tuition	35.3	25.9	18.8	12.8	7.1	34.6	**17.7**	**16.5**
School Meal	34.3	28.8	20.1	11.8	5.0	17.8	**5.5**	**9.6**

Source: Household Surveys, Mecovi, CEPAL and IDB.
Notes: "Percentages by SES quintile" refers to the percentage of the total number of individuals who report the intervention. For example, 31.6 percent of all students with access to medical services at school in El Salvador are in the poorest quintile. The sample probability is therefore not related to the percentages within each quintile. Marginal Effect refers to 0-1 probit model estimations where each intervention is modeled as a function of gender, SES, urban-rural and region controls. Each coefficient refers to the marginal percentage point change in the probability of reporting each intervention when controlling the effects of other variables. All coefficients are significant at the 0.05 level.

Table 31
The Distribution of Knowledge: Academic Achievement in Seven Countries

Comparison:	Argentina	Bolivia	Brazil	Chile	Colombia	Cuba	Mexico
By Gender:							
Language Girls	280.9	247.0	273.7	275.6	259.0	345.6	256.0
Language Boys	274.8	242.5	266.0	268.5	249.6	338.8	244.3
Difference (z-score)	**-0.12**	**-0.08**	**-0.15**	**-0.13**	**-0.19**	**-0.13**	**-0.21**
Math Girls	263.0	250.5	259.1	250.1	250.2	358.9	255.2
Math Boys	268.2	253.9	267.1	253.8	251.5	355.6	254.8
Difference (z-score)	**0.12**	**0.08**	**0.18**	**0.09**	0.03	-0.06	-0.01
By Low-High SES:							
Language Low SES	255.3	230.7	245.4	248.9	235.9	332.8	221.5
Language High SES	307.8	275.5	302.5	301.3	278.4	350.5	285.4
Difference (z-score)	**0.99**	**0.80**	**1.09**	**0.90**	**0.81**	**0.35**	**1.09**
Math Low SES	247.0	244.7	239.7	239.3	244.6	337.9	234.5
Math High SES	291.9	274.6	292.8	279.8	263.4	374.6	282.4
Difference (z-score)	**0.97**	**0.64**	**1.07**	**0.86**	**0.47**	**0.54**	**1.00**
By Urban-Rural:							
Language Rural	246.8	223.4	243.9	259.3	244.9	333.3	232.6
Language Urban	284.2	250.4	273.7	276.3	255.5	345.1	258.4
Difference (z-score)	**0.71**	**0.50**	**0.62**	**0.31**	**0.21**	**0.25**	**0.48**
Math Rural	243.6	237.0	240.7	243.0	252.1	350.5	242.0
Math Urban	270.9	254.8	267.0	257.4	248.1	359.5	260.7
Difference (z-score)	**0.62**	**0.38**	**0.59**	**0.35**	**-0.10**	**0.13**	**0.43**

Source: Latin American Laboratory Data (LLECE), UNESCO/OREALC, 1998.
Notes: All scores refer to standardized exams in language and mathematics with a range of 0-400. Differences are z-scores calculated using each country mean, and are interpreted as the number of standard deviations difference between each group. Negative differences mean that girls score higher than boys, or students in rural areas score higher than those in urban areas. Significant (two tailed tests, 0.05 level of significance) differences are in bold.

Table 32
Learning Resources and Classroom Conditions in Seven Countries, by Low and High SES

