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DEMOCRACY AND EDUCATION EQUITY IN LATIN AMERICA

by

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B.A. University of Central Florida, 2004

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ABSTRACT

In the literature democratic longevity in countries transitioning from authoritarian regimes to democracy is linked to economic development; four factors of economic development are identified: industrialization, education, urbanization, and growing wealth. Education is viewed as a primary factor for effective democratic participation and economic development. This thesis examines the relationship between level of democracy and educational outputs and outcomes. Does the level of democracy (political rights and civil liberties) have an effect on the levels of investment in education and measurable outcomes in education equity toward meeting the educational needs of the newly represented public? The expectation is that the increased scope of political participation and representation in new democratic regimes would result in higher government spending for education with implications for education equity.

This study is conducted using a cross-sectional, longitudinal statistical model. The analysis is based on 18 Latin American countries over a thirty-eight-year period, from 1972 to 2010. To examine the connection between level of democracy and education equity, the study explores the effects of democracy on different levels of education, gender, and social class. In addition to the quantitative analysis, a qualitative component aims at contextualizing this relationship that is, examining closer the mechanism that underlies the connection between democracy and education equity in the cases of Mexico and Brazil.

*To my bride of Thirty-two years Ronda Weger
Will You Marry Me*

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LIST OF ACRONYMS AND ABBREVIATIONS

AXE	Projeto <i>AXE</i> , Bahia Brazil
GDP	Gross Domestic Product
IADB	Inter-American Development Bank
IMF	International Monetary Fund
LDC	Less Developed Country
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
PAN	National Action Party (Mexico)
PRI	Institutional Revolutionary Party (Mexico)
SEP	Ministry of Education (Mexico)
SNTE	Mexican National Teachers Union
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development

CHAPTER ONE: INTRODUCTION

Democratic stability in those countries transitioning from authoritarian regimes requires certain conditions. In the literature, one of these conditions for democratic maturity and longevity is economic development (Lipset, 1959). While this literature finds that economic development is a necessary condition for democratic stability and longevity (Lipset), what is the mechanism of this connection? Does the level of democracy have an effect on public sector spending that may in turn result in an informed public capable of embracing, adopting, and practicing democratic principles?

Economic development may be partly the result of the public service needs of previously unrepresented and underrepresented publics and constituent pressures for redistribution schemes such as education and social security policies. As the opportunities for avenues of political expression and association increase as civil liberties and political rights increase marginalized groups take advantage of these openings to apply this newly discovered constituent pressure and place demands on officials to reprioritize social spending toward previously excluded publics.

To my knowledge the research available is limited in addressing the characteristics of economic development and how more discriminating factors might produce democratic stability and longevity. Lipset (1959) identifies four characteristics of economic development and theorizes that these provide a foundation for growth and thus the expectation of democratic longevity: industrialization, education, urbanization, and growing wealth within a more equitable redistribution framework. Lipset specifically identifies universal or equal education, as a major factor in both economic growth and wealth redistribution and the promotion of the democratic

process by meeting the literacy needs of a newly represented majority. Based on Lipset other research incorporates these same factors to provide an empirical basis for a democratic stability theory via economic growth (Boix & Stokes, 2003; Przeworski & Limongi, 1997). There is also additional research supporting the premise that broad public service sector spending may be related to regime type (Stasavage, 2005). While much of the subsequent research may be compatible with Lipset's ideas, it has not identified the process linking economic development and democratic stability as a focus for empirical investigation. This thesis contributes to existing knowledge regarding democracy and public sector services spending specifically in the area of education within the theoretical framework linking economic development and democracy. Further, it moves beyond existing research on education spending and regime type to a more discriminating investigation into the equitable distribution of education, that is universal education (Lipset, 1959).

Based on previous research it is assumed that economic development and democratic stability have a positive relationship. Also assumed are the factors of development identified above. Of the four factors education is most often identified in the literature as having a significant effect on both economic growth and the democratic process (Brown & Hunter, 2004). Literacy is a primary means for effective democratic participation and a major contributor to economic development, a more discriminating investigation of the relationship between democracy and education is in order. Previous research does not address the relationship between the level of democracy and outputs and outcomes for education simultaneously, nor does it differentiate between different levels of education (primary, secondary, tertiary). Such

differentiation might provide evidence of the effects of democracy on the equitable distribution of education. The research thus far has not considered the democratic effect on education outputs and outcomes based on gender or class. While one of the effects of economic growth on democratic stability is the growing and more equitable distribution of wealth leading to a growing level of prosperity reflected in a growing middle class (Przeworski & Limongi, 1997), similarly the same principle on equitable distribution of education may contribute to the strengthening and stability of democracy through the public's increasing political participation capitalizing on a broad foundation of literacy. While the empirical investigations in this research are on the effects of the levels of democracy on spending for education outputs and educational outcomes it is informed by the ideas of Lipset and others on the possibility of a self-sustaining process inherent in democracy. The research here may be a first step in identifying equitable distributions in education that promote the broader education of a population, that in turn may be a variable affecting democracy's longevity. A theoretical diagram of the research may appear circular with broader levels of literacy providing for greater participation, however, the focus here is on the theoretical origins of education equity based on the levels of democratic freedom.

In order to evaluate this proposition this thesis examines whether increased levels of democracy through political rights and civil liberties across Latin American Countries lead to greater investments in education. Do education outputs and outcomes vary with change from authoritarian to democratic rule and in some cases back to authoritarian alternatives? Examining the spending outputs at the various tiers of education should help discriminate between the spending priorities at differing levels of democracy. As countries transition to democracy will

their outputs (spending) and outcomes (literacy and enrollment) in education increase as the levels of democracy? Additionally, will spending become more equitable among the tiers of education as the level of democracy increases?

The Latin American experience provides a unique opportunity to examine these questions because of the high rate of regime type changes in a wide cross-section of the countries in the region. The previous four decades have seen shifts from authoritarian to more democratic regimes in these countries in some cases transitions back to authoritarian regimes. Additionally, these countries have had high rates of political and economic marginalization based on class, race, and gender. Examining how these regime trends are related with the distribution of education spending for some of these populations might provide a basis for future policy formulation.

This research proposes both quantitative and qualitative components for examining and illustrating the effects of democracy on education in these countries. The quantitative component employs a cross-sectional, longitudinal statistical model for all of the countries in South and Central America, and Mexico (Appendix A). Additionally, there will be an analysis of Brazil and Mexico in order to have a clear quantitative understanding of education outputs and outcomes leading into a qualitative comparative examination of these two countries. This qualitative component aims at contextualizing the quantitative analysis as well as providing the mechanism of comparison for the relationship between regime and education outputs and outcomes in addition to the findings obtained from the quantitative analysis. The qualitative investigation will examine the availability of access points and the inclusion of additional interest groups in the

policy process (Howlett & Ramesh, 2003) for education in the two countries and how these vary with the level of freedom.

Brazil and Mexico each occupy a large land mass and have significant reserves of natural resources. Each has a large population, high poverty rate, significant indigenous populations, and significant economic distribution complexities between urban and rural regions. These countries have also been the recipients of WorldBank and IMF loans and austerity measures designed to induce economic decentralization within government holdings and stimulate market mechanisms. These measures have produced similar patterns of trade and monetary reform in the two countries while also adding to the wage gap in each nation (Brown, 2002; Martin & Solórzano, 2003). More importantly both Brazil (1985) and Mexico (2000) emerged from authoritarian regime structures within fifteen years of one another. Significant differences remain both politically and economically between the two countries and the comparisons conducted in the qualitative study should provide an illustration of the prospects for democratic sustainability and longevity.

These political, economic, and demographic similarities and differences provide an excellent opportunity to combine the qualitative and quantitative results into a unique examination of the effects of democracy on education in Latin American. Also, it may offer a basis for further research of the institutional mechanisms that account for the equitable distribution of human capital as education in transitioning democracies elsewhere.

This research is on the relationship that exists between Democracy and education. **As the degree of democratic freedom in Latin American countries increases, spending on outputs**

to education and measurable outcomes are also expected to increase. Democratic freedom is identified through recognizable indicators. Political rights, civil liberties, and economic freedom are measurable and quantifiable, yet they are distinct democratic characteristics and have occurred at levels somewhat independently of each other (Freedom House, 2011). These independent attributes will be examined for their influence on various indicators for education outputs and outcomes and across different groups based on class, and gender as well as the overall student populations for comparisons across countries. For this inquiry the dependent indicators of education are the overall percentage of GDP spent on education, per student spending in primary, secondary and tertiary levels of education as a percentage of per capita GDP, overall enrollment ratios and female enrollment ratios in primary and secondary education, and school life expectancy ratios as a proxy for achieving broad based literacy goals.

Differences between elementary and secondary education will be identified among these factors. Preliminary examination of the data suggests uniformity among countries in spending in primary grades; however, disparity in secondary grades offers the opportunity to explore the factors that may account for this variation, including the degree of priority different regimes place on human capital as education and how these priorities vary with the level of democracy. The present research seeks to build on existing empirical analyses by including the secondary school level, class, and gender components of education in the examination to help illustrate how levels of democracy might influence education equity.

In summary, as levels of democracy increase I expect that increases in spending among several expenditure indicators will also take place. I would expect that spending per student

would increase for the secondary level due in part to the reprioritization in democracy of education policy that addresses the literacy needs necessary for effective political participation. I do anticipate mixed results with regard to primary education. I expect that authoritarian regimes desire at least a minimal level of literacy in their general populations and therefore I do not expect significant differences in primary education spending between democratic and authoritarian regimes. I would expect at least a partial effect on spending to be due to growing GDP. A convergence of spending distribution between primary, secondary and tertiary spending is expected with increasing levels of freedom. Latin American authoritarian regimes have dedicated large percentages of their education budgets to free university education for the children of upper-middle class and elite families (Lake & Baum, 2001).

I also expect that education outcomes will vary with the level of democracy. Enrollment should increase at the secondary level due in part to additional facilities built from increasing spending. However, increasing enrollment might also indicate an increase in commitment to education equity as previously unrepresented groups may be gaining access to the policy process as political rights and civil liberties increase (Howlett & Ramesh, 2003). An increase in the availability of education facilities providing additional enrollment for a larger population of students requires a change in the priorities in education policy. Increasing levels of literacy based on an increase in freedom levels is also expected. The Data for literacy rates is unavailable for the time period being examined and does not begin until 1995 and is sampled every five years for all of the countries in the study. This thesis uses a proxy for literacy. An explanation and justification for the proxy for literacy will be provided in the methodology chapter along with the

other variables. Having discussed the motivation for this research and provided a general explanation of the theoretical framework and expectations in chapter one, Chapter two reviews the existing literature on the relationship between democracy and human capital development in general and education specifically. The direction and analysis this thesis follows will be related to the literature, and additional knowledge is hoped to be gained. Data sources will be identified and explained in chapter three. The variables will be defined and discussed within the theoretical framework of this thesis as well as control variables. The methodology and statistical models will be described along with the hypotheses.

Chapter 4 discusses the results from the statistical models along with an explanation of the estimates. In chapter 5 the quantitative analyses are integrated in a discussion of democracy's effect on education equity in Latin America. The observations in Brazil and Mexico will add context to the data and illustrate how increasing levels of freedom may allow for greater participation in the policy process through greater inclusion of previously unrepresented groups. Chapter six concludes; it elaborates on how the findings and limitations of this thesis may add to existing knowledge and lead to additional research in the future.

CHAPTER TWO: LITERATURE REVIEW

This thesis examines the relationship between democracy and education outputs in spending and outcomes in literacy and enrollment. It is expected that increases in the level of democracy in Latin American countries lead to increases in equity in education evidenced by the changes in outputs and outcomes. The thesis seeks to build on the efforts of those researchers who have focused on the democratic influence on education expenditures. There has been less consideration of the question regarding democracy's effect on outcomes, and to date the separate influences of political rights and civil liberties have only been considered once (Stasavage, 2005). This is especially important in understanding democracy's influence on education equity based on class and female enrollment and the levels of women's participation rights.

Disaggregating social spending is an important step in considering the question of the effects of democracy on its own stability and longevity through an educated citizenry. In a study of Latin America Brown and Hunter (2004) use a time-series cross-sectional analysis to examine the question of the systematic effect of regime type on education in primary education and the tendencies of politicians in authoritarian and democratic governments to distribute resources to the less fortunate. The data used for their research was obtained in 1999 from the United Nations Educational, Scientific and Cultural Organization (UNESCO), and GDP per capita data was acquired from the WorldBank in 2000. In order to measure democracy Brown and Hunter (2004) used Gurr's measure of democracy from the Polity IV index.

Their research shows a significant positive influence both on primary education spending and absolute spending increases among democratic governments as opposed to authoritarian

regimes. Building on Brown and Hunter (2004), this thesis extends the factors of democracy and spending to include increased levels of fiscal appropriation and reallocation in the secondary and tertiary levels of education in order to determine the long-term effect of democracy on per capita GDP per student spending and increasing enrollments. This study allows further analysis of the democratic impact at the micro-level of the budgetary process, and enrollment outcomes provide a measure for the effectiveness of any changes in spending policy.

David Stasavage (2005) examines education spending in Africa among transitioning democracies and the relationship between spending and the electoral process. He theorizes that politicians in democracies are more inclined to meet the education demands of the rural majority rather than pandering to the urban minorities as was the case of their autocratic predecessors. His results are significant with regard to an increase in spending in the primary grades. Those seeking political office design their competitive platforms to prioritize education spending in order to influence voting outcomes in the environment of a multiparty electoral process. Politicians do initiate platform policies that appeal to the rural majority with regard to education.

Stasavage (2005) identifies the origination point for a change in policy during the pre-election cycle. The levels of political rights and civil liberties determine the quality and organizational effectiveness of participation in the policy process preceding the election and provide greater assurance that promises will be kept in the post-election period. Stasavage provides robust results through his competitive elections model. However, he does not address the points of access available to citizens during the policy formulation phase in the post-election period. He does not investigate secondary school spending initiatives either. This is due

primarily to the underdeveloped education infrastructure in many African democracies (Stasavage, 2005). This thesis examines the effects of democracy on discriminating spending allocations across Latin American cases and expects to find that different levels of democracy affect the secondary level of education as well, illustrating that education equity varies with level of freedom.

