



2009/ED/EFA/MRT/PI/39

Background paper prepared for the
Education for All Global Monitoring Report 2009

Overcoming Inequality: why governance matters

Restructuring Towards Equity? Examining Recent Efforts to Better Target Education Resources to the Poor in Colombia

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2008

This paper was commissioned by the Education for All Global Monitoring Report as background information to assist in drafting the 2009 report. It has not been edited by the team. The views and opinions expressed in this paper are those of the author(s) and should not be attributed to the EFA Global Monitoring Report or to UNESCO. The papers can be cited with the following reference: "Paper commissioned for the EFA Global Monitoring Report 2009, Overcoming Inequality: why governance matters" For further information, please contact efareport@unesco.org

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6-16-08

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Introduction

The Colombian government's restructuring of the administration of basic education during the 1980s and 1990s, principally through decentralization, has been viewed by many as being ineffective in addressing the country's educational needs, particularly of the poor (Hanson 1995, Fiszbein 2005, Lowden 2004). While increases in education funding¹ were associated with improvements in coverage through the 1980s and 1990s, in 2002 it was estimated that approximately 3 million out of a total of 16.5 million youth under the age of 18 were out of school (Lowden 2004). Rates of primary school completion and participation in and completion of secondary education were low compared to most other Latin American countries (Gómez 2000). Moreover, while data for international comparison is extremely limited, Colombia was the lowest performing country on the 1995 TIMSS math exam (Vegas and Petrow 2008).² Inequitable access and low education quality were particularly problems in poor rural areas (McEwan 1998, Gómez 2000).

Rather than a problem of inadequate education funding, which was by some measures among the highest in Latin America, the problems of low and inequitable education coverage and quality have been attributed to inefficient and inequitable administration (Di Gropello 2004, Hanson 1995, Fiszbein 2005, Lowden 2004, Duarte 1998). Specific inefficiencies included a lack of coordination among administrative units, confusion and overlap in administrative roles in the decentralized system, and widespread clientelism (Di Gropello 2004, Hanson 1995, Fiszbein 2005, Lowden 2004, Duarte 1998). Inequities were in part connected to a formula for the distribution of central funding that favored large urban centers and large differences in the level of local resources and human capital to support local administration (Lowden 2004). Both the system's inequities and inefficiencies were in turn connected to and exacerbated by the violence that plagued the country through the 1990s, especially in many of the country's rural areas.³

Since the late 1990s, the Colombian government has implemented a variety of education reforms and programs that have aimed to address inefficiencies and inequities that hampered education provision in the past and improve access and quality for the poorest (Lowden 2004, MEN 2006). There was an attempt to create a more standardized and rational administrative system by better clarifying roles and rules, and there was a deepening of decentralization with the devolution of education administration responsibilities to all municipalities with populations of 100,000 or more. In the revised system, the Colombian Ministry of Education (MEN) was to take a more active role in promoting more coherent, rational, efficient and equitable provision by monitoring local entities and implementing programs to build their capacity. With the aims of increasing fiscal equity in how that transfer was distributed and providing local entities an incentive for improving coverage, allocation of the central transfer came to be based on student enrollment with additional funding provided for rural and secondary students.⁴ There was also a

¹ Education funding as a percentage of GDP increased from 3.1 percent in 1990 to 4.2 percent in 2000 (UNESCO 2006)

² Vegas and Petrow (2008) state that Colombia was the lowest performing country "complying with the TIMSS guidelines" (P. 23).

³ Lowden (2004) for instance states that between 1988 and 1995 a total of 29 mayors were assassinated and 102 were kidnapped.

⁴ The MEN also during the late 1990s and early 2000s expanded and created programs that sought to improve education equity. These include several new alternative educational models that attempt to meet the needs of poor

movement towards privately provided but mostly publicly funded education as local entities were allowed the autonomy to contract providers in cases where the supply of traditional schools was inadequate and in hiring provisional teachers for teaching in difficult circumstances and with special populations.

This study draws on a wide variety of literature to review the characteristics and implementation, and discuss the potential impact of, recent education reforms in Colombia that have sought to improve education access for the poor by reforming the management structure and funding of education. The paper focuses principally on fiscal and administrative decentralization and changes in the way the central transfer is distributed among regions. While improved equity was one of many objectives of the recent round of reforms we view it as a critical one given both the history of disparities in provision and evidence from other countries that fiscal and administrative decentralization of education provision has exacerbated regional inequalities (Meade and Gershberg 2008, Galiani, Gertler, and Schargrotsky 2005, Mizala, Romaguera, and Ostoic 2004). For background and context, the paper draws on sources such as academic articles, reports produced by multilateral development banks (Interamerican Development Bank and the World Bank), educationally focused organizations such as PREAL, the Colombian Ministry of Education (MEN), and other Colombian government entities. It also examines changes since implementation of the reforms in outcomes related to improved access for the poor, focusing on how levels of access have improved for basic and upper secondary education⁵ within and between regions and income groups.⁶ While it is not possible to connect the reforms directly to such changes, due to the scale and magnitude of the changes, the indicators provide a strong suggestion of how the reforms are influencing equity related outcomes.

We evaluate Colombia's recent reforms, both their characteristics and outcomes, based on two standards of education equity (Fiske and Ladd 2004).⁷ The first, *equal treatment* is examined by

individuals in rural and marginalized urban areas including the well documented *Escuela Nueva* model (McEwan 1998) and Colombia's voucher program (Angrist et al. 2002). Also important is the implementation of a conditional cash transfer program (*Familias en Acción*). Along with a nutritional subsidy to families with young children bringing their children to medical visits, the program provides a monthly grant of about US\$8 for 80 percent attendance in primary school US\$16 for 80 percent attendance in secondary school (Attanasio et al. 2005). Due to space limitations this paper focuses on reforms of the structure and funding of the education system rather than programs such as these. It is clear, however, that effectively targeting education funds to the poor must consider the inter-sectoral context of such increasingly popular programs.

⁵ Formal basic education in Colombia is made up of one or two years of preschool (kinder and transición), five grades of primary basic education, four years of lower secondary education, and two years of *media*, or upper secondary. Upper secondary can be divided into one type emphasizing vocational training and another emphasizing preparation for university. Education is obligatory from ages five to 15, or through lower secondary education (ninth grade). At the end of the basic education cycle, student going on to university of technical education are required to take the ICFES (*Instituto Colombiano para el Fomento de la Educación Superior*) exam which is used to determine eligibility for tertiary education.

⁶ Educational inequities are also manifested in systematic differences in education quality and access levels among racial/ethnic groups. Indicators of access and quality are particularly concerning among afro-descendants and indigenous peoples. We focus primarily on the issue of inequities in access to primary, secondary, and tertiary education between different regions and income groups recognizing that such disparities are connected to other important social issues.

⁷ The standards are developed from those used by Fiske and Ladd (2004) for analyzing South Africa's progress towards educational equity in the period following apartheid. We do not use, however, one of their three standards,

comparing disparities between urban and rural regions and different income groups over time to determine whether there appear to be equal levels of funding between the poor and non-poor. As Fiske and Ladd (2004) point out, the equal treatment approach is likely to be inadequate in contexts in which there is a history of discrimination and inadequate funding for schools serving marginalized groups. In Colombia, the argument can be made that providing an equal amount of per student funding to local entities is unlikely to lead to large improvements in educational equity because of a history of underinvestment in education for the poor, especially for the rural poor, and the often higher costs associated with serving students in more rural and less developed regions. Also, many poor students in Colombia have special needs due to exposure to violence or poor levels of initial schooling. Another equity standard, *equal educational opportunity*, requires that education resource allocation take into consideration differences among students "to counter past educational disadvantage" (Fiske and Ladd 2004, P. 8). An education finance system in line with this standard would ensure that groups be provided equal educational opportunities regardless of where they lived or their income levels. Our analysis shows that while Colombia's central government has made progress in distributing funding more equitably across regions, the system has made more progress towards reaching the first equity standard, equal treatment, but not as consistently, the second, equal opportunity, and many poor youth especially in the poor rural regions of the country do not have the same educational opportunities of higher income urban youth.

The first section of the paper provides background by discussing education reforms in Colombia during the second half of the 20th century and changes in legislation and policy that aimed to expand education access. The next section focuses on the components and outcomes associated with the first wave of decentralization reforms that occurred during the early 1990s. The next section discusses the components of the reforms associated with the second wave of decentralization reforms that occurred during the late 1990s and 2000s. This section is followed by findings from an analysis of data showing progress on indicators of coverage over the most recent period of reforms. We conclude the report with a summary discussion of the lessons learned from our review including what reforms appear most promising in promoting equity in basic education access and quality.

Background on the Development of Colombia's Education System

Education in Latin America in Colonial times was viewed as being a responsibility of the family and the Catholic Church (Hanson 1986). With the exception of a small number of indigenous people and slaves that received education from the church and a small number of elite women, education was a privilege of elite males. At the period of independence education continued to be dominated by the church. The Colombian Congress ruled in 1903 that national primary education was to be provided free of tuition, but did not make it compulsory and required that education be "governed by the canons of the Catholic Church" (Ramirez and Téllez 2006, P. 7).⁸ Although there was an effort to create a national system of education in the

educational adequacy, which considers equity from the perspective of outcomes. Their analysis based on this standard works to determine whether the education provided to all groups provides "the education level needed for someone to participate fully in the economic and economic life of the country" (P. 9).

⁸ Translation provided by the author.

early part of the 20th century as part of the process of consolidation of the nation state education was primarily focused in urban areas and access was limited for non-whites and females.

Beginning in the late 1950s, city leaders reacted to changes in urbanization and industrialization by expanding education access (Ramirez and Téllez 2006). In 1956 Latin American political leaders and ministers of education attended a conference sponsored by the Organization of American States and UNESCO where they developed a region wide goal to make primary education free, accessible to all, and compulsory (Gale 1970). Between 1950 and 1975, fueled by economic growth and increased government financing, primary and secondary education coverage expanded rapidly throughout much of Latin America (Ramirez and Téllez 2006). Human capital theory, the view that education was important for economic development, became increasingly popular among the Latin American elite as a way to support their policy of import substitution industrialization (Reimers 2000). Education became increasingly viewed as a state responsibility and as being a critical component of modernization (Oliveira and Roberts 1996).⁹

In 1950s Colombia, the central government funded the bulk of secondary education while departments and municipalities funded primary.¹⁰ During the 1960s and 1970s, the central government, in part due to political unrest resulting from irregular pay of teachers by departments, increased its support of education. In 1960 legislation was passed that nationalized primary education and the central government took on the responsibility of paying primary education teachers (Bonet 2006). The central government also took on an increasing responsibility for financing basic education and between 1960 and 1978 the Colombian central government's support for basic education increased by 84 percent (Bonet 2006).

Administratively, throughout the period of development of the Colombian education system, until the late 1980s there was a general shift towards greater standardization and centralization of the education system in order to address "administrative semi-anarchy" and widespread misuse of education funding (Hanson 1995, P. 101, Hanson 1986, Vergara and Simpson 2001). The education governance structure of the 1960s and 1970s was viewed as being poorly coordinated, inefficient, and lacking coherence and accountability (Hanson 1986, Hanson 1995, Duarte 1998). In primary education, the central government defined education policy and curriculum and financed a portion of school construction. Departments and municipalities financed other expenses and managed the administration of primary education including the management of human resource functions for teachers. While the central government was responsible for funding the majority of primary education, the MEN had little control over how primary funding was used (Duarte 1998). Presidents appointed governors who in turn appointed secretaries of

⁹ Education expansion during the period also played a key role in the creation of the urban middle class and in the expansion of employment opportunities for women (Oliveira and Roberts 1996).

¹⁰ There are 32 departments, similar to states. Departments are made up of groupings of municipalities, of which there are 1,120. Of these, 10 are special districts including the Colombian capital, Bogotá. Municipalities range from large cities of over several million to small rural villages. They are divided into a *cabecera municipal*, the most urban area inside the municipality and the more rural areas outside. Each department has a *Secretaría de Educación* (SE) which manages education services. As will be described later, as of 2003, municipalities with populations over 100,000 also came to have SEs. There are currently 80 SEs. Among the 78 are 32 department SEs, four districts SEs, and 44 municipalities SEs. The movement towards decentralization of education administration to municipalities is described later in the paper.

education and the MEN had little means of either monitoring how the individual budgets were used or for addressing issues. Common issues included the use education transfers for higher profile infrastructure projects and hiring unqualified teachers illegally based on their political allegiance (Duarte 1998, Hanson 1995). Due to the fact that more teachers were hired than could be supported by the funding, in many cases teachers were paid late or not at all (Duarte 1998, Hanson 1995).