Comparison:	Argentina	Bolivia	Brazil	Chile	Colombia	Cuba	Mexico
Attended Preschool:							
Low SES	79.8	63.5	67.1	60.9	54.7	92.6	74.5
High SES	90.4	84.0	90.1	71.2	82.0	94.7	94.1
Difference p-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.094	**0.000**
Has Language Text:							
Low SES	52.2	54.7	85.2	89.4	70.9	96.4	94.1
High SES	74.8	84.7	89.3	95.3	75.6	97.8	99.1
Difference p-value	**0.000**	**0.000**	**0.045**	**0.000**	0.056	0.104	**0.000**
Classroom Problems:							
Low SES	2.9	2.9	2.6	2.8	2.7	1.7	2.6
High SES	2.0	2.3	1.4	2.2	2.3	1.6	2.0
Difference p-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.440	**0.000**
Reports fighting in class:							
Low SES	39.2	37.3	31.4	32.1	33.7	6.3	33.4
High SES	22.4	13.8	18.9	16.6	25.1	6.3	18.3
Difference p-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.990	**0.000**
Teacher has university degree:							
Low SES	50.9	6.9	23.5	83.6	25.3	92.7	29.6
High SES	55.9	5.3	35.1	79.6	44.0	91.4	46.1
Difference p-value	0.145	0.174	**0.000**	0.155	**0.000**	0.353	**0.000**
Index of learning and teaching materials:							
Low SES	59.7	54.2	64.6	64.9	60.3	79.9	71.3
High SES	74.1	71.0	77.5	69.8	77.0	76.5	85.5
Difference p-value	**0.000**	**0.000**	**0.000**	**0.004**	**0.000**	**0.018**	**0.000**

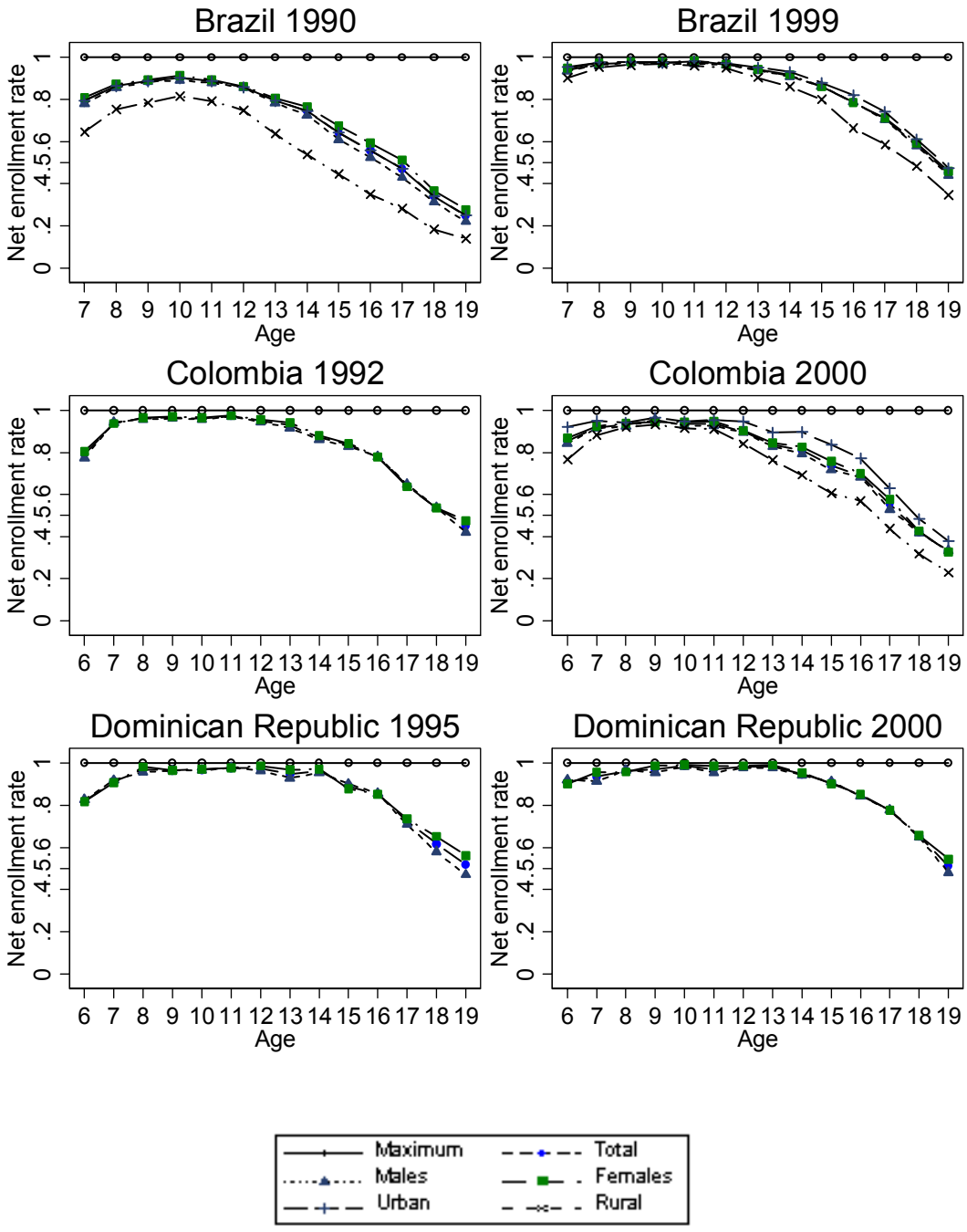
Source: Household Surveys, Mecovi, CEPAL, LLECE and IDB.
Notes: For "attended preschool" the question asks children if they attended any kind of school before primary school. For "classroom problems" there are five possible problems each child can report: hot classroom, cold classroom, classroom does not have sufficient space, classroom is dark, noise enters from outside. "Reports fighting" is a 0-1 variable where 1 means child reports that "in my section we always get into fights." "Index of learning materials" is a percentage of a series of teaching and learning materials that the teacher reports having in the classroom. Differences by low and high SES are based on comparisons of means or proportions (two tailed), and the p-values are reported.