The effects of global market liberalization on fiscal commitments to education is studied by Robert Kaufman and Alex Segura-Ubiergo (2001) to determine the level of mitigation provided by democracy on the efficiency requirements that dictate a reduction in social spending in a global economy. These authors also examine Latin American countries in a cross-sectional analysis of market integration constraints versus the positive impact of electoral participation on spending in healthcare and education. Latin America was chosen as a result of the numerous examples of diversity in political and economic transformation and this study employed data sources for spending from the World Development Report at the WorldBank (1999) and the International Monetary Fund (IMF) International Financial Statistics from various years between 1980 and 1999. The democracy data was gathered from the 1996 Polity III set of Keith and Gurr. The Institute for Democracy and Electoral Assistance (1997) supplied data for voter turnout from 1945 to 1997 (Robert Kaufman and Alex Segura-Ubiergo).

Kaufman and Segura-Ubiergo (2001) find that market efficiency has negative effects on aggregate social spending, however, when disaggregating healthcare and education democratic participation mitigates these effects. They concluded that electoral participation and political competition outweigh the effects of market competition (Robert Kaufman and Alex Segura-

Ubiergo, 2001). My thesis extends Kaufman and Segura-Ubiergo's study by isolating education expenditures from those in healthcare and examining if the rate of economic growth has a greater influence on education spending than democracy.

Democratic and authoritarian motivations for education spending have been explained through the levels of monopoly rents obtained by governments and regime type. Democracies collect fewer monopoly rents and are thus prone to deliver higher levels of public services to the electorate (Lake & Baum, 2001). These authors examine whether utility maximization is in play for politicians in the electoral process as they produce services in demand. Indicators for this research incorporated not only spending, but literacy and enrollment data also. Spending data came from the WorldBank indicators (1995) and electoral and freedom data were accessed from the Polity III index (1996) and Freedom House Tables (1994) respectively.

Lake and Baum (2001) found a strong positive relationship between democracy and public services consistent across developing and developed nations. The greatest impact on healthcare and education was in the first two years after regime change. The overall enrollment results were significantly positive while literacy findings were inconclusive. In order to extend the research of Lake and Baum (2001) this thesis adds additional levels of enrollment and a proxy for literacy that extends the longitudinal model for outcomes. GDP spending figures are also updated to ensure that the trends found by Lake and Baum are sustainable.

Rudra and Haggard (2005) extend the research on globalization and democracy with respect to social spending on education and healthcare and regime type. They examine the global economy's effect on redistribution policies among democratic governments. This study examines

57 geographically dispersed less developed countries (LDCs) and uses primary and secondary enrollments as well as spending data to determine redistribution between hard and soft regimes and democracies. The spending figures are acquired from the World Development Indicators (1972-1997) and education data from the United Nations UNIDO database (1972-1997). In measuring democracy the 2002 Polity IV index from Marshall and Jagger was utilized (Rudra & Haggard).

The results from Rudra and Haggard (2005) indicate that democracies with sufficient time to mature increase both spending and enrollment in primary and secondary school. The more politically powerful groups in immature democracies tend to gear spending toward tertiary education however. This thesis extends Rudra and Haggard's research to study the relationship between political rights, civil liberties, and economic freedom and education spending and enrollment levels relative to GDP.

Due to the reasons cited earlier most of the research on spending in these areas is focused on Latin America, a recent study added trade openness and purchasing power as control variables. Do increased levels of financial and trade openness resulting in additional purchasing power disrupt spending in healthcare and education in democracies (Avelino, Brown, & Hunter, 2005)? These authors examined the effects of constraints on government outlays based on economic openness, regime type, and constituency size. Openness levels were determined through Quinn's (1997) Capital Account Regulation Measures and again Gurr's Polity IV index (2003) was used for levels of democracy (Avelino, Brown, & Hunter).

These authors found that regime type had the expected positive effect independent of constituency size and purchasing power. The healthcare results were not as significant in large constituencies; however, the capacity for resistance in favor of entitlements within democracies is supported. There is still little evidence of efficiency by democratic governments leading to positive education outcomes (Avelino, Brown, & Hunter, 2005). This thesis aims to better illustrate outcomes through more discriminating enrollment data and utilizing a literacy proxy to extend the time line in order to compensate for the lack of literacy data.

James Lebovic (2001) also examines spending priorities and democratic rule using an analysis of budgetary shifts from military expenditures to social spending. He asks whether increased social spending is political lip service that is unsustainable in the long run among democratically transitioning regimes. If budget shifts remove resources from military spending in a “guns for butter” hard choice then systematic change can be identified between authoritarian and democratic priorities. Lebovic postulates that democracies do not breakdown during the budget process and uses data sets from WorldBank Global Development and World Debt Tables (various years), and the IMF Financial statistics Yearbook (1973-1995). He also uses the Polity III in 1995 from Jagger and Gurr (Lebovic, 2001).

Lebovic’s (2001) study identifies budgetary convergence occurs and indicates that the increased political capacities of budget competitors are strong in democracies. Democracy changes national priorities and spending foci changes are robust rather than incremental leading Lebovic to conclude that democracies are not as fragile as others have claimed. This thesis aims

to add to Lebovics (2001) finding via the outcome results in the models. If budgetary convergence exists then education outcome expectations of the electorate should occur.

Additional research examines spending priorities in military authoritarian governments versus democratic ones in the area of education. The study focuses on Brazil because of its long history of military rule and numerous attempts at democratic reform (Brown, 2002). This study examines whether democracy compels politicians to adopt strategies that prioritize human capital development through education and observes the rise and fall of democracy from 1964 to 1998 in Brazil. Brown uses three observations: federal allocation to the Ministry of Education, the distribution of funds to primary education, and the military/democratic effect on education finance redistribution. The data set that illustrated the 21 years of military and quasi-military rule and the 14 years of democratic transition was obtained through archives in constructing tables for regime totalitarianism levels in Brazil and subsequent graphs were developed to include the educational data acquired through OECD accounting records of the Ministry of Education in Brazil and include 186 municipalities. The demographic data was taken from the International Database of the U.S. Census Bureau (Brown, 2002).

According to the study the authoritarian regimes in Brazil repeatedly reduced the share of benefits to the Ministry of Education especially for primary and secondary education. Additionally the majority of the funds remaining were allocated to tertiary education to prop up political support among elites. Alternately, elevated levels of democratic political competition increased the overall education budgets and restructured distribution toward primary and secondary schooling. Brown (2002) is cautious about generalizing the distribution effects of

political climate change beyond Brazil; however, he identifies Chile and Mexico as states resembling the Brazilian circumstance and also identifies similar patterns of changes in political behavior toward education policy.

This thesis extends the enrollment and literacy indicators to examine further democracy's influence and the study by Brown (2002) should benefit from the leverage a new study could provide to his primary and secondary spending conclusions.

Baum and Lake (2003) measure education outcomes and levels of democracy independent of spending factors. They argue that indirect effects for democracy are manifested through public health and education policies that condition the levels of human capital. Their primary indicators are life expectancy and enrollments. If democracy induces patterns of investment then the costs of participation become lower and secondary school enrollments and increased life expectancy should reduce these costs through eventual economic growth and stimulate these investments. The WorldBank World Development Indicators Database (2001) was utilized in this study as was the 1989 Polity II and 1998 Polity III indexes from Jagers and Gurr (Lake & Baum, 2003). The evidence by Baum and Lake (2003) shows significant effects on educational outcomes in secondary enrollments in countries with higher levels of democracy. Authoritarian regimes show a significant negative result for women in this factor. The need to examine educational outcomes is apparent in the absence of replicated research that emphasizes these factors.

This thesis gets its motivation from the previous empirical research discussed above and seeks to extend this research by inquiring how spending on education and education equity vary

with the levels of freedom. Per capita student spending is an additional indicator relevant for this purpose. Additionally, to my knowledge the available literature for outcomes has not drawn any inferences on democracy's ability to provide equity in education. By exploring the effects of political rights and civil liberties separately on spending, literacy, and overall enrollment, and especially female enrollment provides a good basis for theorizing on democracy's effectiveness regarding education and by extension democratic stability and longevity.

CHAPTER THREE: METHODOLOGY AND DATA

Democratic regimes are expected to be associated with higher levels of spending outputs for education than authoritarian regimes. Democratic regimes are also expected to be associated with higher measurable education outcomes than authoritarian regimes.

This research focuses on the level of freedom in transitioning democracies and the effect these levels might have on education toward increasing equity in the provision of education opportunities for the broader student age population.

The statistical models I use in this analysis investigate this premise through the examination of human capital investment in education by democracies based on varying levels of political rights and civil liberties within a country. I conduct a longitudinal, cross-sectional analysis including all the countries in South and Central America, and Mexico.

The factors of democratic freedom are political rights, civil liberties, and economic freedom (IVs); these characteristics can be independent of each other. The education variables are the overall percentage of per capita GDP spending on education and per student spending in primary, secondary and tertiary levels of education as a percentage of per capita GDP spent on education, overall enrollment ratios and female enrollment ratios in primary and secondary education, and school life expectancy ratios as a proxy for achieving broad based literacy goals. The control variables are annual economic growth measured as GDP growth rates and the unemployment rate.

Operationalization and Data Sources

I operationalize democratic freedom as follows. Political rights are the rights that allow individuals to participate freely in the political process including voting or standing for office. According to Freedom House (2011) the criteria for these characteristics of democracy when determining the level of political rights is the extent of political competition and the transparency or anticorruption of government. Are citizens able to determine the nature of the system and are their decisions binding (Freedom in the World, 2011)? Civil liberties are also defined as the freedom to develop political views and institutions and enjoy personal autonomy without interference from the state (Freedom in the World, 2011). The compatibility of these indicators may differ across states in transition and a separate measurement for each is important for identifying the transitional dilemmas that may be occurring. The qualitative study (Chapter 5) illustrates how different levels of political rights and civil liberties may restrict or facilitate formation of interest associations and make a difference in the effectiveness of groups seeking new policy initiatives in education. The cases used in the study are 18 countries from South and Central America and Mexico. The years used for the varying levels of freedom range from 1972 through 2010.

The measurements for political rights and civil liberties are provided by the Freedom tables from Freedom House (Freedom in the World 1972-2010). Political rights are identified using a range from 1 through 7, 1 equaling the highest degree and 7 the lowest. The civil liberties scale is identical in nature (FreedomHouse, 2011). In addition to the Freedom House ratings I use another indicator for freedom defined as economic freedom. The data are drawn from The

Heritage Foundation Index of Economic Freedom that cover 2010 and date back to 1995. The Heritage index data quantify the level of economic freedom of nations using a 100 point scale, where 100 is the highest level of economic freedom. Economic freedom as defined here is determined by the absence of coercion or constraint on the production, distribution, and consumption of goods and services. Also included in this measurement are property ownership legal structures, freedom to trade, freedom to own and operate a business, freedom to earn a living, and the freedom to participate in a market economy (Heritage Foundation Index of Economic Freedom, 2010).

The dependent variables used in the study are enrollment percentages for primary and secondary school totals and female enrollment in secondary school; per student spending as a percentage of per capita GDP spent on education for primary, secondary, and tertiary school levels each; and total education spending as a percentage of GDP. One important outcome that should be tested is the rate of literacy over the entire period to help determine if increasing levels of freedom lead to changes in education policy that increase education equity as an outcome. The best indicator for outcome would be an increase in student achievement or performance. Literacy would most directly coincide with this achievement (Lake & Baum, 2001; Stuart, 2006).

The literacy data for the cases in the study provide on average only four measurement points for the entire period leading up to 2010. This is more problematic than the missing data for spending outputs because one of the primary motivations for the study is the level of education equity that may be achieved by increasing levels of freedom. Education outcomes are

a more appropriate measure for gauging this tendency (Jennings & Rentner, 2006). This thesis provides an appropriate proxy through UNESCO (2011) data using changes in school life expectancy that cover the majority of the longitudinal period. School life expectancy is the number of years a child of school entrance age is expected to spend at school. It is the sum of the age-specific enrollment ratios for primary and secondary education for each year in the study (UNESCO). While this figure is an estimate it is based on accurate statistics; changes from year to year is a reflection of actual enrollment figures and indicates the availability of education facilities and teaching resources necessary to provide an education for those enrolled (UNESCO). With facility and teacher needs met the number of expected years in school would provide the most effective means available to measure the rate of literacy that a country would be expected to achieve. If the actual data were available literacy rates would be problematic when examining their relationship to freedom due to potential lag effects. School life expectancy (literacy) is added to the model for primary and secondary levels, for females and in total.

The data for the dependent variables are retrieved from the USAID Global Education Database 2010, UNESCO Institute for statistics (2011), and the Edstats Education profile Database from the WorldBank development indicators. They are used to determine the levels of percentage in GDP spending overall and total government expenditures on education, and in per student spending. The UNESCO database provided the outcome data on enrollment from 1975 forward. The OECD *Education at a glance 2009* report provides reliable data back to 1985 and was used as a cross reference to verify statistics for the OECD countries.

All three primary data sources quantify enrollment figures for primary, secondary, and tertiary levels as well as for female and overall enrollment. The tertiary level data for per student spending will be differentiated from the primary and secondary categories in order to draw a distinction for regime education priorities.

For enrollment purposes age 6 will be the point of entry and exit will be examined through ages 14 (primary) and 17 (secondary) in order to make adequate comparisons in enrollment. Literacy rates through these sources are defined by the percentage of people age 15 and above who can, with understanding, both read and write short, simple statements about their daily lives. The proxy for literacy should reflect the expectation of an outcome that conforms to the definition for literacy (UNESCO, 2011; USAID Global Education Database 2009).

Enrollment percentages encompass the number of students enrolled in the specific level of education regardless of relevant age group. Female enrollment data are based on the number enrolled but are age specific to primary and secondary general education (UNESCO; Edstats, 2011). Increasing levels of freedom that lead to increases in female enrollment could be key to increases in political participation for women in the democratic policy process. The affect women may have on education policy equity will be mentioned in the qualitative comparison. Public expenditures for GDP percentages in education are the provision, management, inspection, and support for primary through tertiary administrative and teaching services (UNESCO; Edstats).

Two control variables are used in order to correctly analyze the spending variations for education. Annual rate of unemployment is used to account for economic slowdowns or

recessions expected to decrease education spending percentages. Another control variable is annual economic growth expressed as a percentage of GDP growth. It is expected that increased economic growth would be associated with increasing spending in education.

Hypotheses and Methodology

Democracy and Education Equity in Latin America: Output Equity.

Democratic regimes are expected to be associated with higher levels of spending outputs for education than authoritarian regimes. What is the mechanism that underlies the connection between democracy and increased spending that provides equity in education?

