Access to higher education in Colombia: an assessment of public policy and outcomes

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ACCESS TO HIGHER EDUCATION IN COLOMBIA:
AN ASSESSMENT OF PUBLIC POLICY AND OUTCOMES

by

Lina Uribe Correa

A Dissertation
Submitted to the University at Albany, State University of New York
in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

School of Education
Department of Educational Administration and Policy Studies
2012
For Pau, my inspiring angel
ABSTRACT

This research analyzes a set of national policy initiatives, 2002-2010, regularly referred to as Colombia’s “Educational Revolution”. Together these policies constitute a Colombian effort to increase access to higher education, an effort in partnership with the World Bank. The dissertation presents findings on policy goals, efforts, impacts, and outcomes.

The concept of access policy used here is a broad one that places social and political institutions (including governments) in the role of equalizing opportunity. This concept comprises not only the entry stage but conditions prior to and after entrance into higher education. The research combines qualitative and quantitative approaches, based on an elaborated framework of access policy categories and indicators. It focuses on two issues: first, whether or not public policy goals – often enunciated in policy plans – were effectively translated into policy efforts, and subsequent impacts; and second whether changes to higher education policy significantly reduced social inequalities in student access and persistence, as envisioned by national policy makers and their World Bank partners.

The policy efforts not only are multifaceted and innovative, but major and consistent with the goals conceived by the policymakers. Impacts and outcomes are mixed. Some policy impacts and outcomes represent major improvements that shift historical trends, whereas others leave problems that constitute future challenges for access policy. Policy has brought considerable enrollment increases for low-income groups. Also net enrollment rates have risen over time among all income groups. Substantial improvements in equity have come through a student aid program. However, unexpected inequalities emerged during implementation efforts, unequal
proportions in participation by income groups persist, and the pre-existing challenges in access and equity remain (especially with respect to dropouts).

The Colombian case has a three-fold significance. The first lies in the magnitude and variety of policy goals and efforts to increase access. The second lies in this being one of the biggest World Bank projects on access to higher education in Latin America. Third, relative to other countries, the Colombian higher education system comprises several important characteristics that deserve further exploration. Among them is Colombia’s historical standing for having a regressive public higher education that has placed low-income students at a severe disadvantage, in a country with deeply rooted social inequalities.
ACKNOWLEDGMENTS

I would like to thank my academic advisor and dissertation chair, Dr. Daniel Levy, who has intellectually challenged me over the years to conduct in-depth, rigorous scholarly work. As my mentor throughout my doctoral studies, he has encouraged me to acquire and refine analytical lenses, always pushing for scholarship of the highest quality standard. I am extremely grateful to Dr. Levy for the enormous time he devoted to me and the support he provided me in enriching my academic life with his knowledge and experience.

I also wish to thank Drs. Gilbert Valverde and Alan Wagner, my other dissertation committee members. They contributed greatly to strengthen both the quantitative and qualitative approaches of my dissertation as well as helping me to clarify the constructs employed in this analysis. I extend my gratitude to Dr. Javier Botero Alvarez who provided me insights and candid assessments of access policy under the Education Revolution Plan.

I wish to thank my interviewees – scholars and officials at the Colombian Ministry of Education and the World Bank – for their time and contributions. They provided fundamental insights to identify policy goals and efforts. I especially thank Gabriel Burgos Mantilla, former Vice-minister of Higher Education and Martha Lucía Villegas, ICETEX President, for their institutional support and willingness to facilitate my research activities. Their forthright views about policy challenges in Colombia contributed to my deeper appreciation of the topic.

I am deeply grateful to the Institución Universitaria de Comfacauna where I have served as Rector since 2001. In particular, I would like to thank Juan Cristobal
Velasco, the University’s Trustee President as well as other members of the Board of Trustees. They have always supported me in my pursuit of academic achievements especially in relation to my PhD. I also thank the Colombian Administrative Department of Science, Technology and Innovation (Colciencias), Fulbright Colombia, and the Department of Educational Administration and Policy Studies at the State University of New York – SUNY Albany. Their fellowships, together with Unicomfauca’s financial support, enabled me to pursue doctoral studies.

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I thank my friends and especially my dear family – my brothers and sisters and their families – for their patience and support. They witnessed first-hand the time and effort that is needed to develop first-rate scholarly work. I finally thank my Mother who is in heaven. She was always proud of me as a professional, as a student of higher education, and as a daughter.
CONTENT

Abstract

List of Figures

List of Tables

List of Abbreviations

Chapter 1 - Introduction

1.1. Background to the problem
1.2. Research theme and purpose
1.3. Research questions and hypotheses
1.4. Significance of the study
1.5. Organization of the dissertation

Chapter 2 – Literature Review

2.1. A construct of access
2.2. Dimensions of access policy
   2.2.1. Access as capacity to absorb the demand: Provision
   2.2.2. Access as social justice: Equity
   2.3. The sub-sectors of HE – Who goes where to college
   2.4. Access changes and access policy as an issue for inquiry

Chapter 3 – Research Design and Methodology

3.1 Methodological approach
   3.1.1. Qualitative
   3.1.2. Quantitative
3.2. Conceptual model
3.3. Operationalization of constructs on access dimensions
3.4. Indicators used for the assessment of access outcomes
3.5. Methods
   3.5.1. Data collection
      3.5.1.1. Description of databases
      3.5.1.2. Selection of interviewees
   3.5.2. Data analysis

Chapter 4 – Policy Goals

4.1. Conceptualization of goals
4.2. Grand goals
   4.2.1. The Education Revolution and grand goals
4.2.2. The World Bank grand goals
4.2.3. Access grand goals within the context of social demands
4.3. Operative goals
   4.3.1. Equity goals
   4.3.2. Goals on the provision and financing of HE
   4.3.3. Operative goals during the second quadrennium
4.4. Access policy goals addressed by prior Colombian governments

Chapter 5 – Policy Efforts and Impacts

5.1. Conceptualization of efforts and impacts
5.2. Dimensions of access policy
5.3. Policy efforts and impacts of the Education Revolution
   5.3.1. Equitable access for under-represented groups
   5.3.2. Provision and financing access policy
      5.3.2.1. Financing
      5.3.2.2. Enrollment expansion and allocation of the national budget
      5.3.2.3. The strengthening of an open system through non-university higher education.

Chapter 6 – Access Outcomes

6.1. Improvements in access outcomes compared to prior government periods
6.2. Improvements in access outcomes that shift historical trends
6.3. Outcomes that show no change or worsened during the Education Revolution

Chapter 7 - Conclusions

7.1. The linkage of goals, efforts, and impacts
7.2. Access outcomes
7.3. Policy implications
7.4. Limitations and further research

Appendixes:

Appendix A: Comparison of policy goals, indictors, and policy impacts on access to HE.
Appendix B: Grants disbursed to ethnic minorities during the Education Revolution
Appendix C: Colombian indicators on access to HE compared to international

List of Interviewees

References
LIST OF FIGURES

Figure 1  Public/private HE enrollment share, 1960-1999
Figure 2  Conceptual model
Figure 3  The graphical conceptual model depicted in detail
Figure 4  Number of ICETEX loans allocated to HE students (1990 – 2010)
Figure 5  Number of loans disbursed by ICETEX - eigh-year period comparison
Figure 6  ICETEX loan holders and enrollments in private HE without ICETEX loans (2002-2010)
Figures 7  Share of new beneficiaries of student aid by Socio-Economic Strata – Year 2001
Figures 8  Share of new beneficiaries of student aid by Socio-Economic Strata - Year 2010
Figure 9  Share of new beneficiaries of student aid by Socio-Economic Strata - 2003-2010 period
Figure 10  Share of New Beneficiaries of ICETEX loans by Socio-economic Strata
Figure 11  Coverage of ICETEX loans related to all students enrolled in Colombian HE
Figure 12  Amount of student aid disbursed by ICETEX (Constant 2010 US Dollars)
Figure 13  Amount of ICETEX’s aid disbursed by year for undergraduate and graduate education access 1993-2010 – Constant 2010 US Dollars
Figure 14  Annual variation in the cost of private HE compared to inflation
Figure 15  Enrollments in HE by 4-year periods and percentage growth
Figure 16  Percentage growth of HE enrollments by 4-year periods
Figure 17  Absorption rates (Entrants into HE/Applicants)
Figure 18  Percentage of dropouts from HE by year-cohort
Figure 19  Share of first-year students by entrance test performance
Figure 20  Gross enrollment rates in Colombian HE (1970-2010)
Figure 21  2002 and 2010 enrollment number comparison by sector
Figure 22  Enrollments in HE at SENA 2000-2010
Figure 23  Number of HE Entrants by Family Income (Legal minimum salary wages)
Figure 24  Demographic composition of entrants to HE – Share by Family Income
Figure 25  Share of entrants to the public HE sector coming from households earning less than 269 dollars monthly (1998-2002 and 2003-2010 comparison)
Figure 26  Share of entrants to the private HE sector coming from households earning less than 269 dollars monthly (1998-2002 and 2003-2010 comparison)
Figure 27  Graduation rates by year and performance of HE students in entrance examinations
Figure 28  Graduation rates by household income by semester of studies
Figure 29  Share of enrollment by level of HE including and excluding the SENA enrollment (2002 and 2010 comparison)
LIST OF TABLES

Table 1  Gross Enrollment Rates in Tertiary Education
Table 2  The equity dimension and conditions of access addressed by policy
Table 3  The provision/financing dimension
Table 4  Categories, Indicators and Databases used for the Analysis of Access
Table 5  Composition (percent) of ICETEX loan beneficiaries by Socio-Economic Strata
Table 6  Amount of ICETEX’s aid disbursed by year for undergraduate and graduate education access 1993-2010 – Constant 2010 US Dollars
Table 7  Total, Public and Private Expenditure in the Colombian HE as a Percentage of the GDP
Table 8  Public Expenditure in the Colombian HE as a Percentage of the Total Education Expenditure
Table 9  Public Expenditures on HE as a Percentage of the GDP across Latin American Countries and Different Periods
Table 10 National Government Appropriations to Public HE Institutions in Constant 2010 US dollars and their Annual Growth
Table 11 Variation in National Government Appropriations per HE Institution and per Student (2003 and 2010)
Table 12 Tuition share of the total university income in public universities (2003 and 2009) and tuition revenue increase between 2003 and 2009
Table 13 Percentage of dropouts from HE by year-cohort
Table 14 Changes in enrollments by institutional type and sector (2002 and 2010)
Table 15  Number of entrants by family income (5-year periods)
Table 16  Net enrollment rate by income quintiles – Selected years (18-24 age cohorts)
Table 17  Net enrollment rates by income quintiles (including gender) 2002 and 2010 comparison (20/24 age cohort)
Table 18  Graduation rates by year and performance of HE students in entrance examinations
### LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ACCES</td>
<td>Acceso con Calidad a la Educación Superior (Access with Quality to Higher Education –ICETEX Program)</td>
</tr>
<tr>
<td>ASCUN</td>
<td>Asociación Colombiana de Universidades (Colombian Association of Universities)</td>
</tr>
<tr>
<td>CEDE</td>
<td>Centro de Estudios sobre Desarrollo Económico (Research Center of Economic Development)</td>
</tr>
<tr>
<td>CERES</td>
<td>Centros Regionales de Educación Superior (Regional Centers of Higher Education)</td>
</tr>
<tr>
<td>CID</td>
<td>Centro de Investigaciones para el Desarrollo (Research Center for Development)</td>
</tr>
<tr>
<td>COL</td>
<td>Colombia</td>
</tr>
<tr>
<td>CONPES</td>
<td>Consejo Nacional de Política Económica y Social (National Council of Economic and Social Policy)</td>
</tr>
<tr>
<td>DANE</td>
<td>Departamento Administrativo Nacional de Estadística (Administrative Department of National Statistics)</td>
</tr>
<tr>
<td>DNP</td>
<td>Departamento Nacional de Planeación (National Department of Planning)</td>
</tr>
<tr>
<td>ECLAC</td>
<td>Economic Commission for Latin America and the Caribbean (CEPAL) (Acronym in Spanish for Comisión Económica para América Latina y el Caribe)</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income</td>
</tr>
<tr>
<td>GER</td>
<td>Gross Enrollment Rate</td>
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<tr>
<td>GOV</td>
<td>Government</td>
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<tr>
<td>HE</td>
<td>Higher Education</td>
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<tr>
<td>HEIs</td>
<td>Higher Education Institutions</td>
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<tr>
<td>IDB</td>
<td>Inter American Development Bank</td>
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<tr>
<td>ISCED</td>
<td>International Standard Classification of Education</td>
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<tr>
<td>Acronym</td>
<td>Full Name</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>ICETEX</td>
<td>Instituto Colombiano de Crédito Educativo</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>IBRD</td>
<td>The International Bank for Reconstruction and Development</td>
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<tr>
<td></td>
<td>Referred in the Dissertation as the World Bank (WB)</td>
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<tr>
<td>IESALC</td>
<td>Instituto Internacional para la Educación Superior en América Latina y el Caribe</td>
</tr>
<tr>
<td>IFM</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>MECESUP</td>
<td>Programa de Mejoramiento de la Calidad y Equidad de la Educación Superior</td>
</tr>
<tr>
<td></td>
<td>Quality and Equity Improvement in Higher Education Program</td>
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<tr>
<td>MEN</td>
<td>Ministerio de Educación Nacional</td>
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<tr>
<td>NDP</td>
<td>National Development Plan</td>
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<tr>
<td>NER</td>
<td>Net Enrollment Rate</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PHEIs</td>
<td>Private Higher Education Institutions</td>
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<tr>
<td>PROUNI</td>
<td>Programa Universidade para Todos</td>
</tr>
<tr>
<td></td>
<td>University for All Program</td>
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<tr>
<td>SES</td>
<td>Socio-Economic Status</td>
</tr>
<tr>
<td>SENA</td>
<td>Servicio Nacional de Aprendizaje</td>
</tr>
<tr>
<td></td>
<td>National Service of Apprenticeship</td>
</tr>
<tr>
<td>SISBEN</td>
<td>Colombian Identification System of Beneficiaries of Social Services</td>
</tr>
<tr>
<td>SNIES</td>
<td>Sistema Nacional de Información de la Educación Superior</td>
</tr>
<tr>
<td></td>
<td>National Information System of HE</td>
</tr>
<tr>
<td>SPADIES</td>
<td>System for Prevention and Analysis of Dropping out</td>
</tr>
<tr>
<td>SSP</td>
<td>Sistema de Seguimiento a Proyectos (Ministerio de Educación)</td>
</tr>
<tr>
<td></td>
<td>System of Monitoring Projects (Colombian Ministry of Education)</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
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<tr>
<td>-------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
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</table>
CHAPTER 1
INTRODUCTION

Educational access represents the possibility for individuals and societies to acquire capabilities in order to improve conditions that affect quality of life and to enhance productivity. It follows that higher education (HE) becomes the aspiration of growing numbers of people, because greater and more sophisticated competencies and knowledge are needed to succeed in the labor market and the social world. There is a surge of demand for HE.

Unfortunately not all of those with the desire and innate ability to enter HE can fulfill their dreams. Factors such as lack of academic preparation or affordability impede access for many individuals of college age.

Limited HE coverage, summed to unequal access by social groups (e.g. regarding income or geographical location), has commonly been the subject of both public policy and scholarly analysis and Colombia is no exception. A predicament for states is how to finance increased access, given restricted resources. Scholars attempt to understand the phenomenon of access and the conditions for access, and how they apply to particular societies. They often develop inquires on who is accessing, how access takes place, what restricts access, where individuals are accessing, and what the consequences are for entering specific institutions and educational levels.

With such realities in mind, this research concentrates on access policy and access changes within the Colombian HE system. It focuses particularly on the designs and undertakings developed by the national government since 2002 when the “Education Revolution Plan” was formulated. The plan has as one of its major axes an increase in HE coverage with an explicitly stated equity component, in a country
characterized by deeply rooted social inequalities. The extent of policy change and expectations created for increased equitable access by means of public policy merits research attention. Such a policy reform, along with actual changes, has not previously been investigated systematically, regarding the concept of access and the conditions of access proposed here, and accounting for the exploration of efforts during the period covering “the Education Revolution” (2002-2010).

1.1. Background to the problem

Common to most HE systems around the world are the entrance of numerous individuals - differing in levels of preparation - and the expansion of higher education institutions (HEIs) during the second half of the 20th century. Expansion, institutional diversity and the assortment of profiles within the student body have, of course, developed to a greater extent in some countries than in others.

Latin America is an example of an accelerated expansion from the 1960s, in part as the product of a greater proportion of high school graduates as well as middle class growth coming with aspirations to enter HE that has traditionally been aimed at the elite. A large segment of middle class students gained access to Latin American public universities. This resulted in a displacement of upper-classes toward selective, private universities. In addition, limited seats at public institutions and the excess in demand produced a wave of expansion and brought the most varied types of private higher education institutions (PHEIs), ranging from demand absorbing colleges to semi-elite universities (Levy 1995).

In this setting of institutional expansion and student growth, Colombia can be categorized as typical in several important respects. Enrollment within the Colombian system doubled every five years from 1960 onwards. In 1960, enrollments were only
In 1965, the gross enrollment rate (GER)\(^1\) in Colombia had reached just three percent, which was one percent point below the Latin American average GER. Both percentages showed Latin America and Colombia even longer, far from high income countries where this figure reached as high as 20 percent. By the end of 1975, Colombia’s enrollments had risen to 176,000 and by 2000 the figure was 934,000. This corresponds to a 47 times growth in 40 years (World Bank 2003).

In Colombia, the greatest enrollment expansion in HE took place particularly during the 1960s and 1970s with growth rates of 325 percent between 1960 and 1970, and 219 percent throughout the 1970s. During the 1980s and 1990s enrollment grew 75 and 80 percent respectively.\(^2\)

The following table illustrates trends in GER in several world regions from 1965 to 1995. It also depicts how enrollment rates increased to more in Colombia than in Sub-Saharan Africa, East Asia and the Pacific, South Asia, the Middle East and North Africa. However, the GER shows slightly lower growth in Colombia than in Latin America and the Caribbean overall, and significantly lower than for high income countries as well as Europe and Central Asia. It is worth noting that Latin America has had historically the highest GER regionally, except for Europe and the US. In 1985 and 1995 Colombia happens to be at the world average in terms of GER.

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1 The gross enrollment rate also called the “gross coverage rate” compares the number of individuals enrolled in any HE program (regardless their age) and the total population in age to attend college.

Table 1 – Gross Enrollment Rates in Tertiary Education

<table>
<thead>
<tr>
<th>Region</th>
<th>1965</th>
<th>1975</th>
<th>1985</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>South Asia</td>
<td>4%</td>
<td>7%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>9%</td>
<td>14%</td>
<td>13%</td>
<td>32%</td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean.</td>
<td>4%</td>
<td>13%</td>
<td>16%</td>
<td>18%</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>3%</td>
<td>7%</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>Low &amp; Middle Income Countries</td>
<td>4%</td>
<td>7%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>High Income Countries</td>
<td>20%</td>
<td>33%</td>
<td>37%</td>
<td>58%</td>
</tr>
<tr>
<td>World</td>
<td>9%</td>
<td>14%</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>Colombia</td>
<td>3%</td>
<td>8%</td>
<td>13%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Source: World Bank Statistics, HE in Developing Countries. Peril and Promises

Despite national economic crisis and government fiscal constraints, the last three years of the 1990s saw the biggest growth in enrollment in Colombian HE history since 1985, with figures of 11.7 percent (1995), 14.7 percent (1997) and 13.9 percent (1998) (Colombian Ministry of Education 2010c). One possible reason for this growth even during the crisis might be the desire of the population to be part of that exclusive group of people with HE - the only group to receive salary increases during the 1990s according to the World Bank (WB) (2002b). Since the crisis affected high school graduates the most (World Bank 2001), they might have found that the opportunity cost of going onto HE would decrease as they encounter difficulties for finding jobs during economic hard times.

Despite a healthy prior dynamic of entrance to HE, by 1999 a decrease (-0.2 percent) in enrollments finally resulted due to the difficulty for families in paying tuition and the reduction of financial resources for State funding of HE. That year, new enrollments diminished in more than 100,000 students (World Bank 2003), a period which coincides with the peak of the national economic crisis.

---

3 In addition, Colombian workers with HE earned 2.4 times more than a workers with only secondary by 2002. The figure exceeded the level found in other countries (World Bank 2002b).
Up to 1995, the country had seen a growth in its economy. However, in the second half of the 1990s, the Gross Domestic Product (GDP) suffered a downturn, reaching its worst in 1999 when GDP declined to -4.1 (World Bank 2002c). Violence had taken its toll in frightening away international and national investment. Colombians were suffering the impact of terrorism, armed conflict, the sequels of the drugs trade, and organized delinquency. According to the WB (2002c) the economic crisis wiped out more than a decade of progress in poverty reduction, as poverty increased 7 percent from 1995 to 2001.

By the latter time, poverty had reached roughly 60 percent of the population, being the poverty in rural areas 78 percent (López 2006). In 2002 poverty exceeded the Latin American average of 44 percent (CEPAL 2009). The Gross National Income (GNI) per capita in Colombia came to US$1,890 while the average for Latin America bordered on US$3,600.

Additionally, 70 percent of Colombians earned less than the national average per-capita income (CEPAL 2009) which shows, along with poverty, a disreputable mark of being a country with enormous social inequality. By 1999 the richest 20 percent of the population obtained 65.4 percent of the total country income (López 2006). The Gini coefficient had reached almost 0.6, positioning Colombia along with Brazil, Argentina, and Chile as one of the most inequitable nations.

In spite of active expansion, the Colombian HE system had remained restricted to a low number of students when contrasted to the total population aged for college. That has resulted Colombia lagging behind most of its Latin American peer nations.

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4 The Gini coefficient measures inequality in income distribution among the country population from zero to one, in which zero indicates that total income of the nation is distributed equitably, whereas 1 tells us that income is concentrated in only few individuals (CEPAL 2009).

5 Caution would be needed here, since the Gini index may indicate unequal income distribution within the country, but it does not say that the average individual who lives in those economic richest Latin American nations could have better socioeconomic conditions than the average in the rest of Latin America.
At the start of the 21st century, the GER had reached in Colombia just 19 percent, a lower percentage compared to countries holding close GNI per capita such as Panama and Peru with GER of 44 percent and 31 percent respectively. Other upper-middle economies with greater GNI per capita (more than US$7,000) held enrollment rates significantly higher than Colombia: Argentina (53.4 percent), Chile (37.3 percent), Uruguay (34 percent), and Venezuela (28.4 percent).\(^7\) Mexico (19.5 percent), however, had also reached only Colombia’s enrollment rate and Brazil even lagged behind Colombia with 16 percent (UNESCO 2009).

As Colombia was an illustrative case of institutional expansion, but low GER, the country was also illustrating an inequality in access. During the 1990s the situation regarding disparities in HE participation by income quintiles worsened. Over the decade, while net 18-24 age cohort enrollment rate rose from 23 percent to 40 percent for the highest quintile, net enrollment rate (NER)\(^8\) for the lowest quintile passed from two percent to just six percent (World Bank 2003). While the lowest quintile tripled and the highest almost doubled, the gap between the two worsened since in 1990 the breach was of 21 percent and in 1999 such gap reached 34 percent points. Those facts would point to a system appearing to be for the wealthiest or the brightest.

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\(^6\) This classification of countries is developed by the World Bank in pondering fundamentally the GNI per capita. Low income countries have a 2009 GNI per capita of $995 or less, lower-middle income between $996 and $3,945; upper-middle income between $3,946 and $12,195, and high-income reaching $12,196 or more. Low-income and middle-income countries are categorized as developing economies. http://data.worldbank.org/about/country-classifications.

\(^7\) Data are from UNESCO Institute of statistics and percentages correspond to 2000, except for Peru which are 2001 data and Uruguay 1999. http://stats.uis.unesco.org/

\(^8\) The net enrollment rate compares the number of individuals aged 18-24 who are enrolled in any HE and the total population in age to attend college.
Inequality existed not only with respect to family income, but in regard to geographical location. By 2002, in 16 of 30 departments\(^9\), the GER failed to reach 10 percent of the relevant age population, and while the capital city of Bogotá boasted a rate of above 55 percent, in departments such as Guainía, Guaviare, Vaupés and Vichada, HE was nonexistent (MEN 2010a). Sixty eight percent of enrollments concentrated within the four biggest and most prosperous Colombian cities or departments (Bogotá, Antioquia, Valle del Cauca, and Atlántico).\(^10\)

Additionally, by 2002 the Colombian HE system on average absorbed only half of those high school graduates taking the entrance examinations. Absorption rates also registered significantly unequal by region. Whereas such a rate exceeded 100 percent in Bogotá (because of the entrance of overage students), 21 out of 30 departments had absorption rates of below 30 percent.

The described economic and social realities provided a challenge for Alvaro Uribe Velez, elected president in 2002, who required again financial resources to fulfill his ambitious development plan, although Colombia registering deteriorated debt indicators according to the risk classifiers (Clavijo 2002). The economic downturn of the late 1990s had had collateral effects as public debt was increased by the government in order to complete the national budget expectations. By 2002 public debt had risen to 52 percent of GDP, when it was only 28 percent in 1995. Furthermore, Colombia registered the highest public indebtedness among the Latin American countries during 1995-2002 after Argentina and placed third behind Brazil and Argentina in being the most indebted in the region (88, 72, and 52 percent of the GDP respectively) (Clavijo 2002).

\(^9\) Colombia is divided administratively and politically into departments that in turn comprise municipalities. There are 32 Departments in total spread out through the nation. They constitute geographical, cultural, and economic areas with decentralized administration by governors, but integrated in a Unitarian Nation with a centralized national government.

\(^10\) Own calculations from Colombian Ministry of Education (2010a).
Regarding such panorama, the low rates offered along with experience and the offering of additional technical assistance (CONPES 2005), the WB became Colombia’s biggest individual creditor during Uribe’s administration. In turn, as a middle income country, Colombia happened to be the seventh largest portfolio in the WB and third in Latin America, following Mexico and Brazil. Colombia became also one of the more diverse country cases in project types assisted by the WB (World Bank 2010a).

The WB partnership was an opportunity for the Colombian government as it considered a substantial increase in lending to the country. Part of that sum and a case study conducted by the WB were dedicated to HE. The lending program approved by 2002 included moneys for the fostering of economic growth, poverty reduction, employment generation, and security (support for displaced population and the strengthening of the army). It also comprised financial resources and assistance for quality and coverage of education and efficiency of the State (World Bank 2002c). In HE the tasks focused on reaching equitable and expanded access and improving coherence and efficiency of government functions in the monitoring of academic quality (World Bank 2002b).

11 In just seven years from 2001, the IBRD had increased its participation in Colombia from 24 percent to 44 percent among the multilateral agencies having financial relationships with the country (World Bank 2008b). The Colombian government found a lower cost from a multilateral bank, especially from the WB than indebtedness in dollar national bonus as stated by the National Council of Economical and Social Policy, CONPES (2007).

12 Even though all of the projects comprising the lending program were classified as moderate to high risk, the IBRD approved US$3.3 billions to be disbursed to Colombia between 2003 and 2006. Colombia moved from a low lending to a high case scenario from the WB view. Between 1997 and 2002, the WB transferred a total of US$730 million to the Colombian government for different projects they declared as having been satisfactorily performed (World Bank 2002c).

13 Other Latin American countries have recently incurred debt to international organizations, in particular to the WB, all of this in an effort to obtain both money and technical assistance to address problems related to access, equity, and quality in their HE systems. Since the 1990s, financial and technical assistance from the WB has accompanied public efforts for improvement in a number of Latin American countries -Argentina, Chile, Mexico, Venezuela, Brazil and Colombia - in the areas of financing reforms, quality improvement, institutional diversification, and science and technology development. More intensively, through the 2000s, funding projects by the WB have focused on access
The partnership between the WB and the Colombian government appears to be an illustrative example of concrete attempts to modernize a HE system while trying to enhance access opportunities by means of public policy initiative. That is worth noting since literature has questioned the extent to which Latin American governments, and among them Colombian ones, put HE modernization above the ground in their policy and undertakings (Levy 1980; De Moura Castro and Levy 2000). Such criticism has been launched not only considering modernization policies but with regard to policy designs and implementation in other fundamental aspects such as increasing equitable access, achieving greater relevance, and enhancing quality education at all educational levels. In such reality, it results relevant for scholarly work to explore how much government beliefs and ideas have substantive policy meaning by translating them into concrete efforts as well as how well those efforts convert into expected outcomes.

When concern for education by governments – and specifically for access – becomes part of the policy agenda, it also merits attention of how policy takes particular forms within particular country contexts. Policy options, for instance, appear motley within the region. It ranges from the establishment of free public education and unrestrictive entrance such as in Argentina\textsuperscript{14} to the Brazilian pattern of restricted access to public universities, the latter giving the uniquely high private percentage of enrollment share of 75 percent (Levy and Uribe 2009). Colombia, as Levy (1986a) argued, constituted something of a mix between the Spanish/American patterns of rather generous access to public universities and the limiting Brazilian model. This pattern is visible by the fact that although highly subsidized, public

\textsuperscript{14} Such policy was launched in 1983 after democracy recovering and produced a explosion of enrollments at public universities (CINDA 2007)
universities both have historically charged tuition to students and established restrictions on access based on merit.

The Brazilian case of having a prominent private sector is not exclusive among Latin American countries although long the most extreme. Several Latin American and the Caribbean countries (with the exception of probably Argentina, Uruguay, and of course to an extreme Cuba) have promoted private HE to absorb the increased demand. Governments often felt forced to restrict the enlargement of public HE and seek a rise in private enrollment in order to satisfy demand and release pressures on public finances (Levy 1986a, 1986b; World Bank 2003).

In this way, in promoting private HE at least by abandoning financial strengthening of public universities, Colombia may be the strongest example of this sort of policy in Latin America following Brazil. Such situation produced a movement from majoring public enrollment prior to 1960 (more than 60 percent of students enrolled in public institutions) to a peak of 68.4 percent of private enrollment in 1999 (Colombian Ministry of Education 2010c). Figure 1 illustrates the shift in the trend of share.

**Figure 1-** Public/private HE enrollment share, 1960-1999

![Graph showing public/private HE enrollment share, 1960-1999](image)

Conclusions on plans and policies prior 2002 coincide in stating that Colombian policy initiatives in HE were vague, marginal, and unorganized (Arias 2007). Some scholars have argued the lack of an organized body of goals, strategies, and programs to increase coverage, quality, efficiency, and equity within the system and some even declare the absence of a state policy in HE (Orozco 2009). Facts show that by 2002, most of those troublesome aspects of HE that were criticized within prior national plans still existed as seen in the low coverage rate of the lower income groups and in the low percentage of students enrolled in HE receiving public aid (6 percent) (Colombian Ministry of Education 2003).

1.2. Research theme and purpose

Given the stated panorama, Colombia constitutes a relevant case as regards the access phenomenon and policy reform on access to HE. In 2002, two situations coincided: The launching of new President’s ambitious goal of increasing new enrollments by 400,000 during his first 4-year governmental period and the involvement of the WB in Colombian HE.\(^\text{15}\) The policy reform designed and implemented during Uribe’s mandate aimed at addressing the old problems of coverage and equity. It particularly dealt with policy efforts to reduce disparities in access to disadvantaged groups by reason of income and geographical location. Strongly related, as described above, the tasks agreed with the WB focused on reaching equitable and expanded access.

The purpose of this research then is to identify public policy goals, policy efforts, and impacts as well as access outcomes in HE access since the introduction of the policy plan named “The Education Revolution” in 2002. It is also a purpose of the

\(^{15}\) The WB partnership actually began in 2001 during President Andrés Pastrana’s government, but project design and undertakings were concreted during Alvaro Uribe’s mandate.
study to examine whether or not there has been improvement in access as envisioned by national public policy and by the WB as the international agency involved in this policy initiative. Changes in access are compared using measures from existing databases to examine before and after such a policy initiative of 2002 and accounting for two quadrennial governmental periods under study (2002-2006 & 2007-2010).

In sum, the study examines policy choices made by the Colombian government supported by its international partner, the WB, and compares current enrollment patterns to those before the launching of the Education Revolution. The research allows analysis of whether or not or how much there is correspondence between public policy goals and the new shape of enrollment patterns and student composition at the end of the studied period.

1.3. Research questions and hypotheses

1.3.1. Research questions

Considering the study purpose three research questions rise for research:

A. To what extent were policy goals on higher education access, as envisioned in the Educational Revolution, translated into policy efforts?

B. Is there evidence of policy impacts consistent with those policy goals and efforts?

C. What were the actual changes in access to Colombian HE compared to the state of access before the Education Revolution policy launched in 2002?

All of the stated research questions address the inquiry of whether or not public policy achieve – through goals and efforts – improved access to and equity in Colombian HE
as envisaged by the national government during the implementation of the Education Revolution plans and by international assistance.

1.3.2. Hypotheses

In order to address the analysis, hypotheses were established for the research questions, as follows:

**Hypothesis for the study of the research question A**

Efforts not only would be multifaceted, but major and consistent with the goals.

**Hypothesis for the study of the research question B**

Efforts and impacts would be consistent with policy goals across a wide range of indicators while another number of goals were partially achieved.

**Hypothesis for the study of the research question C**

Access outcomes would show improvements nationally, in most regions, and by income groups. Nevertheless, taking into account historical trends, some changes in access show increases substantial enough to attribute a significant effect to policy efforts aimed at changing the preceding tendencies, while another set of outcomes do not shift prior trends.

Hypotheses come from the literature review (Chapter 2), that show mixed results in previous research in changing access patterns in the categories identified for analysis: coverage, equity, and persistence. The analysis of previous research shows some absolute gains in access and its relation to policy, but limitations as well, in modifying long-standing features of inequalities as will be shown later on.

1.4. Significance of the study

This research is significant on the basis of the following arguments. First, the role of access to HE for societal improvement and human progression is of such relevance
that it deserves attention in examining the extent to which individuals within the
country are participating in any kind of HE. Lack of educational coverage has
negative effects both in reaching individual expectations to mobilize upward and in
achieving the necessary workforce supply for the labor market. Inequity in education
exacerbates social injustice and generates a vicious circle in which educational
systems contribute to reproduce and increase social inequality.

Secondly, Colombian public policy focusing on equitable access deserves deep
examination given the extent of plans, goals, and efforts implied. Colombian
endeavors to expand access were committed to a set of policy goals and policy
strategies that might be aligned not only with enrollments but with persistence, and
equity (this last one with noteworthy elements of student aid).\textsuperscript{16} To all appearances,
substantial changes were introduced by the Education Revolution plan in terms of
public funding, the nature of policy programs, amount of resources, and the
involvement of different governmental agencies in HE coverage endeavors.

Despite the extent of policy, there are only a few studies either in relation to a
particular governmental program or about more general public policies introduced
within “the Education Revolution”. Those studies, their findings, and their
particularities have been analyzed and are described in chapter 2, the literature review.

Thirdly, a study that evaluates transformations in access taking account of the
WB participation during the process is also relevant given that organization’s long
standing commitment to HE assistance. More than 220 projects registered in WB data
have been carried out by the international agency in HE since 1970, involving 86

\textsuperscript{16} Murakami and Blom (2008) found that student aid in grants and loans now may represent 6 percent
and 8 percent of the Colombian GDP per capita respectively. Grant percentage appears to be higher in
Colombia than in France, Australia, Canada, the UK, and Belgium. Further, such a percentage exceeds
the average of high income countries analyzed by Usher and Cervenan (2005). In terms of public loans
as represented by a percentage of the GDP per capita, Colombia leads the list of countries with highest
participation following the UK, the US, New Zealand, Sweden and Australia (Murakami and Blom
2008).
countries and all continents. Those projects not only commit financial resources amounting to nearly 15 thousand million US dollars, but human and intellectual effort in understanding how to improve HE.

Access is of course an important component for improvement. Roughly half of WB projects and money are directly committed to or have a component on access. WB projects on access to HE have been undertaken mainly in developing countries. Latin America places third with 18 WB projects comprising HE access among the world regions, and Colombia appears first in the number of WB projects on access among Latin American countries (with four projects undertaken since 2002) (World Bank 2010b). As Levy (2005) finds, Colombia has long been a leading recipient of international aid, and a receptive partner of international organizations in social development, including HE issues.

Finally, Colombian policy on student aid during the analyzed period embodied high expectations in both the Colombian government and the WB. The WB stated that the implemented program “considerably opens the access to higher education to the poorest students” (World Bank 2002b), 47. As such, a scholarly analysis of changes in access and student composition within the system, of whether they took place as envisioned by public policy or not, should also allow us to inform Colombian policymakers and the WB as their partner, on those factors that might still be preventing students from accessing HE.

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17 Own calculations from World Bank (2010b) data on HE projects.
18 Ibid
19 Assistance has been profuse from the US. mission conducted by Kremmerer in 1923 for assisting a reform of the finance and fiscal systems to other specialized missions such as Currie in 1949 (promoted by the WB), the French mission Lebret (1958), and the WB involvement in assisting the elaboration of the National Plan in 1970 (Rojas 2007). Assistance for HE during the 1960s onwards involved IDB, USAID, the Rockefeller Foundation, LASPAU, Ford Foundation Kellogg, the UN, and European foundations as amply documented by Levy (2005).
All of those features relevant to policy, seen from both the national and international perspectives, justify this research that searches for an understanding of public policy rationales along with the examination of changes in access outcomes. It allows not only to observe whether or not there has been an improvement in access, but also what changes were higher in what dimensions.

1.5. Organization of the Dissertation

This research comprises seven chapters. Chapter 1 has presented a background of the study, and has addressed the research questions and hypotheses as well as the significance of the study. Chapter 2 involves a two-fold literature review: One encompasses some aspects from the existing body of knowledge on the field to establish a conceptual framework, and the other, a description of previous research, its strengths, and limitations in order to build the research design. Chapter 3 depicts an operationalization of constructs in categories and indicators, and the methodology implemented for the dissertation. The next three chapters address the main findings on policy goals (Chapter 4), policy efforts and impacts (Chapter 5), and access outcomes (Chapter 6). Concluding considerations and policy implications are provided in Chapter 7.
CHAPTER 2
LITERATURE REVIEW

The core of this literature review is about access and access policy and draws on the existing body of knowledge in order to present the foundations of constructs for the research question and the methodology implemented for the dissertation research.

Four main arguments lead the literature review: First, for understanding access as a phenomenon, we believe that a construct of “access” is necessary that goes beyond the entry stage to include not only coverage, but equity, and persistence. Secondly, it is mainly in those dimensions that HE access has been the object of inquiry and policymaking. Thirdly, public policy on access is usually built to reduce the barriers that act against college entrance. Finally, Colombian access policy reform, assisted by international partnership, constitutes a relevant case for evaluation accounting the stated arguments.

2.1. A construct of access

Our definition of access for this research is taken in part from the discussions of HE researchers on reconceptualization during the 1997 NPEC/ACE Policy Panel on Access. We favor a meaning of access as “participation” in college (Tinto 1998) that comprises not only entrance to HE institutions but “the set of conditions both prior to and following a student’s ‘initial point of entry’ into postsecondary education” (Ruppert 1998), 9.

Conditions prior to entrance can be considered to be the preparation of students for college access in terms of their academic background, resources of information and motivation, and ability to pay. It also entails taking account of the
demographic, social, and personal characteristics of those who aspire to access - such as geographic location and socioeconomic status (McDonough and Fann 2007). Any concept of access that takes account of conditions after entry implies an integral view that articulates enrollments with persistence and attainment as student outcomes (Ruppert 1998; Tinto 1998).

An integral view of access for policy design and data collection is explained by Tinto (1998) as the need for understanding “how access influences participation [in HE] and, in turn, how participation shapes persistence in the completion of college degrees”, 71. In this way, there is agreement among some researchers that access goals, whatever the level or type of education, might lead to attainment (Ruppert et al. 1998).

This study focuses both on entrance and desertion, the latter as departure from the entire HE country system, and understands that public effort in terms of attrition deals with a complex network of individual, academic, institutional, and socioeconomic factors interacting with one another that affect student persistence and completion (Universidad de Los Andes - CEDE 2007).

