Spring 2017

Comparing Education and Policy Outcomes in Brazil, India, and South Africa

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Departmental Honors Thesis

Dr. Johnson

Spring 2017

Abstract

In my research I ask, "What features of education policies are conducive to successful educational outcomes, and what types of policies should be encouraged in developing countries to compliment their development efforts?" Discussions regarding education policy are highly polarized between supply-side and demand-side views. I engage in a comparative case study between three emerging BRICS countries who are dynamic economic and political players in their respective regions—Brazil, India, and South Africa—to analyze the extent to which each country has used supply-side and demand-side education policies and to what extent these policies have been effective. I conclude that either supply-side policies, demand-side policies, or both have the potential to be effective education measures for development, and that the polarized debate within the literature largely misses the point. Instead, I propose that factors relating to policy implementation are likely more important considerations in producing sound education policies.

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Introduction

It is no secret that desirable educational outcomes are good for a state's development as a whole, but what types of policies lead to these desirable outcomes? It is certainly possible to have an education policy that is stellar in theory but ineffective in practice. Because education is likely a critical component to economic, social, and political development, it is paramount that we research what types of education policies actually function successfully in practice, specifically considering policies that can be realistically implemented by developing countries. What features of education policies are conducive to successful educational outcomes, and what types of policies should be encouraged in developing countries to compliment their development efforts?

I hope to begin to answer these crucial questions throughout the following pages. The ultimate goal of my paper is to compare educational policies from some of the major emerging economies in each main region of the developing world and analyze how these different policy approaches have influenced educational outcomes in those regions. Specifically, I will examine three of the BRICS countries, Brazil, India, and South Africa, who are some of the largest economic and political players in their respective regions. These countries, although not fully representative of all of the education policies in Latin America, Asia, and Africa respectively, will hopefully shed light on how different countries with distinct cultural and historical backgrounds have chosen to develop their education policies, and if aspects of these policies are found to be successful, perhaps they could be expanded in the future on a regional or international level. My research question is, "How have the respective education policies in Brazil, India, and South Africa impacted educational outcomes in these countries?" Researching this topic is crucial as many political scientists, economists, and sociologists have recognized the

profound impacts of education on political, economic, and social development. Although there is no simple answer to the development puzzle and clearly more than one factor is at play in determining a country's development trajectory, education is undoubtedly an important factor in the equation.

In the following pages, I will first analyze some of the existing literature on education policy, educational outcomes, and international development. This literature cleaves into two sets of opposing education policy views: those who support supply-side policies and those who support demand-side policies. Next, I will lie out my hypotheses and the methodology I will use for my research. Then, I will examine the specific educational policy outputs in each of the three countries, taking into consideration the relevant cultural and historical factors that have impacted the creation of these policies. Furthermore, I will analyze the implications of each of these policies for development by drawing attention to data from various human development indicators relating to education. Finally, I will assess the aspects of the education policies that have led to their success and/or failure upon implementation, and attempt to draw conclusions about what types of policies may be recommended to compliment development efforts in other developing countries. I ultimately argue that what is truly important is not whether a policy is supply-side or demand-side, and that this polarized debate does little to uncover the real issues at the heart of the success of education policies. Rather, factors relating to the implementation of policy are more important to study in order to uncover the key to successful education policy.

The Great Education Debate

There is a great deal of research in the international education field on the role of education policy in international development. The viewpoints expressed in the literature vary,

however, a great deal of the education policy debate centers on "whether governments ought to, or know how to, intervene. And though the specific reasons invoked are different, the fault line divides the field essentially in the same place it divides it on the subject of aid, with the aid optimists being generally education interventionists, and the aid pessimists being in favor of laissez-faire" (Banerjee and Duflo 2011, 73). This has led to an explosion of literature on two main views: the "supply wallah" view, a term coined by Banerjee and Duflo, also known as the liberal or supply-side view, or the alternate "demand wallah view," which is also referred to as the neoliberal or demand-side view (Ibid.). It is important to recognize that within the education policy debates, the meanings of the words "liberal" and "neoliberal" do not always correlate with the common conceptions of these terms within the United States or global politics.