Spending:

As political Rights increase I expect additional spending to occur in primary education in per student spending as a percentage of per capita GDP spending. As stated earlier I do not anticipate dramatic increases at the primary level because authoritarian regimes have provided some level of basic education at the primary level, although spending distributions in regimes that are less free may not be equitable. If spending does increase as political rights increase it could be an indication that basic education funds are being distributed to benefit a larger percentage of school age children as larger percentages of the voting age population participates in elections.

As political rights increase I expect additional spending to occur in secondary education in per student spending as a percentage of per capita GDP spending. I expect a significant effect here due to an increase in voter participation and the subsequent pressure on officials to respond to their constituents demands. Secondary education spending in most authoritarian regimes

provides a good illustration of discrimination based on class and an increase in spending as political rights increase may be a bell-weather for increasing equity in education systems in Latin America.

As political rights increase I expect lower spending to occur in tertiary education relative to increases in spending in primary and secondary education in per student spending as a percentage of per capita GDP spending. Spending should continue to rise in tertiary education as political rights increase. If constituencies grow and become more diverse and spending increases in primary and secondary schools as a result, then voters will demand additional tertiary school opportunities for their children. Although I expect their priority demands to focus on education below the tertiary level causing politicians to respond with more modest increases at the tertiary level. Additionally, those income groups who have been the beneficiaries of entitlement university education policy in the past have the most resources and organizational lobbying capacity to continue to influence officials to increase spending at the tertiary level.

As political rights increase I expect overall education spending to increase as a percentage of per capita GDP. As the newly represented become factors in the election landscape the demand for the redistribution of expenditures toward public services and social spending should occur and officials should respond in kind (Lake & Baum, 2001). Additionally, the privileged continue to demand tertiary spending. The expectation is that political pressure from both groups will cause increases in overall education budgets relative to per capita GDP. The caveat to this would be the sizes of social spending budgets overall and the competition for expenditures in other areas of social spending such as healthcare (Brown & Hunter, 2004).

As civil liberties increase I expect additional spending to occur in primary education in per student spending as a percentage of per capita GDP spending. I expect civil liberties to play at least as large a role as political rights as an influence on spending increases in primary education. Emerging political organizations made up of the newly represented evolve over the democratic transition period and their influence on elections may follow this same evolution period. An increase in civil liberties provides immediate avenues of influence for groups with single-issue agendas (Howlett & Ramesh, 2003). These organizations may have more influence earlier in the democratic transition period and provide the inertia for education policy equity prior to the gains obtained through increases in political rights.

As civil liberties increase I expect additional spending to occur in secondary education in per student spending as percentage of per capita GDP spending. For the same reasons stated above I anticipate the estimate for civil liberties affect on secondary spending to be significant. I have not formed an expectation of what the increase in spending may be relative to increases in primary education. The demographic character of single-issue advocacy groups for education may play a role in the distribution of spending increases that lead to the most local or regional equity based on the where the disparities lie.

As civil liberties increase I expect spending to decrease in tertiary education in per student spending as a percentage of per capita GDP spending. My expectation for the effect of civil liberties is counter to that for political rights in tertiary education. The policy discrimination favoring university spending in Latin America over primary and secondary funding is a systemic policy hold-over from authoritarian regimes. I anticipate that through an increase in civil liberties

advocacy groups favoring education equity will use this discriminatory policy as a focal point to illustrate the disparity and work to channel expenditures toward the lower levels of education. Civil demonstrations in Brazil have a history of influence over officials (Smith & Messari, 1998) and I anticipate that history, at least in Brazil, may be a factor in the effectiveness of increasing civil liberties.

As civil liberties increase I expect overall education spending to increase as a percentage of per capita GDP. I anticipate that similar factors playing a role through civil liberties for spending increases in per student spending will also affect GDP spending in education overall. Although as addressed in the hypothesis for GDP spending and political rights, education advocacy groups will be competing with groups representing other interests vying for a portion of social spending (Brown & Hunter, 2004).

As economic freedom increases I expect spending to increase in primary education in per student spending as a percentage of per capita GDP spending. As the constraint on the production, distribution, and consumption of goods and services eases and market opportunities increase for business ownership and additional labor I anticipate the increase in the welfare of the newly represented to prioritize primary education spending.

As economic freedom increases I expect spending to increase in secondary education in per student spending as a percentage of per capita GDP spending. Relative to the affect of economic freedom on primary education the level of increase in spending in secondary school may be higher. Presumably as economic freedom increases and economic opportunities increase demand for additional labor increases. The level of skill required depends on the comparative

advantage in the economy. The need for labor with a higher skill set would drive the increase in secondary spending. Conversely, in less industrial but free economies opportunities for family supplemental income provided by school age children may reduce the demand for additional skilled labor and a portion of the additional funding for secondary education could be diverted (Brown, 1999; Gomes, 1999).

As economic freedom increases I expect spending to increase in tertiary education in per student spending as a percentage of per capita GDP spending. The demand for tertiary education should increase in an economically free environment with the emergence of a growing middle-class. As the regression model controls for the other independent factors this increase in per student spending should be found in the estimate.

As economic freedom increases I expect overall education spending to decrease as a percentage of per capita GDP. As stated previously, economic freedom is expected to increase per student spending in all three levels of education. This might lead to the assumption that the overall budget for education should benefit from economic freedom. However, given the accelerated incidents of global market interaction between nations in outpacing democratic institutional change there may be market pressure for austerity measures to privatize education and GDP percentages may flow away from education budgets as capital flows toward technology and production (Lake & Baum, 2001). The regression estimate may help to determine the influence economic freedom may hold beyond those market characteristics promoted by democratic mechanisms.

Control Variables

As unemployment increases I expect a decrease in spending to occur in primary education in per student spending as a percentage of per capita GDP spending. The anticipation of an decrease in primary spending is based on a slowdown in the economy and a shrinking job market. The job losses lead to a decrease in tax revenue and therefore cause cutbacks in social spending that directly affect education. These same factors will influence the regression estimates for unemployment in hypotheses 14, 15, and 16.

As unemployment increases I expect a decrease in spending to occur in secondary education in per student spending as a percentage of per capita GDP spending.

As unemployment increases I expect a decrease in spending to occur in tertiary education in per student spending as a percentage of per capita GDP spending. The factors for primary and secondary education also apply to tertiary spending. However, the regression estimate could find that spending actually increases for tertiary education if the unemployed are seeking additional training to make them more marketable.

As unemployment increases I expect a decrease in overall education spending as a percentage of per capita GDP.

As economic growth expressed in overall GDP percentages increases I expect an increase in spending to occur in primary education in per student spending as a percentage of per capita GDP spending. Many of the Latin American countries have been recipients of international loans. The international lending community places an expectation on recipient governments to redistribute funding to primary education. As economic growth occurs I anticipate increasing

revenue to filter to primary education in fulfillment of the commitments made by officials to adhere to the guidelines of these loan packages (Hunter & Brown, 2000).

As economic growth expressed in overall GDP percentages increases I expect a decrease in spending to occur in secondary education in per student spending as a percentage of per capita GDP spending. Along with requirements to increase spending in primary school international lenders mandate austerity measures designed to curtail social spending (Hunter & Brown, 2000). Without a mandate for secondary spending increases tied to loans I expect additional capital acquired through economic growth to flow to sectors of the economy providing a return to investors. These same factors are expected to apply to hypothesis 19 and 20.

As economic growth expressed in overall GDP percentages increases I expect a decrease in spending to occur in tertiary education in per student spending as a percentage of per capita GDP spending.

As economic growth expressed in overall GDP percentages increases I expect a decrease in overall spending in education. The factors discussed in hypothesis 18 apply for a decrease in overall education spending. The affect of a decrease would be felt at a much broader level of education and could erode equity gains achieved through increases in the level of freedom.

Democracy and Education Equity in Latin America: Outcome Equity

Democratic regimes are also expected to be associated with higher levels of enrollment and literacy in education than authoritarian regimes. What is the mechanism that underlies the connection between democracy and higher measurable outcomes that provides equity in education? Increases in enrollment and rising literacy rates serve as barometers of the

implementation of education policy and if those policies lead to equitable access to school and create a broad foundation for learning throughout the entire school age population.

Enrollment:

As political rights increase I expect enrollment levels to increase in primary education. I anticipate there should be some electoral effect on enrollment in primary school based on officials responding to demands by new constituents for increases in facilities and teaching resources. Also, I expect enrollment levels to increase in secondary education. The electoral effect should also have some bearing on secondary enrollment. I also anticipate a larger increase than that in primary school because as hypothesized above authoritarian regimes tend to provide some level of primary education to their non-indigenous populations.

As political rights increase I expect enrollment levels to increase in secondary education for females. A positive significant effect might provide good contextual illustration of equitable policy implementation and the response by policy makers to the increasing levels of participation by previously excluded publics.

As civil liberties increase I expect enrollment levels to increase in primary education. The anticipation is an increase in civil liberties should allow the formation of education advocacy groups and provide avenues of inclusion in the policy debate for education. Also, I expect enrollment levels to increase in secondary education. Because secondary education is not expected to be a priority of authoritarian regimes I expect the demand for enrollment resources to be high. I anticipate the effect to indicate groups elevating the level of activism associated with

an increase in civil liberties are influencing education policy to reflect more equity for secondary education openings.

As civil liberties increase I expect enrollment levels to increase in secondary education for females. There are few other factors that might promote the rights of women to attend school independently of the role civil liberties may contribute in overcoming cultural and economic barriers (Marion, 2003). I anticipate that women have found new avenues for advocacy and inclusion resulting in greater enrollment opportunities as civil liberties increase.

As economic freedom increases I expect enrollment levels to increase in primary education. As increasing economic opportunities present themselves through freer exchange markets and the labor market becomes more specialized resources should flow toward school facilities to provide additional classroom space. I also expect any gains realized from economic freedom in lower class families to encourage school attendance in primary and secondary education. As economic freedom increases, the desire of parents of secondary age children for further education may increase thus driving up enrollment.

As economic freedom increases I expect enrollment levels to increase in secondary education for females. I anticipate a positive relationship here as new opportunities for women may require additional education and cause enrollment to increase. However, many of these opportunities may be gender-biased, leaving women to fill job openings that do not require secondary education but still provide necessary family income. This may be a factor in how much enrollment increases for females.

Control Variables

As unemployment increases I expect enrollment levels to decrease in primary, secondary education, and secondary education for females. The previous discussion of the control variable identified unemployment as a means to indicate a downturn in the economy. If a recession is occurring then either social spending budget constraints that limit seating capacity or the need for supplemental family income provided by children may be factors in a decrease in enrollment relative to unemployment.

As economic growth expressed in overall GDP percentages increases I expect enrollment levels to increase in primary education. If per student funding levels increase based on economic growth as discussed earlier then enrollment should also increase as seating capacity rises. The IMF redistribution guidelines tied to loans should also flow toward enrollment in primary education. However, I expect enrollment levels to decrease in secondary education. I anticipate education policy to decrease budgets for secondary education in order to comply with austerity measures attached to international loan packages will be felt in the classroom first. An indication of this would be reduced seating capacity.

Finally, as economic growth expressed in overall GDP percentages increases I expect enrollment levels to decrease in secondary education for females. Along with the reasons listed for hypothesis 34, I expect any negative economic influences on education equity to have a direct affect on female outcome indicators.

Literacy: School Life Expectancy Years

Understanding the systemic nature of illiteracy (Pare, 2004) underscores the need to examine how education outcomes in literacy may be affected by increasing levels of democracy. Overall literacy rates are considered a characteristic result of investment toward education equity (Ready, Lee & Welner, 2004) and cannot be identified with just one indicator, rather all of the factors in democracy, political, civil, and economic freedom may be necessary to facilitate literacy. The outputs of expenditure and the outcomes of enrollment related to the democratic indicators are the ingredients of successful literacy strategies and programs (Kozol, 2005). Literacy cannot be accurately measured using an overall aggregate result to provide a concise evaluation of education equity unless the data are available for most years in the longitudinal study. Lake and Baum discovered this when their results for literacy were insignificant in 2001. In the absence of proper data I designed a proxy for literacy in order to more thoroughly examine the outcome for signs of increasing equity. If the relationship between democracy and literacy is compatible with a hypothesis of increasing equity then the final analysis would be the literacy of the population age 15 and above (UNESCO, 2011) for determining the institutional effectiveness of democratic institutions at various stages of development. The proxy of school life expectancy offers a longitudinal inspection that falls in line with the definition for literacy when considering the lag necessary between annual levels of freedom and the gestation period required to attain literacy. The years of school age expectancy begin at the school entry age defined previously and reflect the level of literacy based on the definition for literacy attainment.

As political rights increase I expect the total of school life expectancy years to increase beginning with entry in primary education through exit in secondary education. I expect school life expectancy totals to increase, however, the estimate does not take into account a lag for literacy and the number of years it might take new constituencies to have a significant effect on officials during an election.

As political rights increase I expect female school life expectancy years to increase beginning with entry in primary education through exit in secondary education. I expect school life expectancy for females to increase, however, the estimate does not include a lag for literacy and the number of years it might take new constituencies to have a significant effect on officials during an election.

As civil liberties increase I expect the total of school life expectancy years to increase beginning with entry in primary education through exit in secondary education. I anticipate civil liberties to have an immediate significant effect on the total years of school life expectancy. If enrollment increases overall as expected in primary and secondary education as a result of increased avenues provided through increasing civil liberties this should immediately reflect an increase in the proxy for literacy (UNESCO, 2011).

As civil liberties increase I expect female school life expectancy years to increase beginning with entry in primary education through exit in secondary education. I anticipate civil liberties to have an immediate significant effect on female years of school life expectancy. If enrollment increases overall as expected in primary and secondary education as a result of increased avenues provided through increasing civil liberties this should immediately reflect an

increase in the proxy for literacy (UNESCO, 2011). I also anticipate that females will realize higher gains in literacy through the exercise of civil liberties because previous systemic exclusion based on gender may tend to increase equity for females at a faster pace.

As economic freedom increases I expect the total of school life expectancy years to increase beginning with entry in primary education through exit in secondary education. An increase in competitive markets increases the volume of economic exchanges between citizens and increases the rate at which illiteracy diminishes. I anticipate the demand for literacy through economic freedom may be indicated in the results of the regression estimate.

As economic freedom increases I expect female school life expectancy years to increase beginning with entry in primary education through exit in secondary education. An increase in competitive markets increases the volume of economic exchanges between citizens and increases the rate at which illiteracy diminishes. I anticipate the demand for female literacy through economic freedom may be indicated in the results of the regression estimate.