This study on access to Colombian HE examines changes in access as understood in the above description. In this way, it explores access policy dimensions: a) equity; and b) provision and financing, and within them the conditions of access that policy intends to spur in order to facilitate HE entrance and persistence. The planned research looks at access policy taking account of goals and efforts on those policy dimensions conceived and developed in 2002 onwards by the Colombian government assisted by the WB. It also investigates access outcomes regarding the categories of coverage, equity, and persistence.
2.2 Dimensions of access policy

Concern about access has grown along with the roles and functions assigned to HE. There is an accepted agreement among social scientists, policymakers, and the public in general that access to education (and to HE) produces benefits to society, along with some disagreement on who should appropriately bear more of the cost (Lopez 2011). There has also been a great variety of emphasis as regards understanding why education and consequently, educational access, is of great importance.

Sociologists emphasize the role of education as being to create, transmit, reproduce, and modify human, cultural, economic and social capital (Vogt 1997). They identify HE as a potential means of social mobilization (Blau and Duncan 1978) and a social institution for the acquisition of better life opportunities such as increased occupational returns and greater capabilities to succeed in the social world and the labor market. Yet ascriptive factors may play substantially in impeding or allowing HE as a mobility channel.

Economists in the tradition of human capital theories have found a positive relation between years of schooling and earnings, as well as increased productivity in the labor market both for individuals and nations (Schultz 1961; Langelett 2002). Other economists in the vein of development theory, such as Amartya Sen (1999), give greater importance to the effect of education on individuals’ freedom and their capacity to reach desired life conditions by means of expanded choice. Policymakers, and scholars see how educational access and outcomes might be an instrument for social justice in serving to equalize opportunity for those disadvantaged groups that suffer from inequalities of ascription (Karabel and Halsey 1977).

Hopes for HE are many. They include the fulfillment of a large range of tasks such as the accomplishment of state demands, and even the inculcation of common
values that help integrate the nation (Clark 1987). Regarding all of those missions and functions, Clark (1987) argued that society and governments - reflected in policy - today expect more of HE than in the past.

Whatever the approach to the importance of education, the consensus as to its relevance brings with it the preoccupation for those who cannot gain access, on the basis of social, economic, cultural, and academic factors. Therefore, access has been studied by researchers and has been an object of policymaking in the main by examining those factors that impede individuals or particular groups entering educational institutions.

McDonough and Fann (2007) have found that more than a hundred American journal articles on access published since 1973 on the perspectives of sociology and HE have focused on such factors affecting college entrance. Within the body of research on college access, they observed three levels of approach: individual, institutional, and field levels. These levels of analysis reveal how barriers for HE access may have their origins in people’s attributes and circumstances, such as socioeconomic status or academic background (individual level); the role of schools and colleges in shaping choice and providing admittance respectively (organizational level); and the complex network of factors that involve individuals with organizations and inter-organization interactions (field level) (McDonough and Fann 2007).

While the individual and institutional levels comprise the micro-level of the college access phenomenon, the field level can be understood as a macro-dimension, wherein public policy appears to be one of the relevant enabling factors for individuals and social groups to enter and persist within the HE system. Questions of

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20 The institutional level comprises the scope of HE institutions themselves, including their policies on access and their social and academic environment. The system level refers to the aggregate of HE institutions. From an access viewpoint, it relates to the supply side of the educational service involving also the coordination by public authorities such as states or national governments.
societal significance - such as who attends HE and how to increase access and completion - rely greatly on implemented public policies (Ruppert 1998). As such, the linkage between “access” and “policy” is so deep that a search for definitions on access might be traced by looking at purposes of public policies on the matter. Indeed, policy analysts have often “referred to access in terms of its different policy purposes, such as financial access or academic access” (Ruppert 1998), 3. The following are the dimensions of access policy we drew from the literature that serve to frame our model:

2.2.1. Access as capacity to absorb the demand: Provision

Scholars, practitioners, and policy makers often interpret access to HE as the system’s capacity to cope with the demand. In this way, access refers to the availability of enough seats within a system from the supply side.

Enrollment growth and subsequent massification – often accompanied by institutional expansion and the appearance of demand-absorbing institutions (Levy 1986a) — can be largely attributed to the dynamic of society and HE systems interacting with one another. However, they also may be spurred by public policy. Governmental endeavor deals, therefore, with environmental pressures on enrollment expansion as a worldwide trend since more individuals are completing high school degrees and aspiration to college is enhanced by the need for a more skilled workforce. Yet the literature states that policy enacted to achieve larger access often lacks adequate goals and objective measures (Nettles, Perna, and Millet 1998), governments may launch policies aimed to enhancing enrollments by stating strategies such the promotion of “open access” systems or subsystems like the community colleges in the US or technical education in Latin America and Europe.
The US, for instance, is a striking case of both scholarly and governmental concern on access; and equitable access intensively has been the target of policy efforts since the late 1940s. While the Truman Commission Report represents an endeavor in understanding the phenomenon of access, the GI Bill is an example of how a policy promoting HE for all high school graduates led to massification of the American HE system (Peterson 2007). Later, social and educational dynamic interacting with policy enabled US HE access to become universal.

But not all systems have reached such heights. As stated in the literature on access, HE systems are to be found in one of three stages: The first refers to systems only for the elite with a GER of less than 15 percent. Those systems between 15 percent and 50 percent of enrolled college-age individuals are in the stage of mass HE, and those over 50 percent at the point of universal access (Trow 1974). Claudio Rama (2009) proposes two additional stages for systems to be analyzed in terms of access: Those systems with an age cohort coverage of between 15 percent and 30 percent would be classified as minor-based and those over 85 percent would attain absolute access.

With reference to transition between stages, Colombia provides a relevant study case: When the new millennium arrived the Colombian HE system only absorbed 37 percent of high school graduates (World Bank 2008a) whereas the number of seats in vacancy within private institutions counted by 210,000 (World Bank 2003). By 2002, since transformation was expected by the Colombian government, an exploration of the linkages between policy goals and policy efforts with actual enrollment changes is worthwhile.
2.2.2. Access as social justice: Equity

Transitions between stages can be hallmarks of important success in terms of enrollments, but systems reaching mass or universal access might still experience additional fundamental problems related to unequal educational opportunity.

In this regard, equality would be a social value in democratic societies that implies individuals having equal opportunity. Among the three concepts on equality identified by John Baker within the egalitarian theory – basic, radical, and liberal (Lynch 2006) – this research on access policy adheres to the liberal dimension of equality. Liberals such as John Rawls (1999) assume that society has unequal distribution of goods and capabilities, but social institutions such as schools would try to equalize opportunities. Amartya Sen (1999) points out that those goods are mostly “capabilities”, therefore, education would be an important generator of equality.

While equality may be identified as a right of an individual before the law, equity may be defined as fairness in access, treatment, and academic results. Perhaps equity and equality overlap in that both involve a sense of justice: equity as just and proper, and equality as a human right. They also overlap when sociologists say that equity could mean equality of opportunity (Benadusi 2001). Equity would be the search of equality of inputs, processes and outputs in educational settings. However, equity and equality could diverge when we consider the former as an intervention, conceivably a policy from the side of social or political institutions whereas the latter is inherent to individuals and social groups (they are subjects of equality).

When Rawls (1999) talked about his theory of justice he argued that for equity and justice it is necessary to identify disadvantages among individuals in order to measure their capabilities. In this way, justice embraces distribution of goods by taking account of dissimilar capabilities. Berne and Stiefel (1984) have referred to this
kind of distribution as “vertical equity”, which entails unequal treatment for unequal groups, according to their disparate capacity (e.g. to pay and afford).

Problems of unequal access are realities common both in developed and developing countries. That is why strategies to enable mass enrollment (if existing) are linked with the recognition by governments of a lower participation in HE not only by the relevant population (e.g. those aged 18-24), but also by particular social groups (Hayton and Paczuska 2002). If “equalization is to occur within national societies as a special mission of the state” (Meyer 2001), governments are expected to design and implement access policies and allocate resources to the extent that they are aware of troublesome features that place constraints on access.

Worldwide, public policy to reduce access disparities by gender or race often deals with affirmative action programs or admission quotas at colleges. However, those programs have been the target of criticism concerning the quality of accepted aspirants and the feeling of discrimination among non-minority candidates. Some alternative policies to affirmative action have been applied, particularly in some US states, to increase college diversity such as percentage plans. Research undertaken by Long and Tienda (2008), however, concluded that such initiatives have created some negative side effects. For instance, some colleges in the top quintile of test-score students were pressed to reduce the chances of admission for aspirants with higher SAT scores, just to keep same admission rates for Black and Hispanic applicants (Long and Tienda 2008).

While the gap on female attendance and graduation has been significantly reduced and women have gained majority access in some regions such as in the US and Latin America including in Colombia, studies show something different for race.

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21 E.g. The Top 10 percent Law passed in Texas which disregards test scores for applicants who graduate in the top tenth of their senior class.
For instance, in the US, African Americans and Latinos are underrepresented in college (McDonough 2004) and are twice less likely to complete college degrees (Gandara 2002). In the US, only 18 percent of African Americans and 12 percent of Hispanics hold a college degree compared to more than 30 percent of white Americans (Lumina Foundation 2010).

In the US journals, little attention has been devoted by scholars to the effects on HE access of rural or geographically isolated location and related policy (McDonough and Fann 2007). In contrast, in the US attainment rates for the rural population stands at only 17 percent versus almost 40 percent for the urban one and the rural/urban gap instead of decreasing has been widening since 1990 (Whitener and McGranahan 2003).

Rural aspirants are not the only ones facing restraints in college opportunities. In Latin American countries, a great portion of the population resides in isolated provinces and small capital cities where there is no or little HE provision. The phenomenon of supply concentration should, therefore, be considered when analyzing access to HE as seen also in the Colombian case when analyzing the above percentages of GER among the regions. Related public policy seems to be on increasing the provision of HE to the isolated population by means of supporting distance programs or the allocation of public university and college branches (World Bank 2002a).

Barriers referred to resource availability also deal with equity and are mainly related to prior acquisition of financial resources to afford HE, enough information for choice, and the academic background to face merit-based admission to college.

McDonough and Fann (2007) found socioeconomic status “widely cited in sociological literature as the most influential factor in college access, affecting
students’ college aspirations, eligibility, and attendance beyond ability or achievement”, 59. Within SES, income appears in research as one of the most significant predictors of who gets into college in showing that disadvantaged groups are less likely to apply to and attend four year institutions (Paulsen and St. John 2002; Gandara 2002).

When barriers relate to income, subsequent public policy would deal with the provision of financial resources to guarantee access. Hence, public policy that addresses affordability focuses either on student aid or on the low or lack of tuition. Affordability emerges as a dimension of access related to the “ability to pay” for education (Usher and Cervenan 2005).

Theoretically, students and parents assess the extent of benefits they will obtain from investing in HE and the capacity to pay tuition after discounting for student aid. They also may judge the ability to repay debt. Whereas grants alleviate financial burdens, loans increase financial liquidity in the short-term (Usher and Cervenan 2005), although loans established at lower rates may also lighten the cost burden. Such a distinction is valid when evaluating the form of student aid.

On the other hand, students not academically prepared for college due to low quality of prior schooling also struggle in trying to access when college systems rely on merit for selection and seats are restricted. Many countries have implemented qualification systems to promote selectivity based on national examinations for entrance to HE (Hayton and Paczuska 2002) such as Colombia. Barriers to entrance are complemented with college admission policies that rely greatly on test scores (Sigal and Tienda 2007). Sigal and Tienda found that 94 percent of American four-year colleges and universities considered SAT scores in their admission decisions in 2006.
Outreach programs for disadvantaged aspirants and remedial or developmental education are public policies identified to go against barriers to academic preparation given merit-based college admissions. According to Price and Bell (2008) research points out that students in the US who participate in outreach programs such as TRIO or GEAR UP are more likely to complete high school, apply for and obtain college admittance, and formally search for financial aid.

Research has found that students ill-prepared are often those coming from the lowest SES, and again, low income aspirants are found to have less opportunity for access (Carnevale and Rose 2004). Among most Latin American countries participation in HE of students from lowest income quintiles fluctuates between 10 percent to 20 percent, while enrollment of students from the highest income quintiles represents 50 percent (CINDA 2007)

In Colombia the situation of participation for low income students was even worse in 2002 when the Education Revolution was enacted as presented above. Regarding financial aid, since the rationale was based almost exclusively on merit, paradoxically, students from the highest income strata were those benefiting from public loans.

Such a situation could have been exacerbated by the fact revealed through empirical research that high-income students in Colombia are the most likely to afford private high school and to obtain better entrance exam scores (Sarmiento 2005). Because almost all - if not all - public and private selective Colombian universities rely on test scores for admission, high achiever-high income students can be most likely eligible to attend them. The Colombian may be somewhat paradoxical but still

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22 In the US, two out of every three U.S. students with the highest SAT scores come from the top SES quartile, while only 3 percent of those scoring above 1,300 and 4 percent scoring between 1,200 and 1,300 come from the lowest SES quartile. Only 3 percent of the freshmen enrolled in the 146 most competitive four-year colleges came from the bottom SES quartile and 10 percent from the bottom half of the SES scale (Carnevale and Rose 2004).
usual case that highly subsidized public universities characterized by quality
instruction were for middle and wealthiest students, while less selective private
education was destined for low-income students that accessed by means of mostly
loans. This is a major topic in Levy’s study (1995) on Latin America illustrating
greatly in the Brazilian case.

2.3. The sub-sectors of HE – Who goes where to college

Discussions by researchers question not only who can enroll but also who goes
where to college. Tinto (1998) argues that “our thinking about data and policy must
enable us to disentangle the various ways in which student and institutional attributes
interact to produce varying completion outcomes”, 72. The concept of access as
“participation” entails not only inquiring whether the relevant population is going to
college or not, but also who of them are going, where they are going, and what
implications are for them in going to a specific type of college in terms of student
goals.23

Some scholars suggest that access must be understood to be “inclusive of all
providers of postsecondary education” (Ruppert 1998), 21. On view of institutional
differentiation regards HE systems as settings with roles clearly stated: universities
housing science, talent, privileged rank, and status (Clark 1987) and the non-
university sector absorbing the demand of less prepared students. However, others see
social stratified access and inequity through the fact that low income students mostly

23 Even though part of student goals and access itself relates to quality education, the dimension of
quality is not included within the proposed study, except for an exploration of who is going to high
quality accredited institutions.
enter lower-tier HE institutions (Brint and Karabel 1989; Bowles and Gintis 1977; Monk-Turner 1998)\textsuperscript{24}.

A structure of institutional stratification also exists in Colombia, where technical and technological institutes have been traditionally considered the lowest levels of the institutional pyramid. Consequently, this educational type has been seen as second class, or education for the poor – a negative situation, according to Victor M. Gómez (1998) – affecting status of graduates. Similarly, De Moura Castro & Levy (2000) conclude that there has always been a disdain for technical and technological training within the Latin American HE market, added to the fact that many 2-3 year degrees do not have identifiable value in the job world.

The low enrollment in non-university programs in Colombia, compared to university ones before policy initiatives in 2002, could reflect the lack of enthusiasm of aspirants for investing in a still-discredited educational option, even by the poor. At that time, the WB drew attention to such a low rate of Colombian technical enrollment – 11 percent – contrasting sharply with Chile (27 percent) and the average of OECD countries (25 percent) (World Bank 2002b).

It is argued that diversity in types of institutions constitutes an opportunity for a diverse population to enter HE, a population that otherwise would not have the chance of access if only selective colleges existed. Non-university education is a

\textsuperscript{24} McDonough and Fann (2007) consider as a worsening of minority opportunities the fact that American students of color are less likely to be eligible for four-year institutions and are more likely to attend two year colleges than whites. Hurtado et al. (1997) have identified that Latino students in the US have the lowest expectations in college degree choice and “are least likely to engage in an extensive search and choice process”, 64. They observe this finding matching the fact that 55 percent of Latino students enrolled in HE are attending community colleges. Research findings also illustrate how the type of HE individuals obtain, strongly conditions future placement and earnings in the labor market. Sociologist Monk-Turner (1998) found that individuals entering community colleges in the US compared to graduates from 4-year institutions are twice less likely to acquire the Bachelor’s degree and twice more likely to hold blue-collar jobs. In Colombia, graduates from technical professional education earn on average 35 percent less than university graduates, according to the Observatory of the Labor Market. Nevertheless, technical education implicates lower investment in time and financial resources by students and the government.
subsystem that expands educational opportunity by means of open admission and low expense (Brint and Karabel 1989).

But it is also recognized that an objective assessment of unequal access would explore whether low income students, for instance, are over-represented within non-university programs and less-represented within universities. This assessment is especially relevant since the WB partnership encouraged the Colombian government to focus public policy on access on the basis of non-university enrollment. A conclusion of the study conducted by the WB on Colombian HE during the process of policy launching stated that

“The least expensive tertiary option is for Technical Training Institutions which charge less than half the fee of universities. An accommodation of the high demand for tertiary education through an expansion of technologically oriented courses would reduce the required investment burden by more than a half”, (World Bank 2003), xxi.

Consequently, this dissertation research on the examination of access improvement and related public policy evaluates how the composition of HE entrants changed within university and non-university sub-sectors.

2.4. Changes on access and access policy as an issue for inquiry

This section provides an evaluation of previous research devoted to the examination of the macro-policy impact on access changes in the reality of HE systems. The following review makes a selection of relevant studies using such an approach. Conclusions in this review allow a justification of this research and establishment of the foundations for the methodology, outlined in the third chapter.

To say that such a situation is inequitable is more subjective and even risky since participation in a kind of institution depends on several other factors such as test scores, motivation, and high-school attainment, among others.
Research on access public policy can be classified, according to its scope, into two main categories: 1) Country or state cases (in the case of federal systems) that attempt to analyze impacts on access by HE policy reforms or policy initiatives during certain time periods, and 2) Comparative studies that analyze some variables on access and/or access policy among countries as cross sectional analysis. Both types of research, predominantly quantitative in nature, disregard policy efforts and coincide in evaluating possible policy effects on such as enrollment numbers, persistence and equity (affordability within), or a combination of such dimensions. The focus of this part of the literature review is on country studies.

Espinoza’s study (2008) on the Chilean case is illustrative as a country analysis of changes on access and related policy reform. The author utilizes descriptive and inferential statistics to explore how changes in enrollments affect coverage and equitable access in the Chilean HE system and what the consequences are of access public policies for socio-economic groups. Interestingly, the author uses relevant equity measures to establish whether or not participation in HE by lower and middle-lower income groups has increased through time.26

By using Chilean Ministry of Education databases, household surveys administered by the Ministry of Planning and interviews with former and current government officials, Espinoza is able to show that the gross global enrollment ratio in the Chilean HE tripled between 1980 and 1998 (from 7.5 to 23.5 percent) as the result of private institutional expansion. However, the author concludes that “despite increased participation across all socio-economic groups within the post secondary system, upper and upper-middle income students gained access to HE

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26 Such equity indicators are percentages of young people who attended some HE, age cohort coverage rate (18-24 year old population attending H.E.) by socioeconomic quintiles, distribution of the student body by income quintiles and type of institution, and the percentage of students enrolled in HE who received any kind of public student aid by family per capita income.
disproportionately compared to lower, lower-middle and middle income groups during the period 1987-1998”, 269.

Indeed, figures show a strong relationship between socioeconomic status and access to HE with very little participation gains by the relevant age population from the two lowest socioeconomic quintiles (from 2.6 to 4.4 percent for the first quintile and from 3.5 to 7.6 percent for the second quintile between 1987 and 1998). In contrast, changes in enrollments for the highest two socioeconomic quintiles reveal how the fourth and fifth quintiles of the Chilean population increased participation in HE from 13.1 to 22.9 percent and from 27.6 to 45 percent respectively.

Even though the gap was not reduced, there were positive changes in the participation of both the poorest and middle income Chilean students either in university and non-university institutions, as the study showed. Such transformation is explained by Espinoza as the result of financing policies implemented particularly during the 1990s. The study clearly presents how the proportion of low and middle income students with student aid increased from 1992 to 1996. It also shows, nevertheless, that 26 percent of upper-middle and 15 percent of upper income students are still receiving state loans and scholarships, while 52 and 61 percent of the lower and middle-lower-income quintile HE students, respectively, do not have any kind of student aid.

Some limitations of this study might be underlined. While the author’s purpose is to examine “the impact produced by HE financing policies in Chile during Pinochet (1973-1990), Aylwin (1990-1994) and the Frei (1994-2000) administrations”, 269, it is recognized by the author that data for enrollment indicators and equity measures are limited to the 1980-1998 and 1987-1998 time periods respectively. Such a situation does not enable comparison of outcomes in coverage
and equity for the whole of the years compromised within the three governmental
periods. An additional shortcoming lies in the lack of detailed explanation of policy
reforms made by Aylwin and Frei, as well as of the MECESUP project for improving
Chilean HE agreed with the WB, briefly mentioned in the study.

Espinoza’s research provides a description of the reform in 1981 during the
Pinochet dictatorship. From a critical perspective, Espinoza argues that privatization
via institutional expansion introduced in Chile by the “Chicago Boys”, the WB, and
the IFM led to inequalities in access and elitization of the HE system. While this
research did not provide evidence that links directly privatization with increased
inequality, figures show that the gap between enrollment ratios for lowest and highest
SES quintiles not only prevailed but expanded 20 percent points when comparing
1987 and 1998.\(^{27}\) The lack of data before 1981 obscures an evaluation of equity in the
student composition when the Chilean HE system comprised only publicly funded
institutions. Nevertheless, it would appear that a system that housed only 7.5 percent
of the relevant age cohort population was already one for the elite.

As in Espinoza’s study, many scholars from other Latin American countries
also express concern about access policies that have spurred the expansion of the
private sector. Such a preoccupation, especially by those standing in a critical posture
on government policy, comes along with a claim for more investment within public
institutions, arguing that private expansion has maintained (if not exacerbated) social
inequalities.

An illustrative example is the analysis of recent and current policy on access to
Brazilian HE. McCowan (2007) examines policy efforts on access targeted both to the
private and public HE. He concludes that public policy aimed at providing places

\(^{27}\) The difference between enrollment rates for the extreme socioeconomic groups—lowest and
highest—was of 25 percent points in 1987, but such a difference reached 40.6 percent in 1998
within private institutions while increasing the total number of places and enrollments, “will not lead to an equitable expansion, as disadvantaged students will still be confined to courses of lower quality or with lower subsequent value on the market” (Ibid, 579). Such a conclusion as mentioned is relevant for consideration especially regarding Brazil as a country leader of expanded private HE while having most of its elite HE in the public sector.

It would be more clearly revealing if McCowan were to provide concrete evidence for his assumption that students from lower socioeconomic backgrounds are tracked to institutions and courses of lower quality. McCowan recalls his previous work in which the author elaborated on the relationship between the cost of a course and its quality.

In contrast, McCowan provides strong support for his argument that access to both private and public universities is quite limited for the low income populace. He presents figures from research by the Brazilian Institute of Geography and Statistics in which the richest individuals comprise only 10 percent of the Brazilian population, but half of students in private universities come from the upper income groups. Such participation contrasts to the proportion of lower-income students enrolled in private universities of only 5 percent. Within public universities such a proportion is 34.4 percent for high income students and 12 percent for low-income peers.

McCowan’s study also assesses policy on student aid and the program launched in 2004 named PROUNI - *Universidade para Todos* (University for All) - that searches to fill vacant places at private institutions by giving access to low income Brazilians students while institutions are compensated with tax reduction. Regarding the former, it illustrates how student aid policy has allowed the participation in HE of 277,000 new students since 1999. It also shows a useful
indicator of how policy efforts, however, are insufficient to deal with the demand for student aid to pay education, as only one out of every five candidates is able to obtain any public loan. Concerning the latter policy initiative, it is argued that although a short-term efficient program, PROUNI is not “a satisfactory long-term strategy for equity of access” (Ibid, 590) as well as private expansion and student aid. The author argues that free places at private universities are often given in low-demand or low-cost programs, but again the lack of figures on enrollments from 2004 onwards - either global, by sector or by field - disallow proper evaluation of policy impacts or outcomes on access changes.

McCowan goes on to say that the only option for providing increased equitable access is through the expansion of the public sector. Such a conclusion is often stated by those who clearly oppose to private HE or to public funding going into private HE, claiming that the most adequate public measure is an expanded supply-funding scheme.

Especially relevant to the Colombian case is Gómez and Celis’s analysis (2009) of public policy on student aid, particularly during the time period of this dissertation. Gómez and Celis (2009) conclude that the student-aid program enacted by the policy reform in 2002, instead of expanding equality, is contributing to a situation of extreme inequity, with the poor acquiring loans to self-finance their HE. This assessment of policy outcomes on student aid is based almost exclusively on the fact that 80 percent of student-aid beneficiaries between 2003 and 2008 enroll in private institutions, according to ICETEX statistics. Authors interpret this percentage as “the need to purchase private education through indebtedness by those who cannot obtain a seat in public HE institutions” (Ibid, 109), typically the least academically prepared and the poorest students. They argue that a public policy to expand access
should increase investment in public supply instead of transferring the cost of education to low income families - a method of privatization.

Without supplying additional data, the authors assert that the deficit of places within public universities is then the main factor of students incurring debt through public aid. One could argue that having more seats at public universities, even with accompanying improved strategies for academic preparation, does not guarantee access of the lowest strata, since other educational expenses can be still unaffordable.

Students generally incur debt because of the lack of affordability of attending HE in general, not specifically or directly due to the lack of places in public institutions.

Figures on low income students benefiting from public loans are also provided by Gómez and Celis, indicating that almost 130,000 new students from the lowest three strata (out of six) have obtained such aid. More detailed information is not provided by the authors such as what portion this figure represents of the total students enrolled in HE and how this percentage of beneficiaries has changed throughout the period of reform. Neither an analysis of changes related to enrollment rates by income groups before and after the launching of the aid program is given. The absence of these or similar indicators in Gómez and Celis’ work impedes deeper analysis of whether student loans introduced by the Colombian policy would have contributed to an increased degree of social equality of educational opportunities, as promised by authors. The dissertation research attempts to accomplish such an analysis.

A commonality of the described studies is how researchers highlight the presence of the WB and other international organizations in assisting Latin American

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28 Instead, Gómez and Celis’ article mainly focuses on describing another different topic: affirmative action developed by Colombian HE institutions themselves as complementary actions to student aid. The authors highlight how a major commitment of universities and institutes with affirmative action were found to be intensive in Colombia from 2002, including additional financial support, remedial and developmental education, psychological tutoring, and counseling.
governments toward increased access to HE. The WB is generally seen as an agency of privatization, a common pattern of some research in other developing country regions.

For instance, Munene and Otieno (2008) in their analysis of equity effects of a financing policy reform in Kenya, point out that a mid 1990s shift from a “central-planning model” to a “market-competitive model” is the result of World Bank’s recommendations. Particularly, their study emphasizes the WB prescription of a decrease in state funding for HE while encouraging income diversification for public universities and the provision of private educational services. Indeed, drawing from national statistics, the study clearly shows how public investment in HE reduced from 1.43 of the GDP in 1990 to 0.76 in 2004\(^2\), a finding comparable to the Chilean case where the HE budget as a percentage of the GDP also declined between 1972 and 1997 (no figures provided) (Espinoza 2008).

In the Kenyan case, however, the authors report that private expansion spurred by policy improves the participation of females who constituted only 30 percent of public university enrollment before the policy took effect in 1995. Today they are a majority in private universities (especially in those belonging to higher SES). Nevertheless, as stated by the authors, cost-sharing policies in public universities “have disproportionately weighted against students of lower socioeconomic status” (Ibid, 476).

Certainly, from previous studies Munene and Otieno confirm a significantly lower participation of low-income students in public universities by 1999, 7.5 percent of the student body compared to middle and higher income counterparts who represented an astonishing majority of 92.5 percent (44.7 and 44.8 percent

\(^2\) In contrast, private universities in Kenya are now 19 (whereas none existed until 1985) against six public universities, but the majority of enrollments (88 percent) are in the public sector.
respectively). Although with the limitation of data coming from multiple sources and some years accounting only for the University of Nairobi, authors confirm that the enrollment share of lower income students was higher in 1989 (62 percent of males and 37 percent of females) than ten years later. Unfortunately, this study does not provide data analysis on changes and current student composition by socioeconomic status within the private sector.\(^{30}\)

The lack of data on the student body disaggregated by income groups can be a major constraint for scholars studying access and equity issues. In the US, while some scarcity of consistent data for income groups – according to St. John – may complicate analysis, the availability of data by racial/ethnic groups enables the author to answer inquiries on the effects of policy on equitable access. St. John\(^{31}\) (2003) puts forward as a primary indicator for assessing changes in equity a comparison of trends in college enrollment rates by race and income groups.

In order to analyze changes in policy and their effect on access, St. John compares actual HE enrollment rates to projected enrollment numbers by NCES. Since in most cases actual enrollments do not coincide with those predicted, St John argues that NCES disregards the effect of financial strategies on enrollments.

St. John shows that HE enrollments and participation by ethnic groups are affected by multiple factors. Such factors include the size of the age-cohort of high school graduates or its enhanced academic preparation, and the amount of federal spending on grants per FTE student. Other factors are demographic characteristics

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\(^{30}\) Twofold explanations for the decline in enrollment share by Kenyan low income students at public institutions are explicitly provided. Firstly, the bulk of admissions of "privately sponsored students (PSS)" who pay the full cost of tuition and gain access with the minimum grade in the national high school examinations (more than 30,000 students since 1995 out of 70,000 enrolled). Secondly, a public student aid system that appears inefficient in testing financing needs in order to select its beneficiaries. Through previous interviews with high income students receiving public aid by lying in applications.

\(^{31}\) For more information on St. John’s works see (St. John 2003, 2006a, 2006b; St. John et al. 2004; St. John, Kim, and Yang Forthcoming).
(i.e. income and race), the structure of the states, and changing public financing strategies such as changes from specially directed aid (e.g. to veterans) to general available need-based aid. Another factor affecting HE enrollments is the shift from grant to loans in aid policy (St. John et al. 2004), also highlighted by McPherson and Schapiro as an often changing factor in access policy (McPherson 1995; McPherson and Schapiro 2002).

Interestingly, St. John (2003) proposes and uses steps for the analysis of access policy changes in the U.S. during specific time periods. These are: the identification of changes in policy; the assessment of actual changes on access in key gauges; the evaluation of previous studies on the relations between policy and access outcomes; and the exploration of other explanations for HE access changes such as the improvement of k-12. This dissertation research has drawn from such a process and addresses these stages. However, it takes a route different to establish direct causality between actual changes and policy.

Two more relevant aspects can be worth highlighting from St. John’s studies toward the enlightenment of the Colombian case. Firstly, the author warns about the impossibility of establishing causality by merely noting that access indicators have changed simultaneously to the emergence of a policy change. While some scholars question that such models allow sensible causality statements, he argues that logical and statistical complementary models would be needed to assess how elements of policy such as subsidies and the cost of education influenced student access and

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32 The study focuses on three different periods from the late 1960s through the 1970s when policy centered on student aid, the lapse between 1981 and 1992 when policy shifted toward the efficient use of tax dollars, and years after 1992 with the emergence of tax credits.

33 In other studies especially at the state level, St. John and Hu (2006) develop statistical analyses to assess the extent to which financial factors such as perceived unmet need affects college aspiration, choice and expectations. St. John et al. (2004) have also conducted innovative statistical approaches to evaluate the impact of state finance strategies on postsecondary access by using, for instance, fixed-effects regression with multiple years of data on the 50 U.S. states and state indicators.
achievement. In spite of his reliance on statistical causal models, St John suggests that even other external factors that escape statistics may influence changes on access such as postsecondary encouragement programs. We share this latter viewpoint and argue a methodological obstacle in substantiating causal relations between policy and outcomes.

Secondly, St. John points out the presence of a certain naïve assumption among policy analysts who believe that an increase in need-based grant aid implies direct correspondence with enrollment increases. St. John explains that an increase in aid may entail the opportunity for already-enrolled students to lever funds.

From his different studies, St. John concludes that policy efforts such as financial aid, postsecondary encouragement, and academic preparation in the U.S. increase not only access but persistence in HE. Such an effect of student aid on HE coverage and retention has been the primary concern of policy studies in recent Colombian history, most of them promoted particularly by the national government and the WB.

Other scholars from the US have focused their work on student aid in providing evidence of how shifting policies affect affordability (McPherson 1995; McPherson and Schapiro 2002). Another important issue, referred to the relation between access policy and affordability, is the degree of contribution by families in coping with the cost of HE (Marcucci and Johnstone 2010). Finally, in regard to aid policy, some scholars in the US have conducted research on the remaining unmet cost of HE after the provision of aid, which hampers access to college (Heller E. 2001).

While Colombian studies on access are limited in number, three of these have been contracted by the Ministry of Education within the last five years in order to
assess the impact of public loans and grants, particularly on student retention. All of them have found a positive effect of aid on persistence.

A Universidad de los Andes study (2009) uses a statistical duration model which examines the persistence of a student within the HE system until his/her desertion, graduation, or the last observation occurred. The survival model includes socioeconomic, academic, and institutional variables accounting for available data at governmental databases and is useful to predict the risk of attrition given such variables.

Students with higher previous academic preparation would be less likely to drop out according to the risk model developed by the CEDE. Among the variables that predict student decisions, low entrance test scores would most affect the dropping out while academic support by institutions and student aid –public or institutional – influences retention strongly.  

In order to actually measure the impact of the public student aid program called “Acces”, the CEDE at the Universidad de Los Andes (CEDE 2008) used a quasi-experimental matching method by samples of beneficiaries and non-beneficiaries of public aid. Such method is accepted by research on attrition as an adequate approach to assess the impact of policy interventions by comparing treated and control groups with similar characteristics.

The CEDE found (2008) that students holding financial aid have better indicators of persistence, academic performance, and efficiency in time of graduation compared to students with similar characteristics without aid. Similarly to previous

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34 In terms of individual and socioeconomic characteristics, low income students would be more likely than middle and upper income counterparts to drop out, as are males. Factors such as SES, unemployment rate by province, number of siblings, and mother’s level of education combine to greatly predict attrition.

35 Such as gender, age, cultural, social and economic capital, to be enroll in the same program and time period, as well as similar academic preparation measured by test scores.
studies, results from the duration model designed by the CEDE indicate that students receiving “Acces” loans have a risk 22 percent lower of dropping out than their counterparts without such aid. A similar finding was obtained in a study carried out by the Universidad Nacional de Colombia (CID 2006). It found significant differences in the dropping out of beneficiaries of public lending programs and their pairs without financial aid (5.5 percent and 21 percent respectively).

*Universidad Nacional’s* study also analyzed the impact of the “Acces” loan program in terms of HE coverage, equity, and academic achievement by using a regionally stratified sample of beneficiaries of student aid, applicants-non-beneficiaries and non-applicants of the cohort 2003. Information provided by government databases were complemented with surveys administered to sample units. The study concludes that participation of beneficiaries of public aid increases significantly from 6 percent in 2000 to 13 percent in 2005, although half of applicants do not obtain aid. An increase in HE enrollment is not attributable to the effects of the loan program but to the increase of high-school graduates.

While the distribution by income groups of the Acces loans mirrors the unequal distribution of first time students enrolled in HE by income levels, such distribution of Acces loans favors low income students in their persistence and contributes to enhance social equity in the composition of the student body.\(^{36}\)

The Acces loan program as the focus of those studies is an important policy initiative of “the Education Revolution” but one of the multiple access policy efforts to be analyzed in this dissertation. As such, it analyzes this particular program aimed

\(^{36}\) Another interesting aspect is that 60 percent of those surveyed responded that they would shift from the HE institution where they enrolled to another had they a better economic situation. The study found that the loan “Acces” does not achieve breaking such an adverse college choice for those with socioeconomic disadvantage. In addition, it was found that the majority of students who applied for public aid but were not favored with it, still enrolled in the HE institutions where they were admitted. For instance, just 26 percent of those aspirants to enter universities did not enroll.
to low income students along with other efforts not only in terms of quantitative results, but in its implementation. Instead of developing the already assessment of impacts of aid on student retention, the dissertation investigates relationships between goals (established by the government and negotiated with the WB), actual policy efforts, quantitative impacts, and actual changes in access outcomes.

One more study deserves attention since it relates to the assessment of the Colombian “Education Revolution Plan” in terms of HE coverage and quality particularly from 2002 to 2007. Orozco (2010) develops an analytical context of problems related to the Colombian HE system, describes the historical and legal dynamic of HE, and portrays some of the main initial projects and policy programs implemented by the Education Revolution Plan.

Then, Orozco analyzes enrollment trends, demand and supply behavior, and the institutional platform of the Colombian higher education system. Some indicators of coverage and persistence are part of the analysis such as enrollment rates, the index of response to demand, and dropout rates. Finally, Orozco discusses at length the limits and achievements of public policy for which he acknowledges that criticisms in terms of impacts are mostly based on literature and international discussions.

While recognizing the efforts made by the Colombian government in attempting to increase coverage, Orozco concludes that there was not an “Educational Revolution” as proclaimed by the Plan. The author argues that policy toward increased enrollments was not revolutionary in terms of enrollment numbers (arguing that enrollments grew lower in average per year from 2002 to 2007 than from 1935 to 2001) but also negatively affected educational quality. According to Orozco, quality has declined as the product of the Colombian HE system housing more students within the same institutional infrastructure. He develops the hypothesis of an existing
saturation within the HE system since enrollment growth has slowed down and educational infrastructure has stagnated.

Orozco goes on to assert that the effect of policy on enrollment is lost given the high dropout rates because of the entrance of more unprepared students, who are often - low income students. The author judges the loan policy as producing a perverse effect since policy favors students from low income strata who are attending lower quality institutions and are more likely to dropout. Orozco calls for a democratization of quality education along to the implementation of state policies on retention.

While Orozco’s study appears to be close to this dissertation research, some important differences are to be noted. Firstly, the dissertation focuses on access policy and access changes whereas Orozco’s analysis includes issues of quality, the function of research, relevance, modernization, competitiveness, institutional and program expansion, and the level of education of the Colombian faculty, among others. Secondly, while Orozco describes main projects and policy programs related to access, this study searched for a detailed analysis of the network between policy goals, efforts, and subsequent impacts as well as access outcomes over the entire Education Revolution period. Efforts were investigated systematically during the design and implementation processes.

Thirdly, Orozco’s study develops a relevant evaluation of access such as the increase in enrollments and the capacity of the HE system to absorb the demand with some equity components, addressed also by this research. The dissertation includes further evaluation of the conditions of access and access policy dimensions constructed and developed systematically from the conceptual framework and the literature review. Finally, this research is complementary to the empirical analysis
already developed by Orozco, in including evaluation of data up to 2009 and 2010 together with an extensive assessment of the evidence on access outcomes in the categories of coverage, equity, and persistence.

These sets of categories (as well as the subsequent indicators and measures used in the analysis) are an author’s elaboration drawing from the literature review. Particularly relevant to outcome indicators are, among others, Fitzgerald and Delaney (2002) regarding enrollment rates by socioeconomic status (E.g. income quintiles and mother’s education level), the gap in enrollment rates by income levels, and persistence indicators such as dropout rates. Some similar indicators, particularly those referred to equity have also been analyzed by Furlong and Cartmel (2009) for several European countries. Some of them have been utilized by Espinoza and McCowan (2008; 2007) for Chile and Brazil cases, and by Orozco and Lopez in Colombia (Orozco et al. 2006; Orozco 2009, 2010; Lopez C 2001; Lopez 2011).

Useful in identifying indicators on policy dimensions and conditions of access is the National Center for Public Policy and Higher Education (2008) and its edition of Measuring Up. It presents not only coverage, persistence, and completion measures, but approaches in how to assess the uneven distribution of opportunity and achievement related to family wealth and income, geographical location, resources of information, and academic preparation.

Clancy and Goastellec (2007) are relevant in introducing an important perspective to assess outcomes by analyzing not only relative changes of access indicators among different social groups, but also absolute opportunities of going on to some type of HE as a measure for inclusion. Arum, Gamoran, and Shavit (2007) are relevant in approaching access by institutional (and system) types to assess
whether diversified systems (such as the one in Colombia) produce inclusion or
diversion.