In the late 1960s the central government took steps to promote greater standardization and control over the use of central transfers through the creation of an auditory mechanism based on contractual agreements known as Regional Education Funds (FERs). In the revised system the Ministry located representatives in department offices to serve as auditors monitoring the use of funds. The representatives worked to ensure that the central transfer was used in a manner in line with national policy (Hanson 1995).

According to Hanson (1995), while changes were not immediate, the FERs along with other similar centralizing reforms allowed for greater alignment of local policy with national norms. More qualified teachers were hired and there was an increasing trend for the SEs to hire teachers when funding was available (Hanson 1995). There is evidence, however, that many problems remained, at least in some regions. Examining two departments in Colombia over the 1980s, Duarte (1998) found no evidence of the use *concurso*s, competitions among teacher applicants, for the hiring of teachers despite the fact that they had been a requirement since 1979. He describes how letters of political recommendation were commonly the most important element in the hiring of teachers and, that because political connections were often more important than qualification for the hiring of teachers many teachers were hired without the minimum qualifications. This also often resulted in a greater concentration of teachers in schools serving less poor areas, high rates of turnover among teachers, especially among municipal teachers and temporary departmental level teacher, and more teachers hired than could be supported by the payroll (Duarte 1998).

Another move towards standardization of the education system was the creation of a national salary scale for public school teachers in 1979. The scale, which was determined by a national statute known as the *Estatuo Docente* (ED), was created to address issues such as inequalities in teacher pay resulting from different salary levels for teachers depending on whether they were municipal, department, or MEN teachers and frequent irregularities in how and when teachers were paid. The ED salary scale was based on level of seniority, education level, and number of publications. The ED also established rules around stability and benefits including pensions and conditions for hiring for all public school teachers (Lowden 2004). While the ED represented an important step towards protection for teachers, it has been criticized by some for contributing to the education system being inflexible and inefficient because it did not allow for regional differences in pay, made firing ineffective teachers extremely difficult, and because it based increases in pay on years of experience rather than performance (Lowden 2004). As will be discussed later, increases in the ED salary scale and expanding costs associated with teacher pensions which were again outlined in the ED were also associated with rising deficits in the 1990s.

This period of increasing government control of and support of education were associated with notable improvements in basic education coverage although coverage levels remained below many other Latin American countries. While only about half of the primary school aged population was enrolled in school during the 1950s, by 1991 this number had increased to 83.2 percent. Though this represents an extremely large increase, as can be observed in Table 1, the primary age attendance rate in Colombia at that time was well below the average rate for Latin America (91.1) as well as other Latin American countries selected for comparison. Lower secondary access was also below the average rate for Latin America. Coverage for upper secondary, however, was about three percentage points higher. Moreover, there were large disparities between groups with different income levels. In 1990, while an average of 94 percent of individuals in the two highest income quintiles were enrolled in schools, the percentage for individuals in the poorest quintile was only 65.1 percent (DHS 2008). Support for education was also low in comparison to other Latin American countries. Public expenditures as a percentage of GNP varied between 3.0 percent and 3.5 through 1960s to the 1980s compared to the Latin American average of 4.3 percent for the period (Hanson 1995). Later in the 1990s the government increased education and spending and promoted decentralization of education administration, in part, as means for expanding coverage.

Table 1: Percentage of individuals enrolled at any education level within school level age groups for selected Latin American countries, 1990 to 2005

Country	Pre-school		Primary		Lower Secondary		Upper Secondary	
	1990	2005	1990	2005	1990	2005	1990	2005
Bolivia	...	52.2	...	76.1	...	71.9	...	65.4
Brazil	58.7	90.3	86.3	97.9	82.3	96.7	56.2	80.6
Chile	53.0	77.7	96.6	99.1	97.1	99.0	80.8	93.1
Costa Rica	6.7	57.5	87.2	98.7	77.4	91.8	53.3	79.6
Colombia	43.5	80.5	83.2	96.3	81.0	92.9	63.6	77.4
Ecuador	...	77.8	...	95.7	...	85.9	...	69.5
Mexico	98.2	...	90.8	...	63.7
Peru	...	76.7	...	95.8	...	91.1	...	79.6
Venezuela	64.1	84.3	92.2	96.8	88.6	94.3	68.6	81.0
Latin America	61.6	86.3	91.1	97.2	83.6	93.5	60.5	76.2

Source: CEPAL 2008, taken from individual household surveys administered by the countries.

Notes: Figures for Bolivia are for 2004 rather than 2005, for Chile and Peru are for 2003 rather than 2005, and for Colombia are for 1991 rather than 1990.

The First Wave of Decentralization, 1989 to 2001

Devolution of education management functions to regional entities (departments and municipalities) coincided with large national changes, principally political decentralization as mayors were elected for the first time in 1989 and governors in 1991 and a new Constitution came into effect in 1991. During the late 1970s and early 1980s there had been some initial movement towards decentralization as municipalities were given the power to collect local taxes, principally the sales tax, as part of an effort to improve municipal finances (Faguet and Sánchez

2008). The principal impetus for decentralization in the 1980s, however, was largely political (Fiske 1996). There was widespread political violence and social unrest at the time due to frustration with strong control by the political elite, lack of opportunities for political participation, and large economic inequities (Fiske 1996, Hanson 1995). Much of the social rest centered on the hegemonic control by the two dominating political parties and inability of the State to provide services, especially in the more rural and isolated regions (Faguet and Sánchez 2008). The Constitution that was created through a convention of elected representatives in 1991 promoted the deepening of decentralization and universalizing basic education (Borjas and Acosta 2000).¹¹ The Constitution also established education as a right and made education between five and 15, one year of preschool and five years of primary and four of secondary, obligatory. In regards to education funding, and social spending in general, the Constitution aimed to increase funding as well as making annual funding levels more consistent (Borjas and Acosta 2000).

There is a large degree of consensus that the education laws that came from the constitution, along with the previous decentralization laws and reforms in the late 1980s resulted in an inefficient, confused, and poorly coordinated system of administration in part due to a lack of alignment among the different reforms and laws (Hanson 1995, Lowden 2004, Vergara and Simpson 2001, Borjas and Acosta 2000, Duarte 1998, Di Gropello 2004). Some of the legislation passed during the period emphasized the devolution of functions to municipalities and others to departments and there was a general lack of agreement among key entities and alignment towards common goals (Lowden 2004 and Gómez 2000).¹² Also, some authors have expressed concerns that the decentralization reforms of the period provided very little real autonomy as regional entities were highly constrained in their use of education funding in part due to the restrictions of the ED (Zapata, Acosta, and Gonzalez 2001). There were also concerns around increasing deficits associated with increases in salaries and pensions (Zapata, Acosta, and Gonzalez 2001).¹³ Authors have also noted the continuing large inequities in the distribution of education funding and have observed that the education funding formula favored urban areas (Lowden 2004, Vergara and Simpson 2001).

Previous to 1991 there had been some movement towards decentralization during the late 1980s. These include a streamlining and attempt at the reorganization of the MEN to reinforce role of organization, policymaking, and supervision, the transfer of administration of secondary education to departments although significant changes in the functions of the MEN did not take place until the 1990s (Vergara and Simpson 2001). A total of 300 of 1,300 positions in the MEN were eliminated and the management of construction and maintenance school facilities administration was transferred to municipalities in 1986 (Hanson 1995). There was also an effort to transfer the administration of teachers to municipalities during the late 1980s. Due to concerns among many municipalities that there would not be adequate funding to support autonomy and

¹¹ The 1991 constitution stated that Colombia was a unitary decentralized republic with autonomy for regional entities.

¹² Some attribute the lack of alignment of education policies enacted during the period to concessions made by the Colombian government to competing and often conflicting pressures from the national teachers' union, governors, mayors, Catholic schools and others (Lowden 2004, Gómez 2000). Teachers' unions for example strongly opposed decentralization to municipalities while mayors of many of the large municipalities supported it (Lowden 2004).

¹³ Fiscal problems were exacerbated by a national fiscal crisis that occurred at the end of the 1990s (Acosta and Bird 2003, Zapata, Acosta, and Gonzalez 2001).

strong opposition by the national teachers' union, this was only partially implemented among the larger and better resourced municipalities (Lowden 2004, Vergara and Simpson 2001).¹⁴ Management for the majority of teachers therefore remained in the departments, which according to Lowden (2004) operated as deconcentrated units of the MEN. The FERs were also transferred to departments. There were concerns that the move would cause them to become politicized and lose their ability to promote accountability (Hanson 1995).

One important education law relating to education governance and funding, Law 60 of 1993, arose from the 1991 constitution. The law required a gradual devolution of administrative functions to departments and municipalities with more than 100,000 inhabitants (Lowden 2004). Under the legislation, the MEN was responsible for developing policy and norms around curriculum and pedagogy and managing the national education data management system (Legia Melo 2006). Departments, in conjunction with municipalities, were responsible for managing and administering primary and secondary education, administering and redistributing the central education transfer, participate in financing education services, and developing and evaluating teachers (Legia Melo 2006). The law required that departments become "certified" to receive the central transfer for education and health funding, the *Situado Fiscal* (SF). Certification involved creating an institutional structure in line with national norms, developing an educational development plan and a plan to increase education coverage, and developing a data management system for tracking the use of education funding, student enrollment, teacher assignment, among other education management indicators. In cases where departments did not become certified the SF continued to be managed by the FERs (Legia Melo 2006). By 1997 all 32 department and the four special districts had become certified. Under Law 60, municipalities were responsible for administering education services under the conditions set by the departments, as well as for the management of school facility construction and maintenance, and the monitoring education provision (Legia Melo 2006). Municipalities with over 100,000 could also become certified to manage central transfers provided they become certified although by 2001 only one municipality, Armenia, had become certified (Lowden 2004). Both departments and municipalities were charged with financing facilities.

Law 60 also for the first time attempted to standardize funding for public services by establishing rules around the distribution of the SF. A large portion of the SF, 85 percent was based on the distribution of teachers in the country in 1993.¹⁵ Due to the fact that teachers tended to be concentrated in urban areas it led to large inter-regional disparities in funding (Vergara and Simpson 2001, Lowden 2004). In 2001, per capita transfer of education funds by the central government to SEs varied from between \$560,000 to \$3,300,000 Pesos (a 1 to 5.9 ratio) and there was an inverse relationship between local poverty levels and the distribution of resources (Lilia Caro 2004). While per capita funding levels varied greatly between entities under the SF, by standardizing the way the SF was distributed, Law 60 served as a foundation for later changes in education financing that better targeted education funding to the poor.

¹⁴ According to Lowden (2004), the Colombian teachers' union strongly opposed decentralization to municipalities. Union leaders believed that the union would better be able exert political pressure in the 32 departments than the more than 1,000 municipalities.

¹⁵ There were some improvements, however and the fact that only 15 percent of the SF was divided evenly among departments reduced the advantage for smaller departments (Acosta and Bird 2003).

Another central transfer of health and education funds was the “municipal participation.” This was distributed directly to municipalities based on population, population in poverty, efficiency indicators and was in theory to be directed to poorer, smaller municipalities (Acosta and Bird 2003). A third transfer, Education Compensation Fund (FEC), was created in 1996 to address deficits in central funding. The fund was created to provide funding to local entities that could not meet the costs of teacher payrolls and distributed to departments and municipalities based on teacher salary deficits. By the end of the 1990s the central government financed 86 percent of education provision. Of that, 53 percent of transfers went to departments through the SF, 16 percent going directly to municipalities through the current income participation, 14 percent going to departments and municipalities through the FEC, and the remaining three percent allocated to municipalities and departments through cofinancing (Borjas and Acosta 2000).

Education spending increased markedly over the 1990s from 3.1 percent of GDP in 1990 to 4.5 percent in 1997 before falling again in the last years of the 1990s due to a national fiscal crisis which led to decreases in current income (Lowden 2004). Law 60 required the SF to increase over the 1990s from 15 percent of current income in 1993 to 24.5 percent in 1996. The increase in funding did not keep pace with increasing costs, however, principally because of increases in the number of teacher hired along with increases in teacher salaries and pensions (Lowden 2004, Zapata, Acosta, and Gonzalez 2001). Municipal spending on teachers’ pay in fact doubled between 1993 and 1998 (Lowden 2004). Deficits were an especially large problem in small and poor municipalities (Lowden 2004). As previously mentioned, there was large variation in the amount of per capita central funding allocated to local entities due to the emphasis the funding formula placed on teacher distribution and the concentration of teachers in urban areas.