As unemployment increases I expect the total of school life expectancy years to decrease beginning with entry in primary education through exit in secondary education. If economic slowdown turns to recession then long-term unemployment may have a significant effect on school life expectancy years. Also, I expect female school life expectancy years to decrease beginning with entry in primary education through exit in secondary education.

If economic slowdown turns to recession then long-term unemployment may have a significant effect on school life expectancy years especially for females. The familial costs

associated with school attendance may cause families to make choices about which children continue to attend school (Pare, 2004).

As economic growth in GDP increases I expect the total of school life expectancy years to increase beginning with entry in primary education through exit in secondary education. Relative to GDP growth I anticipate increased enrollment in primary education and enrollment decreases in secondary education in hypotheses 33 and 34. Both levels of schooling lead to increases in literacy and school life expectancy. Total years of school life expectancy may be effected by economic growth the same way.

As economic growth in GDP increases I expect female school life expectancy years to remain constant beginning with entry in primary education through exit in secondary education. Relative to GDP growth I anticipate increased enrollment in primary education and enrollment decreases in secondary education in hypotheses 33 and 34. Both levels of schooling lead to increases in literacy and school life expectancy. I anticipate that GDP growth will not influence the proxy for literacy for females.

Methodological Complexity

In combining a cross-sectional, longitudinal random-effect regression model for this analysis the distinction between variables and the changing values within each indicator can be examined; where these differences do not vary significantly over time in each nation the cross-section characteristics between countries will account for institutional differences based on the democratic freedom levels and specific values of each variable as they vary related to the pooled longitudinal data (Hunter & Brown, 2000).

CHAPTER FOUR: RESULTS

What is the mechanism that underlies the connection between democracy and education equity? The factors of per-student spending, enrollment, and literacy place student welfare in the focal point. Measuring spending outputs that go directly to the cost of educating each student and the education outcomes that tie directly to student access to school and academic success provide the best indication of the level of equity. The multiple indicators of democracy I used in this research were also chosen because their measurement provides the best indication of level of democracy effects on education equity. Education equity is the result of a process that begins long before voters go to the polls and politicians and bureaucrats decide on and implement policy (Lake, Baum, 2001). The level of political rights and civil liberties provides the essence of democracy for a definitive probe into the effects of democracy on education equity in countries undergoing democratic transition. The level of economic freedom provides the necessary control variable to determine if any additional resources provide additional avenues and time for political and civil involvement by the newly represented. I used these factors as well as two additional spending variables and two control variables to measure the effect of democracy using a random-effect cross-section, longitudinal regression model for 18 Latin American countries from 1972 through 2010.

As discussed and elaborated on in Chapter Three my Primary data sources for democracy were the Freedom House tables and The Heritage Foundation economic ratings. The data on education was gathered from UNESCO Institute for Statistics and the Edstats Education Profile from the WorldBank. OECD and USAID education databases were also used to verify the

reliability of the primary source data. The economic data for the unemployment and GDP growth control variables were obtained from the WorldBank Data and Research site. There was no missing data from the Freedom House Tables for the entire longitudinal span of the study. However, the annual data from The Heritage Foundation begins in 1995. The GDP growth and unemployment numbers from the WorldBank also provided a complete data set. The education data were inconsistent from 1972 through 1984. Depending on the country I retrieved on average 3 measurements for per-student spending during this early period. From 1985 forward the data were consistent with few missing cases (Guyana). Education spending as a percentage of GDP was consistent for the majority of years of the longitudinal period.

Education outcome data followed a similar pattern of missing data between 1972 and 1984 for enrollment, however, the data for School Life Expectancy was available for the entire period. I opted to use this factor as a proxy for literacy because the data for literacy began in 1995 and was only available in five-year increments. Additionally, any effect by democracy levels on published literacy data would occur late in the longitudinal period so the missing data for literacy prohibited the effectiveness of a lag variable. I considered interpolating missing spending data points when only one year was missing during a string of years, however, when examining the GDP growth and unemployment numbers and the volatility of the levels of freedom from year to year in Latin American regimes the missing data seemed less problematic than an unreliable estimate.

I chose not to combine the Freedom House scores into a freedom index. The long-range goal of this research is to identify a mechanism in democracy that affects education equity and

democratic longevity. An examination of the Freedom House Index (2011) tables shows inconsistency in how the scores for political rights and civil liberties move in the same direction during the same years. The qualitative discussion in Chapter 5 provides for an observed variance in the effects of civil liberties and political rights on the formation of advocacy coalitions and grassroots attempts to influence education policy. The results of the statistical model reinforce the decision to differentiate between civil liberties and political rights. The freedom scores use a seven point scale, one being the highest level of freedom and seven being the most repressive. I did not invert the scores for ease in analyzing the coefficients in the tables making analysis seem counterintuitive so care should be taken when identifying the negative relationships using the tables.

I ran the regression analysis based on the described relationships in my hypotheses in chapter 3 and found significant results. The model produced expected results for level of democracy strong positive effects in many of the cases. Expectations were also met where most of the negative relationships were found along with some surprises.

I begin with the estimated relationships between the level of democracy and education outputs in per student spending as a percentage of per capita GDP spent on education for primary, secondary, and tertiary levels. As we see on Table 1, there is a significant positive relationship between civil liberties and increased spending in primary school (see Table 1). The effect of civil liberties on spending is a change in per student spending of around 1.3% one-unit increase on the freedom scale. None of the other independent variables had a significant effect on per capita GDP spending for primary education. It is important to note here that political rights

had no effect on primary education spending. Re-election incentives affecting political platforms may not be as influential in education policy as are higher levels of civil liberties that provide new organizational opportunities for advocacy groups.

Table 1: Effects of Democracy on Education Spending:

Per student spending as a percentage of per capita GDP spent on education: primary, secondary, tertiary. Education spending as a % of GDP, across Latin American Countries.

Independent Variables	Primary	Secondary	Tertiary	Educ%GDP
	<i>Coefficient</i>			
Political Rights	.339 (.353)	-.056 (.508)	.411 (1.660)	.162** (.074)
Civil Liberties	-1.310** (.443)	-.426 (.635)	4.040** (1.982)	-.300** (.096)
Economic Freedom	.019 (.058)	-.133 (.083)	-.449* (.262)	-.006 (.012)
Unemployment	-.123 (.109)	-.149 (.156)	-1.107** (.496)	-.046 (.025)
GDP Growth	-.087 (.069)	-.216** (.100)	-1.528*** (.368)	-.047** (.015)
Constant	13.513	23.837	59.477	5.445
Standard Error	(4.206)	(5.925)	(19.63)	(.959)
Observations (N)	106	104	75	121
Wald chi-square	10.84	5.45	40.35	18.65
Prob > chi2	.054	.363	.000	.002
R-sq Total	.043	.015	.426	.078

***p≤.001; **p≤.05; *p≤.10

Note: Standard Error in Parentheses

Sources: Freedom House, *Freedom in the World 1972-2011*; UNESCO *global education database*; Worldbank *EdStats education profile database*; OECD, *Education at a glance*; Heritage Foundation, *Index of Economic Freedom*

Further, there is a significant negative relationship between economic growth and per student spending in secondary education. This was not unexpected based on my earlier

discussion concerning economic growth and international mandates for austerity measures in social spending. The international lending community places an expectation on recipient governments to redistribute education funding toward primary school. The coefficients for secondary and tertiary levels of education and economic growth are both negative and significant, which might indicate compliance with these international mandates. However, the effect of economic growth on spending in primary is negative but not significant. This suggests that as economic growth increases the revenue increases in per capita GDP may not flow to students.

I expected to find a positive relationship between rising levels of freedom and per student spending in secondary education. To observe increasing education equity one would expect increasing outputs to the secondary level in order to increase numbers of learning opportunities available to student age persons who had previously been excluded. I find no significant relationship between increasing political and civil rights and per student spending in secondary education. I observed four significant relationships between the independent variables and per student spending at the tertiary level. As discussed above GDP growth has a negative relationship to tertiary spending. Tertiary spending appears to be higher as civil liberties and political rights decrease. Chapter 5 elaborates on the struggle between entrenched interests and new comers to the policy debate with regard to the elite cultural expectations that tuition at public universities should be free and available space for enrollment should be limited. This systemic Latin American trend required entrance exams that private secondary education prepared students for, which limited the enrollment opportunities for those students attending

underfunded public secondary schools (Brown, 2000). There is a significant negative relationship between unemployment and per capita spending in tertiary education: as unemployment decreases spending increases for public universities and post-secondary vocational institutions.

It is not surprising that as the level of civil liberties decreases tertiary spending increases. This is the largest effect on funding at this level of education among the significant relationships estimated so far. From the lowest to the highest level of civil liberties there is a 28% difference in funding. Further, as GDP growth increases by one percent tertiary spending decreases by 1.528%. It appears that increasing civil liberties opens up new avenues in education advocacy to displace the systemic policy characteristics practiced by more authoritarian regimes. The estimated relationship between economic freedom and per student spending at the tertiary level is negative and significant. This result is contrary to expectation. Additionally, the effect of GDP spending is not significant. As is shown the effect of economic freedom on education spending is not significant (primary and secondary levels) or negative (tertiary level). The regression model for tertiary spending explains 43 percent of the variation in tertiary spending, the highest overall performance of any of the models in this quantitative analysis. In sum it appears that level of democracy has a much higher effect on tertiary spending than on spending on primary or secondary education.

The model estimated the effect of democracy on the percentage of GDP spent on education as a whole. Again economic growth had a small but significant negative statistical effect for GDP spending. Political rights did have a significant influence, however, the effect on

spending was negative when rights increased. This unexpected result does not offer much assurance that the electoral process is an effective avenue for guaranteeing that promised improvements in equity for education offered during the election cycle will be implemented. The bright spot for achieving equity again comes from an increase in civil liberties. The significant coefficient provides a 3% increase as a percentage of GDP in overall education funding for each change on the Freedom House index. An additional 3% of GDP toward education is a dramatic increase relative to a small change in the level of civil liberties. When considering the resources removed from tertiary education and the downward pressure placed on education budgets by economic growth as shown by the regression results, an increase in civil liberties has provided a significant regression estimate that appears to support improvements in equity in education policy in Latin American transitioning democracies. Having examined the estimates for equity in education and levels of democracy in spending I will explore the results from the outcome estimates to determine if equitable changes in policy are translating into positive results for student age populations as a whole.

Enrollment data provide a detailed look at the level of equity provided in public education based on the levels of freedom. When enrollments increase consistently regardless of regime type school capacity and teacher-student ratios should increase as well (Lake & Baum, 2001). The assumption is that this trend would indicate increasing levels of education equity at the point of delivery to students. The level of influence the factors of democracy have on enrollment is provided by the outcome estimates in the model.

As political rights and civil liberties increase, enrollments in primary and secondary education are expected to increase.

Table 2: Effects of Democracy on Student Enrollment:
Primary, secondary, and secondary for females only, across Latin American Countries.

Independent Variables	Primary	Secondary	Secondary Female
	<i>Coefficient</i>		
Political Rights	1.397** (.535)	-1.218 (.960)	-1.400 (1.061)
Civil Liberties	-.479 (.779)	-8.554*** (1.382)	-9.133*** (1.504)
Economic Freedom	.170** (.080)	-.221 (.142)	-.376** (.162)
Unemployment	-.565*** (.162)	-.117 (.293)	-.122 (.341)
GDP Growth	-.153 (.096)	-.224 (.170)	-.251 (.179)
Constant	105.267	116.882	131.065
Standard error	(6.165)	(10.539)	(11.891)
Observations (N)	199	182	174
Wald chi-square	23.51	67.81	66.12
Prob > chi2	.0003	.000	.000
R-sq Total	.015	.199	.207

***p≤.001; **p≤.05; *p≤.10

Note: Standard error in parentheses

Sources: Freedom House, *Freedom in the World 1972-2011*; UNESCO *global education database*; Worldbank *EdStats education profile database*; OECD, *Education at a glance*; Heritage Foundation, *Index of Economic Freedom*

The anticipation is that secondary enrollments will increase faster to levels commensurate with primary education. If in fact primary enrollment drops to existing levels of secondary enrollment the results would raise serious questions about the relationship between democracy and education. Table 2 provides the regression results of the estimates for enrollment based on levels

of freedom and the prospects for equity at the secondary level of education appear to be promising based on these estimates. Primary education is not as fortunate in its relationship with democracy.

The spending increases provided for primary education through increasing civil liberties (Table 1) do not appear to have translated to increases in primary enrollment. Civil liberties had only a small insignificant positive effect. Increasing levels of political rights on the other hand, were associated with a decrease in enrollment in primary education (see Table 2). While the effects are small (R-square overall explains less than 2% of enrollment changes in primary education) they are significant. Unemployment provided the only other significant result for enrollment at the primary level with a small but significant effect, as unemployment went down enrollment rose. The consistent differences in the effect political rights and civil liberties as distinct factors of democracy have on education validates the decision to utilize both indicators in this research.

The results of the regression estimate for the effect of civil liberties on secondary education enrollment in total can be added to existing knowledge for education equity. Increasing levels of political rights do have a small but insignificant effect on increases in enrollment in secondary education. The findings for civil liberties are robust however, as enrollments rise sharply when freedom increases even in small increments. The model explains 20% of the variation in secondary enrollment and the coefficient is large relative to the constant indicating that the increase is eight to one for small increases in civil liberties leading to large increases in this education outcome at the secondary level. While democracy had less of an effect

on per student spending it did have a much larger effect on overall GDP increases to education indicating that capacity, teacher training, and student-teacher ratios may have increased in order to support the increases in enrollment. The significant increases in enrollment at the secondary level speak directly to increasing equity for students where freedom levels rise in democratic transition. Secondary school for general populations in authoritarian regimes in Latin America has been shown to be discriminatory based on class and almost non-existent among indigenous populations. These estimations indicate the possibility of distinct change in the effects of education policy for these groups.