Other indicators used in previous research such as changes referred to unmet
need after the student aid allocated, were not addressed in this research due to
inconsistencies detected on data referred to tuition fees, provided by HEIs to the
Colombian Ministry of Education.37

37 Most of errors detected in data reported by HEIs to the Ministry of Education are in the typing of
figures through the information system. Errors are detected by comparing figures across years that
show inconsistency.
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

This chapter presents the research design and a methodology for data collection and data analysis. The design is based partly on the prior assessment of both the limitations and the strengths of previous research in the field of HE access policy reform and access changes over time. In this way, the literature review has been a source for the adaptation of indicators and methods used in other national cases.

From the country cases analyzed, the lack of systematic approaches in making explicit the research design, with various relevant exceptions, is often a shortcoming of empirical research on policy reform in HE access– not only in Colombia, but internationally. But shortcomings are not limited only to the description of methods. Kogan and Stephen (2000) have found that studies of policy change in HE and the assessment of its results with regard to expected goals often “has been inferential rather than empirical”, 11. They also state that most empirical works have also been more descriptive than analytical and generally are presented in the form of reports.

Studies on HE reforms seldom utilize in-depth interviews with key players in policy creation (Kogan and Stephen 2000). Even though qualitative approaches to the equitable access phenomenon are specifically encouraged by scholars such as Burton Clark (1973), most research, including that on access policy, has been quantitative as
reflected in American journal articles from the last 30 years (McDonough and Fann 2007).³⁸

This research attempts to fill such gaps. The chosen methods, combined, comprise an integrated research plan for data gathering, research organization, and data analysis. A novel contribution of this research is precisely to study the recent policy initiatives on access to Colombian higher education in such a way as described above.

For this case, integrated analysis means a combination of qualitative and quantitative approaches to identify access policy aims, efforts at implementation, and their related policy impacts as well as a comprehensive analysis of actual access changes within the HE system in Colombia. It also means the systematic collection and analysis of every relevant empirical piece (quantitative and qualitative) found to be useful in answering the research questions and in testing the hypotheses.

Regarding the research questions, combined qualitative and quantitative approaches have allowed to conduct not only a pertinent numerical analysis of changes on the mentioned policy dimensions and categories used, but a detailed analysis of policy choices and policy actions.

This chapter explains how and to what extent quantitative and qualitative methods are used in answering the research questions. Finally, an operationalization model and a design of indicators and measures are drawn from the theoretical framework stated in Chapter 2. As such, the research design detailed here extracts useful methods from preceding works not only on access policy, but more widely on

³⁸ As found by McDonough and Fann, 77 percent of 114 articles on college access analysis in six of the most important American journals used quantitative methods exclusively, 19 percent a combination of policy analysis, literature reviews and/or reviews of institutional documents and only 4 percent (6 articles) used qualitative methods appearing just in the middle 1990s.
recent studies related to the identification of policy goals, efforts, and impacts at the macro-level in HE (Bastiaens 2007; Levy 2005).

Levy (2005) and Bastiaens (2007) are helpful in providing relevant methodology for the investigation of policy goals, efforts, policy impacts and outcomes. Levy (2005) examines goals and efforts by international agencies assisting Latin American universities and governments to export progress in HE and the impact on the importers. Levy’s approach is useful as it builds a record of the efforts developed and an understanding of what was “transpired” through the implementation process as well as the consequences. In this way, evaluation is greatly based on undertakings and the examination of major patterns of results. From To Export Progress, we have drawn not only methods of data collection, but the rationale for evaluating policy goals, efforts, and impacts under study. We adhere to Levy’s approach that change should be assessed with the flexibility to keep in mind the grand policy goals but also to unfold “what constitutes reasonable change”, 32. In this way, awareness of how policies were continually transformed during the implementation process helps us understand what constitute the initiative on access policies, what was implemented in practice, and what consequences were produced.

Bastiaens (2007) in turn, investigates goals, efforts, and the effects of international assistance to changing state-university relations in Indonesia in order to increase autonomy of public HE institutions. From his study, we drew methods of collection and analysis such as document analysis, interviews and the use of statistical data. We also adapt some conceptual approaches to the policy analysis, such as efforts comprising resources, policy instruments, and processes like negotiation and mutual dependencies.
3.1. Methodological approach

3.1.1. Qualitative approach

Particularly relevant to answering the research question is to reveal whether or not they occurred as envisioned by public policy and the international assistance. As such, the dissertation involves qualitative analysis as it investigates explicit and implied goals on HE access that were discussed, discarded, established and/or adjusted by the Colombian government and the WB assistance through a policy conception and implementation process starting 2002.

The qualitative portion of the research goes further to identify policy efforts linked to policy goals. It also identifies the form in which those efforts came into being (e.g. resources, policy mechanisms, and interactions) within an environment of design and implementation comprising international agents and domestic policymakers.

The analysis of policy goals associated with concrete policy efforts enable to reveal which parts of the envisioned public policy were developed into real instruments by the government in its attempt to improve HE access. Qualitative methods of data collection and analysis facilitates the identification of such instruments as means used by the Colombian government to accomplish goals and particularly those instruments that produced major impact.

In addition, the qualitative approach helps us explore why and to what extent policy goals and policy efforts were adjusted over time since empirical research has shown that public policy is greatly “shaped during the implementation process” (Gornitzka, Kyvik, and Stensaker 2002). 36. Further, through qualitative analysis we explore if those changes in policy were consciously made and realized by policymakers.
Policy goal (or target) is defined as a “change that is to be achieved over a specified time frame” (Morra and Ritz 2009), 108. Effort is a specific undertaking or actors’ actual activity (Levy 2005) ideally aimed at achieving goals (Bastiaens 2007) and intended to reach beneficiaries.

I pin down the following assumptions on the linkage between goals-efforts-impacts for this research:

1) The research does not focus on the implementation process itself, or how ideas were negotiated and transacted to become policy goals and efforts. In this way, the study is not about successful or failed implementation. Instead, the question is about “which” ideas become goals and “which” goals were strong enough to survive and go on to become the objective of policy efforts.

2) We acknowledge that the reality of policy design and implementation, the identification of policy goals – and their relation to efforts – is not as apparent and linear as stated above. For instance, researchers and theorists recognize that ambiguity and vagueness of goals in public policy are inescapable (Cerych and Sabatier 1986; Majone and Wildavsky 1978). As such, while keeping to the fore the importance of examining clear, identified goals [and efforts] in HE (Gornitzka, Kyvik, and Stensaker 2002), this study avoids an assessment of policy by simply weighting consistency of goals and efforts. Instead, the proposed examination adheres to Sabatier’s assumption (1986) that public policy should be examined into a relative degree of “acceptability”. For this research such acceptability relates more to the examination of a mixture of impacts from identified means which are loosely coupled with stated goals (Weick 1976).

Recognizing that the nature of the linkage between goals, efforts, and impacts is far from being tightly coupled does not imply the nonexistence of a relationship
among them. A qualitative approach including the analysis of policy documents and in-depth interviews allow to unfold (at least some) implied or embedded goals, and to disentangle such relationships. This scholarly analysis also includes pointing out the ambiguity when it exists (whether realized or not by policymakers), as being a natural feature of policy design, implementation and communication processes.

In addition, it is important to situate policy analysis in the context of HE, a sector “prone to ambiguity” (Levy 2005) and in Colombia as a country in which top, middle, and bottom levels of the HE structure all exert strong influence, a trend found in general in Latin America (Levy 1986a).39 The power of the national government, rectors, and professors in Colombia is based on the diverse Constitutional principles of institutional autonomy, academic freedom, and the monitoring of HE by the state being able to coexist together (while not absent of conflict). In this context, policy goals can only be translated into efforts through a process of negotiation, experimentation in trenches (Levy 2005), and persuasion (Majone 1989).

Another complexity might be present when the analysis includes several governmental periods accompanied by the establishment of new policy efforts, gauges and the adjustments of goals. Fortunately, Colombia held stable one plan over two quadrennials periods from 2002 as the result of the re-election of President Uribe and the continuation of “the Education Revolution” as the plan to achieve HE access among other aims.

As such, a qualitative approach facilitates understanding of the transition between the two periods and how the government attempted to improve strategies and instruments to fulfill expected goals. Furthermore, comparing the second period of

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39 Awareness of ambiguity is crucial since it affects the way in which actual access improvement is assessed and even what gauges of success are chosen to be examined. For instance, if policy goals change over time, the gauges probably need to change as well in some way.
government with the earlier term of office in this “Education Revolution” allows to reveal how the government modified those efforts and corrected “inconsistencies”, and examine the changes in measuring impacts, as well as the reasons why those modifications were made.

3.1.2. Quantitative approach

The quantitative approach aims to evaluate two types of policy results: quantitative data of policy impacts on HE access and access outcomes. While the former are linked greatly to the policy efforts carried out (e.g. number of students granted with public aid), access outcomes assess the actual changes on access to HE in Colombia by comparing before and after the launching of the Education Revolution plan. Both types of results help to determine if access has been improved over time.

3.1.2.1. Quantitative Policy impacts:

For this research policy impacts are both qualitative and quantitative. Qualitative impacts are tangible services produced by policy (e.g. the creation of Regional Centers of HE – CERES - intended to achieve regional equality in enrollments). Quantitative policy impacts, in turn, are the numerical product of specific policy undertakings or the quantitative evidence of reaching direct beneficiaries that can be attributed to policy (E.g. number of CERES and number of aid beneficiaries, respectively).

In such exploration, the study accounts and distinguishes for the two quadrennial periods of the Colombian Government headed by President Alvaro Uribe Velez (with time cuts in 2002, 2006 and the most recent year). Policy impacts are identified by carefully examining official plans and projects on HE access with
respective gauges determined by Colombian authorities and the international partnership. Values actually obtained for those indicators are systematically compared with stated goals whenever possible.

3.1.2.2. Access outcomes:

The study evaluates access outcomes or variations of access measures in the categories of coverage, equity, and persistence. As Lane and Ersson state (2000), outcomes are the consequences of policy decisions within the political system as well as the effect of outside factors, including social and economic ones. The authors include in the concept of outcomes “all kinds of results that were relevant to the understanding of policies, including outcomes that had no link whatsoever with a policy but affected the evaluation of whether a policy had succeeded or not” (Ibid, 62). To be clearer, “outcomes are things that are actually achieved, whatever the objectives of policy may have been. Outcomes are real results, whether intended or unintended… and are not restricted to the results of agency” (Ibid, 64). As Hill and Hupe warn (2002), it is important to consider that normally outcomes measures are influenced by factors independent to the implementation process.

3.2. Conceptual model

A conceptual model is depicted in order to have a clear understanding of how approach access policy and access changes and how data, toward the answer of research questions, were collected and analyzed. This model is the product both of the concepts studied and of previous research.

The arrows in the model indicate relationships between constructs: public policy efforts impact individual as well as social group disparities and may constitute
attempts to increase their opportunities to be able for college. Policy efforts become enabling factors for access to, persistence in, and completion of HE. At the same time, governments through policy accomplish the state role of monitoring system performance (particularly within the public HE sector) and finance institutional capacity. Such functions are directed to goal targets.

**Figure 2 – Conceptual model**

Source: Author’s elaboration drawing from the literature review, particularly at the individual level, from St. John et al. (2004)
Two sets of categories are involved as part of the analysis: first, those categories that represent policy dimensions (provision/financing, and equity) to address goals, efforts, and impacts in terms of access to HE; and second, access outcomes themselves as regard coverage, results on equity, and persistence. The following table illustrates the constructs drawn from the conceptual framework and model. Indicators and measurements seek to complete the operationalization of constructs.
3.3. Operationalization of constructs on access dimensions

As stated for this research equity is defined as policy at the individual/social group level aimed to overcome barriers related to individuals’ attributes or characteristics. It attempts to create enabling conditions for access among social groups. In turn, *provision (and financing)* is conceptualized as policy at the system level aimed to cope with the demand for HE through supply and financing efforts.

The content below describes the conditions of access that are analyzed according to policy dimensions in order to identify policy goals (chapter 4) and policy efforts (chapter 5). They constitute a summative approach of what was found in the literature review. However, some other conditions and related policy may have escaped from the texts analyzed, so we rather prefer to set them as illustrative:

<table>
<thead>
<tr>
<th>Individual attributes</th>
<th>Conditions of access</th>
<th>Related access policy options found in literature</th>
<th>Colombian policy during the Educational Revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealth/Poverty</td>
<td>Financial ability</td>
<td>Student aid – Lower or no tuition</td>
<td>Student aid</td>
</tr>
<tr>
<td>Ethnicity, gender, special conditions (E.g. disability)</td>
<td>Equalization of opportunity regarding ethnicity, gender, or special condition</td>
<td>Affirmative action – Percentage Plans - Supply of ethnic or special education</td>
<td>Student aid (less scope than for low income)</td>
</tr>
<tr>
<td>Educational Background</td>
<td>Academic preparation for college</td>
<td>Outreach programs – Lower academic requirements</td>
<td>Support to institutional outreach programs</td>
</tr>
<tr>
<td>Resources of information</td>
<td>Information for choice and aid access</td>
<td>Dissemination of information on college options and aid</td>
<td>Creation of information systems and dissemination of information</td>
</tr>
<tr>
<td>Location</td>
<td>Ease of access regarding geographical location</td>
<td>Decentralization of branches/ Distance-Virtual Education</td>
<td>Decentralization/ Distance Education (using or not ITS)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System’s attributes</th>
<th>Conditions of access</th>
<th>Related access policy options found in literature</th>
<th>Colombian policy during the Educational Revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission standards</td>
<td>Ease of access regarding admission criteria</td>
<td>Diversification of levels of HE by lowering admission requirements / Inclusion of open sub-systems</td>
<td>Favoring the non-university HE / Lowering admission requirements for dual enrollment (high-school and technical professional education)</td>
</tr>
<tr>
<td>Number of places</td>
<td>Availability of seats</td>
<td>Institutional expansion/ expansion of places</td>
<td>Inclusion of SENA as supplier/ Increase of places in existing public universities</td>
</tr>
</tbody>
</table>
Those access policy dimensions and access conditions described above constitute an organizational setting to facilitate the analysis, although they overlap to some extent (For instance, policies on equity regarding the ability to enroll by individuals located in disadvantaged areas may address policy efforts to adjust the supply and encourage HEIs to establish branches in less-served locations, therefore, addressing provision issues).

3.4. Indicators used for the assessment of access outcomes

Three main categories dominate the analysis of outcomes in Chapter 6: a) Coverage (enrollments and capacity of the system to absorb the demand), b) Results on equity (changes in participation by targeted social groups), and c) Persistence. Five variables for the analysis of coverage over time are used: enrollment numbers and enrollment growth (nationally and by institutional type/sector), changes in enrollment rates (nationally and by province), changes in transition rates from high school to college (entrants to higher education vs. high school graduates) and absorption rates into higher education (entrants vs. applicants).

Regarding equity, three variables are taken into account: a) demographic changes in entrants by income groups (measured by salaries), changes in net enrollment rates by income; and modifications in the gap in attendance between the lowest and the highest income quintiles for the 18/24 and 20/24 age cohort. The analysis of persistence includes two more variables: changes in both dropout and completion rates.
Table 4 – Categories, Indicators and Databases used for the Analysis of Access

<table>
<thead>
<tr>
<th>Categories/ constructs</th>
<th>Indicators</th>
<th>Variables</th>
<th>Source of author’s information (on outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Coverage</td>
<td>1.1. Enrollments</td>
<td>Enrollment numbers and enrollment growth</td>
<td>Databases: ICFES and SNIES – Colombian Ed. Ministry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enrollment rates (nationally and by Colombian department)</td>
<td>Databases: SNIES – Colombian Ed. Ministry and UNESCO Institute of Statistics,</td>
</tr>
<tr>
<td></td>
<td>1.2. Capacity to absorb the demand</td>
<td>National and regional transition rates from high school to college (Entrants/High school graduates)</td>
<td>Database: SNIES – Colombian Ed. Ministry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Absorption of the demand rate (Entrants/Applicants)</td>
<td>Database: SNIES – Colombian Ed. Ministry</td>
</tr>
<tr>
<td>2. Equity</td>
<td>2.1. Changes in the demographic composition of entrants</td>
<td>Demographic composition of entrants by income groups (measured by salary wages)</td>
<td>Database: SPADIES– Colombian Ed. Ministry</td>
</tr>
<tr>
<td></td>
<td>2.2. Changes in educational attendance by income</td>
<td>Net enrollment rates by income quintile (18/24 and 20/24 age cohorts)</td>
<td>Household surveys cited by Lopez-Banco de la República and Orozco and ECLAC/CEPAL database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gap in attendance between the lowest and the highest income quintiles (18/24 and 20/24 age cohort)</td>
<td>Household surveys cited by Lopez-Banco de la República and Orozco and ECLAC/CEPAL database</td>
</tr>
<tr>
<td></td>
<td>3.2. Factors affecting successful completion</td>
<td>Graduation rates</td>
<td>Database: SPADIES– Colombian Ed. Ministry</td>
</tr>
</tbody>
</table>

3.5. Methods

3.5.1. Data collection

Combined methods of data collection are used taking into account research questions.

Those methods include:

- Compilation of policy documents from the Ministry of Education, ICETEX (The Colombian agency in charge of student aid), the National Department of Planning (DNP - Acronym in Spanish), and the WB including development plans, reports, proposals, project appraisals, minutes of decision making,
presentations, papers, speeches, and so on, in searching to identify policy
goals, policy efforts, indicators gauged.

- Conduction of 33 in-depth interviews with former key players in the
  Colombian Government and the WB, policy implementers, external analysts,
  and Colombian scholars
- Acquisition of primary statistical data from existing official -public databases
  prioritizing on the Colombian Ministry of Education and National Department
  of Planning. Databases from other Colombian government agencies, such as
  ICETEX were also collected as well as processed data on household surveys
  administered by Department of National Statistics.
- Relevant data have also been gathered from WB, UNESCO’s Institute for
  Statistics, and the Economic Commission for Latin America and the
  Caribbean ECLAC (CEPAL, acronym in Spanish) databases.
- Secondary data were used, such as those found in scholarly papers on
  access and related policy studies targeting the Colombian HE in general,
  and particularly, about access, equity, and persistence within the
  Colombian system.

3.5.1.1. Description of databases

SPADIES

SPADIES is the system for prevention and analysis of dropping out in
Colombia and follows each individual entering HE from 1998 onward for 266 (out of
279) higher education institutions housing 98 percent of the total enrolled population.
Information from the HEIs pertaining to the military forces were excluded for security
reasons. This database collects socioeconomic and institutional information from
3,452,555 cases\textsuperscript{40} or students enrolled and reveals the condition of the student after entrance using three categories: dropped out, active, or graduated. Therefore, first-year student body composition, graduation, and dropping out can be characterized using this database, which also compiles relevant socioeconomic and academic variables for each student, such as salary, family income\textsuperscript{41}, gender, mother’s education, number of siblings, and entrance test scores, among others. It also captures institutional variables such as name of college, period of enrollment, last period of enrollment, year of degree, level of education (technical, technological, university), type of institution (non-university or university institution), origin or sector (public or private) among others. SPADIES also collects data on student aid (whether or not the student received financial state or institutional aid, academic support or other types of institutional support).

**SNIES**

The SNIES captures aggregated census statistics of applicants, aspirants who were admitted, first semester students, and total students enrolled in each HE institution registered at the Colombian Ministry of

\textsuperscript{40} 2,915,837 of cases report entrance test scores which have been standardized because of changes in the exam overtime. Cases are located according to test scores by deciles. Those in 90 or over are classified as high scores, in between 62 and 89 are in the middle position, and those students reaching 61 or below are categorized as low-performance. 82 percent of the total number of cases registers socioeconomic variables as these data come from questionnaires of the entrance examination where students are not obligated to provide such information.

\textsuperscript{41} Income at SPADIES is measured by salary wages among 9 groups which are originally, officially classified as follows: less than 1 minimum legal salaries, between 1 and two minimum legal salaries, between 2 and less than 3, between 3 and less than 5, between 5 and less than 7, between 7 and less than 9, between 9 and less than 11; between 11 and less than 13; between 11 and less than 15, and the last salary income group is represented with those households earning more than 15. To facilitate the analysis, I reclassified the 9 groups into 5 ones. The first four groups are the same as original whereas the fifth one comprises those students coming from households earning more than 7 minimum salaries. The minimum salary in Colombia for the year 2010 is $515,000 Colombian pesos (or USD$269.21). The minimum salary is established by the Colombian government after a discussion process with labor associations, but normally it was stated by decree during the ER Plan because of failure in agreement and it was 1.6 percent over inflation on average annually.
Education. It comprises data from 1970 to current in most of those variables.

Although some data are available electronically, some other were found in printed documents at the Ministry of Education archives.

**ICETEX databases**

ICETEX provided aggregated census data of government aid beneficiaries from 2003 to 2010, broken down by a) HE level (technical, technological, university undergraduate, and graduate); b) six socio-economic strata; c) new and renewed loans; d) distribution according to loan and grant lines by Colombian departments (similar to provinces) and municipalities. The database also embraces amounts of loans and grants distributed among departments and social groups regarding such variables as gender and income strata.

Considering the focus on public policy efforts to increase access to HE by college-aged individuals, some figures were assessed with no relevance to this research and then, discarded for analysis. Those are the number of loans for study abroad, international scholarships, loans that utilize resources coming from third parties such as funds in administration and Títulos de Ahorro Programado TAEs.

Data on student aid before 2003 were collected from ICETEX printed documents conserved at the agency archives. The compilation of these individual documents, mostly progress reports by ICETEX, allowed the acquisition of data from 1990 in several of the variables analyzed.

**Processed data based on Colombian household surveys**

For this research, data on net enrollment rates for the 20-24 age cohort provided by the Economic Commission for Latin America and the Caribbean database
were collected and analyzed. Such data registered by ECLAC are the result of analysis of household surveys in variables referred to education and income. In order to confirm findings from the analysis of ECLAC data, this research also utilizes processed data from secondary sources that also used household surveys of 2002, 2006, and 2010 (Orozco 2010; Lopez 2011).

Data from household surveys provide relevant, indirect information on equity of access, regarding the proportion of the Colombian population attending HE by income quintiles. These surveys are administered in representative samples by the National Department of Statistics (DANE) and are nationwide in scope, by urban and rural settings. They are instrumental, in this case, to analyzing changes in access to HE during the first and second quadrennial periods of the Educational Revolution as compared to prior tendencies.

The Survey of Quality of Life applied in 2010 quantifies and characterizes living conditions of the Colombian population, including variables related to education, health, income, and labor force. The Continuous Household Surveys (in 2002 and 2006) are employment-related. Both surveys include uniform variables referring to education such as whether or not the interviewed individual was attending any educational establishment and what the highest level or grade most recently achieved was. They also include the question of whether the student is enrolled in a public or private educational institution.

3.5.1.2. Selection of interviewees:

The selection of interviewees rested on previous knowledge of identified subjects that were and/or are key players in the design, implementation and evaluation of access policy reform in 2002 and subsequent years. They were
personally contacted by telephone, personal visit and/or electronic mail at the WB, Ministry of Education, National Department of Planning, SENA, ICETEX, and universities in order to present to them the dissertation research and to obtain their authorization for conducting interviews. Every subject identified as a key was visited at her/his office in order to conduct the interviews in Bogota (Colombia) and Washington D.C.

Specifically, we interviewed key officials, former and current government authorities and staff members. Subjects of interview were also Colombian scholars and key analysts of the design and implementation of policy reform.

3.5.2. Data analysis

While content analysis was the method used for interviews and policy documents, we utilized descriptive statistical analysis of figures to evaluate changes in enrollments, equity, and persistence patterns. The study also evaluates variation of access measures at points in time (cross-sectional analysis) as well as changes in access over time by analyzing graphical historical series (Galloway 2004). As stated above, the analysis involves the identification of a network of policy goals, efforts, and impacts using both quantitative and qualitative approaches. Concerning the quantitative portion of the research, the number of students enrolled in HE are the unit of analysis in global figures and, when possible, grouped by common characteristics such as income salary (mainly), and geographical location.

Changes on the described categories are compared using the above measurements relating to before and after the Education Revolution of 2002 and accounting for the two quadrennial governmental periods under study.
CHAPTER 4
POLICY GOALS

This chapter presents the identification of policy goals; it draws them mostly from official documents, mainly development and governmental plans. Additionally, the analysis of planning manuscripts has been complemented by extracting relevant interview content. Goals have been analyzed and labeled by following the theoretical framework on access policy dimensions (equity and the provision of HE), but being sensitive to potential new categories for analyzing access policy.

The chapter first presents a conceptualization of goals as they are understood in this study. Next, it lays out the findings on the identification of grand goals stated by Colombia linked to the origins of the “Education Revolution” catchphrase, as well as within the context of policy design. Although this study concentrates on policy goals on access to HE, other goals for Colombian HE enunciated by government agents are also drawn upon for contextualization of policy envisioning. Further, by analyzing policy documents, the chapter shows the Uribe administration’s policy rationales for linkage between access goals and social goals.

The chapter also portrays a picture of WB grand goals and rationales on HE access for the developing world and, specifically, for Colombia. In doing so, this portion of the research looks for commonalities from its HE projects in the country and more generally, from the existing three WB policy documents on HE (World Bank 1994; World Bank - UNESCO 2000; World Bank 2002a).

It follows a depiction of more concrete sorts of goals, the operative ones that were considered, or at least raised in official plans. Some of those operative goals came with related gauges as stated targets by planning and implementing officials, so
they are featured here as they are invoked and are used further to assess policy efforts, and impacts. Changes in goals and some planning gauges from one quadrennial government period to another unfold as well.

The identification of policy goals through the period studied is accompanied with an examination of whether or not prior Colombian governments committed themselves to access policies (from 1982 to August 2002). The chapter revisits the theoretical framework to briefly connect empirical findings on policy goals to prior access policy.

As the task of identifying goals for this chapter, works with statements appearing in policy documents, speeches, or interviews, we must treat with reservation whether statements represent “true” goals. For instance, goals that emerge within an environment of negotiation with donors and interest groups such as university administrators and faculty are prone to be a tool for boosting legitimacy and popularity (Dowling and Pfeffer 1975; Levy 1980, 2005; Bastiaens 2007). Having this reality in mind, the search for veracity of goals as real intentions is not the objective of this research as it is to find the extent to which policy goals stated by policy agents had enough relevance to be translated into efforts.

4.1. Conceptualization of goals

Scholarly effort in conceptualizing goals, efforts, and impacts is challenging not only because of the difficulties in making distinctions among them but due to the complexity in coming up with definitions for them. Regarding goals, the ambiguity of their nature complicates the scope and meaning of any definition.

In confronting such challenges, a study by Levy on international assistance to export progress (2005) defines policy goals as anticipated changes that imply a
sought-after transformation that is significant enough to convey new forms, in other words, to produce efforts and results. About the context of policy reform and international assistance, Bastiaens (2007) identifies goals as self-imposed constraints and “critical analytical tools”, 55. They are intentionally-pursued outcomes or standards that facilitate judgment of a project’s development, and need mediation, translation and/or negotiation from donors to domestic partners.

Consistent with all the aforementioned characteristics, this study defines goals instrumentally, as expected changes enunciated by policy agents from any level of authority (government officials and the international agency) to be addressed and achieved through policy efforts.

This study makes distinctions between operative goals and grand ones. Such a distinction also matches with Levy’s differentiation between explicit and implicit goals (2005). The former refers to more pragmatic or specifically operationalized aims and the latter to visions ideally constructed, often “sketchy” but “grandiose”, and without any certain identified time frame in which they are to be achieved. Consequently, grand goals in this study go well with the concept of implicit purpose of action, and operative goals harmonize with explicit or pragmatic objectives as in Levy’s work.

Concretely in our Colombian case, grand goals are conceived as ideals or aspirations for improvements of societies or HE systems themselves. Regarding the research topic, grand goals are aimed either at advancing social, cultural, or economic life through HE, or expanding opportunities for HE access and allowing individuals to acquire the benefits of taking such opportunities.

The shape of the grand goals is more abstract than that of the operative ones. A similar distinction can be acknowledged regarding their scope, grand goals being
more general and ambitious, but also more vague in capturing the potential means through which they are to be achieved and their impact. In turn, operative or explicit goals yield to more reasonable aspirations but accompanied by less transformational results (Levy 2005). Restating Perrow’s (1961) assumptions, operative goals would in several cases provide “the specific content” of official grand goals and reflect policy choices in the arenas of both design or implementation. Such choices are aims – and at the same time means - in themselves in trying to accomplish the grand goals (Perrow 1961). For instance, if the grand goal is to increase the age cohort HE coverage, policy developers may choose from among many competing means, such as to enhance efficiency within existing institutions or to create new forms of HE - which become goals themselves.

Selection of operative goals may be done on a rational, technical, or political basis; by assessing or neglecting feasibility; and may even go in opposition to other grand goals. Choices may also be made by top level officials or those implementing policy tools and can reflect what individuals in the trenches are actually attempting to accomplish. Those in the operative field can make such choices without even considering official statements on policy goals (Perrow 1961) or grand goals that may be seen as difficult to tackle. In such circumstances, awareness of a common “gap between explicit and implicit goals” in policy reform (Levy 2005), 223, is worthwhile. Accounting for all of the above and yet trying to avoid an obfuscating analysis, pragmatism leads this research to make the choice of connecting operative goals with policy efforts and impacts without, however, abandoning identification of the grand goals.
4.2. Grand Goals

4.2.1. The Educational Revolution and Grand Goals

The expression “Education Revolution” seems to appear for the first time as part of the 100-point program by Alvaro Uribe Velez when running his Presidential campaign. It certainly appears in the “Manifiesto Democrático” during his campaign which contained Uribe (2002a)’s premises and promises about what was needed for Colombia’s economic, political and social development.

Without giving any explicit explanation of the concept implied in the slogan Uribe claimed in the manifesto that the country required such a revolution in order to make progress toward universal, democratic access, and good quality of educational services. According to subsequent speeches given by the Minister of Education, Cecilia María Vélez, the “Education Revolution” would mean “to transform the whole educational system in magnitude and relevance” with substantial progress in coverage along with quality improvement (Velez 2002), 1.

Indeed, as part of the earlier Presidential campaign and regarding HE, Uribe identified a big number that would become the center of policy attention at the Colombian Ministry of Education for the subsequent years: 400,000 new enrollments during his first quadrennial governmental period (2002-2006). Once Uribe took over the Colombian Presidency, the figure became a goal of the “Education Revolution Sectoral Plan 2002-2006” designed and supervised by the National Ministry of Education.

An increase in enrollments of such a magnitude appears ambitious when contrasted with the actual HE enrollment growth achieved during the 25 years prior: in all that time, the country provided education to 758,000 new students. Besides, the
Minister of Education (2002) herself emphasized that the figure of HE enrollment goal was ambitious, as was the target for basic education (1,500,000 new students).\footnote{In basic education, the target sought to reach double that of enrollments achieved during the prior quadrennial period governed by Andres Pastrana.}

In addition to the enrollment figure, Uribe planted the seeds of some other policy goals within the “Manifiesto Democrático” of 2002, goals that survived to policy design stage at the Colombian Ministry of Education once the cabinet had been appointed by the new President. One of those goals was to substantially increase (by five times) the amount of funding through student loans.

The expansion of enrollments and the increase in financial aid can be seen as operative goals to reach the wider expectations of the new government toward the accomplishment of some national grand goals such as economic growth. The Education Revolution plan of 2002 explicitly stated that HE helps the country to reach a competitive stance within the international market and achieve better socioeconomic development as well as an enhanced quality of life (MEN 2003). The expansion of HE coverage, seen as an urgent means toward the execution of those aims, was also stated in the vein of transforming the national economy through the supply of professionals required by the labor market (Velez 2002). Close to this objective, the plan called for the expansion of the mass of technicians, to reach better industrial development by means of the promotion of the non-university education.

HE was also presented as a tool by which society could achieve a more balanced distribution of income and for individuals to obtain upward social mobility (Uribe V. 2002b). Those grand goals were set in policy plans along with the overt desire for reaching greater social equality and access to HE. For instance, Uribe’s Firm-hand-Big-heart Plan had already declared that education carries individuals out of poverty; this view led to including access to HE as an essential issue of policy.
design and implementation (Uribe V. 2002b). Later, the National Development Plan (NDP) for the period 2002-2006 established the role of educational coverage as “a fundamental factor for human, social and economic development as well as a tool to the building of social equity” (DNP 2003, 166).

Such a goal of equality of participation in education is not only present in policy documents issued by the elected President but in official discourses by the Colombian education and planning authorities once in charge. To illustrate the case, and allowing for the rhetoric of political language, the following statement shows the aspiration by the Education Minister Cecilia Velez to achieve access as a social justice goal:

“Education as a fundamental part of equity becomes a national interest along with the country’s security and the fight against corruption... Education is an issue of justice and equity. Education allows us understanding of the existence of one unified country. If that is what we want, we shall include all Colombian children and the youth within the educational system, emphasizing on the vulnerable ones”

Cecilia María Vélez. Minister of Education. Speech during the Assembly of the National Association of Manufacturers. Cartagena de Indias, August 2002

Sectoral education plans and speeches during the Education Revolution comprised access ideas that were typical beyond Colombia. Indeed, a review of policy papers across countries and country cases (both critical and pro-policy) allows the assertion that similar discourses on access and fairness were found worldwide. India (University Grants Commission 2008); Chile (Heras 2009), Venezuela (Albornoz 2003; Muhr and Verger 2006); Brazil (McCowan 2007); Australia (Pick 2006); South Africa (Nieuwenhuis and Sehoole Forthcoming), and Ecuador (Post 2011) are only few examples. An aspect that may separate Colombia from such abroad
commonalities of access and equity enunciations is the magnitude of the concrete enrollment goal stated by the national government.

By taking into account Colombian social and economic conditions and the described expectations for education, the Education Revolution focused on three main policy objectives: to increase coverage\textsuperscript{43}, to enhance quality, and to raise efficiency of the educational sector – in all its levels –equity being throughout the guiding principle of policy efforts (MEN 2003), as stated in the first Education Revolution Plan (2002-2006).

Although goals toward a more equitable society remained during the second quadrennial period (2006-2010), the new Education Revolution plan emphasized the relevance of HE to face the global economy and to build a more competitive country. The second plan includes, then, relevance as a fourth policy objective, together with the above-mentioned aims.\textsuperscript{44} The relevance policy had as its goal to achieve a HE system which would provide human resources with the competencies required for the labor market and for an increase in the national productivity. In this way, a particular stress would be put on government efforts for positioning the non-university sector. As such, technical and technological education of better quality and relevance became another grand goal for HE toward more responsiveness to Colombian productive sector demands.

\textsuperscript{43} Rationales for HE coverage as an economic development fuel were found repeated in several policy documents along with the desire to spur policies in order to achieve linear and rapid increases in enrollments (DNP 2003). That suggests the importance of HE coverage within policy.

\textsuperscript{44} Those objectives were also stated in the Decennial Education Plan 2006-2015 that came through a process of public deliberation including academic communities from all over the country.
Grand goals were not only frequent in Colombian government plans, but also in WB policy documents and projects. The grand goals of the agency are illustrated in the following section.45

4.2.2. The World Bank Grand Goals

A striking feature of the grand goals on access stated by the WB (1994, 2002a; World Bank - UNESCO 2000) is that they are quite similar to those enunciated by the Colombian government. To be sure, political statements that not only put education access as a tool for a more equitable society but as an instrument for democracy, egalitarianism, and the enhancement of national identities are typical also of international development agencies and foundations (E.g. The Ford Foundation initiative named Advancing HE Access and Success).

In its three HE policy papers - one of them with UNESCO - the WB justifies the expansion of HE as a means toward social and economic development, since it contributes to achieve a mass of skilled professionals that can increase productivity (World Bank 1994), and support income growth (and by extension, poverty reduction (World Bank - UNESCO 2000). The Task Force on HE (2000) also mentions that efforts to enhance accessibility increase social mobility opportunities and the expansion of choices, a rationale reinforced in the WB policy paper of 2002; “Constructing Knowledge Societies” spells out that access to HE for low income and minority groups increases their employability and income prospects, and contributes to overall reduction of social inequalities.

Along with the significant expectations in HE expansion for progress of developing countries, in policy papers the WB prescribed how HE systems of those

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45 A reminder for readers, relevant here, is that those grand goals are brought into the chapter for illustration and not for an assessment of their connection to efforts and impacts, given their abstract, idealized nature. The linkage is, then, between efforts and operative goals.
nations are falling further behind high income country systems. It also went to provide
directions of the reforms required to address the problems of under-funded systems,
with low quality, ineffective management, and still – despite enrollment growth –
restricted just to the elite.

The international agency put its accent on five main directions of reform for
developing countries that can be drawn from the analyzed policy papers. Three of
these deserve special attention here as they are directly related to HE access.

First, an emphasis on equity of HE participation became a strong component
of reform claims by the WB. Equity is mainly associated with the need for an access
policy targeted at economically and socially disadvantaged populations, especially
those who cannot afford the educational costs of attending college. The achievement
of more equitable HE access was seen, early in the 1990s, as an instrument of social
justice as well as a tool for economic efficiency since more individuals would
contribute to productivity (World Bank 1994).

Secondly, not so far removed from the above-mentioned concern, another
debated reform was to expand coverage of HE allowing the system to absorb the
demand by increasing institutional diversification. Consequently, the WB supported
the expansion of the private and non-university sub-sectors as an optimal way of
incorporating individuals from different backgrounds without sacrificing quality
(World Bank 2002a).

Thirdly, improvement of efficiency in use of resources by public universities
and a search for funding diversification were also prescribed by the WB. Efficiency
appeared as a priority as early as 1994 when a call for a redefinition of the role of the
state was linked to the need for institutional accountability together with more
autonomy (World Bank 1994). By 2002, the claim became concretely stated for a
shift from a negotiated budget allocation based on inertial historical factors to alternative mechanisms of funding linked to HEIs performance (World Bank 2002a).

Finally, WB policy for developing countries also focused on the quality requirements and the relevance of HE in facing the knowledge economy and competition in the global marketing. All of these changes in the HE systems would only be possible through a redefined state role that created incentives and regulations for enrollment expansion and quality education as a result of market mechanisms and competition.

Prescriptions for reform, stated generally, coincide very much with those reported by the WB specifically for Colombia in background studies previous to the launching of HE projects and policy reforms. Policy recommendations for Colombia dealt with the provision of finance for equitable and expanded access, the need for internal efficiency in the management of public institutions, and the requirements for increased quality and governance of the system as a whole (World Bank 2003). The WB wanted to address an approach to the Colombian sector of HE as a whole, which included assistance for the improvement of system regulations and better coordination among government agencies in charge of HE.

The involvement of the WB in Colombia in supporting the improvement of HE was aimed at addressing those goals, with a particular emphasis on equitable access, including a substantial component of student aid. The WB role in HE was said to be tied to three of the six strategic areas declared in the Country Assistance Strategy supported by the WB from 2003 in Colombia: Developing human capital, attaining public sector responsiveness and efficiency, and ensuring sustainable development (World Bank 2002b, 2002c). Education and HE were then a piece of
something superior and larger than the national Government, pursued with the assistance of the WB.

Although such a “model” for reform and assistance is apparent in policy documents as a message for the developing world, it does not fit many of its HE projects. Except for few countries, involvement of the WB has been fragmentary (World Bank 2002a) and they have mostly responded to what gets proposed (or not) from country clients (p.i. Salmi; Velez; Villegas). Involvement of the WB in Colombia appeared to be rather more integrated than fragmentary; with less scope however, than seen in an initial comprehensive view of the WB’s concern.

4.2.3. Access grand goals within the context of competing social demands and financial restrictions

When a bigger picture of the new Government’s social plan is observed, the first Education Revolution Plan comes into view as one of several social priorities stated in the National Development Plan (NDP) “Hacia un Estado Comunitario” (DNP 2003). The Education Revolution was included in the “Social Equity” part of the NDP which comprised also the commitment to improving the Colombian social protection system with better public health, to enhance protection toward those in early childhood, women, family, and youth. The NDP also pledged for improvement of the solidarity economy, rural development, and what President Uribe often called “social capitalism” in the supply of public services, which implied a mix between private initiative and social investment.