The Supply Wallah (Liberal) View

The supply wallah, or liberal view, largely emphasizes the supply of schooling, and in this view, the main way to solve the problems of an education system is to get every child into a classroom with a well-trained teacher, and as a result, the education system will take care of itself (Banerjee and Duflo 2011, 73). Because of this assumption, liberals prefer a significant level of government intervention in the education system to ensure that education is equitable and accessible to every child (Edwards and Klees 2012, 57). Liberals also emphasize developing countries' need for support from existing external institutions including international organizations, non-governmental organizations, and intergovernmental organizations in formulating and carrying out education policy to this end (Ibid., 62). The United Nations Millennium Development Goal (MDG) two and subsequently Sustainable Development Goal (SDG) three are prime examples of a liberal view of education. MDG two aimed to "ensure that, by 2015, children everywhere, boys and girls alike, [would] be able to complete a full course of

primary schooling," and SDG three aims to "ensure inclusive and quality education for all" (2015 "Goal 2;" 2015 "Sustainable Development Goals"). Both of these goals emphasize expanding access to schools and teachers.

Some of the most common policy proposals associated with the liberal point of view include instituting universal and compulsory education, prioritizing school construction in areas where high ratios of children do not attend school, and centralizing education policy decision-making (Banerjee and Duflo 2011; Edwards and Klees 2012). The centralization of decision-making with regards to education is relevant on both a national and international level, as liberal scholars have argued that globalization revitalizes the role of international agencies in making educational policy, causes the deterritorialization of the education policymaking process, and allows international organizations to transform legal framework surrounding education policy, thus magnifying the role that intergovernmental forces have to play in creating education policy (Verger, Novelli, and Altinyelken 2012).

The implicit assumption in the liberal or supply-wallah position is that enrollment in school leads to learning. However, this is not always the case. If every single child attends school, there is no guarantee that those schools will be high quality. The World Bank's World Absenteeism Survey; conducted from 2002-2003 in Bangladesh, Ecuador, India, Indonesia, Peru, and Uganda; found that teachers in the developing world miss an average of one in five school days (2006 "Missing in Action"). Many teachers in the developing world are also supremely under-qualified. For example, when a sample of South African teachers was asked to take the examinations their students were required to pass at the end of the year, 79% of teachers in South Africa scored lower than the level that their students were expected to attain (The Economist 2017). Opponents of the supply-wallah case argue that the government is inefficient in producing

education, and that the public perceives inefficient schools as not worthwhile. Because in many developing countries parents are often foregoing extra earnings potential when they send their children to school, simply supplying public schools will not ensure that students actually attend them. These critics argue that there must also be a demand for the schools in order for families to encourage their children to attend (Banerjee and Duflo 2011).

The Demand-Wallah (Neoliberal) View

Critics of the liberal or supply wallah view typically fall into the neoliberal or demand wallah category. They argue that governments are inherently inefficient and ineffective at creating education systems and therefore advocate the reduction of state responsibility in the education sector (Banerjee and Duflo 2011). In their view, this will spur competition between private schools that forces them to respond to pressures from consumers and increase their quality (Edwards and Klees). Neoliberals also argue that globalization creates an even bigger role for privatization and decentralization, as they claim that globalization limits the ability of welfare states to address education policy and naturally nurtures a transnational private market of education provision that causes neoliberalism to frame many of the education policy ideals that circulate (Verger, Novelli, and Altinyelken 2012).

Some classic examples of neoliberal education policies include school privatization, public-private partnerships, parental choice, and school management decentralization to the community (Edwards and Klees 2012, 56). In response to supply wallahs, demand wallahs point out that the main issue in developing countries is not a lack of available schools; it is a lack of demand for the schools that are available (Banerjee and Duflo 2011). If schools were forced to compete for students, they posit, this issue would be resolved. An increase in the rate of return of education would raise the demand for it because the opportunity cost of sacrificing earnings by

sending children to school rather than work would be minimized (Ibid.). For this reason, quintessential neoliberal policies such as privatization and decentralization focus on raising the demand for education by making it higher quality and more competitive. However, it is important to note that neoliberal or "supply side" policies can come in a variety of forms other than the austere measures that often come to mind when the word "neoliberal" is mentioned. Demand-side policies may include progressive policies, such as programs providing additional funding or reduced education costs to poorer families in order to raise the overall demand for schooling and increase enrollment and attendance rates.