The central government also was having trouble keeping pace with increasing costs, particularly in the period of fiscal crisis at the end of the 1990s. Increases in spending by the central government over the period were concentrated in the FEC which increased at an average annual rate of more than 50 percent (Zapata, Acosta, and Gonzalez 2001). There is evidence that the FEC provided an incentive to local entities to hire more teachers even when funding was not available to pay their salaries. Echavarría, Rentería, and Steiner (2001) find a correlation between the number of teachers appointed by departments and municipalities and later increases in the FEC providing evidence that some regional entities took advantage of the fact the central government would compensate for deficits resulting from the hiring of more teachers through the FEC.

Due to increases in teacher hiring student teachers ratios decreased over the period from an average of 30 students per teacher in 1990 to 23 in 1997 (Acosta and Bird 2003). There was in fact a 38 percent increase in the number of public school teachers between 1991 and 1998 (Borjas and Acosta 2001). There is some evidence that the increase in the hiring of teachers may not have been associated with most efficient use of resources as it was found that between 1995 and 1999 the departments that hired the greatest amount of teachers were those where coverage decreased or where increases were minimal (Government of Colombia 2001 cited in Lowden 2004) although without more detailed data it is difficult to rule out the influence of other factors like concentrations of displaced individuals in certain areas. There is also evidence that teacher employment increased in the regions with the greatest level of need as measured by having the

highest student teacher ratios (Borjas and Acosta 2001). Borjas and Acosta (2001) find that regions with about 20 percent higher student teacher ratios in 1994 were estimated to receive about a 15 percent higher rate of teacher employment growth between 1994 and 1998 – a larger and more precise estimate than what was observed prior to the implementation of the decentralization reforms (1991 to 1994).¹⁶ The authors also find that teacher internal migration rates (the percentage of teachers that moved across localities each year) declined over the period of reforms from 5.1 percent in 1991 to 3.4 percent.¹⁷ This provides evidence that the reforms, while successful in ensuring that changes in resource distribution were targeted to areas of greater need, were not as successful in redistributing existing resources to those areas.

Another set of problems impacting regional inequities and inefficiencies in the education system centered in the fact that there was a lack of established formal processes for carrying out administrative tasks and administrative entities often overlapped in functions (Hanson 1995). Often in the same cities there were secondary schools managed by the MEN, the department, and the municipality. According to Fiszbein (2005) there is evidence that the structure is associated with “inconsistencies in the assignment of responsibilities and resources...,” and has, “...made it difficult for local actors to manage schools in practice” (P. 21). The fact that departments were required to direct specified portions of the SF to education and health has also been criticized because it did not allow for sufficient flexibility (Vargas and Sarmiento 1997, Legia Melo 2006). Moreover, the tying of the SF to national income led to large fluctuations in spending from year to year (Lowden 2004).

Another related issue was that the wide variation in the administrative capacity, adherence administrative norms, and availability of local revenue sources exacerbated the level of inter-regional disparities in education provision (Hanson 1995). In many of the larger municipalities and more developed departments like Antioquia and Valle have histories of administrative autonomy and raise more education funding independently (Acosta and Bird 2003). Problems such as political instability and turnover were especially severe in less developed regions with lower levels of institutional development and experience (Hanson 1995). Also, there was frequent turnover among administrators as the secretaries of education and the staff were often replaced as new local officials came into power. Between 1998 and 2003 the average duration of a secretary of education was 14 months ranging from 12 different secretariats over the period in Vichada to only one in Envigado (MEN 2006). There was also little means for the national ministry to identify or address problems or irregularities in the system. The MEN did not have access to data that allowed for monitoring the use of education funds as only the largest cities collected administrative data regularly and managed data in a standardized way (Duarte 1998, Borjas and Acosta 2001). Even if the Ministry could identify irregularities, it was difficult for the MEN to hold local entities to account (Duarte 1998).

¹⁶ The analysis by Borjas and Acosta was limited to a sample of 30 municipalities and it is not clear whether there findings are applicable to more rural areas of the country.

¹⁷ The authors attribute the fact that internal migration rates were lower among teachers than non-teachers to the fact that teachers in Colombia during the period were older than members of the non-teaching labor force and internal migration rates tend to decline with age. It is important to note, however, that the former director of administration of the SE of Bogotá, Nohemy Arias, describes in Lowden (2004) how the reassignment of teachers is uncommon in Colombia because it is a politically sensitive issue. She states that reassignment was addressed in Bogotá in the late 1990s by giving those being reassigned some power to choose posts and favored more experienced teachers. She also states that reassignment is easier to manage in Bogotá, within the same city, than in departments.

Due to increases in teacher pay and in the hiring of teachers, funding for quality improvements and the functioning of the system was more and more scarce (Lilia Caro 2004). Also, there is evidence that resources could have been allocated more effectively as between 1995 and 2000, though the amount of resources increased by 30 percent, enrollment increased by only 17 percent (Lilia Caro 2004). The MEN and other government entities, principally the National Department of Planning (DNP) also expressed concern around system's inefficiencies and inequities. An article published by the MEN at the beginning of the design and implementation of the most recent wave of reforms highlights both the large number of school aged youth that were not attending school as well as how poorly existing resources were used and distributed in the system (MEN 2001). The article focuses principally on the concentration of teachers and low student teacher ratios in urban areas and the lack of coverage in poor rural areas but also irregularities and abuses in the system such as teachers being contracted by more than one municipality (*doble vinculación*) and therefore receiving more than one paycheck (MEN 2001). The article claims that by using resources more efficiently by distributing teachers more evenly among regions and eliminating irregularities the system could use the current resources to create an additional 2.5 million seats. The next wave of reforms used such strategies and others to increase efficiency and equity.

The Second Wave of Decentralization – Attempts to Standardize and Modernize within the Decentralized System

As previously discussed, by the turn of the century it was clear to many education policymakers that there was a strong need to change the way that central education funding was distributed, strengthen the monitoring of the use of that funding, and build local capacity and refine policies so that education funding was used more efficiently and effectively and distributed more equitably. These views were expressed in many of the previously cited reports and other works examining the education system that were published at the end of the 1990s (Duarte 1998, Vargas and Sarmiento 1997, Zapata, Acosta, and Gonzalez 2001, Echavarría, Rentería, and Steiner, 2001, Vergara and Simpson 2001). Increasing education costs, in part due to rising costs from teacher salaries and benefits, and resulting local deficits along with a perception for the need for rationalizing the education system led to support for the law among associations of governors and mayors (Lowden 2004). Due to the country's fiscal crisis and an unemployment rate of over 20 percent the public were not especially concerned with how reforms affected teachers who, in comparison with other public sector employees had a generous pension package and in comparison with the average Colombian worker, greater job stability and higher pay (Borjas and Acosta 2000, Lowden 2004). According to Lowden (2004), lack of public sympathy for teachers helped to ensure that the law was passed despite strong opposition by the teachers' union. The following section discusses the components of the legislation that emerged from this pressure for reform focusing on the aspects of the reform that attempted to promote more equitable and efficient use of education resources.

The cornerstone of the reforms, Law 715 of 2001, was a constitutional reform that modified the system of transfers for social spending and clarified roles in the system of service provision

(MEN 2002).¹⁸ The central thrust of the reforms was a deepening decentralization by providing greater autonomy for large municipalities. Municipalities with more than 100,000 people were required to become certified to manage education services within the city in a manner similar to departments.¹⁹

Along with decentralization, the reforms also sought to clarify roles in the system and improve the ability of the MEN to monitor SEs and of local entities to manage provision in an effort to make service delivery more rational and efficient (MEN 2002, López 2005).^{20 21} The policies attempted to balance greater local autonomy with greater accountability and standardization and control of costs (López 2005). Another explicit aim of the reforms was to promote greater equity, although it is important to point out that, that while equity was one of the goals, it was not one of the central goals which instead prioritized first rationalization and efficiency (López 2005). The following first describes changes in the way the central transfer was allocated and the effects of those changes in the distribution of funding and then other key elements of the reform.²²

Fiscal Reforms

Beginning in 2002, Law 715 revised the funding formula for the central transfer and consolidated all central government social service funding into one stream, the Sistema General de Participaciones (SGP). A total of approximately 59 percent of the SGP was to be allocated to education with the rest going to health, portable water, and other services. The law outlined the distribution of the SGP requiring that the bulk of education funding, about 80 percent, be allocated based on the population served as measured by the number of students enrolled (DNP 2004).²³ The new funding arrangement that came with Law 715 took two years to be

¹⁸ Following Law 715, a number of decrees were enacted by the MEN that clarified pieces of the Law 715 and furthered the effort to rationalize and standardize the education system. Where relevant, these are described in the following section along with Law 715.

¹⁹ We refer to these municipalities hereafter as “autonomous municipalities.”

²⁰ Previous to the legislation, there was some initial movement towards standardization and increased central control with the passing of a resolution that established the parameters around the length of the school calendar, requiring schools to provide 40 weeks per year of instruction (Resolución 144 de 2001) and the Plan de Reorganización which beginning in 2000 attempted to promote more efficient and equitable use of resources by increasing student teacher ratios and distributing teachers more equally among different regions (MEN 2001, López 2005). The bulk of the implementation of reforms associated with Law 715, however, coincided with Uribe’s administration coming into power in 2002 (López 2005).

²¹ Many of the reforms had their roots in Bogotá’s reforms of the 1990s. Several of the MEN staff including the Minister had previously worked as administrators in Bogotá SE. Through the creation of a new data management system and the enforcement of local rules around teacher assignments and transfers that SE was able improve coverage without significant increases in new hires and costs (Peña and Rodriguez, 2005). According to Peña and Rodriguez, “over half of the new places that were created (in Bogotá) between 1998 and 2003 resulted from reassigning teachers to schools where there was a deficit” (2005, P. 13).

²² Law 715 provides guidelines on the factors that regional entities should prioritize in education provision although it is for the most part vague regarding how these priorities should be transferred into practice. The law states that assignments and transfers are to occur in a way that meets the needs of the population, to the areas with the greatest needs, and in a way that promotes efficient use of resources. It leaves much up to interpretation regarding how this will take place and how the MEN will develop policies to promote their implementation. The law also called for SEs to maintain and work to increase coverage although again it does not specify how that it is to occur. As discussed later, the MEN created a number of decrees following the law that further clarified policies.

²³ In 2004, about 10 percent was also distributed based on the number of school aged students not served and in the case of the *Recursos de Calidad*, the number of enrolled student, but with more funding going to municipalities with

implemented as there was a need to first accurately measure the pay roll and official enrollment, which as will be described below are the central components in determining the amount distributed per student. Therefore between 2002 and 2003 were the first years that the funding formula came into effect.

Assignment per student is made up of two components – basic cost (costo básico) and typology (tipología). The basic cost is made up of the perceived cost of instruction as measured by the expected cost of the teacher serving the student (their position on the salary scale) plus the expected administrative cost per student.²⁴ The typology is determined by the level of geographic dispersion of the population, the percentage of the population that is rural, and percentage of enrolled students that are in lower and upper secondary.²⁵ Individual territorial entities are clustered into four groups with poorer, more rural entities receiving an additional percentage over the basic cost.²⁶ In 2006 this percentage ranges from an additional 4.1 in the largest municipalities to 7.1 percent in the poorer departments (MEN 2006). The seven poorest and most rural departments with high numbers of out of school youth are in a separate typology category and in 2006 received between 39 and 112 percent more over the base amount than other departments (MEN 2006).

In addition to attempting to promote equity of education opportunity by providing more funding to SEs with higher levels of need, the SGP has other characteristics designed to address problems that occurred under the previous funding system. It can be argued that the fact that the SGP acts as an incentive for SEs to increase enrollment because the bulk of it is allocated on per student enrollment, rather, as has been argued was the case under the FEC, hire more teachers without boosting enrollment (Lowden 2004, Echavarría, Rentería, and Steiner 2001). Also, unlike the SF, the SGP was fixed with increases tied to inflation rather than national current revenues. This attempted to prevent fluctuations in funding levels from year to year with national income – a particular problem during the late 1990s. The law also placed rules around funding to prevent cost overruns and ensure that funding be used effectively and targeted to the poor. First, departments and certified municipalities were prohibited from acquiring deficits from education funding. Hiring and new pay raises for teachers were required not to exceed the amount of the SGP and departments and municipalities were restricted in the amount of central funding they could assign to increases in teachers' payroll costs.²⁷ Second, the law also restricted the use of the SGP and required that per student funding be used for teacher pay, administrative and facility costs, the contracting of education entities for the poor, and for improving quality. Third, in an effort to address teacher shortages, revisions were made to the ED so that teachers in rural areas

higher proportion of the population living in poverty as measured by the local unsatisfied basic needs index (NBI) (DNP 2004). *Recursos de Calidad* aimed to improve quality and the national government required that they be used for education materials, improvements to the school facility, school transport for the poorest, and to provide additional funding for school meals. In 2007, per capita funding for *Recursos de Calidad* amounted to about \$31,000 pesos (US\$13) (MEN 2008).