As Psacharopoulos (2006) notes, what the WB explicitly states as to what it does or wants to do may be different from what it actually does and from it actually thinks is worth doing. Such inconsistency is criticized by Psacharopoulos as a lack of clarity in education policy. An example, according to his view, is how the WB favors in some policy papers basic education while in other HE assistance.
The challenge was stated by the law sanctioning the NDP in terms of increasing the efficiency of social expenditures to achieve better results by focalization measures and the consolidation of the social protection system to ensure the survival of vulnerable groups in economic crisis periods (Colombian Congress 2003). By that time, the National Planning Department (DNP) explained the rationale of the national plan in terms of focusing on projects of significant impact to reach the largest numbers of poor people in the country. In turn, President Uribe made clear the rationale for progressing through a few strategic projects instead of the “shotgun sprinkler formula” (Colombian Presidency 2002). One of his main concerns lay in the restricted public resources that followed the worst Colombian economic crisis since the late 1990s and a swelling of national debt. Such scarcity implied not only rational investment but a plan of adjustment to reduce excessive expenditures, duplicating functions, and administrative wastage (Colombian Presidency 2002).

A former policymaker at the DNP recalled the difficulties by 2002 as the following:

We were in a very difficult moment. It was not a time to think the country in the long term. In 2002, Colombia was in the verge of a default. We had to handle scarcity and we concentrated our entire efforts to ensure national treasury appropriations to meet international commitments. We were involved in the daily routine of how to pay official salaries and how to finance the first stages of the policy on security, even doing silly things such as the merger of the ministries and the restructuring of public entities, which were more desperate maneuvers than any other (p.i. Gaviria).

Operative goals shown in the following must be understood in such a context of restricted resources. Operative policy goals, and subsequent efforts (presented in the Chapter 5), should be also put in the context of this general approach of public policy during the Uribe Administration. This approach was characterized as involving

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47 Acronym in Spanish
equalization projects with a target on the poor population and on subsidization as a strategy to overcome barriers on access to public services, including education.

4.3. Operative Goals

4.3.1. Equity goals

A major concern for policy in accomplishing the enrollment goal and equity aims targeted the student aid system at the ICETEX, the first public agency created in the world to provide loans for individuals attending HE (World Bank 2003). Here the goals involved for the following five years 100,000 new enrollments as the direct result of the loan program and creating and strengthening new mechanisms of funding in order to benefit low income students (MEN 2003). Such operative goals pointed to a greater aspiration consigned in the NDP, to promote equity in access and persistence by focusing on the poor with good academic performance who would benefit from an expanded amount of loans and grants (MEN ND).

Even though greatly promoted and expanded, the escalation of the student aid program is not an original idea of the Education Revolution Plan, since it had been already planned by Pastrana’s prior government. It came along with the accomplishment of the first stages in contacting the WB. With the objective of improving access conditions for the low income population, Pastrana’s administration had previously submitted to the Council of Economic and Social Policy (CONPES 2002a) the Integral Program for Financing Tuition and the Strengthening of the Quality of HE in July 2002. In such a process, the Colombian Education Ministry

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48 When President Uribe took over the government, there had been already some advances on the topic: first, an initial conception of a possible reform of the student aid scheme developed by national experts. Secondly, some studies diagnosing the Colombian HE conducted by national and international academicians, and a background discussion through the called “Social Mobilization for the HE” led by the Education Ministry which integrated ample sectors of the Colombian academia. All of those prior efforts are summed to discussions and initial approaches by Pastrana’s administration to the WB, which
and the DNP invited the Council to support the program and to request that the
Ministry of Finance guarantee resources for its implementation via external loans.

Within the CONPES document, the education ministry had pointed out the
high tuition of HE, especially at PHEIs, connected to budget restrictions for families
and the scarcity of sources of funding for attending college, including those coming
from the public agency ICETEX. Additionally, the document submitted to the
CONPES realized that the supply funding scheme - from the national budget directly
to public HEIs - limited the increase of enrollments, whereas a loan system directed at
students produced expansion (CONPES 2002a). In this regard, Colombia is typical in
the call for new mechanisms to avoid favoring an exclusive supply funding scheme
that allocates state budgets through historical inertial mechanisms and subsidizes,
mostly, upper income classes (Inter American Development Bank 1997).

More concretely, the new government submitted to the CONPES (2002b) the
inquiry for an authorization of a loan with the WB for the amount of 200 hundred
million dollars in order to finance the “Access with Quality to the Colombian Higher
Education” project. Its main objective consisted of expanding equity of access to HE
by giving priority to students from the lowest three of the six socioeconomic strata in
financing tuition and in some cases, maintenance of students.49

The WB had also suggested increased access to financial aid as a remedy to
stop the decline in student entrants produced at the end of the 1990s. Clearly the WB
background study (2003) stated that the established student aid scheme by ICETEX
was not only limited to a very few students, but “biased toward the middle class”, 57.

appeared in the first place not only as a provider of funding but also as a contributor of the design and
the setting of expectations for the loan program.
49 The project also comprised other aspects of HE improvement such as aid for doctoral education and
the increase of governance at the Ministry of Education level. However, the amount devoted to student
aid committed 86 percent of project resources.
A strengthened subsidized loan system to expand enrollments has been also championed by governments as well as by some scholars not only in Colombia (Lopez 2011), but in Latin America and globally (Marcucci and Johnstone 2010). Such proposed change has often come with a call for cost-recovering mechanisms, targeting those who can afford HE (Inter American Development Bank 1997; De Moura Castro and Levy 2000).

While the expansion of loan systems is a boilerplate feature suggested by international agencies including the WB, a different approach in Colombia by the Bank called also for grants as an additional fundamental ingredient to achieve equitable access. Indeed, the WB had already warned that the lack of access to grants by low-income students, as well as the inequalities in the basic education levels, prevented the Colombian system from improving equity standards despite remarkable enrollment expansion in the 1990s. The Education Revolution implementation process introduced a grant goal to reach low-income beneficiaries.

In addition to student aid, the Colombian government stated some other operative goals including the use of IT in the supply of distance programs and the expansion of non-university HE. Regarding the former, policy plans incorporated the goal of 40,000 new enrollments by means of distance programs with an emphasis on regions with scarce HE supply and particularly those affected by violence.

A favoring of the non-university sector appears to have been based on three different rationales. The first one referred to the requirement of increasing the number of technicians within the country in accordance with national development needs and the labor market. The second one was the fiscal savings for the Colombian government, mainly suggested by the WB, followed by the possibility of accommodating a large mass of low income students as an equity endeavor.
Great expectations were placed by the Colombian Ministry of Education upon such a goal to accommodate 150,000 new students enrolled in non-university programs during the first 4-year period. The amounts were divided into 70,000 as an effort within the existing HEIs and 80,000 through the integration of SENA’s partial supply to the Colombian HE system (MEN 2003). By elevating SENA into HE, the government also accomplished an optimal use of the on-hand facilities by “using existing human resources and infrastructure” (DNP 2003), 161.

Government education officials would have to make a strong effort in stimulating the demand for technical and technological education, traditionally discredited by the social imagery of being third class. That became a goal itself, together with the diversification of non-university programs while enhancing their relevance. They were thought to be by cycles through a credit system allowing for transfers across programs and levels of HE.

4.3.2. Goals on the provision and financing of HE

During the first quadrennial governmental period (2002-2006), the educational sectoral plan established not only the goal of expanding the system in student numbers, but also the aim of increasing the national HE gross enrollment rate. No consistent target for this indicator was registered at the beginning of the process of policy design - the Education Revolution Plan sought to bump up the GER from 20 percent to 25 percent by 2006 (MEN ND) while for the same indicator the Minister of Education, Cecilia Maria Velez presented the target as moving from 17.8 to 24 percent. One close objective was to offer access to better education to a greater

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50 The National Service of Apprenticeship or the public institution in charge of work-related training programs.
number of students in more places of Colombia toward reaching a total of 1,389,921 HE students by 2006 (from a projected 18-24-year-old population of 5,767,504) (Velez 2002).

In trying to evaluate how to meet the large demand for HE, the Government warned about the coexistence of insufficient coverage of Colombian HE, the restriction of seats at public institutions and the many vacant places in the HE private sector (MEN ND). Such unbalance within the supply side was also detected by the WB, which diagnosed the main obstacles for expansion as related to the scarce availability of low-fee charging places and the “stifled demand in tuition-based PHE” (World Bank 2003), xx. Consequently, another related goal was stated as adequately balancing the supply and demand sides of HE, not only by means of public investment and the student loan program, but by the redirection of both sectors (MEN ND).

In addition, the WB pointed to the need to accommodate the ever-increasing number of Colombians completing the secondary level. Background studies showed how equity and efficiency progression in basic and secondary education during the 1990s were “creating an inequitable bottleneck at the gate of post-secondary education” (World Bank 2002b), 6. Uribe’s initial government plan also recognized the existence of a “serious problem of access” - only 148,274 national entrance test takers actually enrolled (from a group of 453,962), representing an absorption rate of just 32.6 percent in 2000 (Uribe V. 2002b).

From the viewpoint of fiscal restriction, it is not surprising that one mechanism for fulfilling enrollment expansion was the operative goal of achieving efficiency at public universities in order to retain 80,000 students (later discarded) and serve 70,000 new ones. However, scarcity of public resources was not the only
rationale for such a strategy, as other concerns had already emerged regarding the public HE sector, such as the lack of accountability and a deficient use of resources. As the result of such perception of inefficiency, the government decided that public universities were able to increase enrollments without additional investments (p.i. Burgos).

The aim of converting the public HE sector into an efficient one seemed to mirror previous measures taken for primary and secondary levels of education in Colombia by the prior administration headed by President Andrés Pastrana and his Minister Alvaro José Lloreda in 2001. It also echoes previous HE reforms in Latin America such as in Chile (Garcia Guadilla 1996; Brunner 1993b) as well as in the US, including performance based indicators for funding public HEIs (Alexander 2000; Jongbloed and Vossensteyn 2001).

Perhaps even anticipating the reaction of the public university sector, goals on efficiency were made since the original NDP was launched for discussion and public deliberation. The first draft spoke of an allocation of financial resources to public universities based on goals and the accomplishment of performance plans. One such mechanism suggested in the Plan implied a change from the traditional inertial system

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51 This perception, also shared by the WB (2003) study on Colombia, was underlined by the high unit cost in public universities, a spending of 29 percent more per student than for private counterparts. Expenditure per student-year reached Col$4.2 million in public universities by 2002 compared to the average of the unit cost in a private university (Col$3.3 million). Public universities spent 42 percent of their budgets on salaries to faculty compared to 34 percent in private counterparts of similar complexity level (World Bank 2003). Such a difference is real regarding figures but can be explained by some factors related to the internal institutional dynamic. For instance, one enlightening fact is that many private universities operate with a part-time faculty more than their public counterparts. In addition, a larger number of the full-time professors at public institutions might be exclusively devoted to research which swells the payroll. While this is traditionally the case - of higher expenditure per student in public universities than in private counterparts – without pointing out that it is even greater when comparing them to demand-absorbing private institutions, such a trend put the Colombian university system (according to the WB) on the highest cost scale (105 percent of the GDP per capita) when comparing the per student expenditure internationally. Such a cost buttressed the WB suggestion that “the internal efficiency of the public sector could be spurred by introducing performance-based funding” (World Bank 2003), xxi.

52 Indeed, Law 715/2001 redefined the resource allocation system for those levels in which the financial provision passed from a cost-based scheme to a rewarding structure regarding the number of served students (DNP 2003).
of allocating resources to one that rewarded efficiency through measured indicators (DNP and Presidency 2002).

The plan called for agreements between the government and every public university in order to design performance plans and to promulgate concrete goals for improvement. Such a prospect was explicitly stated in the NDP and converted into Law 812-2003 as a mechanism to improve productivity, efficiency and sectoral transparency, as to ensure the quality of investments in public universities. This mechanism is compatible to that which President Uribe, once elected, had talked about as to how the government would design those performance plans to avoid finance wastage and to guarantee that every peso invested in HE would be translated into enrollments and quality (Uribe V. 2002b).

Interestingly, the language of the national Government regarding such expectations was changing from strong and general claims of misbehavior by public universities as well as direct calls for more efficiency, to a more nuanced discourse that talked about institutional “modernization” and the use of rational indicators. For instance, once elected, Uribe spelled out in his initial Government Plan the promise to “support public universities without politicking” (Uribe V. 2002b), 20. Later, the draft of the National Development Plan (the basis of the Plan) established the commitment to search for performance plans referred restrictively to public institutions, but the final Plan widened the policy on efficiency to the entire set of HEIs, not only public.

It is also striking how the National Development Plan (DNP 2003) spelled out that the government would intervene to define “the ratio between administrative staff, professors and students, with the objective being to establish an optimal number of regular full-time employees”, 185. Further, it said that the academic and research

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53 Productivity and efficiency targeted not only public universities but the Ministry itself and Education Secretaries in every Colombian region and municipality.
workload of full-time professors would be established by adjusting it according to standards defined between the government and the institutions, in order to optimize the institutional capacity for enrollments and research development. Both goals appeared to be abandoned later, or at least they did not come up again in policy projects or systems to assess indicators.

Subsequent sectoral plans on education suggest a much softer discourse in stating a strategy of “Consensus for Performance Management Plans with the Higher Education Institutions” in general (MEN ND), 37. Such a strategy was launched in order to “design together management models for the efficient use of resources which includes the rational appointment of staff according to the size and the complexity of institutions” (Ibid). Beyond the language, intentions clearly stated by the DNP related to the improvement of public universities, including more relevant academic programs for the regions and the adoption of new technologies, either for programs in situ or for distance delivery.

Further to those strategies, the NDP embodied an idea that was filling President Uribe’s head: the creation of confederations of universities within regions to facilitate transfers of students, circulation of professors, and economies of scales to improve efficiency and productivity by exploiting the strengthening of local universities. Those strategies were reinforced in plans by the National Education Ministry (MEN 2003). They, however, did not survive the implementation phase.

4.3.3. Operative goals during the second quadrennial period

During Uribe’s second administration (2006-2010) much of the aims and policy mechanisms that inspired the first enterprise continued to be addressed. However, analysis of statements and gauges within the policy documents suggests
that now goals appeared to be better targeted by the use of quantitative indicators and baselines than throughout the first period. This change can be understood as the result of two consequent processes that clearly happened in the Colombian case; one was related to the availability of more reliable data compiled through improved national information systems and by follow-ups using a strategic project system built in the National Education Ministry. The other natural process was experience of the undertakings of the previous efforts produced adjustments, of course, facilitated by the continuity of most of government officials after President’s reelection.

Throughout the second quadrennial the Government settled on the goal of universal access in basic education and the increase in educational attainment\(^4^4\), whereas the global HE enrollment goal was of 320,000 new entrants for the following four years. This figure represents 20 percent lower than the goal of the first-period. The GER for the Colombian population aged 17-21 would increase to reach 36.3percent by 2010 (MEN 2008).\(^5^5\)

Regarding equity, a new emphasis was presented toward achieving an expansion of coverage by geographically spreading out the delivery of academic programs, a logical point given that the structure of the Colombian HE system had been concentrated mainly in the largest capital cities. The strategy would be implemented through the strengthening of the Communitarian Centers of HE then called Regional Centers of HE (CERES) promoted during the first quadrennial.

\(^4^4\) Not only were policy goals adjusted; new ones emerged in the scenario of the public sector striving in such a manner as to augment the average in educational attainment from 7.9 years in 2005 to 8.5 in 2010 (MEN 2008).

\(^5^5\) The percentage of enrollment rates to be achieved was changed through the implementation process as the result of methodological changes introduced after the population census of 2005. The census of 2005 revealed that population projections based on the census of 2003 did not correspond to the reality of actual population growth, with an overestimation of 5.5 percent points. In addition, the Colombian Ministry of Education changed the relevant age-cohort for HE from 18-24 to 17-21 in order to measure coverage indicators. The targets were, therefore, adjusted since the baselines changed.
With the introduction of such an emphasis, the equity approach was two-pronged: better balance in regional HE supply and a focus on vulnerable social groups, in particular with respect to income. The goals were at least 25 percent of the lowest-income population aged should have access to college, to reach half of the Colombian municipalities with HE provision (only 16 percent of them had such provision in 2003), and to attain 50,000 new enrollments within the CERES.

In opposition to what was stated during the initial government stage, through the second set of plans no target in enrollment numbers was determined for the policy strategy on distance education. However, regarding the use of IT, the design of 100 distance programs by HEIs became a new goal to be achieved in 2010. The number of existing programs with IT methodologies was just 38 in 2006 (MEN 2008).

The student aid scheme was also the subject of renewed goals. Probably the most challenging one was ICETEX student aid coverage for 20 percent of Colombian HE students, only achievable by an increase of seven percentage points in four years. To accomplish such an objective, the Government pursued the allocation of more than double the loans intended during the first Uribe administration (262,235). It also agreed to increase the amount of aid invested to reach a loan portfolio of US$924 million by 2010, which would be 20.6 times the portfolio for 2001. Other aims in the equity approach were to raise the number of loan beneficiaries coming from the lowest two levels of SISBEN from 41.7 percent to one half of the total supported students by 2010 and to distribute 100,000 student maintenance grants.

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56 From 2006, the Government decided to use the Colombian Identification System of Beneficiaries of Social Services (SISBEN) to determine and count the number of low income students benefiting from policy efforts such as student aid. This system has information compiled through surveys administered by the National Planning Department to the Colombian population to establish their socio-economic situation in order to identify those individuals eligible for social subsidies in health, education, housing, and employment among others. In the case of HE, the percentage described above was expected to be addressed by the enrollment of the three lowest-income groups of eligible beneficiaries (out of six).

57 Own calculations according to data in pesos drawn from the Colombian Ministry of Education (2008b) and ICETEX (2001). Figures originally in Colombian pesos were converted to US dollars (with a representative rate of COL$2,426 per dollar) and are reported in constant values for 2006.
Regarding sustainability and the expansion of the aid scheme, the Government charged ICETEX to attract money from the private sector. The second Education Revolution plan also included the goal of creating a guarantee system that would recognize financial restrictions for students and estimate their future income.

During the first government period the desertion of students from the system had already concerned President Uribe and his team. The initial government plan cautioned how the dropping out had increased during the three years prior due to a raise in the share of educational costs within household expenditures. Only during the second quadrennium did empirical studies warn authorities about the fact that the rapidly expanding enrollment had taken in students with lower academic ability, and therefore, more prone for departure.

During the first quadrennium, except for a complex and unclear target introduced in the ER plan of “to retain” 80,000 students in public universities, no plan established a quantifiable target for plummeting dropout rates. In sharp contrast, plans launched in the second quadrennial were more explicit in addressing concrete measures to reduce dropping out.

For the second term, some goals and mechanisms were reclassified and presented within different policy topics. One of these goal deals with the strengthening of technical and technological education, initially part of the coverage policy and then a fundamental issue within the policy on relevance to enhance national productivity and competitiveness. This change suggests that the Government would have recognized a problem not only related to limited coverage in the non-university sector of HE, but an existing inverted pyramid in the HE structure that did not correspond to the Colombian occupational structure (MEN 2008). For instance, the large mass of students was enrolled in university programs conceived to train
professionals for middle management positions that just happen to be scarce within
the labor market (MEN 2008).

Consequently with the aforementioned, a new goal was stated in order to
adjust the pyramid and to change the enrollment composition. The target of a non-
university sector holding 34 percent of HE enrollments by 2010 can be drawn form
the Colombian Vision 2019 that was compiled following a two-year process of
discussions and prospective analysis by politicians, officials, consultants, and experts
(DNP 2005). The Colombian Ministry of Education in turn established the goal of
achieving 200,000 new enrollments during the second quadrennial in non-university
programs. This implies that a massive 62 percent of the prospective global enrollment
growth would occur within technical and technological programs.

Another strategy linked to the promotion of the non-university sector emerged
for policy reform by the induction of vocational technical schools to articulate with
the HE sector. A new goal was to have 30 percent of those schools with senior
students enrolled, simultaneously, in technical or technological programs offered by
colleges or the SENA. As of 2006, the figure was 2 percent.

As regards the SENA itself, the Government already had begun to count part
of its offering in the HE statistics by the time the second governmental term began.
However, neither all of its technical and technological programs had been
incorporated into the process of quality assurance stated by the Education Ministry
nor had its enrollment reports been adapted to be collected by the National
Information System of HE (SNIES). Despite being more a quality and efficiency goal,
the government set it as a new goal for relevance in completing the evaluation process
of its technical and technological programs through the quality assurance system
(MEN 2008). Subsequent policy efforts would show that the task was not trouble-free
because of the legal nature of SENA as an autonomous entity and its traditional practices of creating programs without external authorization or licensing. But, in spite of political tensions and conflict between the Education Ministry and the SENA that went as far as court claims (*Consejo de Estado*), the SENA turned out to be one of the major contributors to enrollments in the balance sheet of Uribe’s administration.

During the first government period, the battle for more efficiency in public universities was even more troublesome than attempts to incorporate the SENA into the HE quality assurance system, at least concerning the goal of budget allocation by means of performance measures. The first attempt brought a fierce suit before the Constitutional Court by the Universidad Nacional in which the principle of institutional autonomy won, as the next chapter will point out. Nevertheless, the government laid the groundwork for a process of indicator-based evaluation and the performance-based allocation of certain investment resources.

The changed language of the new plans suggests, once again, a notable shift in the government’s strategy, based less on legal regulation than on persuasion and negotiation. The mechanisms coincided with WB statements focusing on the achievement of sustainable financial systems and the use of incentives for fiscal efficiency (World Bank 2002a). The new approach by the Colombian Education Ministry included an incentive system to enhance institutional management at HEIs that allowed them to increase student coverage and academic quality. The new goal then spoke of “greater autonomy through the modernization of the HEIs” (MEN 2008).

In the *Colombian Vision 2019* governmental authorities and national players restated once more how public universities were funded, based on historical
conditions fixed by Law 30/92 without reference to their performance. The new Education Revolution plan (2007-2010) did not give up on the idea of changing those patterns but decided to propose an adjustment in the criteria for resource allocation by taking into consideration variables of performance (MEN 2008).

4.4. Access policy goals addressed by prior government periods

Several prior national development plans had already indicated a concern for the expansion of HE opportunity, but few had established operative goals in enrollments that can be categorized as both ambitious and specific. Special attention deserves to be paid to President Betancur’s Development Plan which in 1983 was preoccupied with those Colombians who had been excluded from educational opportunities (DNP 1983). HE access and overcoming social and regional inequity became an explicit and very high priority of education policy – its main strategy being the creation of the Universidad Nacional Abierta y a Distancia (The Open and Distance National University). The intended university would eventually create 200,000 new places which implied a growth rate of 60 percent. When implemented distance enrollments and in situ would increase the gross age cohort coverage 6.2 percent points to reach 14.5 percent at the end of his government period in 1986 (DNP 1983). His endeavors fell behind the goals, resulting in roughly 81,000 new enrollments and a growth of 1.5 percent in GER.58

Contrastingly, the Open and Distance National University became an achievement that is widely acclaimed today, along with the existence of branches of this institution across the nation. The optimistic projection of progress in access by President Betancur, however, was accompanied by an awareness of several

58 Author’s calculations using ICFES (1975, 2002) and MEN (2010a, 2011a)
troublesome features of Colombian HE which in fact changed little during the subsequent 20 years: low enrollment and graduation rates and a high concentration of HE supply in the large cities. Subsequent presidents recognized the results of HE expansion during and after the Betancur administration, but most of them also mentioned the persistence of these problematic features as well as commitments in face them.

An important exception is that during Virgilio Barco and César Gaviria’s administration when policy priority had a different focus: universalization of primary education. This approach should be seen in context: In 1991, during Gaviria’s administration, a new Colombian Constitution was enacted in which a compulsory basic education law mandating the enrollment of 5-15 year olds was promulgated as well as the state provision of free basic education. By 2002 this resulted in the achievement of 90 percent net primary enrollment rate (UNESCO 2005).

59 Both governments (1986-90 and 1990-94) coincided historically with two important international events that underscored this goal for all developing nations. One was the ratification of the Convention of the Rights of the Child led by the United Nations in 1989; and the other one was the World Conference on Education for All in Thailand spearheaded by UNESCO in 1990. International policy attention to achieving universal basic education would have an echo in Colombian governments, since in 1990 the country’s net primary enrollment rate indicated that 30 percent of children were excluded from school (UNESCO 2005). This fact also reflected a shift in the WB aid assistance for Colombia, from projects supporting vocational training and skilled manpower improvement to an emphasis on primary education initiatives. In 1968 the WB started assistance programs to the Colombian education sector with three projects that were developed during the 1970s. These projects underlined the need for skilled manpower and supported the introduction and expansion of diversified secondary education as “a new concept of education into the Colombian school system” (World Bank 1968). The focus changed during the 1980s, as two new WB projects were implemented in Colombia addressing, for the first time, the enhancement of primary education coverage and quality. This shift matched the trend in overall WB assistance: A reduction in the number of vocational projects supported by Bank and an increase in aid for primary education improvement (Psacharopoulos 2006). This shift in WB policy was partly based on various studies in the later part of the 1980s, which identified primary education as the educational level with the highest rate of return (Psacharopoulos 1985). Several empirical studies conducted specifically in Colombia confirmed the same trend (Psacharopoulos and Zabalza 1984) as well as the finding that vocational schools did not provide increased labor productivity (Velez and Psacharopoulos 1987). For HE the Inter American Development Bank IDB was for a long period more important than the WB. In fact, Levy (2005) points out a tacit understanding that for Latin America the IDB would have the lead in HE. This changed in the main periods of our study.

60 Basic education corresponds to one year of pre-primary education, five years of primary education, and four out of six years of secondary education.
Later President Ernesto Samper (1994-98) not only established as one of his main aims the universalization of basic education, but also set out to achieve “equitable access” to HE. Samper spelled out in his *Salto Social Plan* the insufficient HE enrollment rate that reached just 11.5 percent in 1992 and the inequitable distribution of HE participation by income.

It is worth highlighting an important event during Samper’s administration (from 1994 to 1998) that helps contextualize its policy approaches to education. The launching of the General Education Law No.115-94, during the last year of Gaviria’s administration, mandated the preparation of a 10-year national education plan to start in 1996. The first decennial education plan corresponded, then, to Samper’s administration and was indeed enacted after ample and participatory discussion (MEN 1996). The plan compared again the low Colombian HE enrollment rate (11.5 percent) to HE coverage in other Latin American countries such as Uruguay (42 percent) and Argentina (39 percent). This 10-year plan set forth the goals to duplicate enrollment rates in HE and high school (grades 10 and 11) as well as the diversification of HE toward non-university programs.

President Samper efforts were not limited to the accomplishment of the decennial plan; they included the establishment of a HE policy through the National Council of Economic and Social Policy (CONPES 1995). Here the main goal was to reduce inequality by facilitating HE access to three specific groups: Students coming from the lowest three income strata, individuals located in underrepresented regions and national borders, and, perhaps for the first time explicitly mentioned in HE policy plans, Colombia’s ethnic groups (CONPES 1995).

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61 It can be translated as the Social Enhancement Plan.
Samper’s ambitious loan plan sought to grow student loans either in public or private HEIs from 67,000 loans in 1995 to 129,000 in 1998. To achieve this goal, the President’s team recommended that ICETEX prepare a project for an external loan from a multilateral bank (CONPES 1995). Together with President Gaviria’s plan, it appears to be the most tangible intention during the 1980s to expand the student loan portfolio. President Gaviria had already pointed out the low ICETEX loan coverage (only 7 percent of HE students), which was limited to finance tuition only. Gaviria’s plan was to create a special loan fund for financing tuition and stipend directed, initially, at low-income undergraduate students enrolled in public universities. The amount of this fund was set at USD$94 million\(^{62}\) (DNP 1991).\(^{63}\) We will see (Chapter 6) that during the Samper administration enrollments in HE grew more (relative terms) than in any other government period from 1970, including the period of Education Revolution. The amount of financial resources devoted to aid was also expanded during Samper’s government. However, as ICETEX reports pointed out, the increased tuition during the late 1990s reduced the impact of expanding aid to a greater number of beneficiaries. Samper’s goal to double the beneficiaries of student aid fell short since only 39.3 percent of this figure was achieved\(^{64}\).

Another Presidential term, Andres Pastrana’s, concretely established a goal to progressively transform the existing scheme from entirely subsidized public supply to a more balanced loan system that might contemplate grants (DNP 1999). By so doing, Pastrana moved to target specific public expenditures to enable the system to reduce

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\(^{62}\) Value converted into US dollars to the market representative rate of $693.31 by November 1991. The value in COL pesos was about $65,000 million.

\(^{63}\) Previously President Barco had, but more abstractly, advocated the consolidation of student loan schemes provided by the private sector and the creation of scholarships for students from poorer households (DNP 1987).

the enrollment gap between high- and low-income students. His *Change to Build the Peace Plan* stated that the lowest two income quintiles represented only 12 percent of the HE student population, in addition to the fact that 2/3 of these bottom income students were enrolled in private institutions (DNP 1999).

Sixteen years earlier, Betancur had also enunciated the need to address the inequitable access to low-fee public universities where many high and middle income students enrolled and were subsequently subsided (DNP 1983). President Barco’s plan (*Social Economy Plan* 1987-1990) explicitly mentioned the notorious inequity in the state resource distribution to the detriment of low-income groups. President Samper set out to introduce measures that would ensure greater efficiency toward a more balanced distribution of educational costs among students according to their financial capacity. In these ways, public universities were targeted in criticisms by governments prior to 2002 because of their regressive nature which favored subsidies for few, wealthier students.

In addition, both prior and after 2002 public universities were targets of judgments by governments for their inefficiencies based on comparing expenditures with their coverage and quality. For instance, governmental concern of a funding allocation mechanism to public universities and the attempts to identify efficiency formulas are as old as 1983 and are common to various governments. In his *Change with Equity Plan (1983-1986)* Betancur pointed out the governmental inefficiency, which often increased public finance to HE but repeatedly dealt with budget deficits. President Barco emphasized the lack of budget planning mechanisms and the problems of the allocation criteria (DNP 1987). One of his major goals was to enhance efficiency within the educational apparatus through an equitable re-allocation
of resources. Barco’s plan combined strategies for more public entrepreneurial universities such as the rationalization of resources and the diversification of income sources.

Later, in the *Pacific Revolution Plan* of President Cesar Gaviria (1990-1994), mention is made of the disparities in efficiency indicators for the administration and finance of public universities. The plan also warned about the high dependence of public universities on state funding and how enrollments in such institutions did not grow at the same pace as public finance did during the 1980s. Gaviria established a policy of achieving a more effective allocation system but, as previously mentioned, through redirecting public expenditures towards primary and secondary education. The planned allocation system included a formula for cost recovery as a source to increase public university income. His long-term goal was for public universities to obtain via tuition a cost sharing by families corresponding to 33 percent the HEIs’ expenditures. In 1990 it was just 5 percent according to Gaviria administration’s NDP.

President Samper would later concur that existing resource allocation mechanisms did not produce adequate enrollment expansion, efficiency or quality. His goal, quite similar to Uribe’s initiative, was to correct the inertial allocation of operation resources within the public sector of HE in order to address quality and coverage indicators. The CONPES document of 1995 even asked the Ministry of

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65 One surprising goal, not because of the system itself but due to its objectives, was the creation of a state university system to achieve administrative homogeneity in the institutions of the systems, to make possible the rationalization of resources, and to increase state control over private institutions, among others (DNP 1987). Such a goal appeared to be close to the Continental Model of HE with a strongly powerful national government and regulatory authority (often the Ministry of Education) that establish prior rules and institutional inspection to ensure the accomplishment of HE as an integral part of public welfare (Clark and Youn 1976; Clark 1983).

66 The plan compared the student-professor ratio and indicated how some universities of similar academic complexity held a ratio of 5:1 while in others it was 29:1.

67 Despite the progressive reduction on unit costs in public universities by 1995, they were still higher than private counterparts of the same level of complexity (CONPES 1995).
Education and the DNP to fix the criteria for the distribution of resources to investment and the Ministry of Finance to use performance indicators as the basis for operational budget allocation across public universities.

Pastrana went further in stating that public universities acted against transparency because of “the mediation of political patronage and other means outside the university” in state funding allocation (DNP 1999), 218. Moreover, his NDP alluded to the fact that public universities protected themselves by using a debatable interpretation of autonomy that placed them accountable for neither the use of resources, nor for their results.\textsuperscript{68} A resulting goal, then, was to once again shift the direct HE allotment to one based on performance measures in enrollment levels, complexity of services, quality, and income efforts. Such a goal was thought to be the result of an evaluation system convened between universities and the government, and compatible with institutional autonomy.

When the task force (led by the WB and UNESCO) was presented in Colombia by 2000, participants (mainly rectors and vice-rectors of the top Colombian public and private universities) recognized the important policy reforms intended in the past, but “in the absence of a clear consensus and strong political willing, these proposals had not been translated into concrete decisions and measures” (Salmi 2000), 1.

\textsuperscript{68} The Colombian Constitution enacted in 1991 endorsed the right of the state to supervise the provision of educational services as well as the principle of university autonomy. Such a principle was reinforced by Law 30 in 1992 that regulates (still today) the Colombian HE system in which autonomy is guaranteed for each HEI.
Conclusions

Each of the goals—and especially the aggregation of them – on enrollment number and rates, and regarding the number of beneficiaries as well as the amount of student aid can be counted as potent. As observed, few prior initiatives committed themselves to such a varied set of goals and at the same time, to the vigorous amount of change in access improvement intended by the Educational Revolution. The closest precedent to Uribe’s group of goals lay in the Samper education plan and even that fell short of the Uribe reform package.

The Education Revolution initiative on access also embraced multiple goals beyond just an increase in enrollments and expanded age cohort coverage. They included commitments regarding both regional and social equity, including objectives of increased affordability of HE by low income students. If translated into efforts, these goals are often referred in literature as enabling policy engines toward better access and persistence conditions in HE (McDonough and Fann 2007; Paulsen and St. John 2002; Gandara 2002; Usher and Cervenan 2005; Hayton and Paczuska 2002; Strach 2009).

The connection between goals and enabling factors against access barriers does not mean in itself that Colombian policymakers in fact based their design of policy goals and choices by drawing from any particular theory of access policy or justice. Instead it would suffice to say that those goals enunciated in plans go beyond of a simple search for student number growth to entail some broad notions of social justice. As such, public policy was a liberal intervention intended to equalize opportunities for individuals and social groups with disadvantaged conditions. The Education Revolution goals embraced crucial elements that (whether intended or unintended to be comprehensive and integral) match with the concept of access
emphasized in the theoretical framework on what access should be conceived beyond entry. As argued, this is an inclusive concept that involves not only the point of entrance to HE, but those preceding and subsequent conditions (Ruppert et al. 1998).  

While multiple and varied, Colombian access policy goals reflect worldwide concerns and adhere to common patterns of goal statements globally. The difference of the Education Revolution plans may lie in the boosting of concrete, significant numbers linked to a variety of access indicators to be achieved in a short time span.

Another conclusion in the identification of goals refers to the character of goal statements. These were presented as being the product of rational and planned processes. Most operative goals are linked to numbers and quantitative gauges. This is especially relevant regarding the second quadrennial set of plans (national and sectoral) where baseline indicators were also stated. Another feature of rationality is the profuse presence of diagnoses for the Colombian HE sector in policy plans, although these diagnoses that address the same concerns (e.g. lack of coverage, affordability, and equity) have been typical pieces of both Colombian public plans and a worldwide trend.

Such rational behavior was confirmed through interviews with government officials who emphasized the existence of a two-level goal planning system: a superior and wider level of goals stated in national development plans, controlled through indicators by the DNP and the internal-ministerial goal echelon (p.i. De la Hoz). Evidence of operative goal-oriented rationales is abundant not only in interview content but through the reading of internal policy documents and the observation of

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69 As Hayton and Paczuska (2002) note policy strategies to enhance mass enrollments may be accompanied with a recognition of those social groups in disadvantaged positions to enter the system
the SSP, a project tracking system specifically created for the follow up of targets and performance goals.

As elaborated throughout this chapter, the Colombian Education Revolution plans included goals to reduce particular barriers identified as constraining factors for access, particularly by focalizing in low income individuals and the population located in less-advantage regions. The following reflects an attempt to identify those potential policy goals that were not stated in plans and are found in the literature on access. This examination treats both the focus and the nature of policy goals.

No explicit statement appeared on access goals regarding race or gender (although some efforts were directed to ethnic groups). Considering gender, perhaps the reason is that female enrollment rate in Colombia shows historical significant gains. Currently, the age cohort coverage is, indeed, lower for males. Based on such a fact, a policymaker would say that no gender access policy is required. Nevertheless, a deeper examination of the situation of enrollments by type of institution and knowledge field would tell something further on a potential access policy targeting on women participation (Jacobs 1996; Ayalon 2003).

Except for the continuation of some specific grant programs, surprisingly race was not the focus of access policy as is in other countries, and particularly in the US. Until very recently it was not a subject of data collection by the National Ministry of Education and this appears to reflect the lack of relevant policy on the matter, and the absence of concrete access policy goals targeting ethnic minorities (some recent efforts show interest, especially, on student aid for indigenous populations).

Such groups were recognized in previous scholarly works as those with limited opportunity not only in developing countries but in developed ones together with minorities, rural inhabitants, and women (Apostal and Bilden 1991; Bayou, Gouel, and Sauvageot 2005; Carnevale and Rose 2004; Casazza and Bauer 2006; Cuetara 2001; Haller and Virklr 1993; Hurtado et al. 1997).
The Colombian government bypassed other potential goals as well. The most important one might have been to increase the academic preparation for HE entrants\textsuperscript{71}, found in the literature to be a major constraining factor for HE access (McDonough 2004). The analysis of efforts will show the lack of academic ability to be the most constraining barrier to achieve access to HE. Such omission is especially relevant as similar to what Siegal and Tienda (2007) found for the US case; most prestigious Colombian HEIs rely for admission decisions on test scores and, of course, on academic ability for continuation, which increases access barriers for those individuals who were ill-prepared in prior schooling.

\textsuperscript{71} The absence of an explicit goal on academic preparation as enabling policy for resource availability did not reflect a lack of public policy strategy. There is in fact strong evidence of policy efforts to increase education quality at previous educational levels (primary and secondary).
CHAPTER 5
POLICY EFFORTS AND IMPACTS

This chapter more specifically presents relevant findings on policy efforts regarding access and equity and on the main results of such policies. The chapter also draws upon the rationales behind the policy choices made by the Colombian Government during the implementation of the Educational Revolution Plans (2003-2010). All of these are viewed in the light of World Bank’s prescriptions for the country and its assistance to Colombian education authorities in improving access to HE. The chapter also contextualizes equity and access policy efforts and their relevant impacts within a broader set of competing needs for improving Colombia’s system of HE. For instance, along with access and equity, efficiency and system coordination played a role within a system in which state supervision coexists in tension with institutional autonomy, especially as enacted in constitutional principles.

The analysis of policy efforts and policy impacts is aimed at solving the first two research questions:

RQ1: To what extent were policy goals on higher education access, as envisioned in the Educational Revolution, translated into policy efforts?

RQ2: Is there evidence of policy impacts consistent with those policy goals and efforts?

We will see that policy efforts not only were multifaceted, but major and consistent with the goals. One positive set of findings is presented on impacts on access to and equity in Colombian HE that is consistent with policy goals and efforts across a wide range of indicators. Another group of goals was partially achieved whereas some efforts produced unexpected negative effects on access. For instance, the case shows how the efficiency policy (linked to the enrollment objective) in the use of state
resources allocated among public universities produced unforeseen inequalities and affected the affordability of HE in some Colombian regions. Findings thus confirm the first two stated hypotheses and suggests mixed results attributable to policy.

The Colombian Government explicitly committed to improving access to and equity in HE as shown in policy documents (MEN 2003, 2006, 2008b) and indeed, developed multiple and major efforts. Equitable access was part of manifold policy objectives in which Ministry authorities engaged, including the increase of coverage, equity, quality, efficiency, and relevance of HE.