Stenvoll-Wells and Sayed argue that introducing more market-oriented measures such as school choice and partial or full education privatization is an important part of effective school governance, which is "crucial to ensuring that children, young people, and adults access good education (2012, 91). However, they point out that based on their study of education decentralization in Zimbabwe and South Africa, failed neoliberal policies essentially devolved fundraising to individual schools, which led "to a two-teir education whereby schools with a wealthier parent base were able to afford more resources compared to schools serving the marginalized and poor" (Ibid., 107). While not completely discounting the promise of neoliberal education policies, Stenvoll-Wells and Sayed ultimately conclude that these types of policies should be introduced with caution, specifically in highly unequal societies (Ibid., 108). This is the central critique of neoliberal education policies. Edwards and Klees assert that "it is important to recognize that neoliberal forms of participation may simply reproduce inequality" (2012, 74). Poppema analyzes school-based management systems in Nicaragua and El Salvador, and similarly concludes that neoliberal reforms that were largely pushed upon Central America

by the United States have caused the poorest parents to pay the highest price for the education of their children, furthering societal inequality (Ibid., 158).

One of the main assumptions of neoliberalism is that the reason that students do not attend schools is not that they are unavailable, but rather that there is a lack of demand for the schools that are available. However, some researchers have argued that this underlying assumption is false. Banerjee and Duflo cite a World Bank study that compared conditional cash transfer (CCT) programs to non-conditional cash transfer programs in education (2011). In the conditional cash transfer program designed to raise the demand for schooling, parents were given a monthly cash allowance equivalent to the amount of earnings they would forgo by sending their children to school on the condition that their children actually attended school every day. This program was predicated on the idea that increased income is not enough for parents to want to send their children to school, and they must be given an additional incentive. However, in the unconditional cash transfer program, parents were given the same monthly allowance, but it was not conditional on their children's attendance. They could choose to send their children to school or not to send them to school and earn additional money. Surprisingly, the World Bank found that participation in both the CCT program and the unconditional cash program increased the likelihood that parents would send their children to school by the exact same amount, indicating that the main reason behind lack of attendance is not low demand for school, but rather an inability to forgo increased short term earnings (Ibid., 80). Banerjee and Duflo argue that these findings demonstrate that the market would not be sufficient to increase attendance rates, and that there must be some sort of government intervention to make education affordable enough so that poor students can attend (Ibid., 80).

In general, the debates among the two prevailing views of international education policy are polarized and often reminiscent of other highly politicized issues where the word "neoliberal" comes up. A close examination of the predominant literature reveals that neither the supply wallah view nor the demand wallah view is a sufficient explanation for how to build an effective education policy that will foster development. In general, neoliberal policies address some of the inherent issues in liberal policies, and vice versa. Perhaps a combination of both ideas could lead to the most optimal education policy outcome. Additionally, other factors relating to policy implementation could also be more important.

Hypotheses and Methodology

Once again, my research question is, "How have the respective education policies in Brazil, India, and South Africa impacted educational outcomes in these countries?" The reason I ask this question is to get at the underlying aspects of education policy that generally produce positive or negative results in terms of development outcomes. Drawing upon the main schools of thought regarding education policy for development, it is clear that the two dominant strands of literature, the neoliberal and the liberal, compete for relevance. Therefore, I hope to take a case study approach to examine each of the three countries through the lens of the dominant literatures and evaluate how their use of supply-side or demand-side policies impacted educational outcomes.

Variables

Throughout my research, my independent variable will be conceptualized as the education policies employed in each country in terms of primary and secondary education. The dependent variable will be the resultant educational outputs. I will examine the independent

variable by investigating the specific education policies of each country in depth and looking for patterns in the policies, specifically paying attention to the presence of supply-side education policies versus demand-side education policies. To operationalize this variable, I will identify whether each country used mostly supply-side policies, demand-side, or a mix. In order to operationalize the dependent variable, social-educational outputs, I will compare the expected years of schooling, mean years of schooling, net enrollment rates, and youth literacy rates in each country.

Controls

Throughout my investigation, I have controlled for level of income, level of corruption, and level of human development via my case selection. The countries I have chosen to investigate, Brazil, India, and South Africa, were chosen strategically for these reasons. First off, all three countries are members of the group of countries known as the BRICS (Brazil, Russia, India, China, and South Africa), which are a collection of five major emerging economies that are quickly-growing, contain a large portion of the world's population and net domestic product (GDP), and have a significant influence on international and regional affairs. For this reason, all three countries are in similar positions in terms of human development. According to the United Nations Development Programme (UNDP) Human Development Report from 2016, the Human Development Index (HDI), which accounts for factors such as a long and healthy life, the accessibility of knowledge, and a decent standard of living, places all three countries at similar levels of development. On a scale of zero to one, Brazil's HDI is .754, India's is .624, and South Africa's is .666 (UNDP 2016). Each of these countries are considered medium-tier countries with regards to their levels of development, meaning that although they are certainly considered developing countries, they are also at higher levels of development than many other developing