²⁴ The administrative cost ranged from an additional 7.4 to 8.8 percent over the expected cost of students per teacher with municipalities receiving more than departments.

²⁵ This reflects the initial funding formula for assignment of the SGP. In the last year there have been changes including equal funding for departments, municipalities, and districts.

²⁶ SEs for which the funding does not meet the pay roll costs of teachers receive additional funding based on the number of students served.

²⁷ They were allowed only a one percent increase in funding for payroll costs between 2002 and 2005 and 1.25 percent increase between 2006 and 2008 with anything exceeding that amount to be funded locally.

and areas that were difficult to access came to receive an additional 15 percent over their base salary.

Such restrictions on the use of the SGP and on local education spending, along with the requirements that a fixed percentage of the amount of the SGP go to education have been criticized for restricting the autonomy of local entities and thus inhibiting the potential benefits of decentralization (López 2005). Departments were also restricted due to the fact that the SGP barely covered their costs. By 2004, the SGP financed an average of 97.8 percent of their education costs for departments, of which 93 percent went to salaries of teachers and other instructional and administrative staff involved in education service delivery (López 2005). Districts and municipalities on the other hand, both autonomous and non-autonomous financed an average 84.3 percent of education service delivery with the SGP although there is a great deal of variation within the group (López 2005). Also, some municipalities were much better able to raise local funds through local property taxes and other means than others.

Although only three, or in some cases four years of funding data are available since the reforms were implemented between 2002 and 2003, it appears both that efforts made under Law 715 to control and stabilize government spending in education in Colombia were largely successful and that more education funding per student were being targeted to the grade levels serving the highest proportion of the poor. Table 2 (below) reveals that since 2002 Colombia's government dedicated a significantly smaller proportion of government spending to education than in previous years. Overall education funding as a percentage of GDP, however, increased substantially in 2002, although there was slight decline in 2004 and 2005. Funding levels also appear to be much more stable than in the 1990s. Also notable in the table is the fact that support for individual education levels as measured by per capita funding as a percentage of GDP, increased substantially for secondary but especially for primary. There were some increases in education funding as a percentage of GDP for both primary and secondary education before the 2002 reforms, with the exception of 2000, when financial problems were most severe. These increases coincide with a notable decrease in support for tertiary, but again, the changes precede the reforms and were strongest in 2001.

Table 2: Public Education Expenditure 1998 to 2005

Category	1998	1999	2000	2001	2002	2003	2004	2005
% of p.c. GDP Primary	13.85	15.93	14.89	16.34	17.00	...	19.84	19.17
% of p.c. GDP Second.	14.71	16.87	16.17	18.40	17.46	...	19.02	18.00
% of p.c. GDP Tertiary	35.25	39.55	37.13	38.26	29.70	...	25.82	24.17
% of p.c. GDP Total	16.14	18.44	17.50	19.33	18.44	...	20.16	19.27
% of GDP Total	3.93	4.44	4.19	4.44	5.15	5.15	4.87	4.76
% of Total Gov Spend.	18.10	16.90	17.37	18.00	15.56	...	11.73	11.06

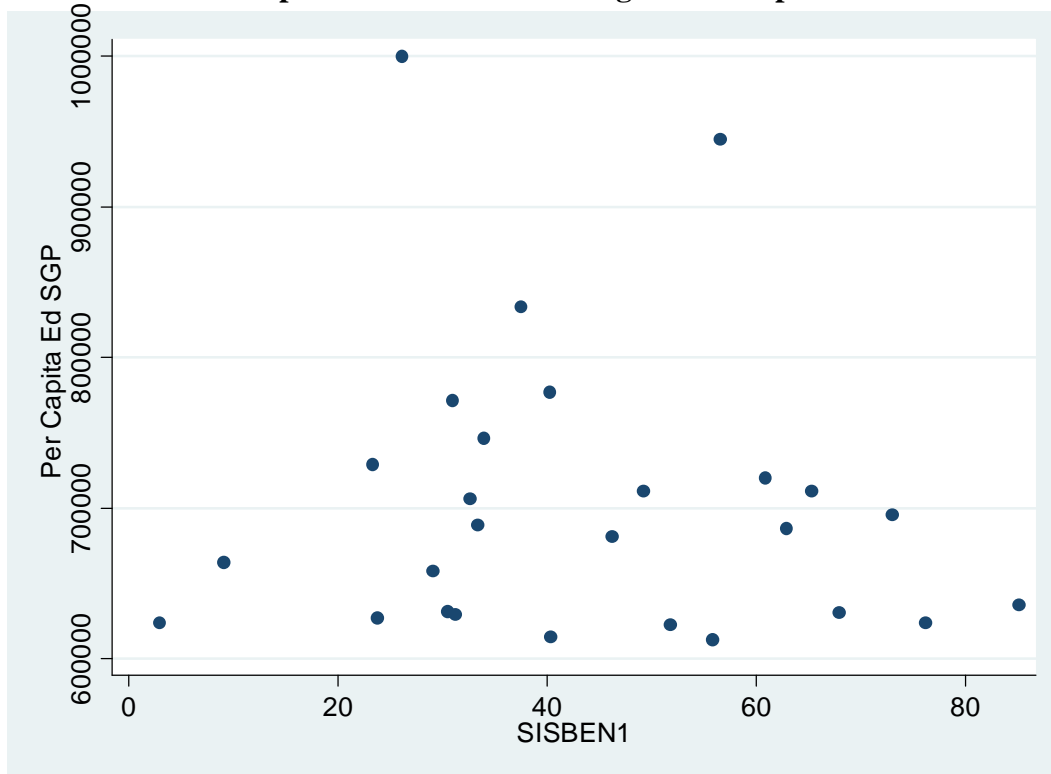
Source: National funding data from World Bank 2008

We also examine how the distribution of funding among local entities has changed over time to become more or less equitable. We find different results analyzing the distribution of per capita funding at the municipal and department levels, but with an overall trend towards a more

progressive distribution of funding in the years since fiscal reform. Figure 1 shows that there is no clear relationship between the total per capita transfer in 27 of the 42 autonomous municipalities, the SGP and *Recursos de Calidad*, and the level of extreme poverty in the municipalities as measured by the percentage of the population on the SISBEN level 1. Our municipal level analysis reveals that large urban municipalities like Medellín are not receiving more funding than the smaller and poorer municipalities, they are also not receiving consistently less and the bulk of the municipalities are concentrated in a relatively narrow funding range regardless of the poverty levels in the municipality.²⁸ Similarly, examining changes in equity levels in the distribution of per capita funding levels after the first years of reform, Lilia Caro (2004) finds that while it is apparent that the changes in funding have created a system without large disparities in per pupil transfers of central education funding, it is also not providing consistently more for SEs serving higher need populations. At the municipal level, the concentration of more teachers and a higher proportion of teachers in urban and less poor areas continues to act to push central funding to large urban and less poor areas and counteract the equity enhancing components of the funding formula (Lilia Caro 2004). It is important to point out that poverty is not a factor in determining funding for the bulk of the central transfer which instead gives more funding per students where the expected costs of service are higher – rural and secondary school students. We also did not measure a relationship, however, between 2006 per capita central funding in autonomous municipalities and the percentage of the population that lives outside of the urban center of the municipality.

²⁸ There are two extreme outliers, with much higher levels of per capita funding and with comparably low extreme poverty levels, Pasto and Manizales. It is important to point out, that the funding levels for one of the extreme outlier in the distribution, Pasto, decreased by more than 32 percent since 2002. This might be related to the fact that Pasto was one of two municipalities to receive certification and become autonomous before 2003.

Figure 1: The Relationships between Per Capita 2006 Central Education Transfer to Autonomous Municipalities and the Percentage of the Population in Extreme Poverty



Source: Funding from DNP – CONPES de distribución de recursos cited in Corpoeducación 2008; poverty DNP – SISBEN 2006

Notes: Figures are for 27 of the 48 autonomous municipalities for which data is available. Funding levels are in 2002 pesos.

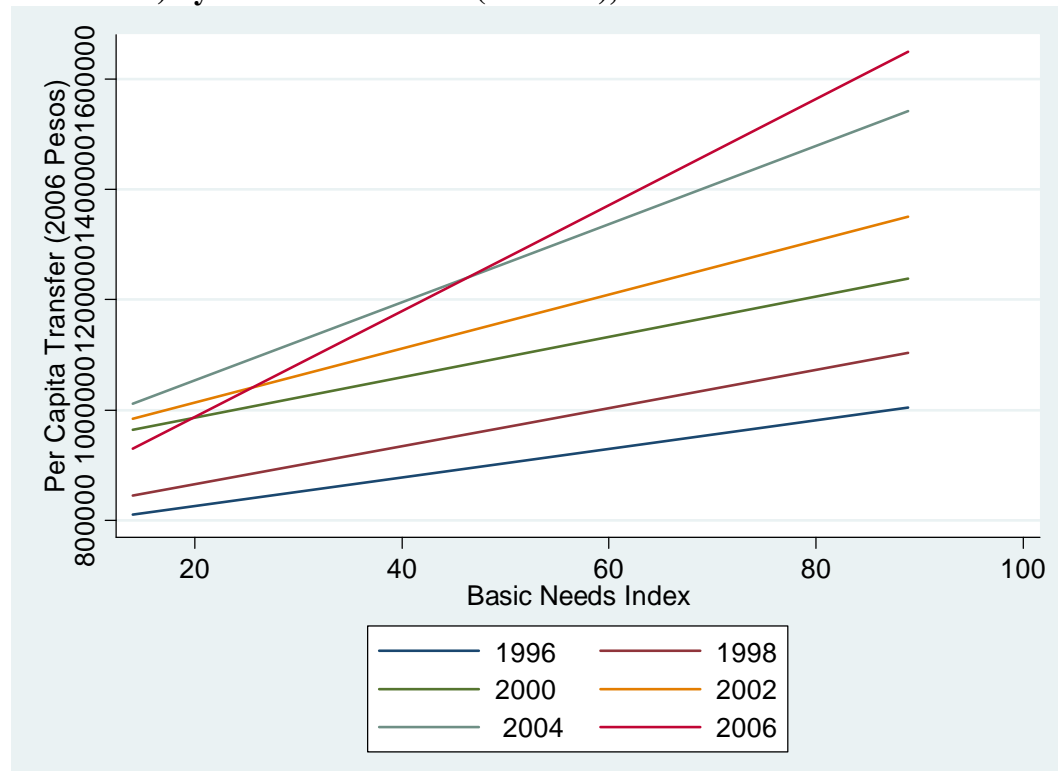
As previously mentioned, the funding formula for the SGP was designed to provide more funding to the poorest departments with the higher expected costs of service. Figure 2 displays fitted linear regression lines for per capita central funding among departments for six years, 1996, 1998, 2000, 2002, 2004, and 2006 as predicted by department level poverty levels as measured by the percentage of the population with unsatisfied basic needs.^{29 30} The figure reveals that between 1996 and 2006, the level of per capita funding has increased significantly across departments although in 2006 some of the least poor departments appeared to receive less than they had in previous years. The figure also reveals that the distribution of per capita funding has moved from nearly flat distribution to one that is highly progressive. By 2006, the nation's very poorest department SEs came to receive substantially more in per capita funding than the more developed ones. For that year, one of the country's poorer and less developed departments, Chocó received more than 47 percent more in per pupil funding from the central government than Valle, one of the most urban and developed of the departments while the poorest

²⁹ Expenditure data was at the SE level (autonomous municipalities and departments) while enrollment data was at the department level. To perform the department level analysis expenditure data for municipalities was combined with their respective departments. Per student funding levels therefore vary within departments.

³⁰ Per capita transfers are in 2006 pesos. We do not include the two very poorest departments, Vaupés and Guainía, in the analysis because they are extreme outliers both in their poverty and per capita funding levels.

departments, Vaupés, Guainía, and Vichada received more than double that of Valle. Also, between 2000 and 2006, per capita funding levels decreased in 10 of the 12 departments with the lowest basic needs indexes (below 25).³¹ At this broad level of analysis, it therefore appears that the distribution funding has come to be aligned with the equal educational opportunity standard, although our municipal level analysis reveals a less progressive distribution of funding more aligned with the equal treatment standard. It is important to point out that the department level per capita expenditures often disguise variation within departments as autonomous municipalities received different funding levels than their departments.

Figure 2: Fitted Regression Lines for Total Per Capita Central Education Transfer (in 2006 Pesos) by Basic Needs Index (for 2000), 1996 to 2006



Source: Calculations by the authors using data from the Colombian Ministry of Education for expenditure and enrollment data and DANE (2000) for data on the basic needs index.