The WB also set goals and efforts on equity (World Bank 2002b, 2002d, 2008a, 2009). Actually, its initial, quite ambitious goals were to improve the quality and equity of the Colombian system, and to enhance the relevance of HE. By doing so, Colombia would achieve goals for society such as broadening its human capital formation and enhancing the country’s competitiveness in the global market.

In practice, as in most countries, the Bank’s involvement was fragmentary (World Bank 2002a) and narrower than the one announced by the agency and the Colombian Government in terms of the variety of efforts to increase access. Its contribution rested mainly on the provision of an external loan to expand the Colombian student aid program. Nevertheless, this contribution went beyond the lending function to include diagnoses, prescriptions, participation in some consensus processes with HE representatives, and indicators of efficiency and coordination by Government agencies.

The chapter begins with a brief conceptualization of efforts and impacts on policy. It then presents the main findings in the identification of concrete efforts made by the Colombian Government and the WB with regard to access to HE. The analysis of impacts that developed from policy undertakings comes along with the
identification of efforts. Thus, it assesses efforts which produced major impacts to which much analysis is devoted (such as on student aid) and explores those less successful efforts that were adjusted over time or that led to a shift in goals. It also examines how and to what extent the stated goals were translated into efforts and impacts.

While this exploration used a goal-based approach to identify main undertakings (Morra and Ritz 2009), the examination was also effort-sensitive, which means that some efforts were identified without having explicit relation to declared goals (“goal-free assessment”, according to Morra and Ritz 2009). Such a pattern was also found by Levy (2005) in his study of exporting progress in Latin America and by Bastiaens (2007) in his research on international assistance for Indonesian HE.

Together with the acquisition of understanding about the instruments selected by policy agents to accomplish goals, the analysis initiates a connection to findings of previous research on access policy, further developed in the concluding chapter. In an annex to this chapter, policy goals stated by the WB and the Colombian Government were systematically compared to efforts and impacts by using a set of indicators stated by agency and Ministry authorities. Some indicators are restated or added by the author for better understanding of efforts made in access to Colombian HE.

5.1. Conceptualization of efforts and impacts

For the purposes of this research, efforts refer to specific undertakings or actors’ actual activities (Levy, 2005) ideally aimed at achieving goals. Policy efforts include resources, instruments, and processes (Bastiaens 2007); resources refer to technical, human and financial means of support provided by policy implementers; policy instruments are instances where decisions are issued such as plans, legislative
acts, and projects by policy makers as well as mechanisms of implementation such as systems, programs, activities, products or services directed to the communities of beneficiaries; processes involve negotiation phases (Bastiaens 2007) and persuasion mechanisms (Majone 1989) within an environment of mutual, reciprocal dependences (Pfeffer and Salancik 2003). In the international assistance context, efforts are “the forms that philanthropy [and assistance] comes through funds, ideas, expertise and other enabling resources shared with or turned over to recipients or contracted intermediaries” (Levy 2005), 6.

Impacts are policy results as achievement of goals; direct transformation of targets (Levy 2005) and efforts’ effects intended by policy. For this research, impacts differ from outcomes (Chapter 6) as the former is a tangible or numerical product that can be attributable to a specific policy undertaking and can be comparable with related goals. Outcomes, on the contrary, are results not restrictedly attributable to policy as they could have been influenced by other outside forces and factors independent to the implementation process (Hill and Hupe 2002; Bastiaens 2007). Impacts are used to assess both policy efforts entailed by government authorities and the international assistance agency.

5.2. Dimensions of access policy

To facilitate the analysis of efforts and impacts, a set of access policy dimensions and access conditions have been elaborated that help conceptualize categories used (Chapter 3). According to the analysis, access policy dimensions have been separated into two categories: Equity and the provision/financing policy, although the categories overlap to some extent. For instance, policies on equity that address issues of disparate ability to enroll by individuals located in disadvantaged
geographical areas may also entail the supply of HE by providing support to deliver in isolated areas, these then, also representing problems of provision.

5.2.1. The equity dimension

As stated in the conceptual framework, equity embraces policy at the individual/social group level aimed at overcoming barriers related to individuals’ characteristics. It attempts to create enabling conditions for access through policy efforts intended to act against limitations regarding a) poverty or financial constraints; b) low academic ability from previous levels; c) geographical location; d) limited resources of information for choice and aid programs; and e) inequalities in access referred to ethnicity, gender, or special conditions such as disability. These limitations which were found in the literature as restrictive factors for access were taken to drive the analysis of policy efforts and policy impacts and to present the findings below.

5.2.2. The provision/ finance dimension

Provision and financing initiatives in terms of access operate at the system level and are aimed at coping with the demand for HE. In this regard, policy resources, instruments and processes address system attributes whether increasing capacity (number of places), lowering admission standards or favoring a type of HE for ease of access (e.g. open access systems).

5.3. Policy efforts and impacts of the Educational Revolution Policy

Ever since the 1980s, Colombian development plans had recognized that efforts were required to address the inequitable access to low-fee public universities and some measures were proposed by governments toward a more balanced distribution of educational costs among students according to their financial capacity (DNP 1994,
1987, 1983). Nevertheless, few concrete efforts were made, except for the plan “Salto con Equidad” in 1994-1998 under the Samper administration. By the start of the 21st century, Colombian governments had shown more tangible efforts to improve access, and equity.

5.3.1. Equitable access for under-represented groups. The policy emphasis

The approach of policy efforts on equity in access by Colombian authorities was two-pronged: better balance in regional HE supply and a strong focus on underrepresented social groups, emphasizing low income families. With less scope, some undertakings developed (mainly during the second quadrennium) targeting ethnic communities, the disabled, individuals located in outlying areas, and those affected by violence (displaced individuals, children and adults who left illegal-armed groups, and victims of landmines). These groups were included as populations with special and vulnerable conditions (MEN 2006).

During the analysis of policy documents and interviews, no explicit policy effort was identified on gender or participation of women in HE for any particular access policy during the Education Revolution periods. Despite women historically gaining access to Colombian HE, easily shown through Education Ministry statistics, no concern on policy or study has explored their participation by fields of knowledge or type of institution which in previous research is found to be disparate with men’s enrollment as is a widespread global pattern (Jacobs 1996; Cuetara 2001; Leslie, McClure, and Oaxaca 1998; Raju 2008).

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72 Policy efforts toward these other social groups were to promote best experience exchange practices among institutions with special admission programs. A special fund for increasing access of disabled people was created when the government period was ending up. The inclusion of displaced-by-violence high-school students to receive grants from the state fund “FEM” (for dual enrollment) was also an effort during the second quadrennium.
Concerning ethnic communities, efforts were directed to the expansion of a grant program for Afro-Colombian and indigenous groups established by Law during the 1990s and the inclusion of indigenous students as grant beneficiaries of the dual enrollment fund named “FEM”.

In 2007, ICETEX – the national agency in charge of student aid – acknowledged that its aid programs for increasing equity (Acces Project) did not have any specific focus on indigenous or Afro-Colombians, but expressed that “with the substantial increase of loan access for low income population it is expected that indigenous can overcome, through Acces loans, one of the most critical barriers for their enrollment in HE: financing” (ICETEX 2007). During the second quadrennium, however, ICETEX increased the grant portion of the student aid from 25 percent to 50 percent to indigenous beneficiaries.

Only since 2007 and 2008 respectively, did the Ministry of Education and the student aid agency ICETEX include race as a characteristic of the student population and loan beneficiaries to be collected by HE institutions (and reported to the National Information System of HE). Yet provision of these data is not mandatory as gender is. Such a difference does not imply greater concern about gender than on race, being the former a basic category routinely asked about nationally and internationally, even without a special equity concern.

In this way, the Colombian case fits what Clancy and Goastellec (2007) refer to as the “social construction” of diversity and its associated inequalities in HE, fundamentals for policy formation, that can be captured by analyzing the categories of data collected (and missed) by national information systems. They assert that social categories defining the under-represented make sense in the context of each nation, regarding its history as well as in a broader understanding from a global perspective.
That way, under-representation can be connected with geographical origin, ethno-racial, social-class, socio-professional or socio-economic categories (Clancy and Goastellec 2007).

Colombian HE policy efforts on social justice, with a dominant construction in the social agenda for the poorest, may be linked to some identified both national and worldwide factors: a historical one, tied to social inequalities in income distribution within Colombian society and the increase of poverty and destitution through the 1990s; and the other one, as the product of a more general social and liberal policy agenda after the enactment of a new Colombian Constitution in 1991, based on subsidies to increase coverage of social services (including education, health, housing, child nutrition, among others).

In addition, pressures to establish public programs to combat poverty, including those for improving HE access come from a world concern, visible in different scenarios such as the Summit of Americas (2002 and 2004); The Millennium Declaration, and the IDB, WB, United Nations, and CEPAL Mandates (López 2006). Those events took place around the same time as the appearance of policy documents on education and on general development and prospective plans during the Colombian Educational Revolution era.

In 2002, the WB had already warned that lack of access to grants for low-income students (as well as the inequalities in the previous education levels) prevented the Colombian HE system from improving equity standards. The background study by the agency (World Bank 2003) also criticized the student aid scheme by ICETEX as being limited to very few lower income students, since most loans required two guarantors (World Bank 2009).
5.3.1.1. Access policy to overcome poverty and financial constraints

To address social equity objectives, a concrete strategy in Colombia saw the creation of a massive student loan program to expand funding, focusing on low income students. The aim was established even during the Presidential campaign to increase ten times the number of beneficiaries of tuition loans with the involvement of the WB.73

The Colombian student aid policy was designed taking account a few prior, not fully successful Bank experiences in Latin America, particularly in Venezuela, Mexico, and Chile, and in Jamaica in the Caribbean. Some warnings of previous projects in those countries referred to the presence of outside factors such as politics, economic recession, a shift in the ideological and political vision of policy makers, and changes of government representatives during the implementation process (p.i. Salmi). Other concerns from previous experiences were the capacity to press and achieve loan repayments, and the ability to build own assets toward system sustainability in the long term.74

To ensure adequate management of financial resources for student aid, ICETEX transformed in character, becoming a financial entity with administrative autonomy and its own assets. Financial resources were progressively increased, not only because of the Bank loan, but through improved practices in the collection of old

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73 Even though 86 percent of the budget (USD 200 million) in the first project was devoted to undergraduate student aid, it also comprised resources for some other endeavors such as the enhancement of doctoral education in Colombia, the improvement of management information systems at the Education Ministry, and the creation of a labor market observatory.

74 The Venezuelan aid system (Fundeayacucho) failed to be sustainable because of a shift in the government officials from one inclined to replace grants for student loans to make the system financially sustainable to one that censured such a program as imposed by the WB. In addition, the economic recession and the devaluation of the local currency impeded the inclusion of commercial banks within the model designed for student aid. Jamaica had an unsuccessful repayment process and Mexico’s two initiatives were ineffective in the long term. In Mexico, a public aid system could not be institutionally strengthened because of politics and the private one did not reach sustainability because it lacked own assets (p.i. Salmi).
debts and the leverage of additional money from third parties to increase the ICETEX portfolio (p.i. Villegas). The WB project original expected investment was USD$252 million and passed indeed to $417 million because of the contribution by HE institutions and municipalities (World Bank 2009). The WB loan, nation budget’s contribution, and the financial support of third parties enabled a disbursement of a total of US$1.47 billion from 2003 to 2010.\footnote{Author’s calculations using data provided by ICETEX (1996, 1997, 1998a, 1998b, 2000, 2001, 2002a, 2002b, 2010a, 2011). Resources were calculated in constant pesos of 2010 and then they were converted to US dollars at a rate of 1913 Colombian pesos per dollar.}

The WB played its role in ICETEX improvements, apparently less so in the amount of the provided loan as in setting some good managerial practices. According to the ICETEX President, what most attracted the Colombian Government to the World Bank was neither the money nor the technical assistance, but the opportunity to have management schemes that followed international standards. Such conditions, the President argued, were “the best pretext” for changing an old and slow-to-act administration (e.g. accounting, purchases, allocation, and portfolio recovery) and by so doing, transforming the Colombian agency and the student loan system itself.

The WB partnership served as well to gain credibility in the financing process and to achieve cooperation with the Colombian HE institutions (p.i. Villegas). That is perhaps one of the most interesting achievements of ICETEX to secure the commitment of the great majority of Colombian autonomous HE institutions to the project. Not only did they become a third party in administering the student loan application that implied institutional expenses, they also agreed to a financial contribution through a “shared sustainable fund” created by ICETEX to cover the portfolio for risks resulting from student dropout. Furthermore, some HE institutions committed themselves to either a loan or a subsidy corresponding to 25 percent of the tuition for students from the bottom two strata.
One strong reason for such responsiveness from the HE sector lay in the financial incentives institutions received by means of tuition income, disbursed directly from the government aid agency. No institution, especially private, which is mainly sustained by income from tuition, wanted to be excluded from fresh public funds in an increasing market-driven environment spurred by demand-based financing strategies.

In negotiating the WB involvement in HE, Colombia appears as an active partner particularly headed by ICETEX. Not only was the Colombian government able to come forward with proposals of involvement, but to increase by fourteen times the amount of the initial loan proposed by the WB and to change the traditional repayment term from 17 to 25 years. The newly agreed repayment period was to coincide with the term of student loan portfolio recovery (p.i.Villegas). By doing this, the Government lightened debt reimbursements.

Grants that were also proposed by Colombian officials, in addition to subsidized loans, were established to pay tuition for the chosen college after the admission process and allocated among students coming from the lowest two of the six socioeconomic strata. From 2007, students had the possibility of using such grants at their own discretion either for paying off part of the tuition, or as a stipend. Time for repayment was extended more during the Educational Revolution periods than in prior aid programs (to be after studies and double the duration as an undergraduate) and interest rates on loans were reduced and categorized according to income.

Despite the fact that international and domestic agencies considered employing an income-contingent repayment system similar to the one in Australia, such an idea was finally dropped by the Colombian officials, citing difficulties related to the structure of repayment control, based upon tax reports. The repayment amount
was, however, established in 2002 to be a fixed percentage (16 percent) of individual’s income (World Bank 2002b) and after implementation by 2008, it was calculated to range theoretically from 8 to 29 percent of income salaries.\textsuperscript{76}

For those students who took on loan debts during the Educational Revolution, repayment periods were in progress by the end of the studied period in 2010. One cannot too soon properly assess how well students would be able to fulfill their financial responsibilities on gaining access to the labor market, in order to accomplish what one WB official pointed out: “the poor student borrows but it is the professional who repays”.

The inclusion of a grant component in Colombia went against international trends toward its reduction, as McPherson and Schapiro (2002) and St John (2006) have found for the US. Indeed, McPherson and Schapiro concluded for the US case that the emphasis on loans as a source of funding moved away aid support from low-income toward middle-income and upper-income students (2002).

In the case of Colombia, the Bank was in favor of the grant-program based on two-pronged approaches: the first one rested on international experience illustrating loans to achieve limited impact in reducing inequality as low-income individuals tend to be more reluctant to incur debt and get scarce information on educational returns (World Bank 2002b). The second one came from repayment projections that showed how “without assistance, the high tuition costs effectively bar at least half the population from entry into private tertiary education” (Ibid, 44). According to the WB, even the projected combination of grants and loans would enable affordability of non-university HE for all deciles, except the lowest, whereas academic, university

\textsuperscript{76} Author’s calculations from World Bank estimations during project appraisal design (World Bank 2008a)
studies “will remain out of reach for the majority of poor households, not only due to short-comings prior to tertiary education, but also due to the high fees”. 44.

In addition, the Colombian policy greatly favored students who decided on 2-3 year programs, by giving them loans of 100 percent of the tuition instead of only the 75 percent that applied to students enrolled in longer, university education (ICETEX 2007). Despite the fact that public aid clearly favored enrollments in non-university HE programs and that a goal of having 75 percent in share of beneficiaries attending technical and technological education was stated by the WB and the Colombian Government, the low demand for those loans pushed officials to adjust the target as low as 25 percent. This confirms findings by Castro and Levy (2000) for Latin America and by Brunner (2003) for Colombia, that the non-university HE was a still-discredited educational option and was seen as of “inferior status”, even by the poor.

Apart from this miscalculation on the demand for technical-technological type of education for loans, efforts on student aid were consistent with goals. The Government and the WB in partnership substantially achieved the operative goal of redesigning and expanding the loan scheme (World Bank 2002b) from one almost exclusively based on merit (prior to the reform) to one targeting “needy but academically qualified” students, 3.

Most targets on aid were achieved by ICETEX and even surpassed (e.g., amount invested in the WB project due to contributions by HE institutions and municipalities) This finding parallels volume indicators of efforts found by Levy (2005) on international assistance in exporting progress to Latin American HE truly matching goals usually and sometimes even exceeding.

Financial aid efforts resulted in a massive rise in the number of public loans disbursed in 2002 (65,218) to the number allocated in 2010 of 223,558 loans.
From the end of 2002 to 2010 there were a total of 304,033 new beneficiaries of student aid, including all loan lines. 212,867 out of those newly awarded students were assisted with resources from the equity project in partnership with the WB. Regarding the grant portion of the project, the goal was partially achieved as subsidies reached 88,605 disadvantaged students out of the 100,000 targeted by policy (MEN 2010b). Grant efforts reached 41.6 percent of the poorest students that were also receiving public loans.

The analysis shows a significant increase in the number of beneficiaries of ICETEX aid, not only when the Educational Revolution period is compared to the state of student aid in 2002, but when compared to historical trends, as shown below:

**Figure 4** - Number of ICETEX loans allocated to HE students (1990 – 2010)

Data of 2002 is taken from MEN (MEN 2010c) and data of 2010 from author’s calculations using ICETEX database (ICETEX 2010a). Number of loans for study abroad, international scholarships, loans that utilize resources coming from third parties such as funds in administration and *Títulos de Ahorro Programado TAEs* were excluded from the analysis.

Figures and percentages are author’s calculations using data from ICETEX statistics (2010a) and ICETEX progress report (2011) for the year 2010.
Figure 5 – Number of loans - eight-year period comparison


It is important to highlight that because the most robust enrollment was reached by public HE, the student aid program did not fully achieve what policy expected in increasing the number of students enrolled hand in hand with the expanded number of ICETEX loans. From the analysis of figures on enrollments by sector it is feasible to assert that the number of beneficiaries of ICETEX aid enrolled in private HE was higher than the actual number of new students enrolled in private HE institutions. This means that a significant number of students already enrolled in colleges would have substituted their original financial sources to be eligible for subsidized aid (either loans or grants). For instance, the private sector experienced an increase of around 163,700 entrants from 2002 to 2010, a figure lower than that for the new beneficiaries of ICETEX aid during that period (304,033, eighty percent of which attended private HE).
In this respect, the Colombian case confirmed that aid policy cannot ensure the result of having a new enrollee in HE per each new disbursed loan, as Colombian policymakers had hoped for:

“There were high expectations [from the Government] related to student loans. It was thought that every new loan would represent a new enrollment and obviously that was not true, of course; lots of substitution happens. If there is an expanded public aid supply, students will look for it. If it would not be available, they would look for financing in some other places. Thus, it was a miscalculation in planning which was adjusted progressively. We were more realistic and sensible with the 2006-2010 [Education] plan” (p.i. J. Botero)

The circumstances just cited by the former Colombian Vice-Minister of HE brought to the case the sort of considerations McPherson (1995) drew upon, the phenomenon of *subjunctivision*\(^{79}\), when accounting for the effects of student aid on enrollments of low income and disadvantaged students. An exercise of subjunctivision would pose the “what if” question in an attempt to analyze how an occurred situation would have developed differently had something different happened.

With such a decision by the government to expand student loans combined with grants, it is clear that a significant number of students, who were already enrolled within the Colombian HE system before such a policy effort, do so again with the benefit of financial ICETEX support. Such a pattern of substitution of financing sources was warned about in previous research by St. John (2003) for the US case.

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\(^{79}\) Subjunctivision is explained by McPherson (1995) as an imaginary device (authored by Hofstadter) that intends to replay events and to see how the history would change if something different occurs. McPherson warns scholars to balance the analysis by including the changing circumstances outside policy programs that may affect decisions (both by institutions and students) as well as how such decisions are influenced by policy initiatives.
However, among some other benefits\textsuperscript{80}, public aid helped to alleviate burdens for economically disadvantaged families that had already made the financial effort to allow their children to attend HE.

\textbf{Figure 6 – ICETEX loan holders and enrollments in private HE without ICETEX loans (2002-2010)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{ICETEX loan holders and enrollments in private HE without ICETEX loans (2002-2010)}
\end{figure}

\textbf{Source:} Author’s calculations by using ICETEX statistical database (2010a) and micro-data from SNIES (MEN 2011a)

We found that a shift is visible in the social composition of new beneficiaries, most of them coming from the lowest income groups: this participation rose from 37.8 percent of beneficiaries coming from the two lowest socio-economic strata in 2001 to 76.0 percent during the Educational Revolution period (2003-2010) regarding the loan program “Acces” in partnership with the World Bank. For the year 2010 (up to June) this loan program disbursed 83.8 percent of loan volume to students from the two lowest socioeconomic strata and accounting for all ICETEX credit lines, this

\textsuperscript{80} Previous studies conducted by the CEDE at \textit{Universidad de Los Andes} found positive effects of student aid on retention as those students receiving “Acces” loans have a 22 percent lower risk of dropping out than their counterparts without such aid (CEDE 2008). A similar finding was obtained in a study carried out by the \textit{Universidad Nacional de Colombia} (CID 2006). It found significant differences (5.5 percent and 21 percent respectively) in the dropout rates for beneficiaries of public lending programs and their peers without financial aid.
participation reached 74.1 percent in 2010.\textsuperscript{81} Before the analyzed policy intervention, major gains in student aid were for the middle classes with 57.0 percent of the share, as the following figures show. This finding substantiates consistently that policy in the realm of implementation was able to accomplish equity goals and the effort to concentrate public aid resources among the poorest students.

**Figures 7 and 8** - Share of new beneficiaries of student aid by Socio-Economic Strata 2001 and 2010 comparison\textsuperscript{82}

![Figure 7: Share of new beneficiaries of student aid by Socio-Economic Strata 2001]

![Figure 8: Share of new beneficiaries of student aid by Socio-Economic Strata 2010]

**Figure 9** – Years 2003-2010

![Figure 9: Share of new beneficiaries of student aid by Socio-Economic Strata 2003-2010]

**Source:** Author’s calculations from ICETEX archives (ICETEX 2002) and statistical data (2010a).

\textsuperscript{81} Author’s calculations from data of ICETEX archives (2002a) and ICETEX statistical database (2010a).

\textsuperscript{82} New beneficiaries do not mean to be new entering students in HE. It means that they benefited for the first time of ICETEX loans.
Unfortunately, no data related to socio-economic status or income level of public aid beneficiaries were systematically collected by ICETEX prior to policy reform and it was only possible to gather data from archives corresponding to the years 1996, 1997, and 2001, periods in which beneficiaries were distributed over six socio-economic strata groups.

From these collected data, it is observable that even though the prior tendency shows a slight increase in the participation of the lowest two income groups (measured by socio-economic strata), the figures and graphic statistics confirm a substantial change with greater and progressive contribution of these brackets in the share of new beneficiaries of student aid. The greatest proportional losses in participation were for students from middle socio-economic strata after 2001.

Table 5- Composition (percent) of ICETEX loan beneficiaries by Socio-Economic Strata

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</tr>
</thead>
<tbody>
<tr>
<td>1. Lower-Lower</td>
<td>3.86</td>
<td>5.25</td>
<td>7.71</td>
<td>15.9</td>
<td>13.6</td>
<td>15.0</td>
<td>17.40</td>
<td>23.6</td>
<td>27.2</td>
<td>35.3</td>
</tr>
<tr>
<td>2. Upper-Lower</td>
<td>25.37</td>
<td>25.80</td>
<td>30.14</td>
<td>53.6</td>
<td>49.2</td>
<td>50.9</td>
<td>49.37</td>
<td>55.5</td>
<td>55.0</td>
<td>49.5</td>
</tr>
<tr>
<td>3. Lower- Middle</td>
<td>42.69</td>
<td>42.81</td>
<td>43.84</td>
<td>26.1</td>
<td>29.2</td>
<td>26.6</td>
<td>25.04</td>
<td>16.0</td>
<td>14.1</td>
<td>12.2</td>
</tr>
<tr>
<td>4. Upper-Middle</td>
<td>21.29</td>
<td>21.20</td>
<td>13.20</td>
<td>3.3</td>
<td>5.7</td>
<td>5.3</td>
<td>5.66</td>
<td>3.5</td>
<td>2.7</td>
<td>2.1</td>
</tr>
<tr>
<td>5. Lower-Higher</td>
<td>5.40</td>
<td>3.75</td>
<td>3.95</td>
<td>0.8</td>
<td>1.8</td>
<td>1.7</td>
<td>1.93</td>
<td>1.1</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>6. Upper Higher</td>
<td>1.41</td>
<td>1.19</td>
<td>1.16</td>
<td>0.2</td>
<td>0.5</td>
<td>0.5</td>
<td>0.60</td>
<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Coverage of public aid (or students enrolled in HE gaining ICETEX loans) jumped from 6.6 percent in 2002 to 16.2 percent in 2010\(^{83}\), the latter figure lower than the stated goal of reaching 20 percent of HE students (MEN 2008). However, despite this significant increase in the number of beneficiaries, with most of them from the lowest income brackets and the great majority enrolled in private universities (about 80 percent), resources again proved to be insufficient in facing demands for aid, since they were able to satisfy only one half of all applicants during the Educational Revolution. Of course, the expansion of student aid during such a period lead to a spike in demand for aid.

As resources were limited, ICETEX chose among the applicants the poorest with the highest entrance test scores. Therefore, many good students that could have

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\(^{83}\) This variable is calculated by dividing the total number of beneficiaries of loans and grants to study within the country over the total number of students enrolled in HE. The Colombian government registered a result of 18.06 percent by 2010 using a formula that includes only new beneficiaries of loans and new entrants in HE instead of the total enrollment (MEN 2010b).
been eligible based on need and merit (because they had a GPA of 3.4 or higher) actually did not obtain public aid, as agency resources reached as far as those achieving a GPA of 4.0 (p.i. R. Acosta).

**Figure 11** - Coverage of ICETEX loans related to all students enrolled in Colombian HE

![Graph showing coverage of ICETEX loans](image)


By taking into account previous experiences and lessons learned from international assistance, the strategy also looked for and accomplished a “more effective and financially sustainable” public aid (World Bank 2002b), 3. ICETEX resources disbursed for student aid grew significantly higher during the Education Revolution implementation than prior years (25.2 percent on average annually against 8.1 percent from 1995 to 2002). The amount that was given to students in loans and grants from 2003 to 2010 was 3.2 times greater than that distributed during the 8-year
period prior to the Education Revolution. Such achievement also confirms the hypothesized impact of efforts (adjusted by the WB and the government from previous international assistance experience) to be consistent with policy envisioning.

**Figure 12** - Amount of student aid (Constant 2010 US Dollars)

![Graph showing amount of student aid](image)

However, both periods, prior to and after 2002, show significant fluctuation in annual growth rate. Another important observation is the lower growth of aid during the years 1998 and 1999, which reflect the peak of the national economic crisis, as shown below:

**Table 6 and Figure 13** - Amount of ICETEX’s aid disbursed by year for undergraduate and graduate education access 1993-2010 – Constant 2010 US Dollars

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84 The evidence shows a positive evolution in the ICETEX portfolio from USD$ 398.8 million in 2002 to USD$ 861.5 million 2010 (Constant 2010 U.S. dollars) (ICETEX 2011). However, the output is below the goal established in the National Development Plan (DNP 2007) of reaching an aid portfolio of 1.3 billion dollars and a goal subsequently adjusted by ICETEX during the second quadrennium of 913.2 million US dollars (ICETEX 2011). The historical trend shows a consistent increase in the expansion of the portfolio from 1997, without a significant change in the rate of growth after 2002.

85 It is relevant in highlighting the effort made during the period 1994-1996 corresponding to Samper’s *Salto Educativo Plan* which explicitly addressed equity concerns. Despite such a significant relative increase in the amount of aid – higher than during the Educational Revolution period – ICETEX recognized in 1996 that goals of expanding loan beneficiaries were not achieved due to the substantial increase in tuition fees at Colombian universities which absorbed a big portion of state resources devoted initially to grow the number of credits (ICETEX 1997).

86 Loan amounts for study abroad and funds in administration were excluded.
The expansion of student aid beneficiaries during the Education Revolution may be the product of an increase in the amount of resources combined with related policies toward controlled tuition increase that should be around inflation of prior year. Although this mandate was established by Decree in 1994, it has greater impact on adjusting the cost of private HE to inflation trends from 2000s (See figure below), which is two years prior to the reform.

Figure 14 - Annual variation in the cost of private HE compared to inflation

Source: Author’s calculations by using DANE statistics on inflation and on the cost of private HE

5.3.1.2. Other policy efforts on equity to decrease regional, academic and information inequalities

In addition to interventions on social equity and student aid, the multifaceted set of equity strategies implemented by the Colombian Education Ministry included support to decentralizing the supply, affirmative action referred to academic outreach, and the democratization of information.

Regionally speaking, policy efforts implied public resources through open competition among HE institutions for the creation of Regional Communitarian Centers of HE (later called CERES) located in municipalities where the service was scarce or non-existent. The initiative produced an impact of a total of 141 CERES (MEN 2011b) created in small, remote towns funded by the Government and created by joint-ventured private and public HE institutions. While the actual enrollment number (28,761) was far behind the stated goal of 50,000 students and the degree of
quality of academic programs became a concern for Ministry authorities, this effort
allowed the reaching the most deprived populations in isolated areas (p.i. Burgos). 87

The number of CERES created surpassed the target of 100 stated by the
Education Ministry. However, decentralized enrollment may be the product of
combined policy programs such as the expansion of distance education (with more
than 150 new undergraduate programs delivered by colleges and universities with
public support) and strategies of regionalization conducted by public universities on
their own.

Regarding academic outreach, efforts were made especially during the second
Uribe administration, after a diagnosis on the attrition phenomenon that found low
academic ability to mostly predict departure. Policy efforts developed in the financial
support to outreach programs for academic/psychological preparation of students who
accessed HE institutions. Those benefited with public resources for outreach activities
had won competitions for funds sponsored by the Education Ministry based on prior
experiences to promote continuation in college.

Concerning information for choice, policy efforts are visible in the created
labor market observatory and the program “Buscando Carrera” [Searching for a
career] that comprised several tools to make the information on school choice
(including program options and prices) more accessible to aspirants across the
country. This effort comprised several tools such as a website and local meetings to
provide information on college options including local suppliers and types of
undergraduate programs, tuition costs and available student aid. The labor market
observatory, included as a goal of the WB project, searched for transparency about

87 Author’s calculations based on data provided by MEN (2011b).
performance of graduates for each program at every institution measured by
employment rates as well as their entry salaries.

Whereas the observatory was something agreed and planned with the
international partner, Buscando Carrera is illustrative in showing the kinds of local
features that emerged progressively through the implementation process without any
link to prior goals. Indeed, efforts on information for the disadvantaged became
stronger in the number of efforts and more sophisticated from implementers located in
the trenches (Levy 2005) and as a bottom up process (Sabatier 1986).

Interestingly, such policy ideas and strategies were not tied to conceptually
oriented ideas of democratizing information; at least they were neither stated as such
in plans or projects nor in interview content, but to a “strategy to mobilize the demand
toward HE”. This consisted of trying to fill those vacant places in undergraduate
programs with low demand, but officially registered at the Ministry of Education.
However, programs such as Buscando carrera developed by prioritizing
underprivileged and under-served geographical areas.

It is difficult to assess the impact on access to HE based on policy efforts of
academic outreach or dissemination of information for choice, without conducting
more particular studies with those that received such benefits. Nonetheless, previous
research has identified how knowledge on financial aid increases encouragement to
apply for college especially for aspirants from low income families (Fitzgerald and
Delaney 2002).

Even though equity efforts became one of the fundamental components of the
Colombian access policy, other undertakings were made by domestic reformers.
Ministry officials conceived and implemented various programs referred to provide
HE opportunities by expanding the supply side and increasing efficiency in expenditures to enhance enrollments, among others.

5.3.2. Provision and financing policy for access

5.3.2.1. Financing

During the first four years of the Educational Revolution period (2002-2006), public allocations to HE as a percentage of the GDP stagnated following a decreasing trend prior to 2002. However, such percentage increased at the end of the Education Revolution (0.82 against in 2009 against 0.56 in 2002). The average of public expenditures as a percentage of the GDP during the Educational Revolution was larger than that of 2002. However, they did not reach the percentage achieved during the prior period (1998-2001).

Private expenditures as a percentage of the GDP continued dropping during the analyzed period up to 2006 following prior trends. Total expenditures, including both private and public, kept on declining also up to 2006 and recovered during the second quadrennium, returning in 2009 to 1.8 of the GDP, just as it was in 2000.

While public expenditures relative to GDP in HE experienced an increase of 0.26 percent, it appears that the main public financing efforts were developed at the lower levels of formal education (primary and secondary) where public expenditures as a percentage of GDP passed from 3.3 to 3.9 (MEN 2010c). Such a pattern of greater increase in resources devoted to primary and secondary can be also seen through the share of HE expenditures of total expenditure in the education sector. HE participation in total education expenses suffered a progressive reduction during the Educational Revolution period with its highest drop in 2006 (From 21.8 percent in

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88 This includes funding from ICETEX, SENA, the Education Ministry and regional governments, among other Colombian public entities financing HE.
2002 to 18.9 percent) and a recovery in 2008 onwards. By 2010 the share returned to what it was in 2002.\textsuperscript{89}

Table 7 - Total, Public and Private Expenditure in the Colombian HE as a Percentage of the GDP

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<tbody>
<tr>
<td>Public</td>
<td>0.77</td>
<td>0.69</td>
<td>0.56</td>
<td>0.54</td>
<td>0.57</td>
<td>0.87</td>
<td>0.82</td>
</tr>
<tr>
<td>Private</td>
<td>1.47</td>
<td>1.08</td>
<td>1.14</td>
<td>0.85</td>
<td>0.76</td>
<td>0.95</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Source: UNESCO Institute of Statistics

Table 8 – Public Expenditure in the Colombian HE as a Percentage of the Total Education Expenditure

<table>
<thead>
<tr>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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<th>2007</th>
<th>2008</th>
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<tbody>
<tr>
<td>21.8</td>
<td>20.4</td>
<td>20.3</td>
<td>19.9</td>
<td>18.8</td>
<td>18.9</td>
<td>19.6</td>
<td>19.5</td>
<td>21.8</td>
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</tbody>
</table>

Source: Author’s calculation based on data of public expenditures provided the Colombian Education Ministry (2010c)

In an international view and accounting for pubic expenditure only, at least six Latin American countries (for which data are available) spent more than Colombia on HE during the Educational Revolution period, including Mexico, Argentina, and Brazil as well as countries with very similar gross national per capita income (GNI) such as Costa Rica and Panama. All of those countries mentioned register higher percentages

\textsuperscript{89} Different percentages from those displayed in the table are registered in UNESCO statistics where the trend shows 13.3 percent in 2002 to 19.6 in 2009 (UNESCO 2010)
of public expenditures on HE of their GDP for the period 2003-2009. In such a context, Colombia places as a mid case.\(^9\)

**Table 9** - Public Expenditures on HE as a Percentage of the GDP across Latin American Countries and Different Periods

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<thead>
<tr>
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<tbody>
<tr>
<td>Costa Rica</td>
<td>0.87</td>
<td>0.95</td>
<td>1.05</td>
</tr>
<tr>
<td>Panama</td>
<td>1.23</td>
<td>1.04</td>
<td>0.85</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.78</td>
<td>0.99</td>
<td>0.81</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.60</td>
<td>0.70</td>
<td>0.77</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0.86</td>
<td>0.80</td>
<td>0.73</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.80</td>
<td>0.79</td>
<td>0.73</td>
</tr>
<tr>
<td><strong>Colombia</strong></td>
<td><strong>0.76</strong></td>
<td><strong>0.56</strong></td>
<td><strong>0.67</strong></td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.53</td>
<td>0.50</td>
<td>0.59</td>
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<tr>
<td>Peru</td>
<td>0.67</td>
<td>0.43</td>
<td>0.37</td>
</tr>
<tr>
<td>Dominican Rep</td>
<td>0.22</td>
<td>nd</td>
<td>0.32</td>
</tr>
<tr>
<td>Chile</td>
<td>0.43</td>
<td>0.42</td>
<td>0.31</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0.17</td>
<td>0.21</td>
<td>0.27</td>
</tr>
</tbody>
</table>

**Source:** Author’s calculations using UNESCO statistics (2010)

As shown in this chapter and will be bolstered in the next one, policy efforts were oriented to the search of enrollment expansion by using more efficiently what officials saw as existing under-served institutional capacity while investing the less

\(^9\) It is important in clarifying that Colombia places second followed by Chile (among Latin American countries for which data are available) in the amount of total expenditures on HE when the private expenditure is included. Such a trend is similar both prior to and after 2002. Indeed, in 2008, Colombia appeared in the UNESCO statistics spending larger resources in HE as a percentage of GDP than several higher-income countries such as Finland, Denmark, France, Sweden, and Switzerland, among others. This pattern of higher investment – when taking account of all sources – but lower enrollment rates, among other performance indicators, may illustrate significant inefficiency.
amount of national public financial resources possible. Evidence to substantiate this assumption is that only during the last years of the Education Revolution period did public expenditures in HE increased as a percentage of the GDP higher than the prior ten years (For the first quadrennium such a percentage got even lower than in 2000). On the contrary, strategies attempted to fill vacant places in private colleges and to increase the number of seats of public universities. A shift in the supply of the existing national vocational training service - SENA – toward greater HE supply, also illustrates the trend.

5.3.2. Enrollment expansion and allocation of the national budget

Rather than providing greater amounts of resources directly to public universities, during the analyzed period, the policy emphasis was aimed at increasing funding through incentives (fondos de fomento) toward enhanced enrollments and improved quality in HE institutions (no matter their public or private nature). That was confirmed in both interviews with government officials (p.i. Burgos; De la Hoz) and in the analysis of quantitative data.

While public resources as incentives provided to institutions of HE in competition through concrete projects grew eight times from 2004 to 2010 (from 7.1 to 56.7 million constant 2010 dollars), total appropriations from the national government to public universities increased 1.2 times during the same period\(^9\). Such appropriations grew from 964.9 million in 2002 to 1.2 billion dollars in 2010. Of course, even with such an increase in funding through incentives the amount disbursed is quite lower than that historically allocated among public universities.

\(^9\) Author’s calculation using MEN (2010c)
Table 10 - National Government Appropriations to Public HE Institutions in Constant 2010 US dollars and their Annual Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>National Government Appropriation to Public HE Institutions</th>
<th>Constant 2010 U.S. dollars</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
<td>962,542,094</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td>985,770,072</td>
<td>2.4</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>964,931,276</td>
<td>-2.1</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>1,012,702,346</td>
<td>5.0</td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td>1,012,723,434</td>
<td>0.0</td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>1,036,325,733</td>
<td>2.3</td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td>1,061,600,581</td>
<td>2.4</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td>1,057,901,258</td>
<td>-0.3</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td>1,035,351,200</td>
<td>-2.1</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>1,102,783,232</td>
<td>6.5</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>1,194,098,107</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: Author’s calculations drawing from SNIES-HE Indicators (MEN 2012)

A sort of stagnation of national appropriation to the Colombian public HE has historical triggers: On one hand, limited resources exerted pressure to discourage expansion through increased funding of the public HE sector whereas private institutions, and enrollments within, mushroomed. On the other, as regards the internal efficiency of Colombian public universities, prior diagnoses promoted by the WB warned of an inequitable distribution among those institutions which traditionally have been funded based on inertial historical factors (Brunner 2003).