I chose to include an additional more discriminating test for equity through a regression model that includes female enrollment in secondary education based on increasing levels of civil liberties and political rights. Economic freedom has a significant small negative effect on female enrollment and the emergence of new investment opportunities that redirect capital away from education may also redirect additional unskilled female child labor into the labor market. Female enrollment is discriminately low in the rural and poor urban areas in Latin America and the efforts to mitigate the adverse effects of little or no education for women at the secondary level have capitalized on opportunities that have emerged through an increase in available civil rights. Chapter 5 will provide a contextual illustration of some of these opportunities. The regression estimate statistically illustrates the significant relationship between an increase in civil liberties and secondary enrollment and the possibility of education equity for women. The model explains 21% of the female enrollment variation and the coefficient estimates a 9% increase in the percentage of females attending secondary school for each numerical increase on the freedom

scale with a confidence level above 99%. Additionally, while the result for rising enrollment levels in secondary school in total is robust the increase for women is even more impressive. An increase in civil liberties is associated with a dramatic positive effect on secondary enrollment for women and in total and it appears that increased civil liberties is providing additional equity in education for the indicators of gender and class. Do increasing levels of freedom that stimulate improvements in education equity through spending and enrollment also affect the outcomes in student achievement?

Table 3: Effects of Democracy on School Life Expectancy (proxy for literacy) :

Expected years of school life Total and for Females Only, across Latin American Countries.

Independent Variables	Schlifex Female <i>Coefficient</i>	Schlifex Total
Political Rights	.008 (.083)	.005 (.073)
Civil Liberties	-.641*** (.114)	-.537*** (.103)
Economic Freedom	.009 (.011)	.001 (.010)
Unemployment	.006 (.024)	.029 (.021)
GDP Growth	.014 (.013)	.020* (.012)
Constant	13.262	12.623
Standard Error	(.841)	(.779)
Observations (N)	161	182
Wald chi-square	43.28	40.95
Prob > chi2	.000	.000
R-sq Total	.246	.153

***p≤.001; **p≤.05; *p≤.10

Note: Standard Error in Parentheses.

Sources: Freedom House, *Freedom in the World 1972-2011*; UNESCO *global education database*; Worldbank *EdStats education profile database*; OECD, *Education at a glance*; Heritage Foundation, *Index of Economic Freedom*

A theoretical statement and discussion in chapter 3 addresses literacy and school life expectancy and designs a proxy for literacy by linking the two. The robust increases in enrollment must be sustainable in order to meet the advanced definition for literacy above the age of fifteen. The statistical estimates for school life expectancy in the data offer some insight into the longevity of these enrollment percentages. These estimates as they are affected by the factors of democracy also provide the observations necessary to examine student literacy achievement in the long-run for countries in democratic transition. The regression model estimates all of the independent factors in the study and the school life expectancy data for females and in total. The only significant results are found in the effects of civil liberties on school life expectancy as a proxy for literacy and student achievement outcome (see Table 3). The coefficients for females and in total are significant and while they may appear small, relative to the constants they do have an impact on literacy outcomes especially considering that none of the other factors played a significant role in literacy and the model explains 25% and 15% of the variation for literacy and student achievement.

I expected a more dramatic association especially after reviewing the estimates for enrollment in secondary school. It is possible that school life expectancy could more accurately reflect literacy achievements if combined with additional factors in a literacy index. Nevertheless, I am still able to reject the null and there is an unmistakable association between the level of civil liberties and student achievement outcomes. The statistical analysis has provided estimates of democracy's positive influence on education equity through spending outputs and education outcomes at the point of delivery to students. Chapter 5 will contextualize

the significance of the results of the regression model by comparing two countries that are typical of Latin American democracies in transition. A qualitative comparison will explore available education opportunities and accessibility to the policy process for education among newly represented populations in Brazil and Mexico.

CHAPTER FIVE: DEMOCRACY AND EDUCATION IN MEXICO AND BRAZIL

As discussed earlier it is expected that democratic governments transitioning from authoritarian regimes would be more likely to develop education policies that result in more equitable education outputs such as per student spending and higher spending on education relative to GDP. As the level of freedom increases, improvements in education outcomes including literacy, enrollment figures, and other quantifiable learning indicators should also be observed. The results of the regression analysis support this theoretical statement with positive associations observed in many of the relationships between level of democracy and education in the quantitative investigation. However, it is unlikely that a thorough investigation can be made solely through a quantitative analysis. Qualitative comparisons are also necessary but the inspection must do more than elaborate on the data produced by the quantitative variables from a few of the countries included in a study. The quantitative analysis may show an association between the degree of democracy and educational policy outcomes, the qualitative analysis will take a closer look at this association to explore the mechanism linking the two.

Could the presence in transitional democracies of greater pluralist opportunities and political access in the policy arena for education be the mechanism that links education equity to democracy? A comparative inspection of the policy process may provide a more contextual understanding of how democracies might influence education. An examination of education policy based on available access points for the actors during the agenda-setting stage as well as through observations of output equity through policy implementation should offer additional perspective and depth to the quantitative examination undertaken thus far. Some of the

quantitative variables will be relied upon in helping to illustrate the outputs and outcomes of the process itself.

Education equity is an important social priority of mature democracies such as the United States both nationally and locally through interest group pressure. Middle-class interests, those representing persons with low socio-economic status, women, and minorities compete to create opportunities for themselves during the policy agenda-setting stage and then evaluate policy-makers' responses by examining outputs and outcomes to evaluate the need for additional action (Jennings & Rentner, 2006; Osher & Quinn, 2003). This is not necessarily the case in transitioning democracies as disenfranchised groups struggle against the entrenched interests of political elites to have their educational needs addressed (McGowan, 2007).

This chapter compares the agenda setting and policy implementation environments in primary and secondary education as they relate to marginalized groups and women. The comparison is based on observations of expenditures as outputs and enrollment, literacy, institutional bureaucracy and infrastructure availability as outcomes. The availability of access points in the policy process will be investigated to determine how freedom levels in democracy influence the pluralist character of the policy arena. The point of access to influence a change in policy occurs as policy problems are identified through interest group pressure or a breakdown in existing policy takes place (policy window) and existing actors in the policy arena seek or are forced to solicit solutions from outside the smaller decision-making community (Howlett & Ramesh, 2003). The results gleaned from this research are important in understanding both the development of priorities in democratically transitioning policy processes and the nature of the

new cleavages in society and the state. It is important to identify weaknesses in education equity during these transitions in the hope of expanding the process of overcoming the systemic inequity that was prevalent during the authoritarian era in Latin America.

The transitioning democracies selected for qualitative observation are Brazil and Mexico. They were chosen because of their relative recent transitions from more authoritarian regime types as well as the promising economic development opportunities afforded to them through the global economy. Both countries have heterogeneous and large populations, and enjoy a large landmass that offers economic opportunity while simultaneously creating difficulties for universal policy implementation and reducing the available access points for minority populations (Martin & Solorzano, 2003; Pare, 2004; Plank & Verhine, 1995; Wong & Balestino, 2001).

Specifically examined is the availability of access points to a cross-section of the represented population. Is there equity in the agenda setting process and if so does policy implementation provide the commensurate equity intended? My assessment is that if the policy process (agenda setting) leading to the formulation process is inequitable then the probability of inequitable outcomes in education is high. The results of the policy implementation observations may illustrate this further.

Transitioning democracies do not have mature pluralistic policy environments and as the levels of political rights and civil liberties increase plurality is expected to increase as well. Brazil and Mexico are good examples of this as they display a less equitable policy process typical of transitioning democracies. Within the agenda setting stage, given their more

authoritarian political bureaucratic history, fewer access points can be identified for minority groups. It will be shown that political elites tend to dominate this stage in order to maintain the status quo in the education policy sector due to their privileged status. Economic and political equity is not at the mature stage for these states (Brown, 1999), however, some equitable development is evident and this may provide a more equitable result in policy implementation in the future.

A review of the regression estimates as they relate specifically to the data for political rights and civil liberties for Mexico and Brazil will provide additional context in this inquiry. Levels of freedom in both factors show repressive regime characteristics until 2000 in Mexico and 1985 in Brazil. The transition from a military government began in Brazil and with it a trend toward increasing political rights and civil liberties (Brown, 2002; Smith & Messari, 1998). Mexico however, continued to restrict the level of rights of citizens. The Freedom House tables reflect these trends in both countries. In 2001 Mexico experienced an increase in the level of freedom until 2007 and levels have begun to decrease up to the present time. From 1996 to 2003 freedoms decreased in Brazil an average of one point on the freedom scale for the same period (Freedom House, 2011).

When examining education spending for the entire period in this analysis, the change in outputs in Brazil and Mexico are associated with the degree of freedom. The outcome data for enrollment and school life expectancy also varied in Brazil and Mexico (UNESCO, 2011).

The qualitative discovery for Brazil and Mexico reveals a more equitable result for some groups due primarily to elected officials' concerns with reelection. Some low-income groups and

women have improved their status based on geographical factors with regard to educational opportunities with increasing institutional access and rising enrollment. Positive outcomes compared to limited access points in the agenda-setting stage may be a positive sign of the effectiveness of interest group involvement (Gomes, 1999). Indigenous groups are less likely to gain any measurable advantage in the policy implementation stage however, as there are significant mitigating political factors that inhibit the equitable distribution of education benefits to these groups by elected officials (Marion, 2003). The qualitative context offered here analyzes the political environment for effective equitable policy based on the level of access points each country provides the interest groups with a stake in education policy. Additionally, policy implementation will be evaluated to see if any intended equitable result occurs. Variations in interest group access may be caused by several additional factors that are explored here and these are mentioned without much elaboration except with regard to those policy influences created by mandatory austerity measures dictated by international financial institutions (Brown, 2002).

Before examining the individual cases it is important to define and justify the indicators for equity used in this discussion. Equity in education provides an environment where all public education systems treat substantially equal those students with similar abilities and needs. No child should be denied the opportunity and resources for a free, compulsory public education based on gender, race, disability, or economic circumstance. When a nation practices this internationally recognized definition of educational equity then all children have access on equal terms to the public good known as education and have the opportunity and access necessary to possess that public good (UNICEF, 1989).

In order to assess the level of policy equity, expenditures for each system were examined using a variety of categories that best display the regime policy priorities and implementation realities. The output emphases provide a window into which policy actors have political influence and identify any new trends that may be emerging. By examining policy through expenditure and dispersion this thesis offers an understanding of bureaucratic character and the influence of plurality stemming from the democratic process.

Education outcomes also provide this comparison with the necessary observations for both areas of the policy process utilized in this examination. Controlling enrollment levels for females, and examining the difference in enrollment between different levels of education offers a picture of agenda access for education advocacy groups. Enrollment and rising literacy rates also aid in assessing the effectiveness of policy implementation.

An examination of the bureaucracy provides the umbrella for policy analysis here. The degree of decentralization of responsibility for implementing education policy at the national, state, or local level and the overlap of responsibility helps to define what groups gain access to the agenda setting stage in the policy process. The distribution of resources, participant actors and the capacity of a state actor(s) to intervene, alter, or impose a decision (veto point) at each level of government and the existence of political cronyism and corruption set the tone and the boundaries for policy decisions (Howlett & Ramesh, 2003).

Education Summaries

Mexico

Education spending in Mexico has risen faster than per capita GDP during the last decade and stands at 5.9%, most of which is provided by the federal government (85%). This trend appears to coincide with political changes at the national level and the increases in political rights. Spending per student however, remains 75% below the OECD average for both primary and secondary school finishing ahead of only Brazil and Turkey (OECD, 2009). The allocation of revenue occurs at the state level and this may explain why per student spending remains low relative to overall spending. This discrepancy may also be partially attributable to a 9% enrollment increase in the urban areas through a Ministry of Education (SEP) initiative to increase enrollments through compulsory education to grade 9 in compliance with the national legislative mandates. Less than 3% of all education spending goes toward infrastructure improvements and only 6.45% toward instructional materials (Martin & Solorzano, 2003; Rangel & Thorpe, 2004).

Mexico continues its poor record with regard to cumulative spending for each child from primary through secondary school with only a \$22,796 investment per child (OECD, 2009; UNESCO, 2011). The trend over the last decade does not overtake Mexico's closest competitors in the OECD statistics. Additionally, the cumulative figure does not display the disparity between income groups and their relative status and access to education facilities. There are serious expenditure distribution inequities between geographical regions, which marginalize the rural poor and indigenous populations (Wong & Balestino, 2001).

National enrollment and literacy data, while accurate in the aggregate, can be deceptive. Primary grades have a 93% enrollment rate while the secondary rate is 86% in the lower division and 51% in the upper secondary grades. Advancement to the university is limited, with only 8% of the population holding a bachelors degree. Mexico has also instituted accountability standards and on these evaluations the passing rate is around 50% (Rangel & Thorpe, 2004; OECD, 2006).

The enrollment and achievement data is also skewed when considering the rural populations. The indigenous groups in the South have only a 24% primary school enrollment rate and females in this region fall below that. Females enrolled at the national aggregate level are above the national overall rate, exceeding males by 2%. There are 4 primary indigenous groups who have retained their language exclusively and these groups have contested the “Spanish-only” bi-lingual education program mandated at the national level. With 9 million non-Spanish-speaking children literacy results remain below the OECD average (Marion, 2003; Rangel & Thorp, 2004).

The SEP and the national teachers union (SNTE) maintain centralized control over virtually all areas of expenditure and instruction, which has created the inordinate distribution of resources toward administrative and salary earmarks and away from infrastructure and educational materials. Only 37% of pre-primary children receive instruction against the OECD average of 68%. The student-teacher ratios also exceed the average by 50% (Erickson, 2002; Santibanez & Razquin, 2005). This may provide an explanation for low proficiency scores for Mexican students (last among OECD countries). International demands for cost containment from the WorldBank and the Inter-American Development Bank may also play a part in low

achievement as well. These lending agencies have tied mandatory education reforms to loan guarantees, including redistribution schemes to benefit primary education. The enforcement mechanism for these schemes appears to be weak based on the regression results found in this thesis. The mechanism is administrated through the ministry of economic development rather than the ministry of education, which may explain why the mechanism is weak (Hunter & Brown, 2000; Martin & Solorzano, 2003; OECD 2006).

Along with low achievement and enrollment initiatives there is a high dropout rate and significant infrastructure differences between urban and rural settings and between mainstream Mexican culture and indigenous populations. With little or no decision-making authority at the local level, administrative transparency at the SEP is non-existent and the policy process is a top-down approach that is at the mercy of legislators and the executives in each state. There has been significant progress however, through NGO collaboration and isolated citizen groups in targeting pressure on the SEP in the design of *Oportunidades*, an umbrella for several new initiatives designed to overcome inequity in many areas of education in Mexico (Erickson, 2002; Santibanez & Razquin, 2005; Weiling, 2003).