Notes: Per capita expenditure levels are in 2006 pesos. The department level basic needs index is the percentage of individuals determined to have unsatisfied basic needs for 2000. Transfer amounts were calculated to include all education transfers to departments– the base amount plus any additional transfers for quality, funding for unpaid teacher salaries, and transfers to municipalities within departments. Calculations were performed excluding the two poorest departments, Vaupés and Guainía, which are outliers both in their poverty and per capita funding levels.

How these changes in the distribution of funding, along with other changes stemming from the reforms described below in this section translated into changes related to educational equity is

³¹ Local governments in Antioquia and Bogotá in fact issued reports showing how the central transfer had come cover less and less of local education costs forcing local governments to dedicate more local funding to meeting education expenses.

explored later in the paper. First, however, we describe other components of the most recent wave of reform that are expected to be associated with changes in the equity of education service delivery, in this case, by encouraging a more equitable distribution of other education resources, mainly schools and teachers, and more efficient use of those resources.³²

Other Administrative Reforms Expected to Impact Equity in Education Access

Along with changes in funding, Law 715 of 2001 and its related decrees were associated with a number of policy changes and new programs that aimed to ensure that central funding was used more efficiently, effectively, and equitably although, as will be discussed below, some have highlighted the initial problems associated with these reforms. As previously mentioned, a major component of policy reform was the devolution of administrative functions for education provision to large municipalities after they demonstrated they had the capacity and resources to manage funding according to MEN criteria. The 42 municipalities and four districts with more than 100,000 inhabitants were required to become certified to receive central transfers. As of 2005, autonomous municipalities and districts served approximately 44 percent of all basic and upper secondary students enrolled in public schools (López 2005).

Departments in turn were required to certify smaller municipalities to ensure that they had the capacity to manage transfers autonomously. Departments and certified municipalities were charged with evaluating rectors (directors of individual schools or groups of school). They were also responsible for overseeing education quality in the regions and managing HR functions – the assignment and transfer of teachers to schools, or in the case of departments to municipalities.³³ The law increased the autonomy of SEs to make decisions regarding teacher assignments and transfers, although in an effort to control costs, regional entities were not able to hire teachers if the cost of doing so rose above what they were allocated in the SGP (Lowden 2004). As discussed later, this along with other policy changes led to substantial increases in average student teacher ratios.

Higher teacher ratios can also be connected to declining numbers of teachers. In 2005 it was estimated that there were approximately 24,000 open teaching positions in the official sector (Corpoeducación 2006). In that year the problem of teacher shortages were most severe in both in some of the poorest and most rural departments (La Guajira) as well as in more urban and developed ones (Antioquia and Cundinamarca), although the hiring of qualified teachers is a particular problem in more marginal communities (Corpoeducación 2006). Due to the retirement of many teachers at the end of the 1990s and problems in recruiting new qualified teachers, the number of teachers in the official sector declined by 11,000 between 2000 and 2003 (Corpoeducación 2006). Teacher shortages might be connected to new ED required that new secondary school teachers have an advanced university degree from a recognized university as

³² We do not discuss all of the elements of the Law 715 related reforms and instead focus on the ones we expect have the greatest immediate impacts on improving education access for the poor. Two important reform elements that we do not discuss are the creation of a new ED that placed higher demands on teachers and the creation of a national testing system (López 2005).

³³ Departments were charged with making decisions regarding the transfer and assignment of teachers to individual uncertified municipalities and municipalities, both certified and non-certified were to make decisions regarding the placement of teachers within schools in the municipalities.

well as creating stricter education requirements for preschool and primary school teachers.³⁴ It is possible that the creation of higher standards for new teachers and by improving accountability mechanisms that ensured more new teachers met hiring standards, particularly that they had the necessary education requirements, had combined to make hiring new teachers more difficult in many regions.

Law 715 and later decrees clarifying rules (Decree 4313) also allowed for greater local autonomy and encouraged private involvement in education provision by permitting territorial entities to use the central transfer to contract services.³⁵ Contracting providers to offer education services was viewed as a method for expanding enrollments for populations and regions where official provision was insufficient. SEs were not allowed to use contracted entities to replace official schools and were to target contracted provision to secondary education, rural areas and marginal urban areas and to the needy groups of students – indigenous, disabled students, and students affected by violence.³⁶ In funding contracted provision with the SGP, the cost of student per teacher was not to exceed that stipulated by the Ministry. Decree 4313 established guidelines around the selection of perspective providers and a system for monitoring and evaluating contracted provision (Castillo Verela 2008). Contracted provision has come to play a substantial role in total enrollment and by 2007 contracted entities enrolled about eight percent of all basic and upper secondary students (MEN 2008) with the increases especially pronounced in the lower and upper secondary grades (Castillo Verela 2008). Slightly more than three quarters of contracted education is provided through traditional education models and the rest through some type of flexible model (e.g. *Escuela Nueva*) (Castillo Verela 2008).

Law 715 also reformed the role and capacity of the MEN for monitoring administration. Under Law 715, the MEN was given responsibility of monitoring the use of central funding and ensuring that local provision was in line with national norms (Corpoeducación 2006).³⁷ In an effort to build the capacity of the MEN to monitor administration and the DNP to administer the SGP a national education information system was developed known as the Sistema de

³⁴ Preschool and primary school teachers were required to have received a degree from a normal school – a post secondary institution specializing in training teachers.

³⁵ Again, contracted provision did not begin under Law 715. The law did, however, for the first time allow for the central education transfer to be used to support contracted provision. Also, the PACES program, which operated between 1991 and 1998, promoted the involvement of private education in areas where there was inadequate supply of official schools by establishing a framework for education subsidies or vouchers for the poor, which are extremely similar in concept to contracted provision in that both encouraged the involvement of private institutions when the supply of public provision was inadequate. The main difference, however, is that the vouchers were provided to students who were admitted to private institutions and often did not cover the full cost of education with the balance paid by parents.

³⁶ A major contracted provider of education in the most remote areas of Colombia where the population is most dispersed and, in which frequently government control is most contested is the Catholic Church through *Educación Misional Contratada (EMC)*. A large proportion of EMC students are indigenous and because of the long distances that students need to travel from their homes to attend schools EMC schools frequently provide meals to students (Castillo Verela 2008).

³⁷ Monitoring of quality took place through the creation of national testing in the core subjects. Since 2005 the MEN has administered an annual national exam to 5th and 9th graders in math, language, science, and civics and made test score data for individual schools available online.

Información de Matrícula (SIMAT).³⁸ The fact that the distribution of the SGP depended on matriculation and teacher assignment made it extremely important that data was accurate and up to date.³⁹ The system combines data on student matriculation and teacher assignment and pay level into one database.⁴⁰ Historically that data had been stored separately in different formats and was often incomplete and in many cases believed to be inaccurate (López 2005). Along with being a key component in the assignment of the SGP, SIMAT is also meant to allow local and central level administrators means to distribute students among schools in an efficient manner and make full use of available resources (PMSE 2006).

The MEN was also charged with providing technical support to territorial entities, although it is vague regarding how this to occur stating it should occur, “when there is room for it.”⁴¹ The MEN operationalized the components of the Law 715 that called for the Ministry to provide technical assistance to local entities, to develop a national information system, and ensure that local entities administered education in line with national norms in part through a project called the Proyecto de Modernización de Secretarías de Educación (PMSE). The project aims to improve administrative effectiveness, efficiency, both at the local and national levels and to “deepen the process of decentralization through strengthening and modernizing local administration” (MEN 2007).⁴² There has been a great degree of variation in how different SEs work towards these goals and individual project designs were adjusted to local conditions. Some SEs, like Medellín, for example already have a relatively advanced administrative infrastructure (computers and a data management system) and experienced administrators. In such cases the project focuses on ensuring that the existing systems are in line with national norms along with implementing other required elements like the training in the national data management system. In more rural SEs like Chocó, which lack regular electricity and have administrators with less training and often with less experience due to frequent turnover, project implementation focuses on building the capacity of workers (e.g. computer training) and establishing the basic necessary infrastructure (e.g. computers and internet connection).

Despite variation due to differences in context, the implementation of the project follows a general format involving the contracting of a university or other organization to support the

³⁸ Decree 1526 of 2002, mandated the creation of the system and its components including outlining what data was to be collected by SEs – student level enrollment, matriculation and education status for all students 5 to 17, results on the national exam, budget data, and data on school facilities and teacher assignment.

³⁹ The decree also required that the MEN conduct audits to guarantee the quality of the information by comparing the reported data to other data (the Registraduría Nacional del Estado Civil). It also regulates the reporting, accessibility, quality, and use of the information. Regarding quality, the decree states that data that is determined to be at least 95 percent without error is of quality.

⁴⁰ Decree 1526 of 2002 regulated the administration of the national education database including determining what data was to be collected by SEs including student level enrollment, matriculation and education status for all students 5 to 17, results on the national exam, budget data, and data on school facilities and teacher assignment. The decree also required that the MEN conduct audits to guarantee the quality of the information by comparing the reported data to other data (the Registraduría Nacional del Estado Civil). The decree also regulates the reporting, accessibility, quality, and use of the information. Regarding quality, the decree states that data that is determined to be at least 95 percent without error is of quality. The data was to be used by the MEN and the SEs to distribute the SGP. The MEN provides guidance and support to SEs in how this information is to be reported.

⁴¹ The law states that the MEN should, “Prestar asistencia técnica y administrativa a las entidades territoriales, cuando a ello haya lugar.”

⁴² Translation by the author.

development of the project, the creation implementation teams for the individual components of the project and professional development workshops for those teams, and the design and implementation of individual processes within each administrative department (e.g. human resources, payroll). In the human resources department for example, a key component of implementation is to revise processes for data collection and sharing and to conduct a thorough review of all of the SE teacher assignments on the payroll. The purpose of the review is determine if teachers are currently assigned according to the revised assignment criteria and to provide accurate and up to date data for the new data management system. The revision also works to uncover irregularities such as teachers being paid to work full-time but working only part-time or not at all (Peña 2005).

Law 715, along with other related policies attempted to promote more efficient use of and more equitable distribution of teachers. Decree 3020 established rules around teacher assignment requiring that the assignment of teachers have “as a point of reference” 32 students per teacher in urban areas and 22 students per teacher in rural areas.⁴³ SEs were to assign one teacher per group of students for primary education and 1.36 for lower and upper secondary. The law allowed for flexibility for SEs that had higher than average net enrollment ratios. Alternative school models were allowed to follow their own rules regarding teacher assignment. In part due to enforcement of the decree, large numbers of teachers were reassigned to areas of higher need and student teacher ratios in official schools increased in primary education from 23 students per teacher in 1999 to 28 in 2006 and for secondary from 19 to 27 for the same period (World Bank 2008). Another decree, *Decree* 1850 of 2002, aimed to maximize the use of teachers in the system by mandating an increase in the number of required instructional hours by approximately 33 percent for preschool and primary teachers and 46 percent for secondary school teachers. The decree required that primary school teachers instruct for a minimum of 25 hours per week and 1,000 hours per year and secondary school teachers instruct for a minimum of 30 hours per week and 1,200 per year.

Law 715 also aimed to reduce desertion and improve efficiency by changing the way in which schools were managed through the creation of *Institución educativa* (IE). An IE could be a single school, as is the case in many urban schools or multiple schools as is often the case in rural areas. Each IE is required to offer one year of preschool, the complete basic education cycle, grade one through nine, and upper secondary, grades 10 and 11. Schools that did not offer the complete range of grades were required to merge with other schools in forming an IE.⁴⁴ This element of the reform aimed to address the severe shortage of availability of lower and upper secondary education. In 2002, 35 percent of institutions offered only the primary grades and only 5 percent the complete basic education cycle (Corpoeducación 2004). In theory, the integration of facilities promoted by the reform would create a system in which there was a place available in the secondary grades for every student that enters primary school and student transitioning between primary and secondary would no longer have to go about looking for an available seat in a

⁴³ The decree states, “Para la ubicación del personal docente se tendrá como referencia que el número promedio de alumnos por docente en la entidad territorial sea como mínimo 32 en la zona urbana y 22 en la zona rural.”

⁴⁴ A later decree by the MEN, *Directiva Ministerial no. 08*, provided exceptions for IEs in indigenous communities because of the circumstances in such communities, provided that they were working towards having IEs offering the full range of grades in the “medium term.”

secondary school (Corpoeducación 2004). It is of course difficult to address this issue without increasing the amount available opportunities for secondary education.