countries, indicating that they could potentially serve as models for other less developed countries. Additionally, according to the World Bank, each of the three countries has a fairly similar GDP per capita when adjusted according to purchasing power parities (PPP). Brazil comes in with the highest GDP per capita at $15,473.694, South Africa is slightly lower at $13,195.465, and India is considerably lower at $6,104.576, however, this lower number is partially due to its much larger population (World Bank 2015). These similar GDP per capita numbers indicate that each country has a similar propensity to fund education measures, and although India's GDP per capita is just under half that of the other countries, they all still fall into the category of middle-income emerging economies. I also controlled for level of corruption while choosing my cases. Because corruption was a crucial theme that resurfaced as a threat to the success of even the best education policies throughout literature from both sides of the education debate, I chose to hold the level of corruption in each country constant in order to negate its effect on my results. According to Transparency International's Corruption Perceptions Index (TICPI), Brazil and India were tied for the 79th least corrupt country in the world with a score of 40/100, and South Africa was ranked slightly less corrupt at 64th least corrupt in the world with a score of 45/100 (Transparency International 2016). These similar levels of corruption, which has been proven to be a huge factor in the success of education policies, indicate that each of the three countries has an approximately similar propensity to effectively implement education policies that are created. By holding the HDI, GDP per capita, and level of corruption fairly consistent in each case, I will hopefully reduce the influence of these crucial and potentially confounding factors on the outcome of my research.

Case Selection

In addition to controlling for a variety of factors, my choice of cases was also determined by regional factors. I wanted to choose a country from each of the three major developing regions of the world. With Brazil situated in Latin America, South Africa situated in Africa, and India situated in south Asia, I am able to look at the results of three diverse development paths and histories, and each of the three countries will likely have themes that carry over to other developing countries in their respective regions. By examining cases from each of the three major developing regions of the world, I will see more variation in terms of educational policies, specifically when viewing the policies through the lens of the two different major paradigms of scholarship on education policy.

Hypotheses

Overall, it is clear that an improvement in education policy in a given country will improve educational outcomes in that country. However, what remains unclear is what exactly constitutes an "improvement" in education policy. Therefore, the overarching goal of this research will be to attempt to either validate one of the two main existing theories on education policy, demonstrate that a combination of both approaches is the best policy approach, or refute both approaches and introduce a new one. Therefore, as I examine the education policies and their outcomes in each of these three cases, I will work from the following set of hypotheses:

> H1a: Primary and secondary education policies that emphasize neoliberal/demand-side reforms will improve educational outcomes more than those that emphasize liberal/supply-side reforms.

H1b: Primary and secondary education policies that emphasize liberal/supply-side reforms will improve educational outcomes more than those that emphasize neoliberal/demand-side reforms.

H2: Primary and secondary education policies that combine both neoliberal/demand-side reforms with liberal/supply-side reforms will provide better educational outcomes than policies that focus on one or the other.

Null: Neither the presence of neoliberal/demand-side policies nor the presence of liberal/supply-side policies will impact the effectiveness of educational development outputs.

Of course, in examining only three developing countries using a case-study approach, my findings will be limited by the number of cases. Nevertheless, in examining three influential countries from each region of the global south, this research will shed light on the issue and be an important first step towards identifying to what extent the two dominant theories may be correct. My suspicion is that the debate over neoliberal versus liberal education policies has been hyperpolarized by related political and economic issues, and that in reality, a successful education policy could result from a thoughtful combination of both sets of ideas. Now, let us examine each of the three cases in depth in order to begin to draw conclusions about these hypotheses.

Brazil

According to the World Bank, Brazil has engaged in a major education transformation since 1995 and experienced some of the strongest and most sustained improvement in educational outcomes in terms of both primary and secondary enrollment and overall learning

(World Bank 2010, 10). On a state level, a "new generation of results-oriented poiticians" has implemented a variety of innovative and promising programs including early childhood education, technical education, accelerated learning, early grade reading, teacher support, student mentoring, and school assistance for conflict zones (Ibid., 60). Beginning with the Cardoso administration in 1995, a series of education reforms was enacted and expanded upon which helped take Brazil from one of the worst performing education systems of any middle-income country to one of remarkable progress and exceptional policy continuity (Ibid., 10). Although federal reforms have been a hallmark of Brazilian education policy since 1995, many of the reforms enacted in Brazil have had a neoliberal slant and have led to a highly decentralized basic education system.