Brazil

Brazil emerged from a military dictatorship in 1985 and civilian policy makers have taken several steps to increase both the quantity and quality of education offered in the public sector. In 1988 the new Constitution mandated 18% and 25% revenue requirements to education spending in the federal and “municipio” areas of government respectively. In a country of 176

million this is no easy task and has required significant institutional development, unfortunately the complexity of this bureaucracy has transformed the system into one characterized by overlap, inefficiency, and inequitable distribution (Brown, 2002; McGowan, 2007).

The aggregate data show that the funding increases mandated by the Constitution have not been achieved and Brazil trails even Mexico in its per student GDP expenditures on education behind all other OECD countries except Turkey. In primary and secondary education relative to GDP however, Brazil spent more than any other country. This indicator is betrayed when the data for tertiary spending is evaluated. Brazil increased funding for each university student by 40% over the period from 1995 to 2003 (Pare, 2004). The increase in tertiary spending is commensurate with the trend found in the statistical analysis. In 1995 civil liberties and political rights began to erode in Brazil and continued in a downward direction through 2003. In comparing Mexico for cumulative spending per child from primary through secondary school Brazil invests only \$11,356, which is last among OECD countries (OECD 2004 & 2006; WorldBank, 2007).

Significant expenditures for university level students have increased these students projected welfare significantly. They enjoy an 814% higher wage than persons receiving only a primary education. The WorldBank (2007) highlights these figures as a measure of Brazil's efforts toward attracting foreign capital to a skilled workforce as required through international lending institutions to secure loans for the country. Measures of decentralization characterize Brazil in response to these international mandates. This particular indicator also illustrates the disparity between education sectors as very few "municipios" achieve constitutional mandates

for funding and the federal government excluded 25% of all municipios from any federal funds toward education between 2001-2004 (Blom, Holm-Nielson, & Verner, 2001). This is caused by a shift in state funds from southern cities providing higher than mandatory per student spending. The goal is equity for students in the North and northeast by redirecting revenues collected at the state and municipal levels of government rather than using federal funds, which remain earmarked for the tertiary level. Unfortunately cities such as Sao Paulo, which have shown the most progress toward equity for poor urban students through a more pluralistic policy process, are inadvertently penalized for their participatory initiatives on behalf of education (Wong & Balestino, 2001).

Just as the wage gap and funding issues illustrate, enrollment and dropout rates show similar systemic problems. There is a 37% annual dropout rate and only 9 out of every 100 students finish high school. Immediately after the dictatorship ended primary enrollments skyrocketed only to experience steady declines since. Overall secondary enrollments have fallen as well especially since the wage gap has widened and more children are required to enter the informal workforce in order to assist in family income. There are several initiatives in the South that provide night school classes for poor urban children that have had to accept employment opportunities during the day (Blom et al. 2001). Secondary enrollment for females has risen in comparison to males but has leveled off at about 60%. Tertiary enrollments have risen annually and this is an indication that long-run prospects for economic growth are promising (McGowan, 2007), however, this does not address the inequity inherent in the system.

The enrollment rate for women in the university is 25%, however indicators for female education overall are equal with males for both literacy and enrollment in the urban settings in primary and secondary education. The disparity in education in Brazil primarily centers on racism and the poor. The southeastern regions closely mirror the goals of the Constitution in the urban areas. The rural areas and the northeast receive far fewer fiscal and institutional supports for their populations and pockets of poverty in the slum dwellings even in the South get little support outside of NGO initiatives (Canen, 2003). Those areas of discrimination in Brazil that have seen the most relief originate from locally initiated projects that have capitalized on regional and local policy access points to offer alternative options in the wake of failed education policy utilizing grassroots support and a knowledge of the bureaucracy through NGO participation (Canen; Pare, 2004). Several of these projects have become portable to other cities and will be discussed later.

There are high levels of corruption in the Brazilian education system due to overlapping bureaucratic responsibilities and dual funding mechanisms that allow siphoning of fiscal revenues. Much of the transparency is lost as state education accounting records are destroyed two-weeks after each annual audit. Brazil decentralized education through the new constitution in 1988, however, the old institutional mechanisms catering to elites and based on cronyism and political favor still persist and decentralization has served primarily to shelter the inefficiencies and entrench the inequities (Blom, et al. 2001; Brown, 2001; Pare, 2004).

Policy Actors and Veto Points

Before embarking on a discussion, analysis, and critique of the policy agenda and implementation observations for each country it is important to have a general discussion about agenda accessibility for participation in the education policy arena and more specifically the veto points that this privileged access provides for these actors.

In advanced industrialized countries the effect of veto points in the policy process for broad expenditures such as education, can have a profound negative result on distribution. When the policy agenda process becomes segregated from a diversity of interests then those interests that are represented hold veto power over significant redistribution initiatives (Karp, 2003; Howlett & Ramesh, 2003). This may provide an alternative explanation for the incremental character of the legislative process in policy change rather than the one based on a plurality of interests working to reach compromise. The difference here is the domination of the process by a specific ideology and a narrowing of that perspective to benefit far fewer numbers of recipients than might otherwise be possible in a pluralistic environment (Howlett & Ramesh).

The case for veto points is no less important for transitioning democracies and may lead to more pronounced inequity. As the demand for social expenditure increases with the level of democratic participation those groups grandfathered into the agenda stage from the previous regime structure are able to veto any expanding social expenditures that benefit unrepresented groups (Huber, Mustillo, & Stephens, 2004; Howlett & Ramesh, 2003). In the face of external international pressure, such as austerity measures by the IMF, these actors will ensure that relative to any concessions they must make to marginalized populations, their own constituents

will gain as well. This may create irresponsible fiscal deficits, however, the evidence from Latin America illustrates that this is exactly the behavior that political elites resorted to in protecting their interests in the wake of transition (Huber et al.).

This comparative paper seeks to extend the use of veto points beyond expenditures to examine political discrimination as a tool against indigenous populations in Mexico, and racism against dark Brazilians (*faveras*) in Brazil. As will be discussed in the policy critique, expenditure veto points for elites and powerful political actors are systemic in Brazil and Mexico, however, they have not gone unchallenged and the democratic transition in at least one of these nations shows progress toward a more plural policy process (Blom & Holm-Nielson, 2001; Brown, 1999; Plank & Verhine, 1995).

Structural Adjustment Policy

Background information on the effects of austerity measures on policy-makers is also necessary prior to an analysis of the policy processes in Mexico and Brazil. The history of economic crisis in Latin America is well documented as massive fiscal deficits arose in the region in the 1970s and 1980s due to liberal lending policies originating from the mature industrialized democracies. Mexico and Brazil were recipients of these loans and the IMF and the WorldBank stepped in to assist with relief. Tied to stand-by loans were austerity measures designed to stimulate privatization, trade, neoliberal monetary policy, and foreign direct investment. These measures naturally required retrenchment of government spending in broad social policy including education as well as an imperative for decentralizing the vertical bureaucracy for administering social welfare policy (Hunter & Brown, 2000). With regard to the

previous discussion on veto points, the actors from the old institutions and political elites were given the responsibility of implementing new programs and structural mechanisms, which gave them the capacity to use their veto power when policy encroached on the interests of their constituents.

New policy dismantled the vertical hierarchy without removing the existing policy players allowing them to create new mechanisms through decentralization that provided additional opportunities for corruption in the newly empowered lower tiers of state and municipal government. The result in many transitioning democracies saddled with cumbersome debt and in need of IMF support is the perpetuation of the status quo and systemic inequality. New policy has been formulated to circumvent one of the mandatory IMF safeguards that increases primary education funding relative to university spending (Brown, 2002; Huber, Mustillo, & Stephens, 2004; Kaufman & Segura-Ubiergo, 2000). This enforcement mechanism does not appear to have been effective for radical reform in education policy as is shown in the regression analysis, perhaps because the austerity measures and economic growth hold priority status among international financial institutions and this is the stronger message being delivered to domestic agenda-setters. It is possible that an economic institution fails to comprehend the re-election motivations politicians' employ in the decision-making process when attempting to maintain their political base (Brown, 2000).

In any case austerity measures appear to have exacerbated the education network as well as slowing the democratic transition even as these same measures appear to have been effective for overall economic growth (Hunter & Brown, 2000). However, just as there are losers in

education, there are also inadvertent effects on pluralism. As the wage gap widens fewer potential participants emerge from the disenfranchised populations to enjoin themselves to others with similar policy interests in order to challenge the status quo. The critiques below may provide some mitigating examples to the review of the effects of veto points and austerity measures.

Discussion, Analysis, and Critique

The analysis below addresses the policy process for agenda access and policy formulation in both countries. While the text is descriptive for the sake of context, it also illumines the accessibility of the policy environment and the primary actors in the agenda setting stage. The policy outcomes that are observed will offer an evaluation and critique of policy effects on marginalized groups and lead toward a broader understanding of how the policy process in these transitioning democracies advance or inhibit equity in education policy.

Mexico

In the wake of an economic crisis Mexico initiated decentralization policies mandated by the WorldBank and the IMF in 1992 to improve the equity, quality, and efficiency of public education. Another economic and monetary crisis and subsequent bailout in the mid 90s reinforced the mandate for austerity measures and Mexico has responded with some economic success related to privatization in the business sector and from increased trade (Rangel & Thorpe, 2004). While the ensuing institutional efficiency has been applauded by these organizations the effects of education policy on equity and quality have been mixed in the urban centers and negative in the indigenous regions in the south. Mexican public education can now

best be characterized as a top-down authoritarian and paternalistic system based on a corporate pyramid model. The decentralization and market initiatives that turned education into a commodity were orchestrated by those groups with a stranglehold on education policy and political power (Rangel & Thorpe).

Led by the Ministry of Education (SEP) and the national teachers union (SNTE) the new system retained its normative functions and stopped the devolution of the policy-making process. Local autonomous initiatives with NGO and international encouragement were co-opted by the SNTE and the dominant political party among governorships, the PRI, and forced to accept the national political education agenda of these policy-dominating organizations. The PRI conceded the power of the executive to the opposing political party (PAN) but has maintained its dominance in the states. The PRI's use of authoritarian tactics in the past continues to influence the cohesion and effectiveness of collective action interest groups in promoting policy initiatives that contradict the political agenda of those most closely associated with the PRI. While executive power has changed hands and economic reforms may have stimulated democratic reforms, to a more limited extent the policy process in education moves very slow against the actors with the most to lose (Martin & Solorzano, 2003; Rangel & Thorpe, 2004).

The results of the policy process in transition have reproduced what has historically been public education as a political tool. The systematic exclusion of parental involvement, low teacher qualifications, regional gender inequity, and discrimination against indigenous groups has been perpetuated in the current system and it appears this will remain so through 2020. Under the umbrella of overall discrimination in education experienced by the poor, structural

adjustment policies (IMF) have created an under-funded system that effects the marginalized populations the most. Non-indigenous rural settlements average 400 people and have severe infrastructure and teaching limitations as well as transportation obstacles (Martin & Solorzano, 2003). In these communities there is only a 50% enrollment rate in secondary school with a dropout rate of 37%. The SEP and SNTE focus their energies on larger communities while the PRI circumvents local citizen and parental involvement in local policy initiatives attempted in smaller communities. When parents gather with NGO collaborators in areas with higher populations to provide policy proposal input the character of the SNTE has been to embrace those endeavors where they are unable to defeat them outright and then corrupt the planning and implementation process at the administrative level through their political influence. The PRI on the other hand relies on entrenched political authority in less populous areas to control access to the policy process for marginalized groups or political opponents (OECD, 2006; Rangel & Thorpe, 2004).

Twenty-five percent of school-age girls are not enrolled in Mexico and this figure climbs based on the distance from urban areas. This figure contradicts the aggregate claims by Mexico at the OECD data collection mechanism (Marion, 2003; Weiling, 2003). The leadership of the teachers union has several women filling important roles as well as prestigious positions in the PRI, however, this has not translated into educational advances academically for women through substantial policy initiatives. There is mandatory enrollment through 9th grade and a requirement for a free public education. The reality is the unofficial requirement for uniform and textbook purchases and non-formal tuition payments that affect the poor and women the most in a country

that has one of the highest socio-economic dispersion rates in Latin America. Most rural regions do not have facilities available beyond the 6th grade and what education materials that are available in poor settings must be purchased from the teacher in order to augment the income they receive (Martin & Solorzano, 2003; Weiling).

The effect of decentralized education policy at the national level manifests itself in the increase of one-party political dominance based on region and maintains stratification in the policy process. Grassroots success in one region has not been portable to other communities due to the dichotomy of political enclaves based on inordinate party influence. The teachers union (SNTE) is a powerful actor in setting the agenda and an effective political influence of expenditure distribution. This creates infrastructure and instructional facility disparity across Mexico. While national education policy attempts to constitutionally mitigate the inequity, the institutional mechanisms of each state, reinforced by the SEP, inhibit policy from taking effect evenly within and across each state. Opposition communities or those poor areas with low political participation rates at the polls suffer with less schools, fewer trained teachers and supplies, and lower literacy and enrollment rates, especially among females (Santibanez & Razquin, 2005).

The population of Mexico is 80% mestiza so disparity based on race in the non-indigenous regions is unfounded. The inequity in mainstream education policy in Mexico is based solely on socio-economic and political exclusion from the democratic process. Agenda access and policy output is based on who maintains control of the governorships and either reinforces the SEP institutional design and solidifies their own base of power in the process or

chooses equitable redistribution based on the constitutional mandates. The SEP bureaucracy was enshrined by the PRI and the efforts at the federal level outside the purvey of the SEP to provide accountability and transparency have made only minimal progress. The vertical structure has shown resilience even in the face of federal reformists and IMF mandates because the states reinforce with vigor the control and distribution of public education funds. Coupled with an increasing wage gap parents, historically discouraged from interfering in education, are caught in the political struggle for resources. In the process public education in Mexico no longer commands the public respect (Martin & Solorzano, 2003).

Many of the current attempts at reform incorporate special programs from the legislature to combat inequality among special non-indigenous groups. In bypassing state governments and the SEP these groups with significant assistance from NGOs approach a more accommodating executive and legislators at the federal level to secure special funding and curriculum materials. While the results are positive in isolated pockets the programs are easily restricted in the states by stopping the flow of information about the opportunities. This places a heavy burden on the already under staffed NGOs to spread the word and act as the primary policy advocates for each separate marginalized population group. The obstacles are problematic for the portability of the significant increases in literacy, enrollment, and retention rates for urban areas and those settlements achieving special status to other regions of the country (Martin & Solorzano, 2003; Rangel & Thorpe, 2004).