Table 33
Learning Resources and Classroom Conditions in Seven Countries, by Urban and Rural

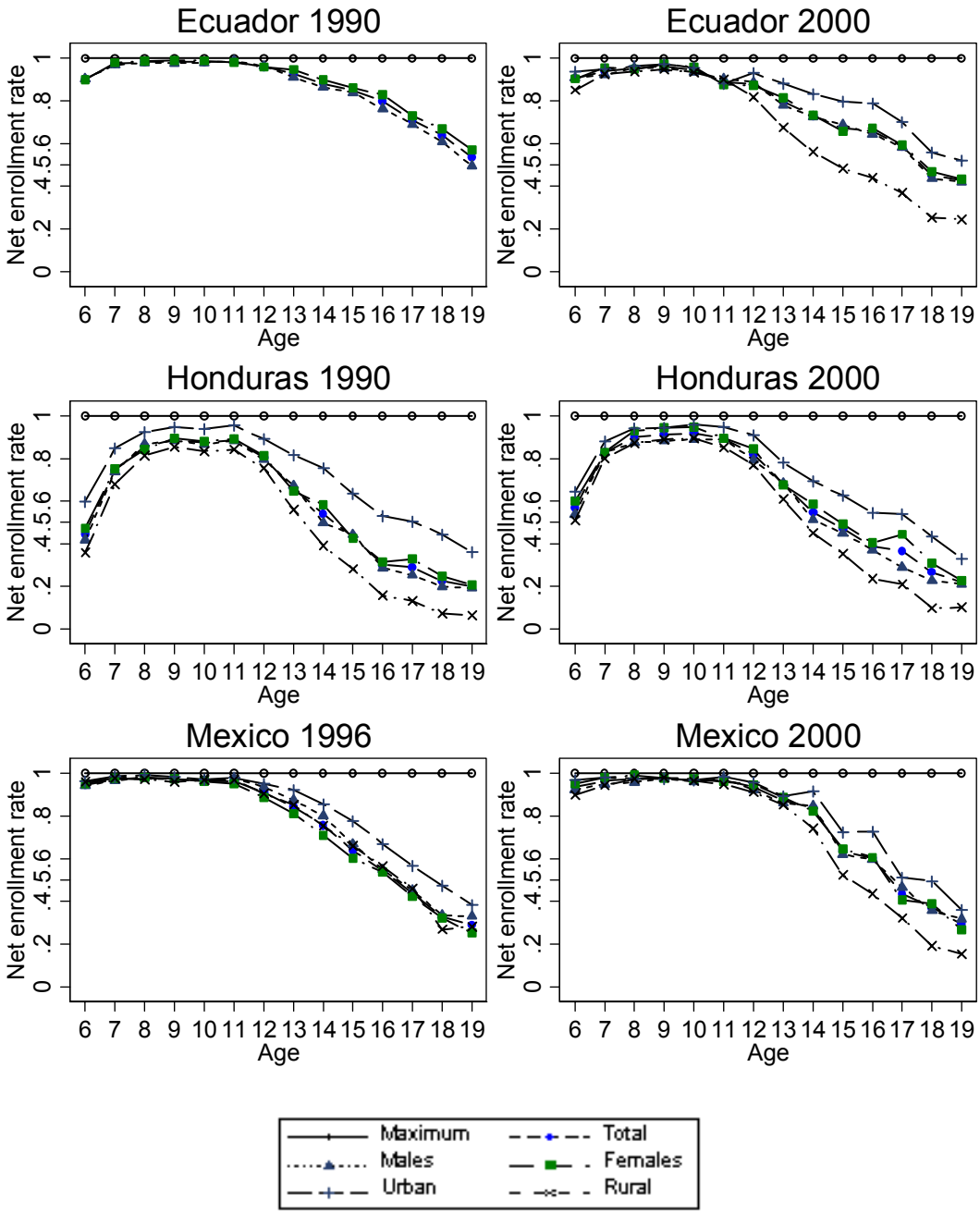
Comparison:	Argentina	Bolivia	Brazil	Chile	Colombia	Cuba	Mexico
Attended Preschool:							
Rural	79.5	63.7	60.7	53.3	54.9	96.2	81.4
Urban	88.6	74.3	78.3	70.1	74.2	94.0	85.7
Difference p-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.004**	**0.000**
Has Language Text:							
Rural	64.0	44.7	92.4	93.0	68.4	98.0	95.4
Urban	64.0	74.9	86.3	92.7	71.5	96.9	96.1
Difference p-value	0.970	**0.000**	**0.000**	0.776	0.070	0.059	0.300
Classroom Problems:							
Rural	2.8	3.1	2.6	2.6	2.6	1.7	2.6
Urban	2.5	2.7	2.2	2.5	2.6	1.7	2.3
Difference p-value	**0.000**	**0.000**	**0.000**	**0.035**	0.770	0.676	**0.000**
Reports fighting in class:							
Rural	29.2	42.4	32.6	33.9	32.2	6.7	29.4
Urban	32.3	23.5	27.1	23.4	31.5	6.7	25.9
Difference p-value	0.372	**0.000**	**0.000**	**0.000**	0.689	0.956	**0.000**
Teacher has university degree:							
Rural	34.5	4.0	35.3	93.6	17.9	89.4	22.7
Urban	61.4	7.2	31.0	75.6	40.4	91.6	50.1
Difference p-value	**0.000**	**0.000**	**0.019**	**0.000**	**0.000**	**0.017**	**0.000**
Index of learning and teaching materials:							
Rural	72.5	47.0	65.0	68.3	70.3	81.7	68.4
Urban	65.3	60.0	69.5	62.7	65.0	73.8	80.0
Difference p-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Source: Household Surveys, Mecovi, CEPAL, LLECE and IDB.
Notes: For "attended preschool" the question asks children if they attended any kind of school before primary school. For "classroom problems" there are five possible problems each child can report: hot classroom, cold classroom, classroom does not have sufficient space, classroom is dark, noise enters from outside. "Reports fighting" is a 0-1 variable where 1 means child reports that "in my section we always get into fights." "Index of learning materials" is a percentage of a series of teaching and learning materials that the teacher reports having in the classroom. Differences by urban and rural are based on comparisons of means or proportions (two tailed), and the p-values are reported.