Key Components of Brazilian Education Policy

President Fernando Henrique Cardoso took office in 1995 and immediately began to address education policy. Once a prominent sociologist and considered to be one of the fathers of Dependency Theory, Cardoso had shifted to a more neoliberal policy view during his term as Finance Minister of Brazil. Despite being elected by the Social Democrat party in Brazil, his presidency was characterized not only by archetypical efforts to improve social equality, but also by neoliberal privatization efforts, the latter of which drew the criticism of some of his political base and admirers of his academic career. After taking office in 1995, President Cardoso implemented three main education priorities which reflected these dispositions: education finance equalization, education results measurement, and conditional cash transfers (CCTs) (World Bank 2010, 10). He equalized funding across regions, state, and municipalities in Brazil through the Fundamental Education Development Fund (FUNDEF), implemented the National Basic Education Assessment System (SAEB) to measure the primary school student learning on

a common national scale, and improved educational opportunities for poor students through *Bolsa Escola*, a CCT program (Ibid., 10). Subsequently, the Luiz Ignacio Lula Da Silva administration, which succeeded Cardoso in 2002, retained and strengthened these policies by expanding on them (Ibid., 10).

Fundamental Education Development Fund. The FUNDEF reform set a national minimum spending level per student in primary education that would follow the student based on the school they attended and provided federal assistance to states unable to meet the federal minimum (OECD 2015, 16). Evidence has demonstrated that FUNDEF and its successor, FUNDEB, have increased teacher salaries, student enrollment, and test scores (Ibid.). FUNDEF and FUNDEB, although rooted in liberal ideals of improving the availability of schools and teachers especially in poorer areas, has been described as a neoliberal education policy in that funding moves with a student, so if students choose to move to a school other than their local public school, the funding will move with the student. On some level, this promotes competition among schools to maintain students in order to retain funding.

National Basic Education Assessment System. The SAEB, which was originally created under Cardoso to measure the primary school student learning on a common national scale, tested a small national sample of students every two years, but was eventually expanded under Lula to test Portuguese and mathematics on a nationwide basis in fourth, eighth, and eleventh grade (World Bank 2010, 11). An Index of Development of Basic Education (IDEB) was created to combine this data with other available data on student enrollment, repetition, and graduation rates for each school so that "every single segment of the Brazilian education system can benchmark how well its students are learning and how efficiently its school or school system is performing," and Brazil is the first country in the world to have achieved this feat (Ibid.).

Although these ratings have no bearing on the level of funding they receive, proponents of the program argue that they allow schools to identify the areas in which they should focus on improving. Despite a funding component or other policy component of the program that explicitly incentivizes schools to compete against one another, the program is nonetheless designed to promote competition between schools, and is therefore considered a neoliberal or "demand wallah" program.

Bolsa Escola: Conditional Cash Transfer Program. The final main component of the Cardoso administration's education policies was a CCT program, *Bolsa Escola.* CCTs are programs in which the government transfers a basic level of income to poor families on the condition that their children will attend school. These programs can vary greatly in the level of income transferred and the specifics of the conditions imposed among other factors. Although described as a demand-side or neoliberal education policy, CCTs are unique in that they originated as a result of South-South collaboration and later began to be supported by the global north, which is part of the reason CCTs are perhaps the most popular "demand wallah" education policy in the developing world, especially in Latin America (Bonal, Tarabini, and Rambla 2012, 129). International institutions such as the World Bank that are often criticized for their promotion of neoliberal economic policies have often contemplated other demand-side policies such as school vouchers and educational loans, however, the Bank did not initially support CCTs until witnessing their success in the global south, including in Brazil (Ibid.).

Initiated in Brazil following the success of the original CCT program, *Progresa* in Mexico, *Bolsa Escola* and the subsequent and more expansive program under Lula, *Bolsa Familia,* transferred cash to many of the poorest families in Brazil, which amounted to more than one-third of students enrolled in basic education in Brazil in 2012 (OECD 2015, 7). According to

the Brazilian Ministry of Social Development, families in the program have 4.4% better enrollment rates and 7.2% lower dropout rates than those who do not participate in the program (Ibid.). However, some critics of CCT programs, including the program in Brazil, have indicated that while CCT programs are often effective at improving enrollment and attendance rates of students, they do not necessarily ensure improved student learning. (Bonal, Tarabini, and Rambla 2012, 128). Many also argue that they can be adequate policies for poverty reduction if implemented properly, but they can spur on educational inequality if not (Ibid.). Educational inequality persists in Brazil, however, the gap in learning levels and graduation rates between rich and poor students have improved consistently since Brazil's educational reforms, including *Bolsa Escola,* were implemented (World Bank 2010, 60).