Those factors were very much reinforced by the HE Law No 30 in 1992 that established an allocating mechanism in which public universities would receive increasing budgets based on the assigned allotment of 1993. As the law maintained the status quo in financing public universities, it also maintained the inequitable distribution in which older universities obtained substantially higher budgets than the newer ones (p.i. Burgos). Of course, differential complexities related to the type of HEIs mattered, but the gap showed some public universities receiving eleven times greater of per-student state contributions and the most disadvantaged public universities getting just USD$400 per student/year (p.i. J. Botero).
scholars found to be the regressive nature of a public HE, highly subsidized for few
students most of them coming from economically privileged households (Lasso 2006;
Clavijo 2011; Zapata and Ariza 2005)

Pressures from the demand for expansion, the cost of private HE, state
financial restrictions, the unequal distribution among public institutions, and a
perceived lack of efficiency and accountability by public universities led ultimately to
efficiency policies to accomplish, among others, enrollment goals.

Undertakings searched for alternative allocation mechanisms including a
portion of funds based on institutional performance and indicators of coverage and
quality. Such a decision matches the suggestion stated in the WB (2003) background
study that “the internal efficiency of the public sector could be spurred by introducing
performance-based funding”, xxi.

Finally, all of those pressures converged in a concrete policy output in the Law
of the Development Plan that would make direction toward a more accountable
Colombian public university: Even though it had been a policy throughout prior three
Colombian development plans, only since 2004 did the government start to assign a
portion of the state budget based on efficiency indicators. In 2004 the efficiency-
based amount represented 4 percent of the total budget, which was progressively
increased to 12 percent by 2006.93

Of course, by the time of policy start-up the national fiscal situation was not the
best and may have also influenced the decision described. A former policymaker at
the Department of National Planning recalled the difficulties by 2002:

We were in a very difficult moment. It was not a time to think about
the country in the long term. In 2002, Colombia was in the verge of

---

93 The government had already started to assign some resources, outside the main budget, based on
performance indicators which were agreed with the State University System (SUE in Spanish), which
comprises the set of 32 public universities in Colombia.
a default. We had to handle scarcity and we concentrated our entire efforts to ensure national treasury appropriations to meet international commitments. We were involved in the daily routine of how to pay official salaries and how to finance the first stages of the policy on security, even doing silly things such as the merger of the ministries and the restructuring of public entities, which were more desperate maneuvers than any other …There were problems of fiscal resources; Notwithstanding the difficulties, the [World Bank] credit was obtained and then an effort from the Minister came, which I would say did not obey a clear official policy consisting of a commitment by public universities to increase coverage. I believe that it was a two-part commitment: a little more resources and an increase in enrollments. Some performed beyond expectations (p.i. Gaviria).

Financial efficiency as a major aspect of recent Colombian policy is widely connected with attempted HE reforms and part of imported transformation models (Garcia Guadilla 1996; Levy 2005). The adoption by public universities of traits associated traditionally with the private sector is a trend that came along with a political economy sympathizing with privatization ideas and practices (Levy 1995).

In Latin America this feature was first introduced in Chile in the early 1980s (with a portion of funds linked to indicators of the quality of enrolled students), but later became part of modernization discourses spread in the region particularly by international financing agencies (Garcia Guadilla 1996). Of course, states in the US had already established requirements on public university performance that pursued the accomplishment of state goals for HE including providing access and improving retention (Leslie and Berdahl 2008). In Western Europe, also, during the 1980s the “evaluative state” had shifted the state-university relations toward a strengthening of accountability together with institutional autonomy (van Vught 1989; Neave and Van Vught 1991). This evaluative state, as a worldwide trend, started to play the role of product/processes quality assurer while attempting for a more managerial and entrepreneurial logic by public universities (Brunner 1993a, 1993b; 2007). Neave and
Brunner, indeed, named such new state-university relations as the social contract of HE.\textsuperscript{94}

Differential contexts may be the reason why such a contract resulted more feasible in the US and Europe with a tradition of public institutions, in holding accountable to states, than in Colombia and in Latin America in general, where public universities historically have enjoyed autonomy without the returning accountability. Brunner offers a stronger discourse when he asserts that Latin American states have behaved as a “kindly, if blinkered, local banker” without asking anything in return (2007), 2. And while now institutions and governments are more prone to talk the same language about efficiency and accountability (in part because of American and European influences, the WB involvement, globalization and economic challenges) the language and the facts may not take the same path.

In Colombia, the enthusiasm of the Government and the WB for a new distributing mechanism was rapidly dampened. In 2005, government authorities encountered a new major obstacle in applying efficiency policies toward increased enrollment and quality. The principle of autonomy emerged as a hobbyhorse carried into legal battles by some public universities reluctant to be supervised by the Government or to lose their traditional budget. The controversial policy was finally annulled by the Constitutional Court by arguing that such a mechanism assumed strict government budgetary control, which could not be applied to public universities due to their autonomy. Judges considered that an agreement on performance indicators implied a process in which “each university would negotiate matters belonging to its

\textsuperscript{94} Colombian policy efforts are linked to an integral education reform in an attempt to increase accountability through different strategies such as quality assurance processes to the all system, performance indicator assessment of public universities, more resources to private universities with the possibility of auditing their quality, and more reliable information systems to capture important information from within HEIs. The education reform was all influenced by the WB and other international actors such as Latin American scholars, like Brunner, who were invited by the WB to study Colombia and write about it.
self-determination, self-government and self-regulation” therefore, “violating flagrantly the university autonomy” (Colombian Constitutional Court 2005), 2.

In addition to the problematic state intervention, another criticism of the performance model concerned the weight assigned to enrollment indicators (access and retention) compared to academic quality or research. This naturally would affect funding for research institutions such as the Universidad Nacional (CINDA 2007), the biggest and most highly reputed public university.

The Colombian Government did not give up its efforts for efficiency, but recognized that more transactional mechanisms were needed when considering the autonomy of public universities. “More carrot and less stick”, in the words of a former official, would imply incentives and persuasion, motivation and dialogue.

Given perceived inefficiency in the use of state resources by public universities, the rationale for convincing boards to push expansion was that those institutions could address this objective without the disbursement of additional investments (p.i. Burgos). The perception of waste in administering public resources was also shared by the World Bank (2003) study on Colombia, in which the high unit cost in public universities was underlined, a spending of 29 percent more per student than for private counterparts. Such a trend put the Colombian public university system, according to the World Bank, on the highest cost scale (105 percent of the GDP per capita) when comparing per student expenditure internationally.

This analysis of efforts and results found how the Government was able to persuade a significant number of public universities to augment enrollments substantially without additional amount of national financial resources, excepting the Universidad Nacional (p.i. Burgos). The student population in public universities increased by 52.6 percent from 2003-2010, whereas national public funding to public
universities for functioning increased by 17.9 percent (in constant 2010 pesos) during the same period.\textsuperscript{95} The average per student appropriation from the national government to public universities for functioning was reduced from 5.3 to 3.9 million constant (2010) Colombian pesos between 2003 and 2010.\textsuperscript{96}

The efficiency policy produced an impact in the reduction of the per-student appropriation from the national government to public establishments in 28 of 32 Colombian public universities. Whereas in the Universidad Nacional it kept stable, at the highest cost among Colombian public universities, the per-student-state funding increased in only two public universities.\textsuperscript{97} In this regard, it would be important to consider whether or not a reduction in educational cost, that enhances efficiency, might also involve a reduction in quality. Indeed, between 2007 and 2009 accredited public universities (with the exception of Universidad Nacional) performed below the average of all accredited universities including private semi-elite institutions.\textsuperscript{98} It of course cannot be linked directly to the efficiency policy as it may also be the result of a greater number of low academically prepared enrollees during the eight years of the Educational Revolution period.

\textbf{Table 11– Variation in National Government Appropriations per HE Institution and per Student (2003 and 2010)\textsuperscript{99}}

\textsuperscript{95} Author’s calculation in constant 2010 Colombian pesos, using 32 Education Ministry Reports (MEN 2011c)
\textsuperscript{96} Ibid
\textsuperscript{97} No complete data are available to calculate this variable at the Universidad Abierta y a Distancia. The per-student state appropriation to the Universidad Nacional that exceeds 12 million Colombian pesos contrasts sharply, other national public universities located in the regions, such as the Universidad Popular del César with only 1.5 million pesos per student state funding in 2010. Of course greatly the higher cost is the result of higher proportion of full-time professors and those holding doctoral degrees. However, Ministry Officials claim that such difference in state appropriations is disproportionate even accounting for differentials in complexity (p.i. Botero)
\textsuperscript{98} Author’s calculations drawing data from (Botero 2010)
\textsuperscript{99} Appropriations here refer to national resources distributed to public universities for functioning. Resources for investments, pensions, research initiatives or grants are excluded.
Perhaps the most important findings are that these 32 public universities contributed 27.0 percent of total enrollment increase from 2003-2010, favoring the enrollment of lower income students, but an unexpected effect of the aforementioned policy was that new regional inequalities emerged. For several of those public universities, mainly located regionally, the financial burden for families increased significantly. In 23 out of 32 public universities, the tuition share in revenues expanded as a mechanism of cost-recovery, and in eleven of those institutions it reached more than 30 percent of institution revenues as compared to six of those institutions in 2003. In only eight public universities did the tuition revenue share increase by less than the relative increase of state funding and just four of them saw a decrease in percentage of income from tuition sources.

Source: Author’s calculations drawing from MEN (2011c)
The most remarkable increase was in the Departments located in the Pacific Coast (Chocó and the coastal part of Valle del Cauca), one of the poorest Colombian regions, where income revenue provided by families to the Universidad del Pacífico surged from 16.5 percent to 42.5 percent and the tuition income for that university grew 560 percent from 2003-2009. In the Universidad Tecnológica de Chocó, the share of tuition of the total university income reached 33.9 percent in 2009 from 24.2 percent in 2003. Some other remarkable examples are Universidad de Pamplona with 50.6 percent of revenue coming from tuition, Universidad del Cesar with 45.1 percent, and Universidad del Tolima with 45.6 percent by the end of 2009. The Universidad Abierta y a Distancia, which is the public university for reaching the nation through distance education, had already more than 60 percent of cost-sharing by families in 2003.

It is important to clarify that Colombian public universities traditionally have charged tuition. Prior to the studied period, such institutions – according to the World Bank (2002b) – had already and progressively “shifted their revenue towards cost-recovery” as an effect of the national crisis at the end of the 1990s. However, the percentage of university revenue coming from students reached a 22 percent high in 2000. Even with such a percentage, Colombia was referred to as “unique among the large countries in the region” regarding the financial contribution by families in public HE (World Bank 2002b), 7.

Table 12 - Tuition share of the total university income in public universities (2003 and 2009) and tuition revenue increase between 2003 and 2009
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Universidad Tecnológica de Pereira</td>
<td>2.7%</td>
<td>15.7%</td>
<td>657.2</td>
</tr>
<tr>
<td>2</td>
<td>Universidad del Pacifico</td>
<td>16.5%</td>
<td>42.5%</td>
<td>257.8</td>
</tr>
<tr>
<td>3</td>
<td>Universidad Pedagógica Nacional</td>
<td>13.9%</td>
<td>38.3%</td>
<td>245.1</td>
</tr>
<tr>
<td>4</td>
<td>Universidad Surcolombiana</td>
<td>7.9%</td>
<td>15.2%</td>
<td>202.7</td>
</tr>
<tr>
<td>5</td>
<td>Universidad Nacional Abierta y a Distancia</td>
<td>64.3%</td>
<td>67.0%</td>
<td>179.6</td>
</tr>
<tr>
<td>6</td>
<td>Universidad del Atlántico</td>
<td>2.9%</td>
<td>7.1%</td>
<td>177.7</td>
</tr>
<tr>
<td>7</td>
<td>Universidad del Magdalena</td>
<td>17.1%</td>
<td>21.3%</td>
<td>94.3</td>
</tr>
<tr>
<td>8</td>
<td>Universidad de la Guajira</td>
<td>19.6%</td>
<td>90.6</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Universidad de la Amazonía</td>
<td>18.0%</td>
<td>27.1%</td>
<td>90.5</td>
</tr>
<tr>
<td>10</td>
<td>Universidad Tecnológica del Chocó</td>
<td>23.7%</td>
<td>33.9%</td>
<td>90.2</td>
</tr>
<tr>
<td>11</td>
<td>Universidad de Sucre</td>
<td>13.8%</td>
<td>18.1%</td>
<td>85.9</td>
</tr>
<tr>
<td>12</td>
<td>Universidad de Nariño</td>
<td>10.3%</td>
<td>12.6%</td>
<td>82.0</td>
</tr>
<tr>
<td>13</td>
<td>Universidad Militar Nueva Granada</td>
<td>80.4%</td>
<td>59.4%</td>
<td>81.6</td>
</tr>
<tr>
<td>14</td>
<td>Universidad de los Llanos</td>
<td>18.3%</td>
<td>24.3%</td>
<td>77.3</td>
</tr>
<tr>
<td>15</td>
<td>Universidad del Tolima</td>
<td>30.1%</td>
<td>45.6%</td>
<td>68.8</td>
</tr>
<tr>
<td>16</td>
<td>Universidad Francisco de Paula Santander - Ocaña</td>
<td>17.7%</td>
<td>23.5%</td>
<td>68.8</td>
</tr>
<tr>
<td>17</td>
<td>Universidad Francisco de Paula Santander - Cucuta</td>
<td>28.6%</td>
<td>34.1%</td>
<td>64.9</td>
</tr>
<tr>
<td>18</td>
<td>Universidad Popular del Cesar</td>
<td>36.9%</td>
<td>45.1%</td>
<td>63.6</td>
</tr>
<tr>
<td>19</td>
<td>Universidad de Caldas</td>
<td>4.9%</td>
<td>5.7%</td>
<td>54.9</td>
</tr>
<tr>
<td>20</td>
<td>Universidad de Pamplona</td>
<td>10.3%</td>
<td>50.6%</td>
<td>51.9</td>
</tr>
<tr>
<td>21</td>
<td>Universidad de Cundinamarca</td>
<td>32.9%</td>
<td>40.5%</td>
<td>25.0</td>
</tr>
<tr>
<td>22</td>
<td>Universidad Pedagógica y Tecnológica de Colombia</td>
<td>20.4%</td>
<td>22.0%</td>
<td>28.0</td>
</tr>
<tr>
<td>23</td>
<td>Universidad Industrial de Santander</td>
<td>16.4%</td>
<td>18.2%</td>
<td>25.1</td>
</tr>
<tr>
<td>24</td>
<td>Universidad del Quindio</td>
<td>0.0%</td>
<td>26.3%</td>
<td>22.0</td>
</tr>
<tr>
<td>25</td>
<td>Universidad del Cauca</td>
<td>10.5%</td>
<td>11.2%</td>
<td>7.4</td>
</tr>
<tr>
<td>26</td>
<td>Universidad Distrital Francisco José de Caldas</td>
<td>12.3%</td>
<td>8.8%</td>
<td>16.2</td>
</tr>
<tr>
<td>27</td>
<td>Universidad Nacional de Colombia</td>
<td>10.5%</td>
<td>9.2%</td>
<td>14.8</td>
</tr>
<tr>
<td>28</td>
<td>Universidad del Valle</td>
<td>13.7%</td>
<td>12.0%</td>
<td>2.6</td>
</tr>
<tr>
<td>29</td>
<td>Colegio Mayor de Cundinamarca</td>
<td>38.7%</td>
<td>37.5%</td>
<td>-1.2</td>
</tr>
<tr>
<td>30</td>
<td>Universidad de Cartagena</td>
<td>25.6%</td>
<td>20.2%</td>
<td>-2.1</td>
</tr>
<tr>
<td>31</td>
<td>Universidad de Córdoba</td>
<td>6.8%</td>
<td>6.4%</td>
<td>-0.6</td>
</tr>
<tr>
<td>32</td>
<td>Universidad de Antioquia</td>
<td>3.0%</td>
<td>3.0%</td>
<td>-0.0</td>
</tr>
</tbody>
</table>

**Source:** Author’s calculation based on data provided for each university in 32 statistical reports of public universities (MEN 2011c)

This unexpected, detrimental effect of the efficiency policy for increasing enrollments proved a diversion from the goal and the philosophy of the equity ideal of having greater numbers of poor students enrolled in public HE by lessening the financial burden for families. We know for sure, from interviews with officials and from statistics that among the poorer students enrolled in public universities a number of them located in Colombian regions paid more for similar type of HE than their pairs enrolled in better-financed public universities cities such as Bogotá, Cali or Medellín.

Such a tuition revenue share reached by some Colombian public universities by 2010 was substantially higher than that of a number of countries with more...
market-oriented systems such as the US, where tuition fees cover around 27 percent of public institution revenue (Barr 2001). Further, Colombian public universities in financing behavior reached levels similar to private US universities, in which tuition fees represent about 41 percent of their income (Barr 2001). Although still the public sector greatly financed by the national government, such a reality corroborates the idea stated by De Moura Castro and Levy (2000) that HE funded only by public sources remains a myth.

During the interviews, when questions arose about the unexpected effects of policy efforts, Education Ministry authorities applauded the growth of public enrollment, but recognized the distortions associated with finance policies toward expanded enrollment without additional public disbursement. According to Ministry authorities, public universities “happened to be more efficient” (p.i. Burgos), as “it was demonstrated that public universities could address their unutilized capacity” (p.i. Botero), but while state expenditures declined, those institutions increased tuition as a strategy for cost recovery. According to the Vice-Minister of HE at the end of the Educational Revolution, one result was as follows:

“Tuition fees became more expensive in smaller public universities located in the more needy regions than in those bigger universities situated in big cities. The increase of enrollments in those [smaller-regional] universities was, therefore, supported by the students, and among them, by the poorest ones” (p.i. Burgos)

Inequalities also increased not only among Colombian regions where lower income students pay significantly different tuition depending on whether their university was well or rather poorly funded by the state. As the former Vice-Minister of HE pointed out, disparate tuition costs affected the poorest within institutions, located outside capital cities:
“Such inequality not only emerged among students of different public universities, but also within institutions such as **Universidad del Valle** through its important strategy of regionalization. Outside the city capital of the Department of Valle, precisely in areas where income is lower, the tuition fees resulted much more expensive in absolute fee terms than in Cali because the University recovered through these a significant portion of the higher costs” (p.i. Botero)

At the end of the Education Revolution period, the complex set of efforts involving the national government and public universities showed also intricate findings complicating the panorama for assessment of policy results. Conclusions are inclined for mixed impacts: on the one hand public universities contributed greatly with enrollment and equity goals (showed in chapter 6). On the other, financial efficiency to achieve enrollments without extra-funding generated differential and substantial higher fees for poorer students in underprivileged areas.

The fulfillment of coverage goals of HE also created a bottleneck in numerous public universities given the high density of the student population accommodated within the same institutional structure than in 2002. Ministry authorities recognized that by 2010 most public universities reached their room to house more students and “additional resources for the next 10 years were required onwards because [universities] were taken over with its capacity” (p.i. Burgos)

### 5.3.2.3. The strengthening of an open system through non-university HE

The non-university policy reform clearly favored 2- and 3-year HE programs, based on rationales of multiple benefits for the country that included easier absorption of the demand and the possibility to accommodate a large mass of low-income students enrolled in a more affordable type of education. This came along with fiscal savings for the Colombian Government, as it “would reduce the required investment burden by more than a half”, a measure suggested by the WB (2003), xxi. In addition, non-
university programs would enhance relevance in the strengthening of the manpower required by the labor market and for increased national productivity.

The Government recognized a problem related not only to lower enrollments in 2- and 3-year programs\(^{100}\), but an existing inverted pyramid in the HE structure that did not correspond to the Colombian occupational structure (MEN 2008). For instance, the large mass of students (81.7 percent in 2002) was enrolled in university and graduate programs conceived to train professionals for upper and middle management positions that just happen to be scarce within the labor market (MEN 2008).

The manifold undertakings to favor technical and technological education in Colombia sought to utilize existing HE institutions and to advocate a shift in the partial supply of the SENA, the public service for work-related and vocational training. Regarding existing non-university institutions by using incentives and competition, the Colombian Government made a strong effort to stimulate the quality, relevance, and demand for such types of education, traditionally discredited by the social imagery of being third class. For instance, a mechanism of funding projects called “bolsas concursables” was introduced to increase student access to and the quality of new or updated non-university courses, both in public or private universities and colleges. Those institutions benefited from bolsas concursables that constituted joint ventures and alliances to design and provide curricula by cycles through a credit system that enabled mobilization and transfers across programs and levels of HE.

A related strategy was the induction of vocational technical schools to articulate with the HE sector. In order to do so, the Government lowered entry

\(^{100}\) The WB had also drawn attention to the low rate of Colombian technical enrollment (11 percent by 2002) compared to Chile (27 percent) and the average of OECD countries (25 percent) (World Bank 2002b).
standards by allowing those school students passing the 9th grade to enroll in 2-year programs without the requirement of taking national entrance examinations. Some results of such a strategy are 40,000 high-school students benefiting from public grants for their college attendance; one out of every six HE institutions and 816 schools involved in dual enrollment programs; and 75 percent of the country’s departments covered by the strategy.

However, after implementation and preliminary results, the government acknowledged the limitations and risks of such a strategy in terms of the quality of HE provided and the homogenization of curricula in technical high school among students of the same class. In addition, public grants were supplied only for the two first semesters of professional technical programs, generating problems of affordability for the rest of studies.

A third strategy was the integration of the SENA (the National Service of Apprenticeship) into HE, with a stress placed on the offering of 2 and 3-year degree programs in addition to the traditional work-related courses. Such policy initiative appeared to be one of the most controversial among those chosen by policymakers. For some scholars, SENA efforts and results are the “black box” of the Education Revolution policy (p.i. Gaviria). Other criticisms refer to the unclear way statistics are counted and how SENA accomplishes HE standards (p.i. Misas; Bula).

Despite the significant contribution to enrollments shown in Chapter 6, this research found that by mid 2010, only sixteen of hundreds of 2 and 3-year programs offered by SENA were incorporated into the process of quality assurance by the Education Ministry (p.i. M. Botero). Truly, the Colombian Ministry recognized a need in trying to bring the SENA into line and tensions between the two government

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101 Intervention by the Vice-Minister of HE Javier Botero during a meeting with rectors of HE institutions in Cauca Department – Consensus Process for a HE Reform. Popayán, Colombia- June 2012.
agencies went as far as court confrontations. This time the battle was won by the Education Ministry as the court in September 2010 compelled the SENA to comply with quality assurance regulations (Consejo de Estado de Colombia 2010).

The promotion of non-university HE has remarkable implications for the Colombian system. In following such a course, public policy was seen to challenge the deeply rooted “tier structure” (Clark 1978) of HE, with lower levels being open-doors and the upper levels selective ones. In contrast, the Colombian policy reform achieved alliances between universities and HE institutions of different types in order to offer curricula designed by education cycles, and to promote transferability among cycles and institutions. For instance, top universities offered non-university education whereas non-universities were also reached the supply of 5-year programs designed by cycle curricula. In this way, the effect of such a mechanism would be a blurring in the type of supply each institutional layer would provide.

Additionally, policy proved to be innovative in relation to previous endeavors and different from conventional policy choices in Latin America. It challenged the traditional way of allocating public resources to HE systems, historically directed almost exclusively to public universities. In contrast, public money went to supporting numerous private institutions by using a variety of strategies and incentives in open competition, aimed at fulfilling Government goals on access and quality and in the country’s technical HE.102

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102 The trend of exclusive public subsidy for public HE is also changing in other countries but mainly in the form of loans and grants for students. For instance, in Brazil, programs like PROUNI – University for All – favor integral or partial grants exclusively for students enrolled in private institutions (Tunnerman 2008). However, it is important to notice that opposite measures with a greater amount of public resources have been taken also in Brazil, where President Lula has launched a dozen new federal institutions to house low-income students (Tunnerman 2008). Venezuela is another example of high investment in public education that seeks to eliminate access restrictions by creating new decentralized units (Lanz, Fergusson, and Marcuzzi 2006).
Policy efforts to favor non-university HE at the SENA and various types of HE institution brought significant system implications. Repercussions are observable not only in terms of greater supply of non-university HE by universities, but the stagnation and even reduction in enrollments in technical and technological institutions, shown in Chapter 6.

Conclusions on policy efforts and impacts

Coverage and equity were central concerns and guiding principles for HE policy by the Colombian Government and the international partnership. In this regard, policy can be categorized as an intervention from the state in order to equalize opportunities for certain groups (Benadusi 2001), namely low income and regionally underprivileged individuals. Policy favored those social groups by identifying their disparate capabilities and resources. Initiatives acted, then, in search of fairness in the vein that Rawls (1999) describes how actions of social justice search to identify disadvantages among individuals in order to distribute goods accounting for dissimilar capabilities. In the practice of Colombian access public policy, such an approach implied a “vertical equity” intervention (Berne and Stiefel 1984) which entails unequal treatment for unequal groups (such as affirmative action, subsidies, supply decentralization), according to their disparate ability (to pay or to reach HE institutions). Policy efforts become, therefore, intended enabling factors (Levy 2005) for access to, persistence in, and attainment of HE. However, not all of those aims were achieved as shown in the chapter reserved to access outcomes.

Policy efforts to increase access during the analyzed period were substantial in the amount of resources employed and in the variety of mechanisms used to try and bring about an increased access. Efforts were comprehensive as they sought not only
to increase enrollments but to expand age cohort coverage, improve conditions of affordability, ease of access (referred both to geographical location and academic preparation) and to a lesser extent, persistence in college.

In addition, efforts of the public policy reform were significantly different from those that comprised previous access policy in Colombia particularly in the nature of mechanisms used to improve access. An illustration is how the aid program introduced, for the first time, grants for students pursuing HE from the poorest economic groups in Colombia.

The Colombian Government addressed private and public sectors as being of equal value as partners to accomplish access policy goals (p.i. J. Botero) as both of them were considered targeted beneficiaries of public funding. This policy strategy is shown to be innovative both in Colombia and in Latin America in general not only because it challenges the traditional way of transferring public resources exclusively to the public sector. The unusual initiative enabled the government to finance directly private institution projects other than those for research, with the goal of increasing enrollments and, simultaneously, to enhance the quality of private HE.

While some efforts were innovative, some others were clearly common to worldwide trends on access policy. Some examples of commonalities to policy trends are efficiency policies, expanded student aid, and financing-demand strategies (OECD and the World Bank 2009; Marcucci and Johnstone 2010)

Not only were intentions declared goals, but the goals were converted into efforts and concrete undertakings produced results. The existence of concrete goals and especially concrete undertakings to achieve them as well as subsequent adjustments showed a guiding policy design and actual implementation that were themselves policy results. Indeed, in contrast to typical policy ideas stagnant in just
plans, the Education authorities used rational and technical tools to search for the fulfillment of stated goals. For instance, a system to follow up targets through indicators with assigned responsible officials for implementation was established and clearly utilized.

The WB established some indicators in the beginning of its project that were not revised during the entire project and for which specific targets were never defined (World Bank 2009). At the end of 2007 the Colombian Government and the WB agreed on new and more specific indicators to monitor from that time onwards. Indeed, the WB recognized that “there were some deficiencies in the PAD in relation to the Project indicators” (World Bank 2009), 7. Once the first project closed in 2008, the WB also acknowledged that baselines to measure progress were not included in the official documents despite their existence in background studies conducted by the agency or domestic partners. Although official documents at the early stages mandated the inclusion of targets in an Operative Manual, they were not fully built-in into such a guide even for relevant indicators, as found and depicted in the Appendix. The Bank recognized the oversight in including specific quantitative targets “as not unusual in Bank projects prepared in 2002, especially in countries lacking good-quality information systems for HE, as was the case in Colombia” (World Bank 2009), 8.

Concerning the equity project developed in partnership, a considerable increase is evident in the number of low income students receiving public financial aid with respect to prior policy reform and in the share of beneficiaries. Likewise, a progressively increased percentage of HE students were awarded public loans. In addition, as described, the student aid system expanded significantly, more than hundred Regional Centers for the supply of HE were created and multifaceted
strategies to increase enrollments in non-university HE were conceived and supported by the Colombian Government.

As to the assessment of international assistance, expertise was transferred through concrete efforts (such as specific projects) that were reform-oriented (Levy 2005). Seen from the local view, technical backing provided by the WB was less a real need or a real tool granted, than a mechanism to push improvement of domestic practices. In the Colombian case it could be said that even when the international agency brought its recipe filled by Bank beliefs, the dish was transformed with domestic ingredients and acquired a new flavor. That is why several interviewees coincide in saying that policy efforts greatly responded to those proposed by the Colombian Government (p.i. Salmi; Velez; Villegas). It parallels what Levy (2005) found about prismatic reform achieved through the efforts of partners.

Recommendations by the agency and implemented efforts by domestic partners show remarkable consistency. That consistence may be the product of a twofold explanation: one aspect is the extent to which the bulk of remedies for Colombia are part of the rather generic WB agenda for HE throughout the continent and even the world (e.g. enrollment expansion, equity, and efficiency improvement). The other is that some of those statements are obviously goals and hopes suitable for any governmental plan. But further, modernization and efficiency criteria met the ideological agreement and sympathy of the Uribe administration toward reform. In this regard, as Levy states, “without receptivity and reform, there would be never partnership or adequate impact” (Levy, 2005), 71.

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103 Some researchers have criticized the lack of consistency between what the WB states, to what it actually does, which is viewed as a lack of clarity in education policy. An example of such inconsistency is how it favors in some policy papers basic education while in others HE assistance (Psacharopoulos 2006).
Both, the WB and the Colombian Government envisioned shared goals and rationales to fulfill them such as the reliance on efficiency, the value of private HE, the priority on expanding non-university enrollments, and a financing-demand based model. However, whereas the WB concentrated its efforts on the student aid project and some measures of efficiency in the Ministry of Education, the Colombian government diversified its efforts and implemented them. Those efforts, including new forms of funding directly both private and public HE institutions, appear to be the result of particular domestic opportunities.

From another perspective, the efficiency policy in the search of greater enrollments by using similar amounts of state resources produced significant effects. While the Colombian government spurred an increase in spaces in public HE without expending additional resources, such a strategy may have affected the quality of public universities. Beyond that, it cannot be a long term measure, as the public system cannot reach the point of collapse because of its over-population of students.

Being perhaps the most controversial issue in financing access, the cost-sharing rise had mixed implications. Clearly, as observed, it created new regional inequalities when smaller, public universities with lower levels of public funding, increased tuition fees disproportionately, harming the financial capacity for families to pay for HE. At best, they would incur debt; in the worst case, the measure most definitely hampered their educational opportunity, which contradicts the aim of the equity policy. However, the rise of cost-sharing in public universities when it is assumed by families with financial means would allow better distribution of the burden in financing HE.
CHAPTER 6
ACCESS OUTCOMES

This chapter explores access outcomes or actual changes in access over time (2002-2010) by comparing the situation before and after the launching of “The Education Revolution” policy initiative. As referred to in the conceptual framework in chapter 2, outcomes are results whether intended or unintended by policy. They can be influenced by factors independent of policy and the implementation process (e.g. socioeconomic dynamics). Thus, whereas chapter 5 addressed efforts and impacts that are attributed to policy, here in chapter 6 the focus is on variations in access indicators that may have resulted from either the policy or forces outside policy (such as socioeconomic factors).

The analysis addresses policy and historical benchmarks. The former centers on a comparison between 2002 and 2010 (or 2009 according to data availability), while the historical dimension compares the state of access dimensions and categories at the end of the Education Revolution to trends over time – including data prior to 2002. This historical view is undertaken in order to observe whether or not a substantial change in the access trajectory was produced after 2002. The historical view also attempts to compare what happened in terms of access to higher education (outcomes) during the studied period against policy expectations or policy goals (DeLeon 1999; Hill and Hupe 2002).

The examination searches to answer the third subsidiary research question stated as follows: *What were the actual changes in access to Colombian higher education compared to the state of access before the Education Revolution policy launched in 2002?*
Findings confirm the hypothesis that access outcomes significantly improve in absolute numbers of entrants and in relative increases of enrollment rates nationally, regionally, and by income groups. This chapter also illustrates that some changes in access show increases substantial enough to attribute a significant effect to policy efforts aimed at going beyond preceding tendencies. However, another set of outcomes does not mark a shift from prior trends. Such a mixed pattern of outcomes was hypothesized for this research.

The chapter presents the access outcomes themselves, as well as the body of evidence to support conclusions regarding modifications in coverage, equity, and persistence. Although access outcomes variables have been analyzed systematically by categories, findings are presented by assessing the extent to which the results improve equitable access and persistence in HE. In this regard, findings are depicted in three different groups.

The first two sets of outcomes represent real improvements in access. One compares outcomes after 2002 from the prior Andres Pastrana administration (1998-2002). Outcomes that are included within this group are twofold: first, those for which the evidence shows improvements from the prior period but not from other government periods in the past, and second, those outcomes for which historical data are not available to enable a comparison to a trend line over time. Findings belonging to the second group are assessed as the most important because they show not only improvements in access, but also in shifted historical trends. Finally, within the third group are the outcomes that did not change or even worsened during the analyzed period. Those outcomes constitute current and future challenges for access policy.

Although these three groups are separated for presentation, variables analyzed are not mutually exclusive within those three groups. For instance, while regional
enrollment rates improved from the prior period during the Education Revolution, no equalization of participation in HE was produced and those historically less-served geographical areas are still below the Colombian average of higher education attendance.

This mode of presenting the findings involves more complexity in evaluating changes referred to as progressive impacts with multiple variables and events analyzed (such as historical, government period benchmarks, and two subsequent quadrennial governmental periods analyzed). At the end of the chapter some access indicators are used to compare Colombia to world regions and other Latin American countries (See appendix).

As established in the research design, the analysis relies on descriptive and graphical statistics. The analysis utilizes different official databases that were described in the third chapter.

6.1. Improvements in access outcomes compared to the prior government period

Regarding access outcomes, the trend during the implementation of the Education Revolution plans is a recovery from the prior period, which was characterized by a deterioration of HE indicators. Improvements are evident in four variables dealing with coverage and one related to equity: a) absolute enrollment numbers; b) relative enrollment growth; c) absorption rates; d) School-to-college transition rate, e) regional enrollment rates, and f) dropout rates for the cohorts 2003-2007 compared to those of the period 1998-2002. All those indicators were improved during the Uribe administration compared to the previous period as observed in the following:
Coverage

In absolute numbers, enrollments grew 67.4 percent during the eight year-period analyzed, rising from 1,000,041 enrollments in 2002 to 1,674,420 in 2010. This finding confirms the growth tendency found up to 2006 and 2008 by previous research (Masso 2008; Orozco et al. 2006; Orozco 2009, 2010). From 2007 to 2010 enrollments exceeded the goal (390,336 against 320,000). Over the eight-year period enrollments represent 93.6 percent of the initial goal (674,272 against 720,000).

The annual average of enrollment growth of over 7 percent points (7.1 and 7.6 for the two Quadrennia) became the second highest average increase since 1986 (a 13.2 percent increase was recorded during the Samper administration, 1994-1998). The analysis that deals with 4-year government administrations illustrates different outcomes from those presented by Orozco (2010). He compared the annual average enrollment growth during the entire period 1935-2001 to the period 2002-2008 and argued that during the Education Revolution enrollments grew much less than in the sixty-six prior years (5.8 percent against 8.9 percent). Indeed, our analysis of four-year periods from 1938 to 2010 reveals that the enrollment growth rate was higher in ten previous 4-year periods than during the Education Revolution, this being particularly true for the periods 1958-1982 and 1994-1998. But of course it is progressively more difficult to expand systems proportionally once have already reached larger size.
Figure 15 - Enrollments in HE by 4-year periods and percentage growth

Source: Author’s calculations using ICFES (1975, 2002) and MEN (2010a, 2011a)

Figure 2 shows that the trend in enrollment growth rate fluctuated considerably over time. The period post-2002 exhibits a modest recovery compared to growth before 1978, but a relevant one if we observe the decline after that year (except for the increase during the Samper administration in 1998).

Figure 16 – Percentage growth of HE enrollments by 4-year periods

Source: Author’s calculations using ICFES (1975, 2002) and MEN (2010a, 2011a)
As in other indicators, absorption rates\textsuperscript{104} show a recovery from 2002 onwards against a decline starting 1997, and beyond, and have fluctuated through history with three important peaks in 1985, 1988, and 1996. The improvement of absorption rates in 2010 compared to 2002, opposed to the decline tendency argued by Gomez and Celis (2009) who analyzed the years 2007 and 2008 that show lower rates from one year to another.

**Figure 17** - Absorption rates (Entrants into HE/Applicants)

![Absorption Rates Graph](image)

**Source:** Author’s calculations using higher education statistics (2001) for data up to 2001 and SNIES database for data of 2002 onwards (MEN 2011a)

In addition, Colombian HE saw an increase in the transition rate from high school to college as well.\textsuperscript{105} Such results are significant, accounting for a growth in enrollment rates at the lower educational levels and an increased demand for HE over time. Outcomes illustrate that even with a wider mass of high school graduates

\textsuperscript{104} The absorption rate measures the percentage of applicants who actually enrolled within the system for a specific year.

\textsuperscript{105} The transition rate determines the number of first semester students enrolled within the system against the number of high school graduates that year. The Colombian government uses another measure to establish transition rates, which is the number of first semester students enrolled in HE against the number of those who take national examinations (Saber\textsubscript{11}) to enter HE within the prior year.
transition rates grew 6 percent points from 2002 to 2010. In four departments the rates declined over this period.\textsuperscript{106}

**Equity**

Analysis by Colombian region, found that an increase in enrollment rates occurred in all regional departments. In those regions where higher education was non-existent in 2002, institutions have registered students, and in 2009 gross enrollment rates ranged from 5.7 to 20.3 percent. In all less-served departments where enrollments did not reach more than 3,000 students, enrollments grew by between 200 percent to roughly 1,000 percent between 2002 and 2009.\textsuperscript{107} Overall the percentage of municipalities that report HE supply increased from 25 to 62 percent (MEN 2010b).

**Persistence**

Despite attrition being still far from greatly reduced, an encouraging finding is that the percentage of those who departed is lower than that for cohorts enrolled during the period 1998 – 2002 (56.5 percent on average). For the cohorts enrolled during the period 2003-2007, the cumulative dropout rate decreased three percent points (53.5 percent). Such a difference deserves attention since it has not been shown in previous research and is remarkable if we take into account the expanded enrollment of more disadvantaged students with lower academic preparation for successfully completing their programs. An analysis of attrition by cohort confirms the finding that dropout rates declined for those cohorts from 2005 onwards compared to prior periods.

\textsuperscript{106} Unfortunately no consistent data are available to follow historical trends referring to transition rates. \textsuperscript{107} Author’s calculations using micro-data from SNIES-Colombian Ministry of Education and demographic data from the Department of National Statistics
Another finding is that over all income groups, the proportion of those who depart decreases as academic preparation (measured by entrance test scores) increases. This finding is consistent with previous Colombian program evaluation studies that found academic preparation to be significantly linked to continuation (CID 2006; CEDE 2008; CEDE and MEN 2009; Melguizo, Sanchez, and Jaime 2010; Econometría Consultores 2010).

Graphical statistics illustrate the shift in the composition of first-year HE students according to their entrance test scores. While participation of students with middle test scores has kept stable, the drop in share of students with high scores is significant even prior the Education Revolution.

Source: Author’s calculations using SPADIES
Results during the Education Revolution compared to the prior period (1998-2002) should be observed regarding external factors that may have affected outcomes. Factually, if the previous period coincided with the worst national economic crisis\textsuperscript{109} that drove enrollment growth to negative 0.2 percent in 1999, the recovery in growth starting in 2002 coincides substantially with an improved Colombian economy (See annex GDP increase versus enrollment growth).\textsuperscript{110} The expansion of enrollments in HE from 2002 onwards also coincided with increased gross enrollment rates in basic secondary (from 79.5 to 102 percent in 2009) and high school (57.4 against 75.8 percent), improved internal efficiency of these lower educational levels\textsuperscript{111}, and a fall

\textsuperscript{109} The worst year of the economic crisis in Colombia was 1999, with the unique decrease in enrollments in Colombian history due to the difficulties for families in paying tuition and the reduction of financial resources for State funding of HE.