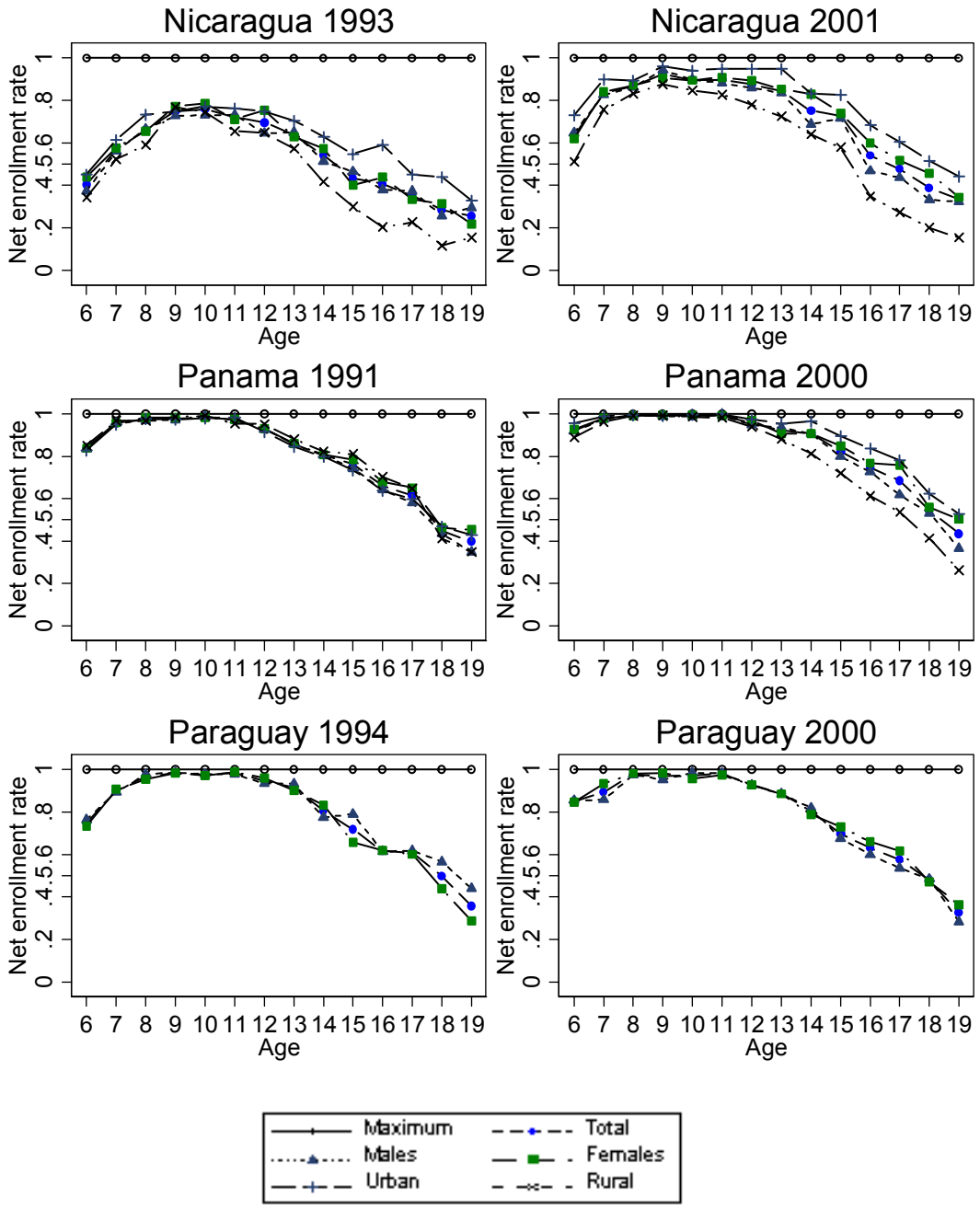
Figure 1
Enrollment Rates 1990 vs. 2000, Ages 6-19