Education Outcomes in Brazil

In general, over the past two decades, education outcomes in Brazil have improved rapidly compared to other middle-income countries, but there is still a great deal of room for improvement. According to the World Bank, Brazil's average level of educational attainment among 25-34 year olds still trails the OECD average by more than 20% for both upper secondary and tertiary education (OECD 2015, 5). Nonetheless, Brazil's education reforms have clearly gotten something right. According to the World Bank,

> A six-year-old Brazilian child born today into the bottom quintile of the income distribution will complete more than twice as many years of schooling as her parents. The average educational attainment of the labor force since 1995 has improved faster than any other developing country, including China, which had set the global record for schooling expansion in the prior decades. Major gaps in performance with middle-income countries in LAC and elsewhere are closing, such as in primary school completion and pre-school coverage. And in key areas such as assessing student learning and education performance monitoring more generally, Brazil today is a global leader (2010, 10).

Brazil still needs to continue to prioritize improving key areas of education such as teacher quality, instructional hours, curriculum, and educational equity. According to the World Bank,

Brazil could experience significant benefits from supporting federal programs to evaluate state and local education policy outcomes and disseminating the evidence (Ibid., 60).

Other more skeptical commentators believe that issues of equity and teacher quality would be best improved by shifting towards liberal or supply-side education policies. According to Kempner and Jurema,

> Neoliberal policies have a double negative effect of denying social services and education for the underclasses, while promoting unemployment through the global politics of the market and privatization. Although policies of education for employment, as proposed by the World Bank and other international agencies, are notable, many [neoliberal education] programs actually reinforce the distance between those who have access to the best places in the employment market and those who do not. Competition for places in education creates a role for education that is driven by the market, not one that meets the cultural needs of all citizens. Education, as a market commodity, is antithetical to the cultural values required to assure Brazilians at all social levels have the opportunity for a public school of quality (2002, 350).

Although more recent evidence indicates that inequality is steadily decreasing in the Brazilian education system even under demand-side policies, it is still a major issue that continues to persist, and many argue that significant inequality will continue to be an issue as a result of these policies.

Looking specifically at the dependent variables of my study, according to the most recent Human Development Report, Brazil's mean years of schooling for those aged 25 and older stands at 7.8 years, while those who are currently entering the school system are expected to attain an average of 15.2 years of schooling (UNDP 2016). Looking at Figure 3 (See Appendix), we can see that Brazil's average adult has a much lower level of education than South Africa's 10.3 years, and it is just over a year higher than India's 6.5 years (UNESCO 2016). However, students entering the school system now are expected to attain much higher levels of education than their counterparts in both South Africa and India as we can see on Figure 4, indicating major improvements in the school system since todays adults were in school. Although the adult

literacy rate is 92.6%, youth literacy rates are much higher at an average of 98.9% among those aged 15-24 (UNDP 2016). On Figure 5, we can see that youth literacy rates have been consistently high since the implementation of new education policies in 1995, on par with those of South Africa, and much higher than those in India, although India's literacy rate has been increasing rapidly since the early 1990s. According to the United Nations Educational, Scientific, and Cultural Organization, the adjusted enrollment rate of students in primary schools in Brazil is 94.72% and in low secondary schools is 84.57% (UNESCO 2016). As we can see on Figure 1, although primary enrollment rates have been volatile in Brazil, they have remained high around 95%, on par with rates in India, and much higher than South Africa's enrollment rates (Ibid.). Figure 2 demonstrates that low secondary enrollment has increased drastically in Brazil over the past 10 years and has the highest rates of the three countries, with India trailing by approximately 5% (Ibid.).

Analysis of Policy and Outcomes

These data indicate that Brazil's education policies appear to have been at least as successful as those of South Africa and India at increasing and maintaining the literacy rate, relatively effective at maintaining and increasing enrollment, specifically at the low secondary level, and highly successful at raising school life expectancy from previous generations to the newest group of students entering the school system in comparison with both India and South Africa. Based on the data, it appears that a school system with a few key neoliberal or demand side policies has been effective in Brazil. This is reminiscent of my hypothesis H1a:

> H1a: Primary and secondary education policies that emphasize neoliberal/demand-side reforms will improve educational outcomes more than those that emphasize liberal/supply-side reforms.