\textsuperscript{110} Even if the SENA enrollment were subtracted from the analysis, the average enrollment growth of 4.7 percent during the Education Revolution would be higher than prior period of the Pastrana Administration. Colombian results during the analyzed period show a recovery from the prior Pastrana administration, which had an annual growth as low as 3.4 percent

\textsuperscript{111} Taken from Sectoral Statistics – MEN (2011c). Internal efficiency of those educational levels is referred to greater percentage of students with courses approved and lower percent of those who dropped out.
Such environmental variables, outside policy, may have influenced the significant positive results in enrollments in Colombia. Such a phenomenon has previously been found in analysis of OECD countries where an important factor accounting for enrollments was the increase of high-school leavers who qualified to enter higher education (OECD 2007a).

6.2. Improvements in access outcomes that shift historical trends

Further, during the Education Revolution period the Colombian HE system attained more than just recovery. Findings show a significant shift from prior historical trends in four main variables, two of them dealing with coverage and the two others related to equity: a) the growth of the national enrollment rate; b) the contribution to growth by the public sector; c) the entrance of substantially greater number of low-income students; and d) the reduction of the gap between the lowest and the highest income quintile groups. The latter two outcomes could be judged as the most important changing trend lines regarding equity endeavors and, therefore, could be judged as the most important findings of the research. They are shown in the following.

Coverage

Results in the growth of national gross enrollment rates over time were improved during the Uribe administration compared to any 4-year period since 1970. According to an analysis of UNESCO statistics, the national GER\textsuperscript{113} rose sharply from 25.0 to 39.1 (2010 against 2002) for the 18-24 year-old cohort. Such a change

\textsuperscript{112}The average of poverty passed from 53.7 to 45.5 percent between 2002 and 2009, and a positive trend in reducing poverty occurred in all Colombian regions except for Choco, Cauca and Quindio. Percentages taken from the Department of National Statistics (DNP 2010).

\textsuperscript{113}All students enrolled in HE/Colombian population aged 18-24 years old
shows greater growth in percentage points of the GER during the two quadrennial governmental periods of the Education Revolution than prior ones from 1970 (7.0 and 7.1 percent points higher in enrollment rates during 2002-2006 and 2006-2010 against 1.8 percent points for the period 1998-2002). Comparing the periods 2002-2010 against 1995-2002, average annual growths of gross national enrollment rate were 1.5 and 0.95, respectively, even though obviously it is easier to move percentages upon a smaller based number.

**Figure 20** - Gross enrollment rates in Colombian HE (1970-2010)

![Gross Enrollment Rates Graph](image)

**Source:** CEPAL – CEPALSTAT – Statistics and Social Indicators Data drawn from UNESCO Institute for Statistics

The public sector made greater efforts and produced better results than the private one in expanding HE to a greater number of students. This opens another type of comparison: both sectors were partly dependent on the economy (and demographics) but the public one was the main target of the government policy.

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114 According to CEPAL data prior to 1997 are not absolutely comparable to those onwards because data on enrollments from 1998 are calculated by using the Normalized International Classification (ISCED 1997).
Nevertheless, there were elements intended to increase coverage within private HE as well.

The public sector contributed 74.3 percent of the enrollment growth from 2002 to 2010. Public universities and public university institutions reached a share in enrollment growth of 32.5 percent and SENA, 40.9 percent. The remaining 0.9 percent corresponds to public higher education non-university establishments. Even without taking into account SENA enrollments, the public sector surpassed its private counterpart as the latter holds a share of enrollment growth of just 25.7 percent, including university and non-university subsectors.

Considering absolute enrollments, the public sector – excluding SENA – expanded 1.3 times that of the private one (230,759 against 178,064 between 2002 and 2010). Taking SENA into account, the increase in enrollments for the public sector is 2.9 times the private enrollment growth. The data show SENA contributing with more than 282,800\(^{115}\) new entrants to higher education from 2002 to 2010.\(^{116}\)

\(^{115}\) On the other hand, outside SENA, new enrollments in non-university HE accounted for just 62,353. SENA apart, the share in growth of non-university institutions (both private and public) was just 4.1 percent of the total enrollment growth of HE.

\(^{116}\) Author’s calculation based on SNIES database.
Table 14— Changes in enrollments by institutional type and sector (2002 and 2010)  

<table>
<thead>
<tr>
<th>Institutional Type</th>
<th>2002</th>
<th>2010</th>
<th>Variation</th>
<th>Contribution to growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIVATE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universities</td>
<td>408,694</td>
<td>463,863</td>
<td>55,169</td>
<td>8.0%</td>
</tr>
<tr>
<td>University Institutions</td>
<td>127,997</td>
<td>228,791</td>
<td>100,794</td>
<td>14.6%</td>
</tr>
<tr>
<td>Technological Institutes</td>
<td>12,729</td>
<td>15,907</td>
<td>3,178</td>
<td>0.5%</td>
</tr>
<tr>
<td>Technical Institutes</td>
<td>34,006</td>
<td>52,929</td>
<td>18,923</td>
<td>2.7%</td>
</tr>
<tr>
<td><strong>PUBLIC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universities</td>
<td>337,527</td>
<td>524,187</td>
<td>186,660</td>
<td>27.0%</td>
</tr>
<tr>
<td>University Institutions</td>
<td>48,375</td>
<td>86,177</td>
<td>37,802</td>
<td>5.5%</td>
</tr>
<tr>
<td>Technological Institutes</td>
<td>13,043</td>
<td>19,895</td>
<td>6,852</td>
<td>1.0%</td>
</tr>
<tr>
<td>Technical Institutes</td>
<td>6,120</td>
<td>5,565</td>
<td>(555)</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Sena (Technological)</td>
<td>3,703</td>
<td>268,352</td>
<td>264,649</td>
<td>40.9%</td>
</tr>
<tr>
<td>Sena (Technical)</td>
<td>7,954</td>
<td>26,131</td>
<td>18,177</td>
<td>68.6%</td>
</tr>
<tr>
<td><strong>Subtotal Private</strong></td>
<td>583,426</td>
<td>761,490</td>
<td>178,064</td>
<td>25.7%</td>
</tr>
<tr>
<td><strong>Subtotal Public</strong></td>
<td>416,722</td>
<td>930,307</td>
<td>513,585</td>
<td>74.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,000,148</td>
<td>1,691,797</td>
<td>691,649</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Author’s calculations using SNIES database

Figure 21 – 2002 and 2010 enrollment number comparison by sector

Source: Author’s calculations using SNIES database

SENA apart, the greatest absolute enrollment increase was in public universities (186,660), followed by private demand absorbing university institutions (100,794) and private prestigious universities (55,169). The lowest enrollment enlargement occurred both in public and private technological institutes whereas a

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117 The detailed data displayed by each HE institution and program provided by the Colombian Education Ministry register 17,377 more enrollments for the year 2010 than the aggregated data on national enrollments provided by the Education Ministry in the source Indicators of HE (MEN 2012). This difference can be attributable to data drawn from different cut-points in time during that year to feed the database.
decline in enrollments was produced in public technical colleges. This result may be attributable to a shift in the SENA supply toward free HE that conflicted with a similar supply but with tuition fees attached.

This proportional shift from private to public enrollment is significant in that private HEIs are the majority in Colombia, reaching more than 70 percent the total set of the establishments. The private sector had also held the majority of students enrolled since 1975, a trend that prevailed up to 2005. From that point, the private sector started to represent a minority in share. In 2010, it held 48.0 percent of the total enrollment, a finding that supports Orozco’s research findings (CINDA 2007; Orozco 2010). Further, in the last 15 years, an absolute global decrease of private sector students occurred during 4 of the 8 years comprising the Education Revolution. Except for the 4-year period of absolute decline, this Colombian private decline follows one pattern discovered in other global settings, which is a drop in share but not in absolute enrollment.

As shown in Chapter 5, such results of greater public than private growth can be attributable to policy that also shifted historical local trends. For decades, financial constraints by Colombian governments had pressured the emergence of policies to support the private sector, given its ability to absorb the demand. A lack of investment for expanding public higher education was, in fact, the major “public policy” for the expansion of private enrollment (Uribe Correa 2010).

The Education Revolution implementation also concurred with challenges related to limited state resources for social investments and burdens for families to afford higher education. While not an optimal one, a policy solution was to utilize a minimum amount of financial resources and the existing institutional capacity to fulfill expansion goals. A supplementary initiative dealt with the allocation of state
funding by means of incentives to leverage private and public institutional resources. Evidence from figures and interviews confirms that the Government spurred existing higher education institutions and the SENA to endorse enrollment goals.

On one hand, enrollment figures in public establishments substantiate Orozco’s hypothesis that the public sector was the sector receiving more significant growth. On the other hand, the lack of extra-investment by the government along with strategies described above of using existing institutional capacity for expansion, contradicts his initial assumption of a government effort involving fresh resources. Orozco argues that such higher amount of resources would have been transferred to public universities for operations and investments as a strategy to spur institutions to increase enrollments (Orozco 2010). However, the reality described in Chapter 5 showed that the increase of state resources was almost equal to inflation.

Although controversial when it comes to the assessment of its benefits, the shift in the SENA offer appears to be the most potent public policy. Because SENA collects mandatory contributions from industry (4 percent of the payroll from every corporation or institution formally registered) and offers free education, the Government accomplished enrollment goals without the disbursement of either supplementary or additional public resources.

**Figure 22** – Enrollments in HE at SENA 2000-2010
As happened in Colombia with the SENA, the elevation of vocational education into HE is a policy option in some countries to deal with increased demand. For instance, such elevation occurred in Japan in the early 1980s when ministry authorities restricted university expansion and allowed vocational schools to give opportunity for HE to low-academic performers (Ishida 2007). Normal schools in Thailand incorporated into HE (Praphamontripong 2010) is an other example as are the binary systems introduced earlier in several European countries (Levy 2011).

**Equity**

Regarding social equity, even though it was at the center of Colombia’s HE policy, no relevant indicators were officially established or measured to assess the outcomes on student participation by income. Despite the stated goal of reaching 25 percent of the poorest population being enrolled in HE at the end of the Education Revolution in 2010 (MEN 2008), only some fragmentary information was reported through by both the ministry and the WB regarding this indicator.

**Source:** Colombian Ministry of Education (MEN 2010c, 2012)
Evidence that a growing number of low-income students entered college during the studied period can be seen by analyzing micro-data from SPADIES. Historical trends show greater gain for students coming from the two lowest income groups (earning less than 2 legal minimum salaries) and the lower-middle income brackets (earning between 2 and 3 legal minimum salaries). Although the growth tendency already existed prior to the reform of 2002, it shows a larger increase from 2006 onwards (Second quaddrenium).

**Figure 23** – Number of HE Entrants by Family Income (Legal minimum salary wages)

![Figure 23](image)

**Source:** Author’s calculations using SPADIES

For the two quadrennial government periods of the Education Revolution (data up to 2009), the shift in the composition of entrants is significant: from 29.8 percent during the period 1998-2002 to 50.0 percent of share by the two lowest income groups during the period 2003-2009. \(^{118}\)

\(^{118}\) Changes in the composition of the first-time student body can also be analyzed according to mothers’ educational levels. Patterns are less consistent than those found regarding income, with major gains for those entrants whose mothers had reached or completed secondary education (9th grade) followed by those with university education or higher. The share of first-time enrollees whose mothers had primary education, or lower, decreased; so too did the share of enrollees whose mothers gained a
Figure 24 – Demographic composition of entrants to HE – Share by Family Income

Source: Author’s calculations using SPADIES database

Another important finding is that the share of low income students entering HE increased among all types of HEIs during the period 2003-2010 compared to 1998-2002. Interestingly, participation grew higher in public universities than in public technical or technological institutes. The opposite occurred within the private sector.

Such a pattern of reaching enrollment expansion by enlarging the numbers of low income students at the public university level instead of the lower institutional layers represents perhaps some deviation from international trends. In most countries, massive enrollment has rested on open, less selective subsystems of HE such as community colleges in the United States (Bound, Lovenheim, and Turner 2007);
second-tier colleges in Israel (Shavit et al. 2007); and junior colleges in South Korea (Hyunjoon 2007), among others. According to Levy (2011), the expansion of non-universities is a policy trend globally and an alternative to low-cost access taken by governments via demand-absorbing institutions.

This important outcome of greater growth in share by low income students entering public universities instead of other public institutional types can be seen as bolstering the view that access policy efforts were indeed large-scale. This should be assessed together with the fact that the great majority (85.6 percent) of those students receiving ICETEX aid during the period 2003-2010 entered public universities. The same trend occurred regarding beneficiaries of aid who accessed private universities (63.2 percent) instead of other institutional types within those sectors.¹¹⁹

Such findings contrast greatly with the panorama described by Bula (2009), who focused his analysis of the Education Revolution on the contribution of the student aid scheme to reduce inequalities. Bula argues that the majority of students from the poorest households who benefited from public loans accessed to low-tier private institutions.¹²⁰ He concluded that aid policy produced a perverse effect since students have to choose low quality HEIs.

**Figure 25 and 26** - Share of entrants to public and private HE sectors coming from households earning less than 269 dollars monthly (1998-2002 and 2003-2010 comparison)

¹¹⁹ Findings are according to author’s analysis of SPADIES statistics.
¹²⁰ Bula breaks down HE institutions according to their institutional capacity into categories based on indicators of high quality accreditation, quality of faculty, and the extent of being comprehensive in fields of knowledge.
Additionally, data from SPADIES are relevant in concluding that access for students coming from low-income groups, and from mothers with levels of education reaching 9th grade or lower, increased significantly in absolute numbers. Such a rise is not related to a growth in the number of Colombians belonging to the less advantaged family income groups because the percentage growth of entrants is not proportional to the increase in the number of individuals earning lower salaries. Indeed, the share of the employed population that earns less than two minimum salaries has remained

**Source:** Author's calculations using SPADIES
almost stable over time (from 83.6 percent in 2002 to 85.7 in 2010). Regarding income, data also show that the percent growth in the number of first-time students was greater for low-income groups than that among high-income counterparts.

Table 15 – Number of entrants by family income (5-year periods)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>25,901</td>
<td>141,223</td>
<td>115,322</td>
<td>445.2</td>
</tr>
<tr>
<td>Between 1 and less than 2</td>
<td>177,572</td>
<td>436,390</td>
<td>258,818</td>
<td>145.8</td>
</tr>
<tr>
<td>Between 2 and less than 3</td>
<td>168,092</td>
<td>284,734</td>
<td>116,642</td>
<td>69.4</td>
</tr>
<tr>
<td>Between 3 and less than 5</td>
<td>161,844</td>
<td>203,730</td>
<td>41,886</td>
<td>25.9</td>
</tr>
<tr>
<td>Between 5 and less than 7</td>
<td>85,781</td>
<td>86,393</td>
<td>612</td>
<td>0.7</td>
</tr>
<tr>
<td>7 or more</td>
<td>63,562</td>
<td>84,861</td>
<td>1,299</td>
<td>2.0</td>
</tr>
<tr>
<td>Total N*</td>
<td>682,752</td>
<td>1,217,331</td>
<td>534,579</td>
<td>78.3</td>
</tr>
</tbody>
</table>

Source: Author’s calculations using SPADIES. *Measured by Colombian legal minimum wages

A reduction of the gap in enrollment rates between the lowest and the highest income quintiles during the Education Revolution is another substantial finding. The 8-year period analyzed shifted a negative trend occurred over the entire 1990s that experienced an increasing inequality in HE participation between the poorest and the wealthiest Colombians. Results from household surveys show a slight reduction in the gap of just one percent point for the 18/24 age cohort from 2002 to 2010 (41.2 against 40.0 percent). Such an outcome is consistent with the analysis conducted on

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121 The population earning less than two minimum salary wages grew around 3 million from 2002 to 2010. Such figure represents 68.8 percent of the Colombian population who entered the labor market; a percentage that is below the historical share of the employed Colombians who earn less than two legal salaries (around 83 to 86 percent). Between 2002 and 2010, labor aged Colombians increased from 30.5 million to 34.9 and the employment rate passed from 52.2 to 55.9 percent. Author’s calculation using DANE – Household Surveys – Percentage of the Labor Aged Population, Employment rates, and underemployment and Ministry of Labor - http://www.mintrabajo.gov.co/index.php/buscar.html?searchword=abece+del+salario&ordering=&searchphrase=all

122 An aspect in highlighting is that in 2006 – at the end of implementation efforts of the first Educational Revolution Plan – such a gap was narrowed in 6.3 percent points, but the favorable trend was reversed, at least as regards of results in 2010.
statistics on school attendance by per capita household income quintile\textsuperscript{123} for the 20/24 age-cohort, by year, provided by ECLAC/CEPAL (2011).\textsuperscript{124} Estimations in using this source show that the gap in attendance for such an age-cohort between the lowest and the highest income quintiles was lessened in 2.3 percent points from 39.6 in 2002 to 37.3 in 2010. These results had not been evidenced in previous research with its focus on equity and access during the Education Revolution (Lopez 2011; Orozco 2009, 2010; Bula 2009).

Although Colombian policy efforts show limitations in the reduction of the gap between the lowest and the highest income groups, the fact that such a gap declined during the eight-year period can be assessed as improvement. The prior decade, the 1990s, had the gap widening by 13 percent points.

Additional to the gap cutback, relative and significant absolute gains for all income groups in the net enrollment rates occurred. A remarkable finding, however, is that the net enrollment rate increased more for the two lowest income quintiles than for the highest one. Indeed, all income groups increased at a higher rate than the highest quintile. Such results are consistent in the analysis of both processed data from household surveys (drawing from Orozco 2010 and Lopez 2011) for the 18-24 year-old cohort and from ECLAC statistics for the 20-24 age cohorts, as shown in tables 6 and 7.

Results referring to enrollment rates by income quintile in Colombia are quite distinct from broad Latin American patterns. Among 18 Latin American countries for

\begin{footnotesize}
\textsuperscript{123} According to ECLAC/CEPAL, income quintile corresponds to household income based on per capita income quintile, where quintile 1 corresponds to the poorest households and quintile 5 to the richest ones. School attendance by gender and age group is in urban areas and are based on special tabulations of data from household surveys (CEPAL 2011). In the Colombian case, surveys are administered by the Department of National Statistics DANE.

\textsuperscript{124} CEPAL statistics are based on Colombian household surveys.
\end{footnotesize}
which data are available, Colombia is unique in improving access for all income quintiles.

**Table 16**– Net enrollment rate by income quintiles – Selected years (18-24 age cohorts)

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2006</th>
<th>2010</th>
<th>Difference between 2002 and 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Q2</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Q3</td>
<td>12</td>
<td>12</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Q4</td>
<td>23</td>
<td>25</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>Q5 -Highest</td>
<td>44</td>
<td>43</td>
<td>48</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>18</td>
<td>24</td>
<td>8</td>
</tr>
</tbody>
</table>

**Source:** DANE – Household Surveys in Orozco 2010 (years 2002 and 2006) and *Banco de la República* in Lopez (2011) (for the year 2010)

**Table 17**- Net enrollment rates by income quintiles (including gender) 2002 and 2010 comparison (20/24 age cohort)

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th></th>
<th></th>
<th>Men</th>
<th></th>
<th></th>
<th>Total (males and females)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>11.6</td>
<td>16.6</td>
<td>5.0</td>
<td>15.1</td>
<td>16.5</td>
<td>1.4</td>
<td>13.1</td>
<td>16.5</td>
</tr>
<tr>
<td>Q3</td>
<td>18.7</td>
<td>27.1</td>
<td>8.4</td>
<td>18.6</td>
<td>23.1</td>
<td>4.5</td>
<td>18.7</td>
<td>26.1</td>
</tr>
<tr>
<td>Q5</td>
<td>51.8</td>
<td>52.9</td>
<td>1.1</td>
<td>53.6</td>
<td>54.6</td>
<td>1.0</td>
<td>52.7</td>
<td>53.8</td>
</tr>
</tbody>
</table>

**Source:** Author’s calculations based on CEPAL statistics (2002, 2011)

Results from Colombia fit prior research findings that middle classes are the ones who benefit the most from expansion (Summerfield and Gill 2005; Iannelli 2007; Furlong and Cartmel 2009) when systems have not reached universal access for upper social groups. Indeed, analyzed data from ECLAC/CEPAL confirm that during the Education Revolution period greater gains in enrollment rates were for middle
income 20-24 aged students, followed by the lowest quintile\textsuperscript{125}. The pattern is consistent for 18-24 age cohorts.

6.3. Outcomes that show no change or worsened during the Educational Revolution

Despite such positive results access and equity during the implementation of government initiatives, public policy did not change some negative features in access of the Colombian HE system. In this section, results are presented twofold: first, those variables of access that were improved, but not to the extent to significantly reduce inequalities among both income and regional groups. In this set of outcomes a) enrollment rates and b) transition rates within Colombian departments are included as well as c) the remaining gap in HE attendance by the lowest and highest income quintile; d) the evidence of prevailing attrition is also incorporated within this group of outcomes despite a fall of drop-out rates from the previous period. Second, I present access outcomes both that worsened during the analyzed period and those that did not change or for which change is attributable to the inclusion, exclusively, of the SENA within HE. Within this set of outcomes are e) graduation rates; f) the regressive nature of public higher education (including subsidies distributed among non-poor students); and g) the shift in share of enrollments by educational types (university and non-university HE).

Despite accomplishments, by 2010 seven Colombian departments still had GER of less than 15 percent and in the Department of Vaupés it was as low as 4.1 percent.

\textsuperscript{125} These data are also relevant in illustrating gains in enrollment rates for women particularly coming from middle income brackets who increased their participation more than males did (except for the highest income quintile). Males in the third quintile also increased participation the most compared to males from other income groups.
More than 80 percent of Colombian departments remained below the Colombian average of GER by 2010 (26 of 32).

While in some departments the majority of high school graduates access HE, in most of them less than half of those who completed eleventh grade by 2010 entered colleges or universities (20 of 32 departments). The worst cases are for underprivileged departments located in the southeast part of Colombia, where only three of every ten students got the opportunity for HE. Again the Department of Vaupés, did not reach one percent point of transition rate in 2010.

In spite of the reversal in trend observed, the gap remaining in enrollment rates between the lowest and the highest income groups is still 37 percent. Outcomes in the participation of the Colombian population by income quintiles are not surprising, as observed from comparative research on HE equity. Very few countries in the world have achieved substantial reductions in the disparities among socio-economic groups.

Attrition is another outcome that is far from being reversed. The descriptive analysis using micro-data from SPADIES reveals that more than a million students representing 47.7 percent of the total students enrolled from 2003 to 2009 in the sample dropped out from the system completely (1,040,803 out of 2,181,309 enrolled) and ¾ of those who dropped did not survive the third semester of their studies.

Although the majority of those in the sample who dropped out from 2003 to 2010 (first semester) came from the three lowest income brackets (those whose families earn less than three minimum wages), such a percentage is fairly similar to that of the composition of entrants from low salary groups during that period (74.9 percent and 72.9 percent, respectively).

Ministry authorities recognized during interviews that academic and financial limitations prevail and produce a significant effect of attrition. Departure in
Colombia, was then, categorized as the greatest barrier to expand coverage in the HE during the analyzed period (p.i. J. Botero).

According to officials, such restrictions, observed as barriers for persistence, were mostly low academic preparation, affordability, and limited adaptation to college culture and institutional requirements. The latter reason for departure had been recognized by Tinto as central in explaining the causes of departure from HE (1987).\textsuperscript{126}

ICETEX was also acquainted with such a reality (p.i. Villegas). Even though aid officials expressed during interviews how much they valued the provision of aid to poorer, less prepared children, they recognized that limited academic background often results in dropping out. Such a reality brings high cost for the agency, the system, the HEIs, and the students themselves. As a former official pointed out, “such failure implies threefold consequences: the drop-out still has to repay debts, she/he leaves the HE system with the trauma of not having been able to cope with college, and we keep increasing dropping out figures” (p.i. Hernández).

Indeed, as an effect of a significantly greater number of less academically prepared and low income students, graduation rates dropped over time and the time spent for graduation expanded on average over the Education Revolution period. These negative trends confirm Herrera’s findings, based on data up to 2008 (2011). Similar tendencies were found in the US during the 1970s where graduation rates declined five percent together with a massive access of students with lower academic preparation to the lower layers of the HE structure (Bound, Lovenheim, and Turner 2007; Bound, Lovenheim, and Turner 2009). As found for the US, whereas the mass of HE students increased in Colombia, institutional and public resources remain

\textsuperscript{126} Tinto highlights the quality of faculty-student interaction and institutions’ commitment to students as fundamental in encouraging retention.
almost constant (Herrera 2011). However, while in the US expansion rested mainly on the lower layers of HE – and particularly at the community colleges - in Colombia as seen during the Education Revolution period, major expansion resulted in universities and university institutions (SENA apart).

Such a reality confirms that access policy should be studied and designed by taking account both the supply-side (Bound, Lovenheim, and Turner 2007) in factors affecting enrollment, equity and persistence, and the demand-side by understanding individual and social characteristics of those who aspire to HE, that may hamper educational opportunity in access and results.

Figures show a constant historical trend of greater graduations rates in HE for those groups with higher performance on entrance test scores. By household income (measured in salary wages), graduation rates also vary across groups of entrants. The trend during the Education Revolution period reveals higher results in completion for the richest brackets.

Table 18 and Figure 27– Graduation rates by year and performance of HE students in entrance examinations

<table>
<thead>
<tr>
<th>Graduation rates by period and performance on entrance test scores</th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-1</td>
<td>32.5</td>
<td>39.2</td>
<td>50.4</td>
</tr>
<tr>
<td>1998-2</td>
<td>28.6</td>
<td>36.7</td>
<td>46.0</td>
</tr>
<tr>
<td>1999-1</td>
<td>30.0</td>
<td>37.5</td>
<td>48.9</td>
</tr>
<tr>
<td>1999-2</td>
<td>31.1</td>
<td>36.9</td>
<td>44.7</td>
</tr>
<tr>
<td>2000-1</td>
<td>30.3</td>
<td>37.1</td>
<td>46.8</td>
</tr>
<tr>
<td>2000-2</td>
<td>28.9</td>
<td>34.8</td>
<td>43.2</td>
</tr>
<tr>
<td>2001-1</td>
<td>27.1</td>
<td>35.4</td>
<td>44.7</td>
</tr>
<tr>
<td>2001-2</td>
<td>27.8</td>
<td>34.9</td>
<td>42.7</td>
</tr>
<tr>
<td>2002-1</td>
<td>27.7</td>
<td>36.5</td>
<td>48.3</td>
</tr>
<tr>
<td>2002-2</td>
<td>26.7</td>
<td>35.8</td>
<td>45.5</td>
</tr>
<tr>
<td>2003-1</td>
<td>28.9</td>
<td>37.2</td>
<td>48.2</td>
</tr>
<tr>
<td>2003-2</td>
<td>24.9</td>
<td>34.3</td>
<td>44.4</td>
</tr>
<tr>
<td>2004-1</td>
<td>24.8</td>
<td>34.6</td>
<td>46.6</td>
</tr>
<tr>
<td>2004-2</td>
<td>24.8</td>
<td>32.8</td>
<td>43.3</td>
</tr>
<tr>
<td>2005-1</td>
<td>28.4</td>
<td>34.4</td>
<td>46.6</td>
</tr>
<tr>
<td>2005-2</td>
<td>25.7</td>
<td>35.2</td>
<td>46.7</td>
</tr>
</tbody>
</table>
Additionally, the regressive nature of the Colombian public HE prevails as well as a disparate composition of the student population by income. In 2010, it was composed only 6 percent of students from the lowest income quintile and 12 percent from the second lowest one, whereas the two top quintiles accounted for 32 and 29 percent (Lopez 2011). This outcome illustrates how a very regressive type of public higher education is prevalent in the Colombian system that has been claimed in previous research in Colombia for prior periods (Lasso 2006; Clavijo 2011; Zapata and Ariza 2005).

In 2003, students from the lowest quintile received just 2.5 percent of the total subsidy from public expenditure appropriated by the government to public HEIs whereas the highest quintile was given 41.6 percent of such subsidy (Lasso 2006). According to Nuñez (2009) those percentages have risen to 3.7 and 45.8 percent in 2008 for the poorest and the richest quintile, respectively. Of course, this disparate distribution is not only the result of an unequal representation of the HE student

**Source** for Table 19 and Figures 27 and 28: Author’s calculations using SPADIES
population by income groups, but also relates to the unequal allocation in the amount of per-student appropriation by the Colombian government across public HEIs.

A great concern with the financing of the public supply side is that from the total subsidies, 74.2 percent goes to financing HE for the richest students belonging to the two highest quintiles. The share of HE subsidies for the 40 poorest percent students is only of 10.4 percent.\textsuperscript{127}

The inclusion of a great majority of the non-poor in public subsidized HE is a structural, historical problem that has been addressed integrally by policy neither in the past nor during the Education Revolution. It is associated with both a strong supply side subsidy system and an admission process based exclusively on merit (except for indigenous quotas and a few other affirmative action programs). Such a distortion of the public subsidized HE has produced calls particularly from economics scholars to shift public funding greatly from a supply-side to a demand-side financing. One proposal is to engage public university students within the public subsidized loan system, particularly those with high income capacity (Lopez 2011).

Unfortunately, the current structure and processes of the public HE bypasses many poor students who cannot compete with their high income counterparts holding better test scores. In the worst case, they do not gain any access. But as I proceeded to show, even when they gain admission, they frequently fail to continue enrolled because of scarcity of academic resources and preparation for college.

Finally, results regarding a shift in the educational structure toward a greater share of non-university enrollments are not easy to assess considering the inclusion (or not)

\textsuperscript{127} Author’s calculations using (Nuñez 2009). Data of 2008 based on Quality of Life Household Survey. An analysis of the whole Colombian system of subsidies tells that by 2006, if subsidies for HE and for pension were excluded, Colombia would achieved that the social public expenditure in subsidies went to the majority of 73.2 percent of the population. The remaining 26.8 percent corresponding to non-poor individuals receiving subsidies is similar to international trends according to the Mission for the Reduction of Poverty and Inequality in Colombia (López 2006)
of the SENA enrollments. If the analysis includes SENA, the Government was also able to tip the balance and see the non-university share of the total HE enrollment soar from 18.3 to 32.4 percent. By doing so, policy achieved the goal of starting to change the educational pyramid with a greater base, or number of students enrolled in non-university education, in order to fit the occupational structure with a base of work-related skilled graduates. If SENA is not included in the analysis, the share of enrollment by modality or level of education (non-university HE, undergraduate, and graduate education) remains almost the same between 2002 and 2010, as shown in Figure 16.

**Figure 29** - Share of enrollment by level of HE including and excluding the SENA enrollment (2002 and 2010 comparison)

![Bar Chart](chart.png)

**Source:** Author’s calculations using MEN (2010a, 2012)

A subsidiary finding is that the policy favoring non-university enrollments regardless of type of HEIs, produced an interesting effect in regard to the differential supply of programs’ levels by institutional type. As observed in chapter 5, through competitions for funds by the National Education Ministry, universities and non-
university institutions were heartened to create new 2-3 year programs. The results found are both remarkable and paradoxical, as a greater percentage of enrollments in 2-3 year programs occurred in universities (54.5 percent, corresponding to 33,955 enrollments) than in technical and technological colleges. Although the government intended to incorporate flexibility from the supply side toward the strengthening of technical and technological programs in terms of quality and coverage, no outcome of this nature was projected deliberately in policy plans or projects.

Conclusions

Substantial changes in access to Colombian HE were produced compared to the state of access before the launching of public policy named the Education Revolution. Outcomes show improvements, not only in comparison to the previous governmental period, but some are extensive enough to shift historical trends. Some of this transformation can be attributed to policy such as the contribution by the public sector to enrollment growth. Although, an assessment of outcomes shows mixed results overall, the number and the extent of improved indicators allows a more positive than negative view of change. Most access indicators in the categories of coverage, equity, and persistence show progress.

Arum, Gamoran, and Shavit (2007) provide a stance that may guide the interpretation of findings like ours. Paraphrasing and adapting their arguments allow us to say that expansion of enrollments in Colombia during the analyzed period has been of inclusion rather than diversion, even without substantial declining inequality. As they argue “when inequality in an expanding system is stable rather than on the

128 Author’s calculations using SNIES
rise, the system should be regarded as increasingly inclusive because it allows larger proportions of all social strata to attend”, 29.

Positive assessment may contradict the views of most Colombian scholars that have also evaluated outcomes referred to the implementation of the Education Revolution plans. But those views mostly have focused the analysis on the prevailing inequalities, instead of addressing the state of the change. In this regard, perception of results would always get a pessimistic view taking into account the difficulties encountered, globally, to achieve substantial equalization.

Historical patterns that hamper educational opportunity persist and would require strategies to be implemented on the long-term. As observed, the gap in attendance in Colombia between the lowest and the highest income quintiles is still sharp compared to other countries such as Argentina, Peru, and Bolivia, with gaps below the Latin American average (being Bolivia the nation with the smallest difference in enrollment rates between the lowest and the highest income quintiles of 11.0 percent) (See appendix on Colombian indicators compared to international).

Of course, the phenomenon of attrition, which affects powerfully the continuation of less advantaged students, also affects greatly results on successful access to HE. Such a pattern along with regional prevailing inequalities in HE enrollment and school-to-college transition rates constitute substantial tasks to be addressed by Colombian access policy in the near future.
CHAPTER 7
CONCLUSIONS AND RECOMMENDATIONS

Analysis of policy goals, efforts, impacts, and access outcomes has enabled to investigate how public policy (goals and efforts) achieve improved access to and equity in Colombian HE as envisaged by the national government during the implementation of the Education Revolution plans and by international assistance. This systematic examination concludes that Colombian public policy to a significant degree achieved – through extensive and major efforts – pursuits of greater access to and equity in higher education. During the Education Revolution the national government committed to equitable access through identifiable goals that were further translated into concrete efforts and impacts.

Conclusions from the empirical analysis on efforts and impacts fit Levy’s (2005) findings of international assistance and policy in Latin America as results appear more positive or mixed than negative. Evidence of positive results comes from the fact that outcomes show significant improvements in absolute numbers of entrants and some progress in relative increases of enrollment rates nationally, regionally, and by income groups. Empirical findings demonstrate concrete policy goals and efforts focusing on benefits to disadvantaged groups, especially regarding income and location. Significantly greater amounts of student aid and access for Colombians residing in less-served geographical areas occurred; therefore, equity policy in the HE system also improved.

The entrance of larger numbers of lower income students is the most important, encouraging result, while attrition became a significant barrier for effective participation. The demographic composition of entrants to HE coming from lower
income households is fairly similar to the share of those who dropped out coming from this income bracket. Departure resulted from financial ability, but mainly from poor academic preparation.

This concluding chapter draws attention to the main findings, their connection to literature, their implication for policy, and recommendations for both research and policy. The content of the chapter follows the structure of the dissertation by addressing policy goals, efforts, impacts, and access outcomes. It also recalls to some limitations found during this research and potential subjects for further studies.

7.1. The linkage of goals, efforts, and impacts

This examination evidenced the existence of concrete goals in policy plans and subsequent monitoring and adjustments. Such a presence of targets through the design and the implementation process showed a guiding policy conception and actual implementation that were, themselves, policy efforts.

Public policy on Colombian HE access during the Education Revolution placed a visible emphasis on coverage and equity. Policy intentions were stated as goals in policy papers and plans. Equity in access can be categorized by this research as a state intervention to equalize educational opportunity among targeted groups. Public policy became, then, an intended action that searches for a better balance in the distribution of goods by examining individual disparities (E.g. resources available) and accounting for disadvantages (Rawls 1999).

Although we were able to identify goals and a ensuing official system to follow up them through concrete projects, the Colombian case did not escape to ambiguity and vagueness of some goals in policy described in the literature by Cerych and Sabatier (1986), and Majone and Wildavsky (1978). Perhaps, because policy
objectives were frequently manifold, to some extent they were illustrative of a conflicting and unclear character, particularly in the first quadrennial governmental period. Causes for such can be derived from a result of transactions between policymakers and several groups with contrasting interests (Majone and Wildavsky 1978); Some goals were abandoned through the implementation process because they were weak themselves as policy ideas (Gornitzka, Kyvik, and Stensaker 2002; Pressman and Wildavsky 1984). For instance, the government established in the first quadrennium a goal of encouraging 80,000 students to persist in their studies at public universities as a measure of coverage expansion. This goal, of course, was later discarded.

The Colombian access policy was also enlightening on what literature has shown as the difficulty to define policy and its goals, given the lack of explicitness and their embeddedness within policy actions (Levy 2005; Bastiaens 2007). For example, policy goals to reduce dropping out did not come out explicitly in plans or projects while efforts were implemented on the way as shown in Chapter 5. Implementation efforts on reducing attrition were then an earlier stage to the establishment of concrete goals on this matter. This example also confirms literature that policy efforts often appear to be tied to unidentified or at least unstated, even not recognized, goals. In addition, there was the case that a given policy effort was linked to several policy goals simultaneously. For example, the projects to strengthen non-university HE funded by the Education Ministry were established in plans to be the means for increasing quality, relevance, and coverage of HE. This approach also shows that generally, though not always, operative goals – such as to increase enrollments in 2 and 3 year-programs – were subordinated to multiple grand goals, as those described above.
Some policy efforts were to bear little relation to certain goals that the
government explicitly linked them to, illustrating how some inconsistency is common
to policy. For instance, some efforts for system coordination were tied to coverage
goals in the monitoring of plans. For the second quadrennium such a discrepancy was
adjusted and this effort was linked to efficiency goals.

The Colombian Education Ministry implemented a multifaceted set of policy
efforts linked to policy goals. This finding substantiates the hypothesis regarding the
first research question (to what extent were access policy goals on HE access, as
envisioned in the Educational Revolution, translated into policy efforts?). Some of
them included support of institutional affirmative action, the implementation of
substantially expanded student aid programs, greater decentralization of the supply of
HE, and the dissemination of information on college choice among disadvantaged
groups. This shows that the Education Revolution not only set goals on equitable
access, but implemented efforts of equalization. Such policy efforts implied “vertical
equity” initiatives (Berne and Stiefel 1984) which intended to establish enabling
conditions for access prior, during, and after the entrance to HE institutions by
targeting groups.

The nature of policy efforts bears out how innovative the Education
Revolution in relation to previous endeavors and different from conventional policy
choices in Latin America. For instance, policy initiatives challenged the traditional
way of transferring public resources to HE systems, historically directed almost
exclusively to public universities (Garcia Guadilla 1996). In contrast, public money
went also to supporting numerous private institutions by using a variety of strategies
and incentives in open competition, aimed at fulfilling government goals on access
and quality. Certainly the tradition of exclusive public subsidy for public HE is also
changing recently in other countries – such as in Brazil – but mainly in the form of loans and grants for students.

In addition, the government was able to spur autonomous public institutions (both universities and SENA) to accomplish state goals of system expansion. Because access occurs within those largely self-ruling establishments, access policy cannot be implemented by the state alone. In its empirical execution within systems where autonomy is a constitutional principle for both public and private institutions, access policy requires both consent and action by institutional implementers.

A question here is how a national policy agenda is received, accepted and even supported by multiple institutions holding their own institutional interests within a pluralist HE system (Levy 1995). Such complexity of the policy implementation process has been described by Hill and Hupe (2002) when they observe the multiplicity of loci, layers and levels of implementation. The nature of a pluralistic system requires a variety of political-administrative-institutional relations of both a vertical and horizontal character (e.g. Government-HEI interactions and relations among government agencies, respectively).

A conceptual shift is discernible in a pluralist context like Colombia’s, from government to governance; and instead of a hierarchical managerial form in which authority is the core mode (Hill and Hupe 2002), autonomy and pluralism require transaction and influence (Majone 1989). Both of the latter are the means of governance when markets and institutional networks coexist for policy execution (Hill and Hupe 2002) as present in the Colombian case. During the Education Revolution period, policy used transactional mechanisms that facilitated the transition from policy aims to policy actions, becoming a policy challenge because of the significant degree of freedom on the side of implementers. Hill and Hupe named such policy
effort the “act of management” described by O’Toole (2000) as the set of conscious efforts to coordinate actors and resources in order to accomplish established collective purposes.