The IEs also aimed to promote greater efficiency. All IEs were either managed by certified departments of municipalities and there were to be no more MEN managed schools and no schools managed by uncertified entities. Each IE was to be managed by a single administration, headed by a *rector*, even in cases where an IE was made up of multiple schools or when schools had more than one shift (*jornada*). Rectors were charged with participating in the hiring teachers, although it is not clear how much they actually participate in such decisions as certified municipalities and departments remain in control of teacher assignment and transfers, evaluation and management of teachers, and administration of school funding (MEN 2002). Rectors were in turn assisted administrative by *coordinadores*, who were assigned based on the number of students served in an IE. The number of *coordinadores* ranged from one for 500 students up to 8 for 5,400 (Decree 3020).

The creation of IEs and the MEN's implementation of policies guided by Law 715, including the decree outlining the minimum number of students per teacher, led to a large scale reorganization of schools as many schools were consolidated. According to a newspaper article published at the time of consolidation, between 2001 and 2003 the MEN estimated that the number of official K-9 schools (*colegios*) decreased from approximately 53,000 to about 32,000 (El Tiempo 2003, cited in Plataforma 2007). Although, evidence is limited to newspaper articles covering the restructuring, there is evidence that consolidation was associated with many disruptions of students' educations and other problems as many communities lost their schools (Plataforma 2007).⁴⁵ There is also evidence that some IEs have had difficulty in integrating facilities and of occasions in which there was conflict among different school sites that were combined within a single IE (Corpoeducación 2006).

Progress in Towards Education Equity Between 2002 to Present

The following section draws from a wide range of data and some previous research to examine recent changes in educational equity as measured by levels on education coverage indicators for different regions and income groups. While it is not possible to directly tie the changes directly to the most recent wave of reforms or to specify which elements of the reforms had the greatest influence on education equity, the analysis will help to determine the direction of education equity in Colombia and whether the process of standardization and modernization that began in at the turn of the century appears to be promoting or impeding educational equity. Due to the fact that we are relying on quantitative data representing large groups, much of the variation in outcomes and equity issues associated with the implementation of the reforms like the previously mentioned issues involved with school consolidation are missed. Clearly there is a need for more focused quantitative research examining student level data in specific regions and populations and for qualitative case study analysis to explore these issues in greater detail.

Examining changes in gross and net enrollment rates over the years prior to and after reform, Table 3, we find that the bulk of progress is concentrated in lower and upper secondary

⁴⁵ The Plataforma (2007) report for example highlights cases documented in newspaper articles in which students were required to travel long distances, sometime in dangerous circumstances because their school was closed.

education. For both secondary gross and net enrollment, after a period of fluctuation in the years previous to the reforms, there has been a substantial increase with net secondary enrollment in 2006 at nearly 10 percentage points above that of the years previous to the reforms. The fact remains, however, that less than two thirds of the secondary school aged population is enrolled in secondary school. For primary enrollment rates, while gross enrollment expanded since 2003 net enrollment in 2006 is below that of levels prior to reform. This is an indication that while a higher proportion of students are in primary school, that increase is primarily due to over or underage pupils. Also notable is the drop in the primary net enrollment rate between 2002 and 2004. Further analysis is needed to determine how that drop might be connected to reform components like the additional funding that is provided in the SGP for secondary school students and school consolidation (Plataforma 2007).

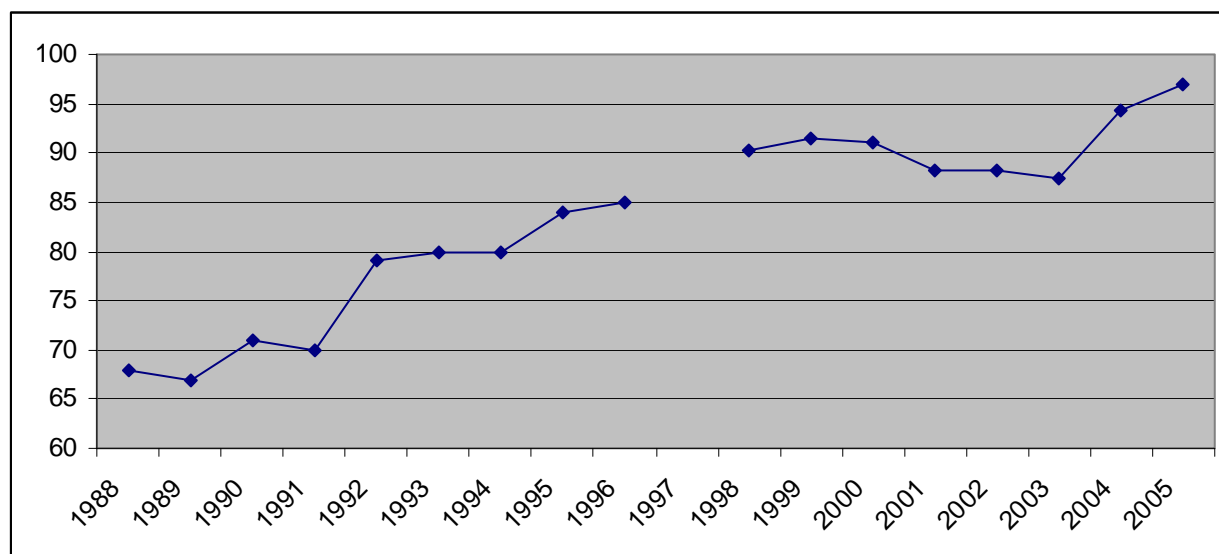
Table 3: Gross and Net Enrollment Rates by School Level, 1999 to 2006

School Level	Rate	1999	2000	2001	2002	2003	2004	2005	2006
Pre-School	Gross	37.13	38.39	38.03	38.65	38.79	39.11	40.99	40.36
	Net	33.42	34.56	34.32	34.84	34.97	35.26	36.96	34.59
Primary	Gross	114.06	114.52	112.04	113.14	113.42	114.68	115.74	115.95
	Net	89.37	90.16	88.70	89.67	...	85.75	89.74	88.50
Secondary	Gross	70.33	69.30	64.91	70.73	71.15	75.29	79.24	82.23
	Net	53.81	56.10	53.23	55.24	...	55.47	60.86	64.91

Source: UNESCO Institute for Statistics

Examining another indicator, primary school completion rates, for a longer period of time it is apparent that there have been some recent notable improvements although it is difficult to determine how much recent reforms might be connected to these improvement particularly given that primary school completion would be expected to be a longer term outcome of reform than annual indicators of coverage, for example. Between 1989 and 1999, the percentage of students attending primary school increased substantially (Figure 3). Between 1999 and 2003 there was a period of slight decline, bottoming out in 2003 with about 88 percent of students completing primary. There was a notable increase in the two most recent years of data and rates in 2005 at 97 percent, were more than 9 percentage point above those of 2003.

Figure 3: Primary School Completion Rate 1988 to 2005



Source: Data for 1988 to 1996 World Bank Ed Stats, 1998 to 2005 World Bank, World Development Indicators
Note: Data is not available for 1997.

Using regression analysis to analyze panel municipal level data over the period of decentralization, Faguet and Sanchez (2008) examine the relationship between increases in municipal enrollments and factors associated with decentralization, including municipal autonomy, but also the level of local resources going to fund education. The authors also include a number of local control variables including indicators capturing community socioeconomic levels and the local political environment. The authors find that increases in enrollment were associated with municipal autonomy although the share of own local resources going to education was found to have a substantially stronger correlation with increases in enrollments.⁴⁶ Interestingly the authors also find a negative relationship in per capita expenditure in education (central transfers per students) and enrollment levels, which, according to the authors highlights the importance of careful investment of education resources. According to their model, the smaller and poorer municipalities saw the greatest improvements in enrollments under decentralization, as did those with lower level of inequality and in which there were higher levels of mayoral support. Not surprisingly, the strongest positive coefficient in their model was municipal expenditure growth. There is also evidence that higher levels of armed violence were negatively associated with enrollment growth.

The trends and findings observed above disguise large degrees of variation in education coverage across regions and income groups. The follow section explores changes in educational outcomes over the period of implementation of recent reforms in greater detail. The section is divided into one part examining changes in levels of access by geographic entity – size of municipality, urban and rural, etc., and a second part examining changes in levels of access among different income groups.

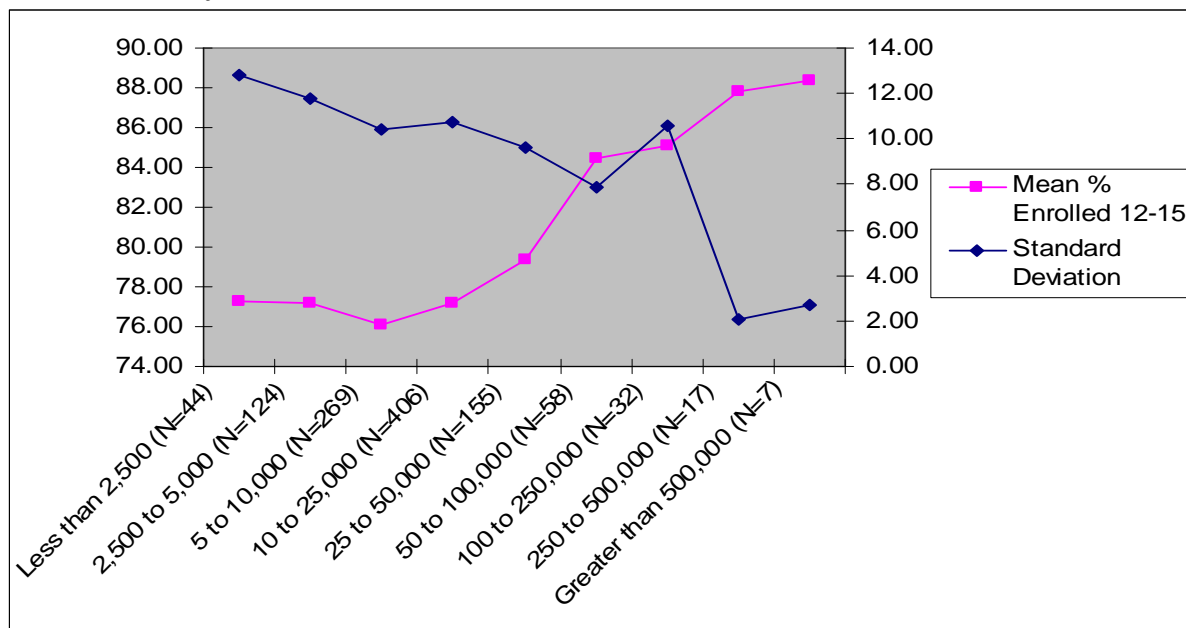
⁴⁶ The findings are consistent across alternate specifications including the use of an instrument for local revenue – the amount of revenue collected from municipal taxes in the previous year.

Analysis by Geography

Our analysis around changes in education coverage by geography shows that some impressive gains have been made coinciding with a more equitable distribution of funding, especially in many of the poorer regions of the country. Many of the poorest and most isolated regions, however, continue to lag far behind the more developed ones in rates of education access. In many cases, these regions are also the ones most affected by violence and political instability.

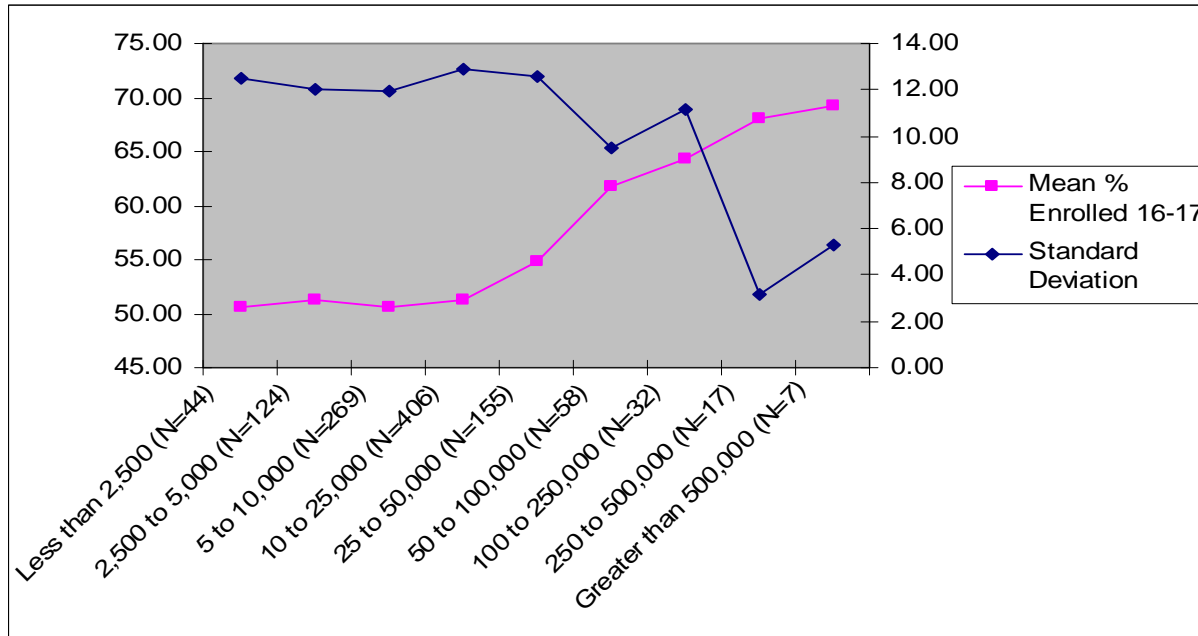
Figures 4 and 5 display the percentage of individuals enrolled within the lower and upper secondary education age groups in 2005 by municipality size. The municipalities range from largely unpopulated rural areas to the central urban centers of Bogotá and Medellín. Among the most isolated and unpopulated tutorial territorial entities are eight *corregimientos departamentales* – territories located in the Amazon region of Colombia that do not have adequate concentrated populations to be municipalities.⁴⁷ As can be observed in the figures, there are large disparities in levels of enrollment between urban and rural areas in lower and upper secondary education and post-secondary education.⁴⁸ For lower secondary education for example, the percentage of student in the age group enrolled ranges from about 77 percent in municipalities with populations of less than 2,500 to more than 88 percent in urban areas of with populations of more than 500,000. For upper secondary the disparity is even larger, ranging from 51 percent in the smallest municipalities to almost 70 percent in the largest.