The austerity measures mandated in exchange for bailouts appear to have reinforced market mechanisms throughout Mexico, however, the rhetoric of the education reforms lack

enforcement and rather than delivering an improvement in the indicators may have contributed to the stagnation in the increase of pluralism in non-indigenous rural populations. The power of the SNTE and the bureaucratic entrenchment of the SEP along with the vertical structure of the bureaucracy provide the mechanisms that ensure an authoritarian result (Rangel & Thorpe, 2004; Santibanez & Razquin, 2005). The results of the political dominion the PRI, SEP, and SNTE enjoy among mainly homogenous populations are illustrated through the effects of policy inequity in regions with higher rates of minorities and indigenous populations. Among the states in the South with larger indigenous populations the negative results of education policy move beyond discrimination based on socioeconomic status and assume an overt campaign of political and social repression (Weiling, 2003).

With the political stranglehold the PRI has on governorships indigenous groups face the additional dilemma of political exclusion and sanction. Only 24% of Indian children finish primary school and in communities with less than 100 people only 8% have access to any type of schooling and in many cases these schools are sponsored by NGOs. There are 9 million indigenous people that do not speak Spanish and education policy excludes flexible bi-lingual methodologies from the mainstream curriculum. Faced with systematic extinction of culture and economic viability several indigenous groups have resorted to political violence in order to secure a position of access in the policy process, however, these regions are tightly controlled by the PRI and no substantial national dialogue has occurred beyond NGO human rights initiatives. The platform priority for these marginalized groups has been equal resources for education or the right to run alternative schools beyond a pilot approach. The response by the controlling party

(PRI) has been more exclusion from both education and health services. To receive social services in Chiapas, Guerrero, and Oaxaca citizens must renounce support for or membership in specific indigenous groups (Marion, 2003; Weiling, 2003).

Where access to education is provided there is a centralized curriculum that eliminates the Indian cultural relevance for students and stigmatizes Indian students. This also reinforces the political power the PRI enjoys over the non-indigenous populations in the South through choosing to exclude some groups and redirecting additional benefits to others (Marion, 2003; Weiling, 2003). While outside the scope of this investigation it is important to understand that the indigenous peoples in the South inhabit a significant portion of land rich in natural resources essential to Mexico's survival. In support of the theory of this research it should be considered that the lack of political rights afforded the indigenous groups affects the outcome of the policy process and the equity of education in the region and has the broader effect of marginalizing interest group access in other areas where the government wishes to remain autonomous (Marion; Weiling). The PRI remains strong precisely because it controls much of the bureaucracy Mexico relies on to function and many of the channels necessary to funnel resources to various populations (Rangel & Thorpe, 2004). Given this political environment, restricting the policy agenda stage in the South and elsewhere reinforces this position of power. The policy implementation observations further on in the research bear this out.

In the mainstream those persons most compromised in and from the policy process are parents. Historically education has been the domain of authorities and parent involvement below the elite level was accompanied by a punitive result for the child. In this context most parents of

school-aged children are under-educated or uneducated themselves and are fearful of making demands of officials. The ability of the cultural collective identity of Mexican parents has not materialized into grassroots organizations that might accompany NGOs in the fight for education equity (Martin & Solorzano, 2003; Rangel & Thorpe, 2004). The vertical hierarchy of Mexico's public education system has been successful in dividing the voter constituency populations and framing each group as "the other" while marginalizing all groups too poor to hold any voice at all. Simultaneously the government has sought to marginalize the indigenous groups by requiring assimilation in exchange for social services and education (Marion, 2003; Weiling, 2003).

The strong pyramid of SEP and SNTE power in conjunction with the stranglehold the PRI has on the governorships and accompanied by international financial institution mandates for efficiency have restricted the policy process for Mexican citizens in public education and reinvigorated policy implementation to perpetuate the status quo.

Brazil

A pedagogical legacy of teaching and learning that transcends poverty, race, and gender in providing that all persons are capable of learning and should be given the opportunity has been embraced as educational policy and practice in both developed and developing nations. This pedagogy has been successful in meeting the literacy needs of marginalized populations and women. The tenets and practical application of this pedagogy was developed by a Brazilian named Paulo Freire (Freire & Macedo, 1998). These opportunities are not available however, for many school age children in Brazil even though policy statements might lead one to believe otherwise.

While the 1988 constitution establishes the ideology for an equitable education it also provides the legislature with the structural opportunity to design a corrupt and discriminatory infrastructure in a bureaucracy that is malleable to custodial whims. The system is characterized as centralized federalism where the criteria, curriculum, and cronyism are dictated from above and the lower levels of government are left to mete out the resources in the same discriminatory fashion. In most cases this means political or elite connections determine the allocation of resources. Much of the revenue dedicated to education is consumed through the overlap of multiple administrative agencies and the revenue that remains produces a substandard application of the constitutional ideology for education (Brown, 2002; Blom et al. 2001).

Revenues are collected through multiple taxing mechanisms primarily in the form of employer and employee income taxes. However, as a means to appease WorldBank mandates for privatization the government allows larger companies (corporations) to withhold this revenue if they create a private school for their employees' children, illustrating the disparity and stratification of education in Brazil. With budget shortfalls and misappropriation the states have been unable to promote enrollment and must work to meet the needs of existing students (Plank & Verhine, 1995). Enrollments have steadily declined since 1989 by 26% in primary and 37% in secondary school in a period where the number of children has risen. There are several causal factors outside of education's purview such as the wage gap and migration, however, the policy failure for decreasing enrollment within education is infrastructure deterioration, low teacher salaries, and racism. Urban schools are running 2 to 4 shifts per day and teachers are paid at a rate of 60% of the minimum wage (Brown, 2002). There are not enough schools or teachers to

meet the educational demand in Brazil in those areas where race, poverty, or rural settings are a factor (Pare, 2004).

Resources spent on children in school are channeled to the elite more frequently. There is a distinct prejudice against dark skinned Brazilians (favelas) and those of mixed race and these populations are excluded from the policy debate with the exception of NGO representation. Most suburban school systems attempt to mirror their counterparts in industrialized nations elsewhere while the urban schools betray the image of Brazil's good economic performance capabilities. Corporations and international financial institutions are involved in the policy process with bureaucrats and politicians and marginalization is the result for areas not requiring additional educated labor. Only those NGOs willing to accept government money are permitted into the policy process, which undermines their objectivity and voice. Several advocacy groups have managed to spur children's rights legislation with varying degrees of effectiveness in the local settings. New legislation is implemented through old institutions that lack any significant oversight and reforms depend primarily on local avenues of participation that will be discussed later (Blom et al. 2001; Brown, 2002; Pare, 2004; Wong & Balestino, 2001).

The absolute poverty rate is fifty percent and there is a significant competition for resources between the masses, the middle-class, and elite. A convenient mechanism for narrowing distribution and ensuring re-election is racism as a tool for political control based on the exploitation of a cultural characteristic. In keeping with the policy discussion the exclusion of any class from the agenda setting stage allows other groups to maintain their benefits especially in a climate of forced retrenchment. The purely cultural phenomenon of racism common to most

countries in one form or degree or another, is a politically expedient tool for narrowing the policy debate in education. This observation by many international critics has created support for independent domestic groups to gain some limited access to the policy process (Canen, 2003).

It appears from the data that the middle-class and elites benefit from the exclusion of the faveras the most. The increase in university level expenditures is dramatic since 1995 and this has provided additional space for less affluent students. There is stratification at the tertiary level however, as most public university vacancies are held for the most elite students and tuition remains free. Through the IMF and WorldBank mandates for privatization there has been a substantial rise in the number of private for-profit universities that rely on public money in the form of student loans to remain viable (McCowen, 2007). Though beyond the scope of this investigation the increase in tertiary spending is important relative to the lower expenditure rate in primary and secondary institutions and the setting of the policy agenda.

International lending institutions have access to the agenda and their mandates provide a spot for the “private education as a commodity” interests. Those elites and politicians involved in the process must construct a mechanism to satisfy all constituent parties in the process, thus excluding the majority favelas population (51%) from equitable benefits in education (Gomes, 1999). While this narrative sounds much like the Mexican case there are important differences in the progress that marginalized groups have made for education equity and in the politics they practice.

There are pockets of success in a few urban settings primarily initiated by groups that embrace Freire’s ideals. Prior to his death in 1997 he was the director of education in Sao Paulo

and one of the inequities he addressed was the significant problem of street children and their education (Freire & Macedo, 1998; Plank & Verhine, 1995; Wong & Balestino, 2001). Using grassroots initiatives and NGO facilitation these marginalized potential students have been brought into the system through innovative programs that provide both academic and vocational training, family reunification or shelter, and protecting non-criminal street children from juvenile authorities. There are seven-million street children in Brazil by modest estimates and authorities have often resorted to violence in order to displace them from cities where their appearance might cast Brazil in an unfavorable light among visitors (Brown, 2002; Pare, 2004). This violence is symptomatic of the racism and stigma that coincides with poverty in Brazil today.

Freire was welcomed back from exile in Sao Paulo in 1988 over the objections of the federal regime and assumed the role of Secretary of Education for that state as well as his position of advocacy. He immediately began to address the issues of inequity by creating forums for local solutions. These organizational efforts and Freire's credibility led to the success and sustainability of these projects and provided the motivation and support necessary for portability to other cities in the South and southeast (Freire & Macedo, 1998; Pare, 2004). These efforts are now taking root in the northeast where conditions are even more desperate. These movements have now born fruit within the national agenda regarding alternative education opportunities such as night classes for students forced to work during the day to supplement their families or provide their own income. Where portable projects have taken root using local participation and community specific sensitivity to ensure sustainability the dropout rate among these populations

has stabilized (Blom & Holm-Neilson, 2001; Canen, 2003; Gomes, 1999; Wong & Balestino, 2001).

The NGOs associated with Freire's initiatives have transported their success to Salvador, and Porto Alegre and a model for providing education to Brazil's poor has been created by *Project AXE* and lobbying efforts are underway for its expansion within the present administration. This is a laborious process given the systematic corruption within the decentralized bureaucracy; however, NGOs and grassroots organizations have learned to incorporate the model in small but strategic urban settings where visibility is high and success undeniable. Several political parties and radical trade unions have joined the efforts and new openings are being created in the policy process (Brown, 2002; Wong & Balestino, 2001). As marginalized Brazilians gain a concept of their political rights and the power they have gained through increases in civil liberties, as shown in the regression results, education initiatives inspired by Freire and introduced through grassroots organizations in the more populated regions of Brazil may be able to create the political pressure and transparency necessary to overcome inequitable education policy in Brazil. One of the important comparisons for this investigation is the success of portability for useful models of education equity in Brazil and the failure of such attempts in Mexico. These differences will be elaborated on in concluding remarks in this chapter.

Expanding Agenda Access and the Success of Starting Small

This policy comparison has provided an understanding of the current conditions of education policy in Mexico, and Brazil. Investigations have focused on the access enjoyed or

denied to specific groups and the output results from policy as it is already constructed and applied. The evaluation and critique has drawn some summary conclusions based on the academic resources available for this research. These comparisons would be incomplete however, without a serious discussion concerning the prospects for expanding agenda access and thereby effecting policy outcomes in the transitioning democracies of Mexico and Brazil. This conversation can best be approached by evaluating the prospects for an increasingly democratic environment within the narrow policy framework that is education and where this process becomes stagnant what alternatives exist for those removed from the policy debate. Prying open the agenda setting stage locally manifests additional power at the next level. It appears that the avenues utilized thus far in Brazil tie directly to the increases in civil liberties that are estimated in the quantitative results of my research. These avenues are just beginning to emerge in some transitional democracies in Latin America and the increase in civil liberties in these democracies with the assistance of NGOs willing to work small and then helping to coordinate portability may provide relief for marginalized groups in education. The fact that the education bureaucracy monolith is so entrenched in these democracies discourages local efforts to chip away at the policy strongholds. Starting small may be the most effective path however, as is demonstrated in one of the two transitioning democracies in this investigation.

Mexico

Mexico is not accustomed to the use of sustainable grassroots politics as a device for effective policy change. Pluralistic forms of governing in education are non-existent and in the

present environment academic policy analysts do not expect change within the current framework (Martin & Solorzano, 2003; Rangel & Thorpe, 2004; Santibanez & Razquin, 2005). The illustrations in this examination were unable to uncover any significant progress beyond the special programs that target isolated groups and an increase in enrollments in the dense urban areas. As long as education is used as a political device to maintain hegemony then any equitable reform for children will not be forthcoming. In light of this forecast it is important to consider a variety of alternatives that might be available within a transitioning environment.

Those national legislators that have worked to circumvent the SEP and provide targeted relief because nationwide reform appears impossible might refocus their efforts toward empowering parents by encouraging their participation through collective advocacy in what their children are learning and experiencing in school. Once parents become engaged the political tactics of the SNTE might not so easily isolate them and they may discover what additional education opportunities exist for their children. The mobilization of disparate groups in Mexico will be much more difficult to achieve when the majority of citizens have very limited economic resources (Rangel & Thorpe, 2004).

As a second step local school systems could be slated for more openness across communities in each region in order to induce a pluralistic perspective among parents able to take advantage of the new communication avenues to discuss problems and solutions for issues that hover beneath the political mandates of the SEP such as dropout prevention. This issue does not threaten the autonomy of the teachers union who would presumably have a financial incentive for keeping students in school even if the motivation to teach is absent. As parents

connect on apolitical topics an understanding of pluralistic problem solving may begin to take effect. Much of the Mexican population, especially in the rural areas, has not developed an alternative regime perspective to the authoritarian example set by the PRI.

A third alternative is the proliferation of NGO initiatives as has been seen in Brazil. Among indigenous groups these attempts have been successful yet isolated. The federal government outside the purview of the SEP should promote regional NGO participation without allowing boilerplate solutions that may be ineffective in new areas. The bolt-on approach defeats pluralism and excludes endogenously developed alternatives that would become more sustainable.

Each of these alternatives involves the exercise of political rights and civil liberties in order to achieve success. The data display an increase in freedom in Mexico following a change in power at the executive. As yet the less urban areas of Mexico have not exercised these rights in concert with available alternatives for education equity. These alternatives would naturally raise the ire of the STNE and SEP over time. The federal politicians working to buffer the negative effects should reenergize their efforts as well as provide a new safety net for the pluralistic endeavor through alternative means of information that bypass the vertical state hierarchy and ultimately the PRI. That being said, the political reality is that both politics and education are fractionalized in Mexico and the PRI, SEP, and the SNTE seem to have the most organized and effective political mechanisms to date. The mutual dependency and support necessary for sustainable democracy and education equity has yet to break the systemic political entrenchment evident in Mexico.