Brazil still has a long way to go in terms of improving its education system, however, it seems to have had relatively better results than India or South Africa in the majority of the indicators that I have examined. Perhaps this is a function of neoliberal policies, however, it is important to note that these policies are still moderate for demand-side policies. Brazil does not have a completely privatized education system or a full voucher program that would allow for more school choice and competition among schools. Although it measures education outcomes via consistent national measurements, it does not increase competition by punishing schools via decreased funding for failing to meet coordinated benchmarks. Brazil's education policies originate from a president who, despite engaging in neoliberal policies as Finance Minister, nonetheless came from a background of studying Dependency Theory and was elected by the Social Democrat party; and in both of these communities, especially in Latin America, "neoliberalism" is typically used in a pejorative sense. Although Brazil seems to have seen positive results from its "neoliberal" policies, these policies are not as "neoliberal" as it gets. However, Brazil has definitely emphasized demand-side policies over supply-side ones. Therefore, this case tentatively confirms hypothesis H1a, as we have seen strong improvements in educational outcomes as a result of mainly demand-side reforms.

India

India's education policy has in the past been characterized largely by supply side reforms that aim to increase the availability of schools and teachers, but recent policy decisions in India have integrated demand-side reforms into education policy. In particular, there has been a major push towards reaching full primary enrollment through a compulsory education system. In 1993, a ruling by the Supreme Court of India "ensured free and compulsory education to all children up

to the age 14 as a fundamental human right," however; this decision was initially not well enforced (World Bank 1997, 72). Since then, India has made impressive strides towards reaching full enrollment in its primary schools. However, this increase in enrollment has not corresponded with an increase in quality of education. According to the Organization for Economic Cooperation and Development (OECD), "expanding access to education needs to be matched by efforts to raise quality and relevance" in India, and future policies should be aimed at improving learning outcomes rather than simply ensuring that students attend (OECD 2014). School quality is still abysmal in many Indian schools. One study demonstrated that teachers in India missed an average of one school day per week, and even when they were in school and supposed to be in class, they could be found drinking tea, reading the newspaper, or talking to a colleague for nearly 50% of the time that they should have been teaching (Banerjee and Duflo 2011, 74). The World Bank also acknowledges that ensuring quality education that actually improves learning levels and cognitive skills should be a top priority for India and recommends that reasoning skills, problem solving, learning to learn, and critical and independent thinking skills be emphasized in the curriculum (World Bank, 2011). Although primary enrollment has reached nearly universal levels, many students still drop out prior to starting secondary school and secondary schools have much lower attendance rates and enrollment levels, which is another area that education policy in India has not prioritized thus far (Ibid.).

Key Components of Indian Education Policy

Although the past two decades in Indian education policy have mainly focused on supply side interventions that aim to increase school enrollment, India has also experimented with some demand side policies both in the past and more recently. These efforts have included the longstanding Grants-In-Aid system, which uses public funds to subsidize private school

operating costs, and the Right To Education Act, which includes a type of private school voucher program. These two neoliberal policies, coupled with the liberal Elementary Education Project, which is the main initiative aimed at expanding school facilities and teacher availability to increase enrollment, define India's education system.

Elementary Education Project. Although the Indian Supreme Court ruled in 1993 that all children should be guaranteed compulsory education until age 14, education was nowhere near compulsory until the Indian government made strides towards universal enrollment through the Elementary Education Project (SSA) in 2002 (World Bank 2009). The main goal of the SSA, a supply-side education policy, was to enroll all six to fourteen year olds in school by 2010, and also "aimed to bridge gender and social gaps, avoid drop-outs, and provide quality education until at least grade eight—a much tougher requirement by 2015 than called for by the Millenium Development Goals" (Ibid.). The act aimed to accomplish these goals by building primary schools within a kilometer of all inhabited areas, recruiting and training new teachers, and providing alternative education and bridge programs for children who had dropped out or were otherwise out of school (Ibid.). The program also gave a considerable level of autonomy to villages, which were instructed to manage district grants and school resources to build classrooms and schools and identify and enroll children (Ibid.).

Thus far, the program has had wide-reaching positive results. In India, 98% of children have a primary school within one kilometer of their home, and 95% have one within half a kilometer (World Bank 2009; Banerjee and Duflo 2011). As of 2015, twenty-four of India's twenty-nine states had achieved universal primary enrollment, and many others were quickly approaching universal primary enrollment. According to the World Bank, the majority of these new students were "first-generation learners from previously deprived communities" (World

Bank 2015). However, despite these successes in increasing access to schools and primary enrollment levels, Indian schools still struggle with retaining students through secondary school as well as with quality.