Figures 4 and 5: Percent within age group enrolled by size of municipality for 12-15 year olds and 16-17 year olds



⁴⁷ These are treated as municipalities as are the ten special districts.

⁴⁸ A problem with grouping the municipalities this way is that most Colombian municipalities, even large ones, contain urban centers and areas outside of them which are more rural.



Source: Calculations by the authors using data from DANE (2005)

Notes: Municipalities are grouped by population ranges unevenly to be consistent with their distribution. Enrollment figures are from the 2005 Census represent percent within age group enrolled in any formal education

The above figures also display standard deviations within population ranges which provide an indication of the large degree of variation within groups for all but the largest municipalities. The two highest population groups (more than 250,000) have standard deviations for 12-15 and the 16-17 year old age groups range from 2.1 to 5.3 compared to a range of 7.9 to 12.9 in the other population group categories. Only in these, the large urban centers of the country are enrollment rates consistently high for secondary education. In smaller municipalities, there is a great degree of variation in enrollment levels with generally the poorest and most isolated municipalities having the lowest secondary attendance rates.

Examining the municipalities with the lowest attendance rates, as would be expected, we find the lowest attendance rates in the poorest and more isolated communities. The lowest attendance rate for all municipalities with between 100,000 and 250,000 inhabitants, where standard deviations are extremely high, is found in Uribia, a municipality located in the department of La Guajira which is inhabited largely by the Wayúu, an indigenous group concentrated on the Caribbean coast. There, the percentage of individuals within the primary and lower secondary age groups is only 34 percent and within the upper secondary age group is only 25 percent. It is important to note that this is a largely rural municipality with less than 8,000 living in the town center. Uribia is also not one of the municipalities that was provided administrative autonomy in 2003. The overall lowest primary attendance rate is found within the group with the least populated municipalities. There, the percentage of the primary school population enrolled is as low as .74 in an isolated municipality bordering Brazil with just over 1,000 inhabitants, of which only 175 live in the municipality's town. These findings are reflective of the fact that there are some regions of the country, mostly isolated rural areas, often with high concentrations of indigenous or afro-Caribbean people where the government's presence is extremely limited.

Next we examine changes in enrollment and coverage in the years previous to and after the most recent reforms. It is important to point out that we are tentative in attributing findings to the recent reforms given the fact that only a few years of data is available since reform implementation. Table 4 displays summary statistics for the annual rate of change in enrollment for departments and the special district of Bogotá from 2000 to 2006. It is apparent that there have been fairly consistent mean department and national level increases in enrollment for pre-school and secondary education. Both for department level means and the nation as a whole enrollments increased in preschool in all but one of the six years and in secondary all but two of the six. There was an especially notable increase in secondary enrollment between 2003 and 2004. At the primary level however, enrollments only increased between 2001 and 2002 and decreased by nearly two percent in 2004 and 3.5 percent in 2005. As previously described, however, the primary completion rate increased substantially in 2004 and 2005.

Tables 4: Summary Statistics for Department Level Rate of Change in Annual Enrollment for Preschool, Primary, and Lower and Upper Secondary Education, 2000 to 2005

Year	Mean	SD	Min	Max	National
Preschool					
2000	0.5	7.02	-11.28	26.76	-1.13
2001	4.86	7.64	-11.5	22.69	2.1
2002	7.57	12.53	-10.91	52.06	5.81
2003	-7.83	9.83	-28.89	15.35	-8.31
2004	5.23	8.53	-5.78	38.91	4.19
2005	0.32	8.18	-22.71	21.44	-0.29
Primary					
2000	-0.74	2.89	-7.41	6.56	-1.72
2001	1.62	4.34	-9.22	12.71	1.44
2002	-0.09	5.3	-10.87	18.38	0.04
2003	-1.51	5.58	-19.39	8.93	-1.46
2004	-2.18	3.5	-9.68	7.34	-1.68
2005	-2.4	3.74	-11.72	6.89	-3.48
Secondary					
2000	-2.83	6.3	-11.15	19.43	-5.31
2001	5.44	5.26	-10.94	15.08	3.85
2002	3.43	7.73	-8.75	22.25	2.51
2003	10.55	8.05	-3.72	41.19	7.85
2004	-3.33	7.14	-23.75	11.44	-2.35
2005	3.86	4.81	-8.33	13.66	1.88

Source: DANE (2006) collected from the Education Policy and Data Center

Also apparent in the table above is the wide degree of variation in changes in enrollment among departments. We find that the poorest departments with the highest numbers of out of school youth tended to demonstrate the largest increases although the correlation between the percentage of the population in individual departments with unsatisfied basic needs in 2000 and the change in enrollment between 2003 and 2004 is fairly weak (.24).⁴⁹ For 2005, the largest increases in enrollments are also observed in the poorest departments with the largest rural populations and most students out of school – Amazonas, Guainia, Vichada, La Guajira, and Chocó. In these departments the rate of increase in 2005 for primary ranged from 7 percent to 1 percent and for secondary from 14 percent to 2 percent. The largest decreases for 2005 are observed in the more wealthy departments, most of which are located in the central part of the country – Tolima, Cundinamarca, Santander, and Caldas. In these departments, changes in primary enrollments ranged from about -12 to -5 and in secondary from -8 to .43. Atlantico and Valle are also among the departments that had the largest decreases in primary and secondary enrollment in 2005. While some departments demonstrated improvements across education levels, especially in 2005, there is no consistent correlation across years between departments

⁴⁹ The correlation was computed using data presented in López (2005).

that had increases at one education level and another (departments that increased in both primary and secondary for example).⁵⁰

Some SEs demonstrated impressive improvements in education coverage, however, despite challenges such as violence, instability and high levels of poverty. Interestingly the municipality with the largest level of improvement over the period was Buenaventura, Valle. Between 2002 and 2006 primary education enrollment increased by 100 percent and secondary enrollment increased by 180 percent (Corpoeducación 2008). While net enrollment for primary school is still comparatively low at 85 percent the rate of change is remarkable especially given the city's characteristics (Corpoeducación 2008). Although Buenaventura is Colombia's most important port city and 50 percent of the nation's cargo passes through it, it is also among the most violent and poorest cities, houses a large number of displaced people, and is a major cocaine trafficking site (Romero 2007). The private sector played a large role in the expansion of provision as enrollment through private providers contracted through subsidies increased from 11,189 in 2004 to 41,278 in 2006 (Corpoeducación 2008).

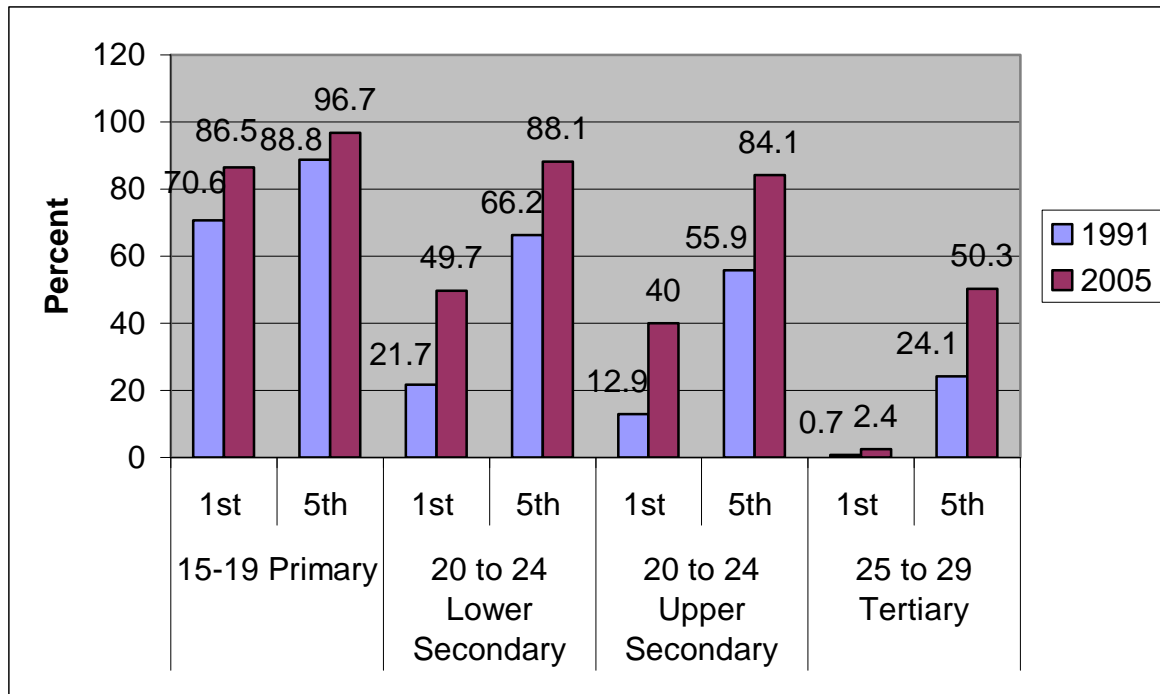
Analysis by Income Level

Our analysis of education coverage related data by income levels reveals that there have been notable improvements in coverage across income groups and some movement towards narrowing of disparities for primary and lower secondary. Extremely large disparities remain, especially at the tertiary level but also the upper secondary level since 1990 and there has been little progress made in narrowing these gaps. We also find that movement towards convergence in attendance level among income groups, at least for lower secondary education, predate the 2003 reforms. We are careful to connect changes to the most recent reforms again, however, given the fact that our most recent data is from 2005, two years after reform implementation, and the general limited availability of coverage data disaggregated by income levels.

As can be observed in Figure 6, there have been notable improvements in rates of education completion among the most wealthy and the poorest, although rates of completion are still low for the poor for upper secondary, where only about 56 percent completed the level in 2005 and dismally low for tertiary, where only 2.4 complete the level. Also observable in Figure 4 is the fact that gaps in completion of education levels between income groups narrowed for primary and lower secondary but widened slightly for upper secondary. For primary, the gap between the wealthiest 20 percent and the poorest 20 percent decreased from about 18 percentage points to just about 10, and for lower secondary from about 45 percentage points to just above 38, for upper secondary the gap widened by about one percentage point (43 to 44.1) and for tertiary by almost 25 percentage points (23.4 to 47.9). This disparity in rates of completion of tertiary education may in part be attributed to an "education bottleneck." As more students, rich and poor, are completing upper secondary, there is increasing competition for admissions in post-secondary institutions where admission is based on a graduation exam. The gap and the extremely low rate of completion of tertiary education among the poor may also be an indication of quality gaps between schools that serve different income groups.

⁵⁰ There is a large degree of variation in the correlation between changes in enrollment in primary and secondary over time. Within year department level correlations for the rates of increase between primary and secondary range from .71 in 2005 to .07 in 2000 and average .32.