Brazil

The picture of decentralization in Brazil is a mixed landscape of entrenched policy and growing pockets of innovative policy transformations through local and regional politics predicated on a cooperative approach among marginalized groups. The lack of coordination at the federal level and the overlap of responsibility in education have led to corruption and inequity. The inability of Brazil to eliminate poverty in a country considered to have a medium to high income illustrates the broken distribution model based on privilege, elitism, and cronyism. This examination however, has revealed a distinct pluralistic perspective among some of Brazil's most unlikely and marginalized citizens and an attitude of advocacy and progressivism within the ranks of esteemed academics and grassroots citizen groups and NGOs.

In the South and southeast where economic development is most notable attention has been drawn to the most inequitable circumstances in the region. The broad effects of racism and more microscopically the street children have served as examples of policy failure and concerned Brazilians have deemed these issues important enough to open a dialogue predicated on a democratic solution. While national and international attention has been drawn to these conditions it has only occurred after significant grassroots initiatives had already begun to address the inequities. Much of the global response has been induced as the regional governments have moved to extinguish the efforts without much success. The punitive efforts have failed precisely because of the pluralistic attitude at the local level and the advancement of participation has increased the political initiative against those wishing to remain in office.

In the policy discussion section Freire's philosophical approach was introduced as having had a significant impact on education around the world. He spent his life advocating for the learning opportunities of disparate populations through an approach that met them in their own circumstances and within their own cultures and allowed them to address education from their own perspective. In every area of the developing world those groups benefiting from Freire's methodology have achieved significantly higher literacy rates than their peers who were educated through government-mandated curriculums. Freire understood and applied portability and implemented sustainable pedagogical practices without undermining cultural and social norms that might have alienated educators and policy-makers from employing the philosophy in several developing nations in their attempt to revitalize education and achieve a new level of previously unrealized human capital development. While Freire's global influence was marginalized in Brazil by the military regime as well as by the civilian government that took power in 1986, he seems to have had a significant effect on local democracy in southern Brazil (Freire & Macedo, 1998).

While the reform is far from sweeping, marginalized Brazilians, thoughtful academics, educators, and politicians have shown the patience necessary for grassroots politics to be a viable alternative to being excluded from the policy process. With strong, credible leadership at the local level and citizen empowerment through organizational vehicles based on an eclectic constituency that shares the most basic and common goal of education equity Brazilians have created access within the agenda-setting process and may soon affect more broad based change in education policy.

The example offered by Brazil through increasing levels of civil liberties illustrates successful local political action on behalf of equitable education. The exercise of these rights has led to mobilization beyond regional borders while simultaneously providing the education outcomes necessary for achieving true academic progress for students. Brazil is a heterogeneous nation with a poverty rate of 50% and a fragmented and inefficient bureaucracy and yet it has been able to demonstrate a democratic resilience at the grassroots level among a diversity of interests representing race, class, and gender in challenging the status quo because the stakes for education equity are so high. The failure to overcome the systemic inequity in education in Mexico even at the local level may be directly related to a less democratic environment uncovered in this qualitative analysis and specifically to a lower level of civil liberties as was shown in the quantitative analysis.

CHAPTER SIX: CONCLUSION

The cross-sectional, longitudinal regression model used in this research has provided significant estimates that indicate that increasing levels of democracy provide more equitable education output in spending and education outcomes in enrollment and literacy increase as the level of civil liberties and political rights increase. Civil liberties appear to be the mechanism that influences this relationship between democracy and education the most. The comparative discussion of the policy process for education in Mexico and Brazil helped contextualize these results. Interest group mobilization by the newly represented is taking advantage of an increase in the level of civil liberties in Brazil. The regression estimates failed to show significant spending increase across the levels of education as civil liberties increased. The spending estimates that were significant displayed an increase in primary spending as civil liberties increased which is contrary to the expectation that authoritarian regimes spend similar amounts as democratic governments in primary school. The other significant spending relationship is a negative relationship for civil liberties and tertiary spending. This may suggest that as freedom increases systemic education policy previously directing resources toward the children of upper middle-class and elite families in authoritarian regimes will be replaced by policies that prioritize education equity.

Education outcomes in rising school enrollment are also positively affected by an increase in civil liberties. Secondary school enrollment increases dramatically as freedom increases. Discrimination at the secondary level based on class and gender has been the norm in Latin American countries that are less free. The strongest effects from democracy in the study

were found in secondary education and the regression estimates show that equity for women and the poor may be increasing nine to one with increasing levels of civil liberties. The positive outcomes for enrollment provide context to the positive outcome for advanced literacy improvements as the level of freedom increases. The equitable access to secondary school allows more students to achieve higher levels of literacy under a more discriminating definition for achievement. The school life expectancy estimates for literacy show that increasing levels of civil liberties effect education policy that will sustain these enrolled students for an increasing number of years in order to achieve these advanced literacy goals.

By combining the regression estimates with the comparative study of Mexico and Brazil a clear picture begins to emerge of how democracy affects education equity. In comparing the data from Brazil and Mexico for all of the variables against the pooled data from the entire study the longitudinal trends in both countries are typical of the regression results. I elaborated on the policy process for these two countries in order to provide some focus on the mechanism in democracy that leads to education equity. An increase in political rights and civil liberties provides greater representation for previously excluded publics and create multiple avenues of expression and association. Marginalized groups are taking advantage of these opportunities and mobilizing with others in the interest of education equity to create openings for themselves in the policy process in Brazil. These advocacy groups have started small, but after finding access to the local policy debate they are now affecting regional and national education policy in favor of equity as officials respond to the demands of these new constituencies.

While the regression model estimates point to several significant positive relationships between democracy and education there are a few areas that could have benefited from the use of some additional control variables. There are no political control variables in this study. I considered controlling for left leaning governments because these regimes may tend to spend more on education than fiscal conservatives. Having included controls for economic growth and recession I decided that at the present time the economic indicators would be sufficient in determining if pressure on fiscal policy would restrict education spending. The results from GDP growth do show that in every test when the economy grew education spending was negatively affected. Including the political variable may be useful in order to gain additional insight.

Political rights increases did not associate as strongly with education equity as civil liberties. I expected this result, however, I did not expect the relative differences between the two. The model estimated that where civil liberties had their largest and most significant effects the r-square percentages were also the highest. Had I included a variable that accounted for patterns of election irregularities in each country or considered regime durability I may have seen an indication that politicians are not as concerned about re-election when their own political machine is well established and lacks political competition. The influence of political rights may be lower in these cases whereas grassroots organizations taking advantage of increasing civil liberties can become a presence in local and regional politics that will not evaporate after an election.

In the absence of reliable longitudinal literacy data I am comfortable with the design including a proxy for literacy. Lake and Baum (2001), Brown and Hunter (2004), and Brown

(1999) experienced a problem of missing literacy data that led to insignificant results for literacy while using similar factors for democracy and different factors for domestic and international finance. Rather than run a similar regression and gain no new insight I created the proxy. School life expectancy is tied directly to statistical enrollment data and is derived using the sum of age specific enrollment ratios for each level of education. These calculations are checked against the gross enrollment rate (UNESCO, 2011). I do think that adding teacher training or student-teacher ratios and creating an index for literacy may have refined the test for measuring increasing literacy. Regardless, having learned through the existing research that literacy relationships are difficult to test in Latin America I moved forward with the proxy, and at the very least extended feedback to the existing literature for creating a proxy for literacy in the future. There are several additional research approaches and results from this thesis that may benefit or add to the body of knowledge in the literature.

Much of the research reviewed in Chapter 2 focuses on the relationships between domestic or global economic influences and regime as determinants of social spending or human capital investment in its broad form or narrowing the focus with factors such as education or healthcare. Either way the research goal is a better understanding of the mechanisms that connect these economic, political, and social factors and the direction of these relationships. The research question has generally been framed focusing on economic or regime effects. I started with a similar design when I began investigating democracy and education and my methodology still follows this basic pattern. However, I decided to reframe the question in a way that required added discrimination in my variables. I included education equity to my question as a long-range

research goal into the often overlooked benefits of democracy on human capital investment. This guided how I approached democracy's relationship to education. I chose definitive indicators in education that when acted upon by increasing levels of democracy might display a tendency toward education equity. This also made it necessary to discriminate for democracy and use civil liberties and political rights as separate factors of democracy rather than a single freedom index. The added discrimination that I provide for the factors of democracy, the approach I use to look for trends in education equity through outputs and outcomes, and the results I get from my investigation of secondary education are this theses' most significant contributions to the existing literature.

The future literature that investigates broad domestic or global economic and regime effects on human capital as social spending or public services such as Brown and Hunter (2004), Lake and Baum (2001), and Kaufman and Segura-Ubiergo (2001), may benefit from the separation of political rights and civil liberties as discriminating factors of democracy. My Data show that these indicators may occur at different levels independent of each other and therefore might have distinct effects. Lebovic (2001) and Brown (2002) looked at transfers from military expenditures and transitions from military governments respectively and the effects on social spending in Latin America. Studies that build on Lebovic (2001) could note the output and outcome discriminations when they examine how the policy process is affected as democracy levels increase. The literature in this review that investigated policy processes or outcomes did not attempt to determine the substantive effect of policy beyond changes in spending. Because I included indicators that might identify equity trends my research is better suited to examine how

levels of democracy influence policy implementation outcomes that may have unintended effects. Additionally, by separating the factors for democracy my qualitative policy evaluation when accompanied by my regression results allows deeper insight into how democracy through the benefit of increasing civil liberties may open new avenues for input to the policy process. Brown (2002) used primary education spending, funding to the Ministry of Education in Brazil, and the transition of resources from the previous military regime to determine the level of redistribution that takes place for education. I added secondary and tertiary spending to Browns (2002) model and provided additional effects by democracy that were not present in his study.

Research is available that provides more discrimination in the dependent variables for social spending. Baum and Lake (2003), and Rudra and Haggard (2005) disaggregate social spending in healthcare and education enrollments. Rudra and Haggard (2005) include secondary school as do Baum and Lake. My use of secondary enrollment for females as an additional indicator may have enhanced their findings. Also, as shown by my regression estimates, separating the factors of democracy affects the analysis. Stasavage (2005) did not follow the pattern of human capital investment that was used in the majority of the other literature when he examined education spending in Africa and political participation in the multiparty election process. Stasavage finds trends in the process that lead to increased spending in primary education. The introduction of civil liberties as a discriminating variable for democracy may have indicated that advocacy for education spending through the avenues provided through increased civil liberties may have preceded the election cycle, politicians may have followed through on their platform promises because of the continued pressure from advocacy groups for

education. Research in the future may be able to use the discriminating approach to variable design used in this thesis to help gain added insight and to better inform questions in pursuit of long-range research goals.

This thesis has uncovered several areas of research that need to be added to my long-range plan. In my introduction I discussed democratic longevity and economic development. I separated education from the factors of economic development because it has been included as one of the means in achieving democratic stability for so long that few question the direction of the relationship. Borrowing education as a factor in economic development and lending it to democracy as a variable to be acted upon allows us to investigate this direction once again as it relates to democratic longevity and begin looking for the mechanism that might alter the assumptions about the relationship between economic development and democratic stability, at least as far as education is concerned. Having uncovered a positive relationship between increasing levels of democracy leading to increasing levels of education equity through the outputs and outcomes observed in the regression estimates, I now have additional questions.

Regarding the specific findings, the addition of political control variables would be an important addition to the results. Secondly, refining the proxy for literacy should be a priority as a large part of the research on education achievement involves literacy outcomes. Three studies cited in the literature review attempted an analysis using literacy as a variable and none found significant results. Additional research could branch off in two distinct directions. The regression estimates for civil liberties effects on education suggest that it may be useful to explore whether the mechanism for equitable policy in education is portable to other areas of human capital

investment and public services. Additionally, a study of the success in Brazil, raises the question of what effective avenues may result from an increase in civil liberties for fundamental changes to occur in public policies that have marginalized persons based on race, class, and gender in countries that are undergoing democratic transition?

The other branch for future research may continue the investigation into what Lipset (1959) considered to be an inherent trait of democracy. Framed as a research question here, is there a mechanism within democracy itself that operates to ensure democratic longevity? I have begun to inquire into this mechanism in this thesis through an investigation of democracy's relationship to education. If democracy is to remain viable in countries undergoing transition wide distribution patterns of participation need to occur. Education equity may provide this environment, but as this research has shown the factors of democracy and specifically an increase in the level of civil liberties is one of the primary avenues to education equity.

APPENDIX A: LIST OF COUNTRIES

Argentina
Bolivia
Brazil
Chile
Colombia
Costa Rica
Ecuador
El Salvador
Guatemala
Guyana
Honduras
Mexico
Nicaragua
Panama
Paraguay
Peru
Uruguay
Venezuela

APPENDIX B: DATA SOURCES

Freedom House. *Freedom in the world* 1972-2011.

Integrated Network for social Conflict Research. *Polity IV Project: Political Regime Characteristics and transitions*, 1800-2003.

The Heritage Foundation. *The Heritage foundation Index of Economic Freedom* 1985-2010.

OECD: *Education at a Glance* 2010.

UNESCO. *United Nations Educational, Scientific, and Cultural Organization*. 1995-2011.

UNICEF (U.N). 1989. *Convention in the Rights of the Child*.

USAID *Global Education Database*, 2009.

WorldBank. *Edstats Educational Profile Database*. 1995-2011.

APPENDIX C: SUMMARY STATISTICS

VARIABLES	N	MEAN	Std. Dev.	Min.	Max.
Political Rights	741	3.269	1.759	1	1
Civil Liberties	741	3.404	1.391	1	7
Economic Freedom	304	60.411	10.289	27	78
Enrollment Primary	604	108.106	12.156	62	155
Enrollment Secondary	523	61.378	21.127	12	109
Enrollment Sec. Female	435	64.650	22.022	11	117
Per student Spnd Prim	131	13.178	7.252	3.2	45.4
Per student Spnd Sec.	127	15.246	9.703	3.9	53.3
Per student Spnd. Tert.	96	32.716	21.540	8.9	107
Education Spnd. GDP	151	4.553	2.024	1	13.6
Unemployment	405	7.222	3.658	1.3	22.8
GDP Growth	722	3.248	4.650	-26.5	25.3
School life exp. Female	414	9.989	1.654	4.2	13.7
School life exp. Total	525	9.930	1.679	4.5	13.4

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