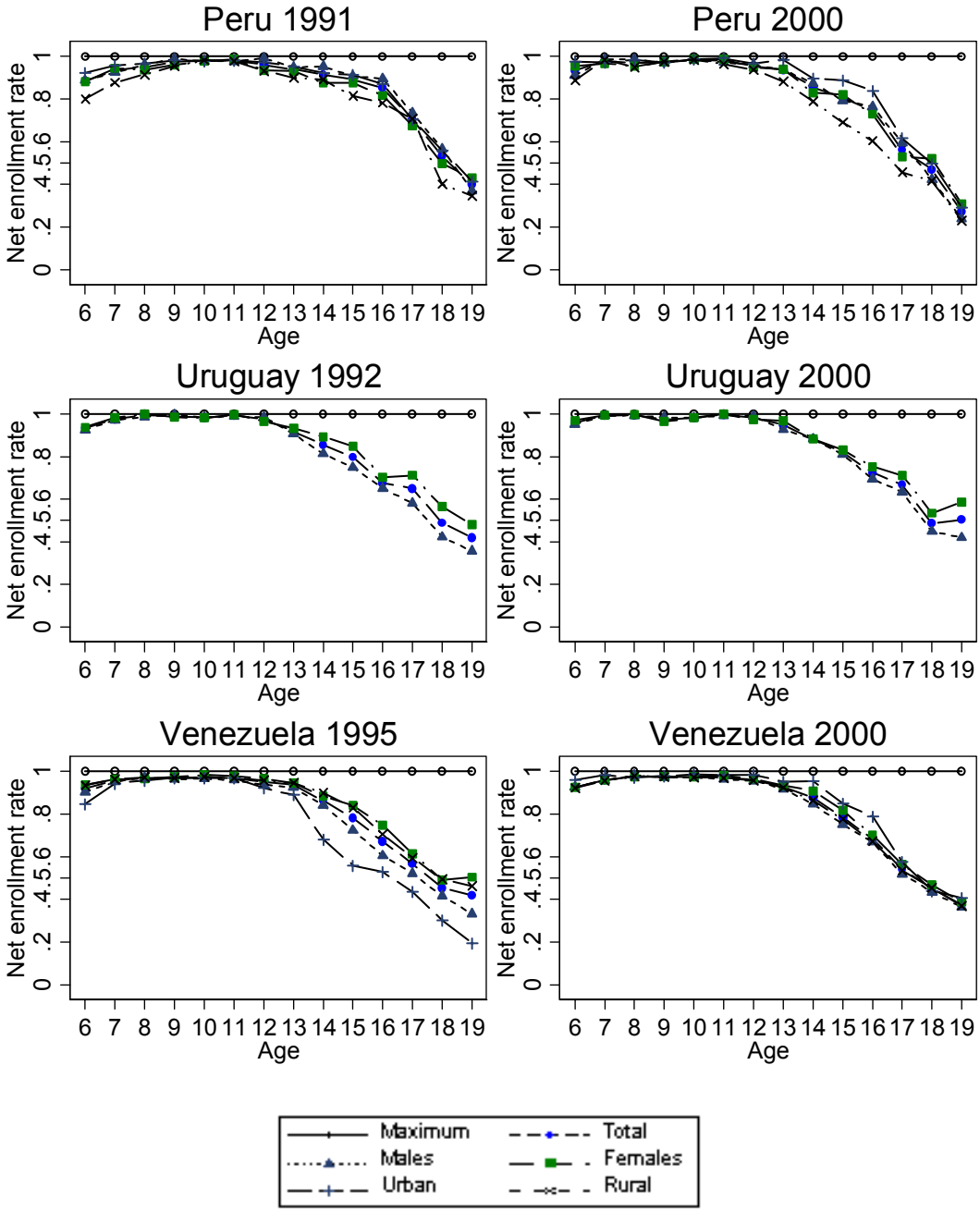
Source: Household Surveys, Mecovi, CEPAL and IDB.



Source: Household Surveys, Mecovi, CEPAL and IDB.



Source: Household Surveys, Mecovi, CEPAL and IDB.



Source: Household Surveys, Mecovi, CEPAL and IDB.