Figure 6: Percentage of Students within Age Group Completing Education Level for Individuals in the First and Fifth Income Quintile, 1991 and 2005



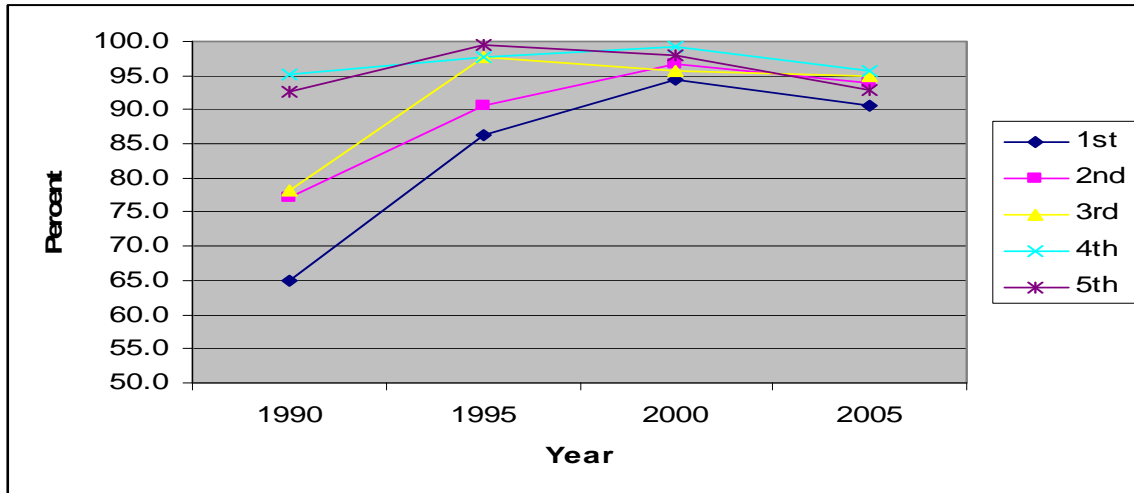
Source: DANE 1991 and 2005

Figures 7, 8, and 9 show some convergence in enrollment rates among income groups in the period leading up to and before the reforms although except for the 12 year old age group, the age at which students are expected to begin secondary school in Colombia, there is little evidence that equity has improved more since the more recent waves than in the previous years. The bulk of the progress for primary school (aged 8) appears to have been made during 1990s. While rates of enrollment at aged eight were high at the beginning of the 1990s for the two highest income quintiles, they were only at about 65 percent for the poorest 20 percent. Over the 1990s enrollment increased dramatically for the poorest 20 percent. Also observable is a slight decrease in primary aged attendance since 2000, a trend not out of line with what has been observed in other data.⁵¹ Enrollment at aged 12 increased substantially between 1990 and 1995, decreased slightly between 1995 and 2000, and then increased again between 2000 and 2005. If the trend continues, enrollment at this age level for the poorest 20 percent would be at or extremely close to those of the other income groups. Also notable for the findings around enrollment rates at aged 12 is that enrollment for individuals in the second quintile increased to nearly the levels of the upper income groups over the period. The situation is very different individuals at age 14, one year from the expected end of lower secondary school. In 2005 more than 95 percent of individuals in the highest income quintile were enrolled. The fourth and third

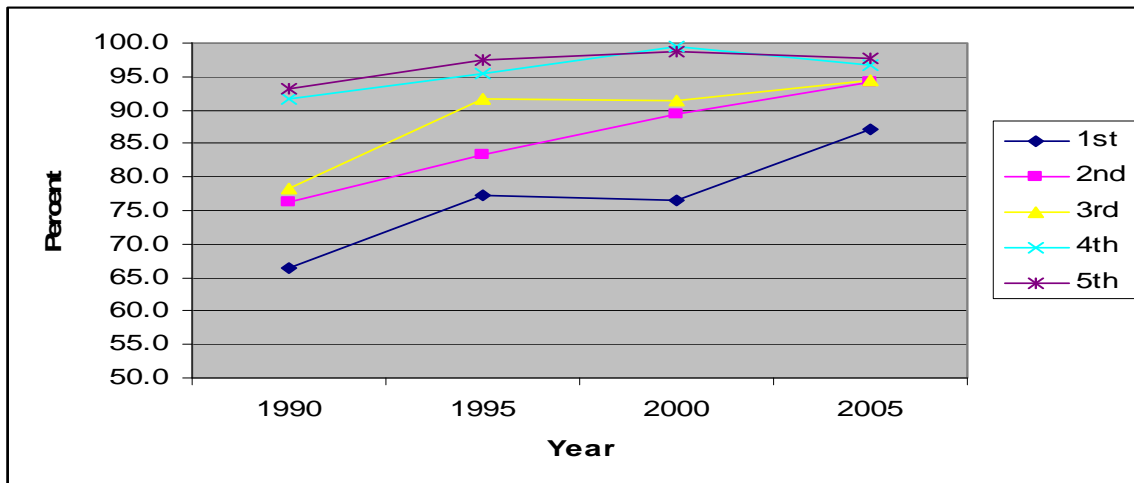
⁵¹ The data comes from the Demographic and Health Survey which is administered by USAID every five years in several developing countries to, according to USAID, generally a large and nationally representative sample. It seems counterintuitive and contradictory to other data that enrollment rates for the poorest quintile would be higher at aged 12, the expected beginning of secondary school than at aged 8, midway through primary.

income quintiles were also above 90 percent. Despite large improvements since 1990 for individuals in the bottom two quintiles are well below the other income groups. For the poorest quintile, the enrollment rate for students at aged 14 at about 66 percent, is nearly 30 percentage points below that of individuals in the highest income quintile. Also notable is the progress the middle quintile group has made since 1990. Enrollment rates for aged 12 for the middle quintile increased from about 75 percent to just above 90 percent over the period.

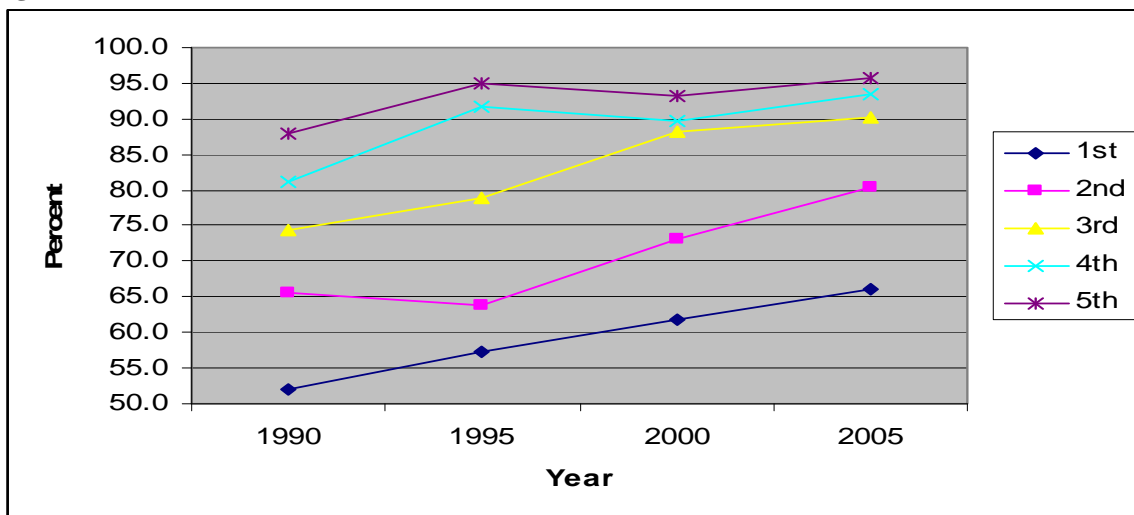
Figures 7, 8, and 9: Age Specific Enrollment Rate by Wealth Quintile 1990 to 2005
Age 8



Age 12



Age 14



Source: Demographic and Health Survey, Colombia 2005, collected from the Education Policy and Data Center

Conclusion

The characteristics and goals of the most recent wave of reforms can be used as a rational response to the problems observed in the 1990s. In the 1990s, the lack of accountability and standardization and a funding formula that emphasized the distribution of teachers rather than students led to both large inefficiencies and inequities. While improving equity was not the central goal of the most recent wave of reforms one could argue that fundamental to an education system that is able to target education services to the poor, especially given Colombia's context of interregional diversity and disparities, are clear roles for the entities involved in provision, standardized policies around how education funds should be used, and an accountability system which encourages more efficient and equitable use of resources. At the most basic level, education resources cannot be targeted to the poor unless one has the infrastructure and systems in place to identify them and channel education resources to them efficiently.

While one could criticize the low level of autonomy provided to local entities in the revised system (López 2005), the emphasis on central control and standardization and local capacity building could be viewed as a method for preventing inequities common to education decentralization reforms in Latin America (Meade and Gershberg 2008, Galiani, Gertler, and Schargrodsky 2005, Mizala, Romaguera, and Ostoic 2004). As was initially the case in Colombia, in many Latin American countries decentralization of education administration has been accompanied by continued and sometimes widening interregional disparities in the level and quality of education provision (Meade and Gershberg 2008, Galiani, Gertler, and Schargrodsky 2005, Mizala, Romaguera, and Ostoic 2004).

The incremental nature of the movement towards decentralization in Colombia and the level of acceptance for reforms across key stakeholders may also be important in explaining the apparent success of the reforms (Smoke, Gómez, and Peterson 2006). There has been a continuous movement towards municipal autonomy since the 1980s and more recently efforts by the central government to support local administration and monitor and prevent irregularities. This contrasts with more sudden and more problematic movements towards decentralization, in, for example, Bolivia (Faguet and Sánchez 2008).

We also observe that through a funding formula that is based primarily on per capita enrollment and provides for additional funding for entities with that have been historically received less funding and serve a population often associated with higher education costs there has been progress towards the equal treatment equity standard at the municipal level and the equal opportunity standard at the department level. Though the funding formula provides additional funding for rural students it also takes into account the salary scale of teachers. The fact that more teachers per student and more experienced teachers higher on the salary scale are concentrated in urban areas serve as a counterbalance to the equity enhancing aspect of the funding formula in municipalities. Therefore, though the funding distribution appears to be more equitably distributed than in the past, there appears to be a need for continued adjustments in order to move closer towards the standard of equal educational opportunity.

The more equitable distribution of funding along with increases in funding and efforts to promote more efficient uses of funding and more standardized service delivery appear to have

resulted in some improvements in education coverage. Both the analysis of changes in education coverage by region and income groups show that that some notable improvements in education equity, often concentrated in the few years of available data following the most recent reforms. The most progress under recent reforms appears to have been made under recent reforms in lower and upper secondary and there is some evidence that there have been some slight declines in the provision of primary education, at least for the population within the age group for primary school.

Despite improvements, however, large disparities remain for higher levels of education and between the poorest and least poor regions. The fact that, according to the data from the CEPAL survey, only 2 percent of individuals in the lowest income quintile complete education is especially concerning. Returns to higher levels of education, especially tertiary education, are much higher than that of completion of primary education in Latin America (Thomas, Wang, and Fan 2002, World Bank 2003, IADB 2007). It remains to be seen if large improvements in coverage for lower secondary education translate into improvement in upper secondary and tertiary education for the poor. We believe that the assignment of the SGP provides more for secondary students is an important step to encouraging this trend given the higher costs associated with its provision.

Not surprisingly, one pattern that was observed in our analysis is that the poorest and most isolated regions are those in which rates of access to basic education remain extremely low. Colombia is a country marked by tremendous disparities in wealth that are observed both within and between regions. Per capita income, for example, in Bogotá, the wealthiest area in the country is more than 8 times higher than that of el Chocó, Colombia's poorest department (Bonet and Meisel 2006 cited in Roca and Romero 2007). Our findings highlighting continuing low coverage rates for some regions clearly are rooted in larger political and social issues as these are also generally the regions of the country where government control continues to be contested and where illegal drug related activity is most prominent. These are also often the areas in which teacher shortages are most severe (McEwan 1998). It is important to evaluate whether efforts such as the salary incentive provided to teachers that work in those areas are effective in boosting the supply of teachers in underserved areas as well as continuing to explore the effectiveness of strategies such as contracted provision⁵² and alternative education models like *Escuela Nueva*.

The analysis also demonstrates that there are exceptions to this pattern and some municipalities like Buenaventura have made dramatic progress in expanding basic education despite their having to confront issues of extreme poverty and high levels of violence. Findings regarding the strategies employed by such municipalities collected through in depth case study analysis might provide some useful lessons as well as building understanding around the

⁵² The contracting of the private sector appears to have played a large role in the expansion of education in many municipalities. According to policy guidelines contracting is to be targeted to the most in need although further data and analysis is needed to determine how well closely these guidelines are being followed. Also important is determining the level of quality among contracted providers as low quality has proven to be an issue among many contracted providers that serve the poor (Lowden 2004). While data is supposedly available to do that for the SEs, it is not clear how well the contracted providers are being monitored and how SEs are considering quality in making decisions regarding providers.

contextual factors that are important to expansion of coverage in poor and marginalized communities.

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