As in the Colombian case and as seen in the policy effort description, both persuasion and incentives (explained in Chapter 5) were the mechanisms used to align institutional efforts to government aims. As observed through the dissertation research, examples of such processes are multiple in the Colombian case: a) participation of HEIs in agreement with ICETEX to finance lower-income students; b) the compliance of public universities (particularly regional ones) to “efficiency policies” toward increasing enrollments by using existing institutional capacity and resources; c) the creation of alliances of HEIs to compete for public funds and their commitment to develop projects (as well as to be supervised by the Colombian Ministry in order to accomplish operative goals).

Transaction and stimulus as processes within a set of efforts have of course been increasingly found in HE systems in much of the world. For the European Commission such a mechanism is apparent in OECD countries even with a variety in the levels of state ownership of HE institutions and the institutional autonomy. A study of eight European countries concluded the significant extent to which governments depend on HEIs to accomplish their economic and social goals without having direct mechanisms to secure it. OECD 2007b)

“… The State cannot directly manage delivery of policy. It cannot guarantee that institutions will share its policy aims. It may need to share more information with HEIs and to engage them in a process of consultation and debate to achieve this. It can pay for delivery at a price that is attractive to the HEIs, but this becomes closer to a contractual than a core funding relationship” (OECD 2007b), 12, 23.

In terms of the relation between domestic policy efforts and the envisioning of the WB, policy implementers appear to have taken distinct routes in stimulating both the
public and private enrollment. Although local policy initiatives apparently responded greatly to WB suggestions stated in 2002, domestic implementers included homemade features to motivate enrollment expansion no matter the private or public character of suppliers.

For instance, a WB recommendation was that public HE provide seats to low-income students both in urban and under-served areas, where private institutions “tend to not operate” (World Bank 2003), 46. Instead, the Colombian government stimulated both public and private institutions to serve economically disadvantaged students and students in troubled areas, by giving financial incentives. State funds went to support technology and equipment in the creation of Regional Centers of HE and in general, for the increasing of enrollments in non-university programs.

Whereas the WB recommended supporting enrollments in private HE to produce substantial fiscal savings (since private instruction would substitute a more expensive public one), the Colombian Government produced such savings from both the expansion of enrollments in public HE and the reduction of the per student state appropriation.

The international agency had thought mainly about private suppliers of non-university HE given that this educational type would allow the system to absorb the increased demand from the lowest social layers. Yet the Colombian government facilitated such growth in the public sector by the support both to free non-university HE offered by the SENA as well as low-cost programs supplied by public-private partnerships of existing institutions.

Regarding the linkage between efforts and policy impacts, both expected and unexpected effects occurred, as well as mixed results, confirming the hypothesis for the second research question that impacts were consistent with policy goals across a
Some examples of the latter are: a) the goal of financing demand to expand the private non-university sector did not happen to the extent to which the WB and the government had expected because of the low demand for this type of HE; and b) there was not significant enrollment growth in non-university education outside the public SENA.

Three main policy impacts with mixed consequences found in this research deserve attention: First, the contribution of the public sector to enrollment growth; second, the unforeseen effect of financing policy that resulted in regional inequalities of affordability; and third, the contribution of public aid to equity.

In spurring enrollments at both SENA and public universities, the Colombian government was able to fulfill a national enrollment goal in HE without resorting either to additional substantial investments or supplementary institutional capacity. The number of public HEIs rose only slightly from 79 to just 81 between 2002 and 2010 while 23 private institutions were created (211 against 188 in 2002). This recent trend in Colombia would contradict some literature that observes how expansion to absorb the demand normally comes together with institutional expansion and differentiation (Levy 1986a; Arum, Gamoran, and Shavit 2007; Trow 1988).

Careful interpretation and analysis show a complex story in terms of the relationship between policy efforts and results obtained, which proved to involve reasonable controversy in the Colombian case. Such an argument is apparent not only because complexity of efforts yield mixed impacts, but for the reason that the inclusion (or not) of SENA within access efforts and statistic accounts, gave us different panoramas of effects.
Considering enrollments, significant improvements may be derived from the effect of public policy since the majority of enrollments were in public universities and in SENA, which is public as well. Together both represented almost 75 percent of the total growth. Although the public HE demonstrated the more potent path, the private sector also grew. Whereas the expansion of enrollments in HE by SENA is evident, the inclusion of this institution to provide HE was perceived for some scholars as a mechanism to inflate enrollment statistics.

Controversy and contrasting impacts are also visible in policy to enlarge enrollments in existing public universities. On one hand, the government spurred institutions to broaden significant room for the poor. On the other, the financing/efficiency public policy aimed to increase such enrollments in public universities with no substantial additional national investments, in turn, produced an unexpected, negative effect of greater burden for families. As was observed, the reduction of the per-student appropriation by the national government to public universities led to regional, low financed public universities increasing their enrollment by means of increased tuition. By doing so, they made HE less affordable for the poorest students. In this regard, the lack of additional funding to public universities was reasonably questioned by interviewed scholars, even without their knowing our finding of unforeseen inequalities.

The lack of both additional investment and institutional growth in the public sector, but remarkable enrollment expansion within, would be placing several public universities at the end of the Education Revolution as “overtrading institutions”. This phenomenon, described by OECD - directorate of education (EU-RA 2004), consists of financing deficits absorbed by HEIs as “an efficiency gain” that overloads teaching
staff time and physical institutional capacity. This fact would produce a “reduced ability to respond to new policy initiatives” (Ibid, 39).

Finally, policy efforts showed a displacement from an almost exclusive supply-side financing scheme prior to the Education Revolution to a combined demand-supply funding system through the expansion of student aid. This policy involved increasing opportunities for competition among HEIs to attract students with financial aid.

Financing demand came from a policy rationale that was calculated by the government and the WB. Funding tuition through loans and grants in private HEIs would allow financial efficiency and substantial savings because the opposite (financing supply) implied both significantly higher public subsidies at public universities and lower investment returns compared to cost (p.i. Alexandra Hernández).

Judged against the Colombian history on the matter, the expansion of student aid was remarkable in both the number of beneficiaries and the amounts disbursed during the Education Revolution. In addition, aid went mostly to students from the bottom three income strata (out of six). Some individuals already enrolled used this aid, however, in substitution of other funding sources. This phenomenon is also documented in literature (St. John 2003). Public resources became limited as well, compared to the demand for aid as acknowledged by the WB and Colombian officials (of course aid applications substantially increased), and the market did not provide sufficient private capital for low-income students (World Bank 2008a).
7.2. Access outcomes

Contrasting groups depicted to present findings in this research enables to confirm the hypothesis of mixed results. Historical trends validated contrasting outcomes as well. Some changes in access resulted in amelioration substantial enough to attribute a significant effect to policy efforts aimed at changing the preceding tendencies. Another set of outcomes did not shift prior trends, which was also hypothesized for this research (to answer the third research question).

Four most important findings have been underscored through this research in terms of access outcomes and are synthesized in the following: a) improved indicators of coverage in both absolute and relative terms nationally and regionally; b) increased net enrollment rates for all income groups, uniquely in Latin America; and unusually, greater increase in net enrollment rates by lower and middle income quintiles than by the higher income one; c) a reduction, though small, of the gap in net enrollment rates between the lowest and the highest income quintile that shifted a previous decade of widening disparity in trend line; and d) a substantial increase in the demographic share of entrants to HE coming from lower income households, one surpassing (remarkably) the percentage for middle and upper income groups. This shift in participation composition included the fact that economically disadvantaged students accessed all types of HEIs, and to a greater extent, universities than non-university institutions.

Regarding access outcomes, the Colombian case is informative in providing differential results from other country cases where the Maximally Maintained Inequality hypothesis has been confirmed (Raftery and Hout 1993). Ecuador is an example of an uptick in which privileged social classes are the ones benefiting most
from recent access policies, including free HE enacted by Constitution in 2008 (Post 2011).

The findings of improvements in equitable access to Colombian HE point out the advancement of HE access for disadvantaged students, which coincides with less severe selection to college based on academic ability. This trend was confirmed by empirical findings of a higher share of students with low entrance test scores during the Education Revolution than in prior periods. According to Arum, Gamoran and Shavit (2007), a lowering of preparation requirements for college may likely promote lower class inequalities more than where systems hold more rigid academic standards.

The balance sheet of access outcomes, however, must consider the salient problem of HE persistence, which is strongly linked to academic ability. Lack of persistence precludes a fuller positive assessment of outcomes. Further, conclusions of the dissertation adhere to the assumption that persistence is especially fundamental in establishing the effectiveness of policy because the benefits of HE are only entirely achieved if students are able to graduate (Fitzgerald and Delaney 2002). Results on degree attainment are, of course, tied to the integral concept of access presented in this research. Regarding the link between access and continuation in HE, Orozco (2010) is radical in assessing the phenomenon of dropping out during the Education Revolution. He argues that departure would annul policy endeavors of the increased coverage that was, indeed, achieved.

Despite sizeable gains in access and equity measures, Colombia’s recent access outcomes fit prior research assumptions that expanding enrollments neither, in and of itself, improves substantially social equality (Furlong and Cartmel 2009) nor lessens the strong linkage between social backgrounds and educational achievement (Arum, Beattie, and Ford 2011). In this regard, the Colombian case also meets the
difficulties of access policy, documented in literature, to achieve ample equalization of both opportunity and results in education (Thomas 2001; Brennan and Naidoo 2008). In this case, equality of results is fundamentally relevant. As such, the Colombian case fits well the conclusions of Clancy and Goastellec (2007) that “enlightened educational and social policy is capable of reducing but not eliminating inequality”, 152. Such a reality would be particularly true when societies are significantly unequal in the distribution of resources among social groups (e.g. cultural capital, financial means, or information for choice) (Little 1971; Robinson 1981). Limitations may be reinforced by the fact argued by Hale (2006) that universities and colleges often come far too late to compensate for accumulated disadvantage. Regarding this reality, advocates of great access efforts in HE commonly ignore this point that would be crucial to conceiving and implementing public policy. One ramification is the need for effective equalization efforts in the lower education levels.

Perhaps rational views would allow us to convey that opportunity of entrance to HE, by itself, as a policy project is one of inclusion if inequality is stable, rather than expanding and if all social groups are able to attend HE in larger size than in the past (Arum, Gamoran, and Shavit 2007). This reality was documented through the case.

Finally, while the increase in share of entrants coming from lower-income households were significantly larger than those from any other income group, at the end of the Education Revolution net enrollment rates show the greater gains for middle classes over other social classes (This contrasting result may be the product of attrition affecting mostly economically disadvantaged students). Such a trend line of middle classes benefitting the most from access opportunities adds to previous
empirical findings of this nature in both developed and developing countries (Summerfield and Gill 2005; Iannelli 2007; Furlong and Cartmel 2009).

7.3. Policy implications

Although the contribution of this work is scholarship, that scholarship may benefit domestic policymakers and international partners to provide material for informed policy choice in the future. Particularly relevant for access policy selection are Chapters 4 on policy goals, and 5 on policy efforts and impacts. Chapter 4 provides background on how Colombian governments have approached equitable access. Goals can be the arena most under the policymakers’ control, although not completely given political and economic and academic realities. Chapter 5 illustrates how certain policy efforts produced major impacts. Access outcomes of Chapter 6 also provide information from empirical evidence on what has been accomplished that may encourage policy to continue along this line, and on what needs careful, further consideration for policy adjustment.

Some insights on policy implications are drawn from this research as regards the concept of access used and the findings, which are presented in the following:

a) The research gives examples of how an aid strategy alone, as recognized by the WB, cannot be the “remedy to mitigate future inequalities” (World Bank 2002b), 7. For this specific case, a balance in supporting ability, both financial and academic, would be worthwhile (Fitzgerald and Delaney 2002). From this specific reality we could argue that more integrated access policy strategies might be beneficial in an attempt to deal with combined disadvantages of social groups. Of course, one might be skeptical that such an integrated view would not in itself ensure better results than strategies that address only one front. Our view is that
compounded outlooks of policy would at least address accumulated drawbacks, and therefore would have better chances in facing access barriers.

This approach comes with the combination of both individual and socio-demographic characteristics that require comprehensive examination. In Colombia, for instance, it is frequent to find an amalgamation of rural, minority, and low income characteristics all together within specific social groups. Such a reality would call for policy to seeking out deeper understanding of the network of enabling factors that would diminish access barriers contextualizing on the particular realities of Colombian regions and social groups, which differ from one another. Again, we would rationally accept that recognizing such cumulative cleavages does not automatically lead to policies that effectively diminish the inequalities.

In looking for clues on this matter, some other country cases are relevant and the Australian case may be especially illuminating.\textsuperscript{129} Despite concrete policy efforts in terms of government funds directed to HEIs, access outcomes do not show significant improvement over time. Scholars have found similar reasons in recent Colombian developments that the lack of substantial progress in access is due greatly to the performance of students experiencing educational disadvantage (Coates and Krause 2005; James 2011). Australian researchers warn policy makers that, perhaps, the equity framework is not dealing with the basis of inequity as policy should address composites of groups that experience supreme disadvantage (because of suffering multiple access barriers) (Coates and Krause 2005; Willems 2010).

b) Establishing mechanisms that enable a more coherent view of policy pursuits would allow weakening potential unexpected effects and conflicting results.

\textsuperscript{129} During the 1990s Australia established a unique equity policy framework to drive access to HE for six target social groups (based on SES, rural location, isolation, disability, non-English speaking background, and gender).
The Colombian case was revealing in this regard. As observed, efficiency/financing policies produced significant unpredicted effects on inequality of affordability. This aspect could call policymakers’ attention to a search for tools that allow finance, provision, and equity policies to be thought of as convergent paths of implementation with connected consequences. Of course, we have learned from literature that contrasting goals and corollaries are typical in policy.

Another example is quality education and enrollment expansion. While the Colombian Government stimulated an increase in places available in public institutions of HE without expending additional resources, this strategy may have adversely affected the quality of the public universities adopting the policy. Beyond this, the strategy cannot be viewed as a long-term measure, since the public system might compromise its capacity to cope with quality and extensive coverage at the same time. A realistic and rational alternative would be to measure both the institutional capacity of public HEIs and financial additional resources that the government is able to invest in expansion. Enrollment goals and efforts would accommodate accordingly.

Although policy that favors enrollment enlargement has pay-offs on quality, responsible policy would deal with progressive coverage by assessing simultaneously certain prevalent basic quality standards at HEIs. The Education Ministry also committed to efforts during the Education Revolution to improve quality, as shown by strengthening the Quality Assurance System. However, the push toward coverage in public universities stretched institutions to their limit in physical, teaching capacity by 2010, as acknowledged by government authorities (p.i. Burgos).

In this regard, we would not claim the automatic formulation that substantial enrollment expansion in a short-span is something positive in itself. Various country
cases have shown that rapid enrollment expansion may affect quality education negatively and may produce increased inequality in access to HE. For instance, researchers have found problematic patterns of quality associated to the striking enrollment expansion in even pre-Chavez Venezuela (Albornoz 2003). This assessment of the contribution of determined policies is crucial to the overall interpretation of the significance (and limitations) of the goals in diminished inequality.

c) The strengthening of joint efforts between national policy and HEIs along with the search for synergies with other political and economic actors could serve to leverage resources devoted to equitable access. According to McPherson (1995) the availability of government aid can push both state and HEIs to adhere to access pursuits favoring low income students. The Colombian case may be an example of this dynamic. A funding model of HE access would include as many social and institutional actors as possible that are geared to contribute with a portion of the tuition and other educational costs. This scheme, of course, would include a balanced cost-sharing by the students themselves (or their families) according to their financial ability.

In the Colombian case, we have demonstrated that HEIs have been important allies of the government not only in devoting their own aid resources to needy students, but in designing and implementing affirmative action for students to persist and achieve academic success. Colombian access policy thus confirms what McPherson argues about the favorable impacts of US federal funding of student aid based on financial need, including that it drives institutional aid resources to focus on low-income students as well (McPherson 1995)
d) A shift in financing policies at public HEIs would act against the regressive nature of the system by seeking a balanced distribution of subsidies (from the supply-side) to truly favor the needier students. While this shift would have widespread acceptance given both the principles of social justice and efficiency in the use of resources, it is perhaps the most difficult policy to implement. Given restricted places, public universities deal with the quandary of whether to admit the most academically prepared individuals (who are less likely to come from disadvantaged backgrounds) or to support a large number of financially needy, but talented students that may not rank at the top of performance.

Such a dilemma may be ameliorated if the real cost of public HE is reflected in tuition for families with the financial means to afford it while subsidization focuses on those who require it. Some researchers claim that transferring the cost of public HE to students and families while advocating for the expansion of private education is a source of inequality (CINDA 2007; Dias Sobrino 2008; Mollis 2008; Gómez and Celis 2009). Others would say that such measures are solutions for expanding access, given the limited public resources and the pressure for places within the system (De Moura Castro and Levy 2000).

This research supports the idea that only through an unbiased mechanism that allocates subsidies fairly among those with financial need (using both supply sides at public HEIs and financing demand based on student aid), could there be a better distribution of the burden in financing HE.\footnote{Although this statement appears almost tautological and perhaps mere common sense, the reality in the Colombian case is so different from the need that the gap merit mention here} This transformation in the allocation of subsidies would result in a change in the current structure of enrollment and funding, wherein public universities directly serve disproportionately the relatively well-to-do.
Considering this approach, the student aid scheme, as Lopez (2011) points out, could also cover students enrolled at public universities who would have to pay a viable portion of the cost. In turn, public student aid would structure interest rates in scales based on the family income of beneficiaries. Private sources of funding from families who can afford both private and public HE would help leverage institutional capacity at public universities to receive a greater number of students who benefit from supply-side subsidies. Of course these proposals for equity that have an economic rationality routinely run afoul of other rationalities. One, for instance, could argue that public resources could be better used by public universities to increase their capacity for research and development activities; therefore, allowing to claim for selective admission procedures based on merit exclusively.

e) Continuing to increase the quality of data on access, collected from HEIs, through official information systems would allow for better identification, through research, of problematic issues related to HE access. Colombia has substantially improved information systems on enrollment and dropouts and the government has made them publicly available. However, some shortcomings prevail such as the unavailability of data on race and ethnicity (except for the number of beneficiaries of specific minority grant programs). It would be worthwhile for scholarly work and empirical research to have the possibility to merge databases on enrollments, dropout rates, student aid, and performance of students on national tests. This would allow longitudinal studies for better understanding of the network of factors affecting enrollments, equity, and persistence in HE.
7.4. Limitations and further research

Limitations of this study are at least fourfold: First, the use of multiple sources of quantitative data coming from different databases increased the complexity of the analysis in ways that may undermine clarity. Second, the greatest deficit this research finds about equity lies in the scarcity of data on race. Unavailability of reliable, sufficient data on race obscures the possibilities to obtain a complete panorama of the reality and even less, to assess changes in access outcomes by race over time. Third, the short time span from the time that the Education Revolution ends to the dissertation writing may be problematic since some possible outcomes of the policy may be seen only in the longer term. Some programs on access started in 2005 (e.g. the program of strengthening the non-university education) and so only later would it be possible to analyze complete results. Further, it is hard to specify what the “true results” are of a policy as opposed to the new realities that come after the policy is started or even fully implemented. Four, as described above, it is not possible to have great certainty when connecting trends and transformations with specific policies since other factors surely influence the Colombian HE systems’ development. In this way, it should be clear that a change in reality is attributable to a specific policy only if such a policy can be demarcated within a specific time period and the reality change is so prominent that we could distinguish the “before” and the “after” (regarding policy and changes). Moreover, we can attribute policy effects if we do not see parallel changes in associated countries. The present study has been able to meet these thresholds in some but not all matters.

However, this concluding chapter also allows for a reflection on the positive contributions of this research. The main methodological one, perhaps, is the design of an integral conceptual model of access policy and access outcomes, operationalized
carefully through indicators and variables. Supplementary to the above, the model has been applied to a specific country case through empirical research. Finally, the dissertation contributes to develop research designs on the phenomenon of access and policy by using combined qualitative and quantitative methods. This approach may serve as input for future research on the topic and is, of course, open to critique and improvements.

Regarding potential further research, the topic on race deserves further exploration. Afro-Colombians experienced by 2002 a remarkable lower enrollment rate in HE of 14 percent compared to 26 percent held by the rest of the population (World Bank 2008a). They had also greater unemployment and poverty rates, and lower quality conditions (E.g. lack of health insurance). The indigenous population appears to hold even lower enrollment rates. We hope that race will acquire relevance for data collection by the Education Ministry as a category as important as others.

Another relevant topic for further research in Colombia is gender and access to HE. Studies might deal with enrollments by gender and by institutional types and/or fields of knowledge. Because this dissertation ends its analysis on the graduation/dropout stage, future study might also examine the relationship between life outcomes, such as wages and social mobility, and enrollment among the varied institutional types and HE echelons (technical, technological and university undergraduate). Both such studies would contribute to give input on access public policy, as this research has done to the extent it could.
This Appendix presents tables that compare the policy goals stated by both the World Bank (WB) and the Colombian government (COL Gov) to actual policy efforts. The first column of the tables describes the official indicators that were established by both the COL Gov and the WB which were found by analyzing policy documents such as plans, projects, progress reports, and the “System of Following up Projects” (SSP in Spanish); this latter is a rational tool implemented by the Education Ministry that monitors the accomplishment of policy objectives through a set of indicators and measurements.

Some indicators are restated in the second column (encompassing official indicators) or that were added for better understanding of the network of efforts and outputs developed during the *Educational Revolution* era. The third and fourth columns present the outputs and the sources of information used. The fifth column registers the quantitative goals that were officially stated. Their identification involved the same documents used to draw the indicators. Even though in several cases I found goals with their indicators in the same document, in several others this pattern was not consistent and I had to bring them from different sources to connect them in the table. When the indicator is an author’s creation, I use an asterisk (*) as a mark.

**Student Aid:**

APPENDIX A

COMPARISON OF POLICY GOALS, INDICATORS AND POLICY IMPACTS ON ACCESS TO HIGHER EDUCATION

This Appendix presents tables that compare the policy goals stated by both the World Bank (WB) and the Colombian government (COL Gov) to actual policy efforts. The first column of the tables describes the official indicators that were established by both the COL Gov and the WB which were found by analyzing policy documents such as plans, projects, progress reports, and the “System of Following up Projects” (SSP in Spanish); this latter is a rational tool implemented by the Education Ministry that monitors the accomplishment of policy objectives through a set of indicators and measurements.

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**Student Aid:**
<table>
<thead>
<tr>
<th>Official Indicators</th>
<th>Author’s indicators</th>
<th>Policy impact</th>
<th>Source of author’s information (on impact)</th>
<th>Government Goal</th>
<th>Source of author’s information (on goals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB indicator:</td>
<td>Number of new beneficiaries of ACCES loans from the two and the three lowest strata (out of six)</td>
<td>162,908 new beneficiaries of ACCES loans came from the lowest two strata , and 204,000 from the three lowest strata out of six (2003-2010)</td>
<td>Author’s calculations using data from ICETEX statistics (2010a) for the series 2003-2009 and ICETEX progress report for 2010 data (ICETEX 2011)</td>
<td>100,000 (up to 2008) plus 80,000 by 2010 (Inconsistent target –difficult measuring as the number of targeted strata changed from one project to another)</td>
<td>WB second project appraisal and progress report on the first project (World Bank 2009, 2008a)</td>
</tr>
<tr>
<td>COLGov Indicator:</td>
<td>Passes from 35 percent in 2001 to 74 percent by June of 2010.</td>
<td>(No baseline in 2002 as there are not available data broken down by strata) Passed from 41.7 percent in 2006 to 53.0 percent on average during the second quadrennium</td>
<td>Author’s calculations from data of archives ICETEX (ICETEX 2002a) and ICETEX statistical database (ICETEX 2010a)</td>
<td>50 percent (2nd quadrennium)</td>
<td>National Development Plan (DNP 2007)</td>
</tr>
<tr>
<td>WB Indicator:</td>
<td>Number of new beneficiaries of grants distributed to HE students from the two lowest SISBEN levels</td>
<td>88,605 students from the two lowest SISBEN levels (2006-2010)</td>
<td>Author’s calculations using data from ICETEX progress report (ICETEX 2011)</td>
<td>100,000 (2q)</td>
<td>Second Educational Revolution Plan (MEN 2008b)</td>
</tr>
<tr>
<td>subsides distributed among students from the lowest two levels of SISBEN (MEN 2008)</td>
<td><strong>COLGov Indicator:</strong> Percentage of beneficiaries of ACCES loans receiving also grants (MEN 2008)</td>
<td>41.6 percent of ACCES beneficiaries received simultaneously subsidized loans and grants.</td>
<td>Author’s calculations using data from ICETEX progress report (2011) and ICETEX statistics (2010a)</td>
<td>42.71 percent T&amp;T 31.2 percent univers.</td>
<td>Second Educational Revolution Plan (MEN 2008)</td>
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<tr>
<td><em>Public loans allocated annually to undergraduate and graduate students within the country (Comparing 2002 with 2010)</em></td>
<td>Same as official</td>
<td>Passed from 65,218 distributed in 2002 to 223,558 in 2010 (including new and renewed loans).</td>
<td>No identified gov indicator</td>
<td></td>
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<tr>
<td><em>Percent increase over eight-year periods (prior to and during the Educational Revolution E.R.)</em></td>
<td>An increase of 243 percent from 2002 to 2010 compared to 60 percent between 1994 and 2002. This represents 30 percent against 8 percent annual growth on average respectively.</td>
<td>No identified gov indicator</td>
<td></td>
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</tr>
<tr>
<td><strong>COLMin Indicator:</strong> Number of beneficiaries of loans (MEN 2003)</td>
<td>Total number of new beneficiaries of student aid during the ER period (2003-2010), compared to the eight-year period prior (1994-2002).</td>
<td>From 2003 to 2010 there were a total of 279,219 new beneficiaries of student aid, without including funds from third parties in administration</td>
<td>100,000 (From 2003 to 2008) and 262,235 (From 2007-2010) – Inconsistent Target</td>
<td>E.R. Plans 2002-2006/2006-2010 (MEN 2003, 2008b)</td>
<td></td>
</tr>
<tr>
<td><strong>WB Indicator:</strong> Increased number of students obtaining loans – Access Project (World Bank 2002b)</td>
<td>Total number of awarded students assisted with resources from the “ACCES” Project in WB partnership</td>
<td>212,867 from 2003 to 2010</td>
<td>Author’s calculations using data from ICETEX statistics (2010a) and ICETEX progress report (2011) for the year 2010</td>
<td>Total 200,000¹</td>
<td>WB result report regarding the first project and the second WB project appraisal (2009, 2008a)</td>
</tr>
<tr>
<td><strong>WB Indicator:</strong> Number of loan renewals disbursed for needy students (World Bank 2008a)</td>
<td><strong>Total number of loan renewals of the “ACCES” WB Project during the E.R.</strong></td>
<td>414,702 from 2008 to 2010 (Period stated for the WB goal) and 726,155 (2003 – 2010)</td>
<td>432,000 by 2010 (Target established in the scaled up project) (World Bank 2008a)</td>
<td><strong>WB second project appraisal (World Bank 2008a)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>WB Indicator:</strong> Increase coverage of student loans (World Bank 2002b, 2008a)</td>
<td><strong>Coverage of public loans (Percentage of students receiving ICETEX aid of the total enrolled in HE excluding SENA enrollment)</strong></td>
<td>Jumped from 6.6 percent in 2002 to 16.2 percent in 2010.¹</td>
<td><strong>Author’s calculations using data from ICETEX statistics (2010a), Ed. Ministry progress report (MEN 2010c) and micro-data on enrollments from the National Information System of HE, SNIES (MEN 2011a)</strong></td>
<td><strong>20 percent (MEN 2008)</strong></td>
<td></td>
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<tr>
<td><strong>COLMin Indicator:</strong> Percentage of HE students financed with public loans (MEN 2008)</td>
<td></td>
<td></td>
<td></td>
<td><strong>(MEN, 2007a)</strong></td>
<td></td>
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</tbody>
</table>

Race- Ethnicity – Special conditions
<table>
<thead>
<tr>
<th>Official Indicators</th>
<th>Author’s indicators</th>
<th>Policy Impact</th>
<th>Source of author’s information (on impact)</th>
<th>Gov Goal</th>
<th>Source of author’s information (on goals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No identified official indicators for ethnic groups, disabled, affected by violence, or residing in the country borders</td>
<td>Changes in the number of Afro-Colombians and indigenous beneficiaries of student aid</td>
<td>An increase in 1.5 and 2.5 times the number of Afro-Colombians and indigenous, respectively, as beneficiaries of forgivable loans for access to HE during the second quadrennium compared to prior 2002. In 2010, the aid program fulfilled 68.4 percent and 77.1 percent the demand for aid by Afro-Colombians and indigenous, respectively. See graphic below.</td>
<td>Author’s calculations from data of ICETEX archives and reports (2001, 2002a, 2007, 2010b, 2011)</td>
<td>Not identified quantitative target for those additional groups in disadvantaged. The national plan during the second quadrennium included the increase of coverage in HE for indigenous and Afro-Colombians through forgivable loans and the Regional Centers of HE - CERES</td>
<td>National Development Plan – Chapter on “Special Dimensions of Development” (DNP 2007)</td>
</tr>
<tr>
<td></td>
<td>Changes in the amount of resources invested in Afro-Colombians and indigenous beneficiaries of student aid</td>
<td></td>
<td>Author’s calculations from data of ICETEX archives and reports (2001, 2002a, 2007, 2010b, 2011)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Number of institutions supported by state funds to replicate experiences in affirmative action for population affected by violence or residing in the country borders</td>
<td></td>
<td>Ed. Ministry resolution (MEN 2010g)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amount of financial resources disbursed to disabled individuals for access to HE</td>
<td>Three HE institutions were supported with funds and six were encouraged to publish their experiences on the Ed Ministry web site.</td>
<td>Ministry report (MEN 2010c)</td>
<td></td>
<td></td>
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<tr>
<td>Official Indicators</td>
<td>Author’s indicators</td>
<td>Policy impact</td>
<td>Source of author’s information (on impact)</td>
<td>Gov Goal</td>
<td>Source of author's information (on goals)</td>
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<tr>
<td>COLGov indicator: Number of HE institutions with programs on student retention supported by the Ed.Min (MEN 2010b)</td>
<td>Same as official</td>
<td>From 2007 to Dec 2010, 42 HE institutions with higher dropout rates were supported with funds for outreach programs (remedial and leveling courses, academic and psychological tutoring)</td>
<td>System of Following up Strategic Projects at the Education Ministry (MEN 2010b)</td>
<td>35 institutions supported by the Ed.Min</td>
<td>System of Following up Strategic Projects at the Education Ministry (MEN 2010b)</td>
</tr>
</tbody>
</table>

**Academic/psychological preparation for college**
## Information on college choice

<table>
<thead>
<tr>
<th>Official indicators</th>
<th>Author’s indicators</th>
<th>Policy impact</th>
<th>Source of author’s information (on impact)</th>
<th>Gov Goal</th>
<th>Source of author’s information (on goals)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WB indicators:</strong> Creation, implementation and operation of a Labor Market Observatory (LMO) (2009, 2002b)</td>
<td>A labor market observatory created, operating and accessible to the public</td>
<td>1 Labor Market Observatory operating and publicly accessible through Internet</td>
<td>Website: <a href="http://www.graduadoscolombia.edu.co">www.graduadoscolombia.edu.co</a></td>
<td>1 Labor Market Observatory operating and publicly accessible through Internet</td>
<td>Implementatin, completion and results report by the WB – First project for improving access to HE (2009)</td>
</tr>
<tr>
<td>Improved HE information management system (World Bank 2002b)</td>
<td>An Information system to facilitate college choice and options of student aid</td>
<td>The strategy <em>Buscando Carrera</em> which includes an information system publicly accessible through Internet with data on educational options and student aid and regional meetings led by the Ed Ministry to inform high-school student about college options</td>
<td>Website: <a href="http://www.colombiaaprende.edu.co">http://www.colombiaaprende.edu.co</a></td>
<td>No identified quantitative goal</td>
<td></td>
</tr>
<tr>
<td><strong>COLGov Indicator:</strong> Improved information systems to facilitate choice (MEN 2006) and to provide high school graduates with relevant information on supply (p.i. L.E. Castro &amp; D. Barbosa)</td>
<td>Number of high school students informed of choices by means of Ed. Ministry actions</td>
<td>2 million visits to the website on average monthly</td>
<td>Ed. Ministry report (2010c)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

GRANTS DISBURSED TO ETHNIC MINORITIES DURING THE EDUCATIONAL REVOLUTION PERIOD

Source: Author’s calculations drawing from ICETEX’s annual budgets (2001-2010) and 2001 ICETEX progress report
APPENDIX C

COLOMBIAN INDICATORS ON COVERAGE AND EQUITY COMPARED TO INTERNATIONAL

Within South America, among the seven countries for which UNESCO data are available, three increased their enrollments more than Colombia during 2002-2009. Venezuela’s annual enrollment growth remarkably reached 18.4 percent, followed by Brazil (10.1) and Chile (9.7), compared to Colombia’s 7.6. Those three countries are also the ones with greater increase of enrollment rates: Venezuela might seem the most striking case, surging from 38.2 in 2002 to 78.1 in 2009 (a 40.1 percent growth). Chile and Brazil’s respective 18.7 and 16.0 percent expansions of enrollment rates are similar to Colombia’s 12.1 percent.

By 2009, Colombia had reached a gross enrollment rate of 37.2 percent (for the relevant 18-24 year-old group), almost exactly the Latin American average of 37.1 percent, near Brazil’s 36.1 percent. This leaves Colombia behind some other Latin American countries such as Ecuador (42.4)\textsuperscript{131}, Panama (44.6), Chile (59.2), Uruguay (68.7), Argentina (67.63 for data of 2007), (as well as Puerto Rico’s 80.9). But it vaults Colombia ahead of México (27.0), which it previously trailed\textsuperscript{132}. Colombian gross enrollment rate growth during the educational revolution is higher than other world regions except Central and Eastern Europe, with its 15.1 percent growth.\textsuperscript{133}

\textsuperscript{131} Data for Ecuador and Argentina are for the year 2008. According to Ministerial reports, by the end of the Educational Revolution plan in 2010, Colombia registered a gross enrollment rate of 37.1 percent for college students aged 17-21, showing an increase of 12.7 percent points on the 2002 figure (MEN 2010b, 2010c).
\textsuperscript{132} Except for Ecuador and Uruguay for which data for 2002 are not available, the latter group had already reached more than 40 percent of gross enrollment rate by the beginning of the 21\textsuperscript{st} century Data drawn from UNESCO (2010).
\textsuperscript{133} The Colombian enrollment growth was resoundingly higher than growth rates for Central Asia (0.9), Sub-Saharan Africa (1.6), Arab states (3.4), South and West Asia (3.6), and for North America and...
Gap in school attendance between the lowest and the highest Colombia income households 2002 and 2010 – (20/24 year-old cohort):

<table>
<thead>
<tr>
<th>Country</th>
<th>GAP Q1-Q5 Year 2002</th>
<th>GAP Q1-Q5 Year 2010</th>
<th>Gap increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uruguay</td>
<td>60.3</td>
<td>59.1</td>
<td>-1.2</td>
</tr>
<tr>
<td>El Salvador</td>
<td>36.2</td>
<td>47.7</td>
<td>9.5</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>30.9</td>
<td>43.9</td>
<td>12.7</td>
</tr>
<tr>
<td>Colombia</td>
<td>39.6</td>
<td>37.3</td>
<td>-2.3</td>
</tr>
<tr>
<td>Chile</td>
<td>47.7</td>
<td>36.2</td>
<td>-11.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>34.2</td>
<td>36.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Paraguay</td>
<td>47.8</td>
<td>34.9</td>
<td>-12.9</td>
</tr>
<tr>
<td>Ecuador</td>
<td>33.3</td>
<td>33.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Mexico</td>
<td>36.7</td>
<td>32.9</td>
<td>-3.8</td>
</tr>
<tr>
<td>Guatemala</td>
<td>52.8</td>
<td>32.0</td>
<td>-20.8</td>
</tr>
<tr>
<td>Honduras</td>
<td>41.3</td>
<td>31.7</td>
<td>-9.6</td>
</tr>
<tr>
<td>Argentina</td>
<td>39.9</td>
<td>28.0</td>
<td>-11.9</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>36.7</td>
<td>27.6</td>
<td>-9.1</td>
</tr>
<tr>
<td>Peru</td>
<td>21.7</td>
<td>22.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Panama</td>
<td>32.4</td>
<td>15.9</td>
<td>-16.5</td>
</tr>
<tr>
<td>Venezuela</td>
<td>33.9</td>
<td>15.7</td>
<td>-18.2</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>26.1</td>
<td>14.4</td>
<td>-11.7</td>
</tr>
<tr>
<td>Bolivia</td>
<td>41.4</td>
<td>11.8</td>
<td>-30.4</td>
</tr>
<tr>
<td>Average</td>
<td>37.6</td>
<td>31.1</td>
<td>-6.5</td>
</tr>
</tbody>
</table>

Source: Author’s calculations drawing form CEPAL statistics (2002, 2011)

Western Europe (5.9). Author’s calculations using UNESCO (2010) as the source. South and West Asia data are for the year 2008.
LIST OF INTERVIEWEES:

1. Rodrigo Fernando Acosta Trujillo – Planning Chief, ICETEX
2. Eduardo Aldana – Professor, Universidad de los Andes
3. María Victoria Angulo – Former Director of Quality, Colombian Ministry of Education
4. Diego Barbosa – “Searching for a Career” Project Coordinador, Colombian Ministry of Education
5. Andreas Blom - Senior Education Economist, World Bank
6. Javier Botero Alvarez – Former Vice-Minister of HE, Colombian Ministry of Education
7. Ana María Botero – Former Sub-director of Quality Assurance, Colombian Ministry of Education
8. Jorge Iván Bula Escobar – Professor and Researcher, Research Group Economy, Public policies and citizenship, Universidad Nacional
9. Gabriel Burgos Mantilla – Former Vice-Minister of HE, Colombian Ministry of Education
10. Alejandro Caballero – Head of the HE program for Colombia, World Bank
11. John Jairo Cobo – Coordinator of the FEM Fund, Colombian Ministry of Education
12. Luz Enith Castro - “Searching for a Career” Project Coordinador, Colombian Ministry of Education
13. Remberto de la Hoz Reyes – Former Sub-director of Support to HEIs, Colombian Ministry of Education
14. Diana Durán – Student Persistence Project Coordinador, Colombian Ministry of Education
15. Marisol Forero Cárdenas – Former Project Manager - Strengthening of Technical and Technological Education, Colombian Ministry of Education
16. Jorge Franco Gallego - Consultant, Sub-direction of sectoral development, Colombian Ministry of Education
17. Alejandro Gaviria Uribe – Former Dean of Economics, Universidad de los Andes – Current Minister of Health and Social Protection of Colombia
18. Víctor Manuel Gómez – Professor, Universidad Nacional

19. Patricia Gómez de León – Former Project Manager – Strengthening of Technical and Technological Education, Colombian Ministry of Education

20. Hector Fernando Guaranguay – Project Coordinator, Colombian Ministry of Education

21. Carolina Guzman – Former Sub-director of Sectoral Development of HE, Colombian Ministry of Education

22. Alexandra Hernandez – Former Coordinator of the WB project for improving Access to HE – ICETEX – Current Director of Quality at the Colombian Ministry of Education

23. Martha Laverde, Team Leader, World Bank Colombia

24. Daniel Mera, Scholar, writer and director of Fundación Color de Colombia

25. Gabriel Misas, Professor, Research Group Economy, Public policies and Citizenship, Universidad Nacional

26. Luis Enrique Orozco, Professor, Universidad de los Andes

27. Jamil Salmi, Education Sector Manager, World Bank

28. Olga Sanchez, CERES Project Coordinator, Colombian Ministry of Education

29. Fabio José Sánchez Torres, Professor, CEDE, Universidad de Los Andes

30. Edith Cecilia Urrego – Vice-President of Student Loan and Collection

31. César Vallejo Mejía – Scholar, Co-director Directive Board, Banco de la República

32. Carlos Eduardo Velez, Sector Manager, World Bank

33. Martha Lucía Villegas – ICETEX President
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