FIGURE 2. ROR VS. YEARS OF SCHOOLING (WHOLE SAMPLE)

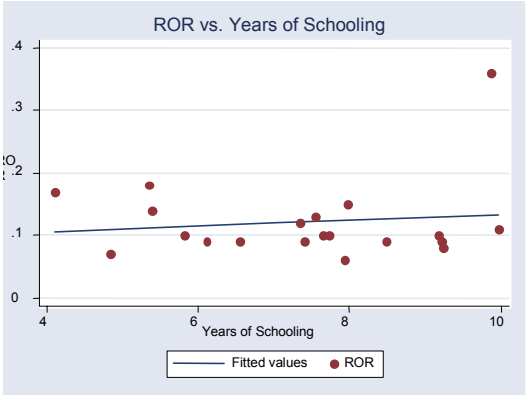


FIGURE 3. ROR VS. YEARS OF SCHOOLING (MALES)

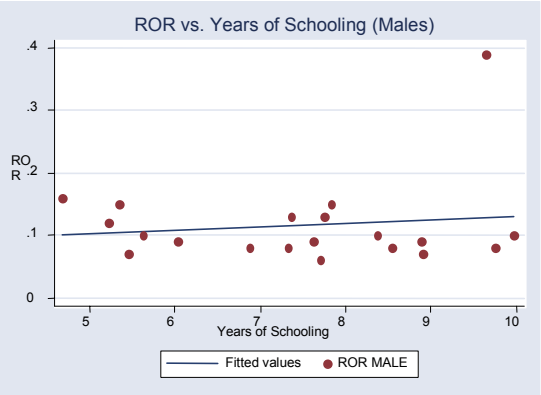


FIGURE 4. ROR VS. YEARS OF SCHOOLING (FEMALES)

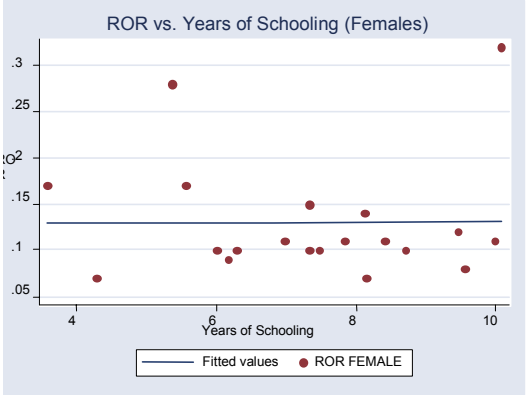


FIGURE 5. ROR VS. YEARS OF SCHOOLING (URBAN)

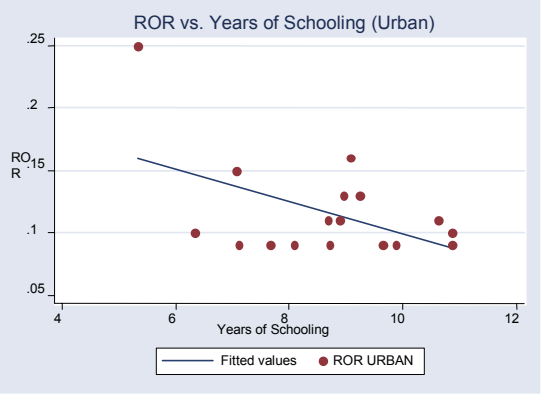
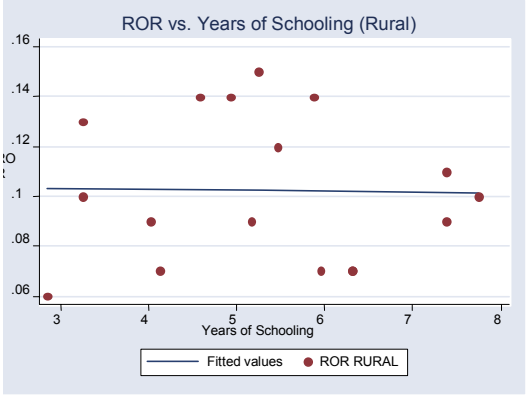


FIGURE 6. ROR VS. YEARS OF SCHOOLING (RURAL)



Source: Household Surveys, Mecovi, CEPAL and IDB.

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