Grant-In-Aid System. The Grant-In-Aid system is a longstanding system in India that originated during British rule in 1859 (World Bank Human Development Sector: South Asia Region 2003, 12). The program provides public funding to a variety of private schools in order to subsidize teacher salaries and some other recurring expenses; meanwhile private institutions are still responsible for funding all capital costs and any remaining recurring costs (Ibid., 13). Theoretically, this program is designed to reduce tuition costs and improve quality at private schools to expand the availability of these higher-quality private schools to poor students and increase the demand for these private schools. Studies reveal mixed results from these programs. In secondary schools, examination results suggest that students from unaided private schools attain much higher academic results on average than either students in private schools receiving Grants-In-Aid or public school students (Ibid., 22). However, subsequent studies that have attempted to account for the higher levels of prior academic achievement and socioeconomic status in students that enter unaided private schools have shown that students in aided private primary schools are marginally better off on average than students in unaided private primary schools (ibid.).

The Grant-In-Aid system has run into considerable administrational challenges and a failure to substantially increase the quality of education, according to an extensive evaluation process of the system by the South Asia regional department of the World Bank's Human Development Sector. However, the South Asia regional department still maintains that retaining and reforming the Grant-In-Aid system would be more effective at expanding education access

and quality for the poor than doing away with it completely (2003, 8). They recommend either improving the administration of the program to ensure the achievement of its goals or shifting to either a system of performance-based subsidies for schools or a student-based grant system in which students could attend the public or private school of their choice and the grant would follow them (Ibid.). The latter two strategies would likely cultivate increased competition between schools to receive more funding, which could arguably increase school incentives to improve curriculum and teacher quality, but could also potentially leave some poorer performing private schools behind and create more inequality. In general, although the neoliberal Grant-In-Aid system has been somewhat successful in increasing the quality of private schools, these successes have been marginal and would likely necessitate reform to provide more dramatic results.

Right to Education Act. In an attempt to further address the quality issue, the Indian government enacted the Right of Children to Free and Compulsory Education Act, also known as the Right to Education Act, passed in 2009 with strong support across the political spectrum (Banerjee and Duflo 2011, 83). Although the name of the act sounds like a classic supply-side policy intervention, the act was actually a neoliberal policy that created a version of voucher privatization where the government gives "vouchers" to low-income parents to cover the cost of sending their children to private schools, and each private school is mandated to reserve at least 25% of its seats to students of low socioeconomic status. Although this program is somewhat similar to the CCT programs found in Brazil and elsewhere, the voucher program covers the cost of private school tuition rather than covering the opportunity cost of sending children to work instead of school.

The Right to Education Act came as a result of the realization that private schools were of generally higher quality than public schools in India: in 2008, 47 percent of public school fifth-graders could not read at a second grade level in comparison with only 32 percent of private school students, and private school teachers were eight percent more likely to attend school on any given day than public school teachers (Banerjee and Duflo 2011, 83). According to Kumar,

> Even in rural areas, poorly monitored government schools have created a good field for the new private schools. However, cost remains an excluding factor for private schooling. The very poor are dependent on government schools and in fact can generally access only the government primary schools seen to be the worst in the sector (Kumar 2008 18).

Although the voucher system was designed to combat these inequalities by allowing poorer students to attend higher quality private schools, this has not stopped critics from denouncing the new system. Ravi Kumar equates the Right to Education Act with a "neoliberal assault" on the education system (Ibid.). He also states that the new neoliberal education policy, and others like it, produces "machines" rather than "critical beings" as schools compete for more students (Ibid., 19). According to Panikkar, the Right to Education Act is an embodiment of everything that is wrong with the Indian education system:

> Post independence, India's leaders, particularly Abul Kalam Azad, advocated an education policy that would be liberal and humanitarian, and set the nation on the path of progress and prosperity. This path was neither a full continuation of the colonial modern nor a restoration of the feudal-traditional. Drawing on progressive ideas from India's "renaissance" and nationalism, this education policy was meant to unleash the potential of India's civilization by a process of intellectual decolonization. Unfortunately, in the past few decades, this unfinished agenda has been dumped by successive governments. It has been replaced by an educational policy which prioritises private profit over public good and will encourage cultural and intellectual imperialism (Panikkar 2011, 38).

Despite criticism on the foundations of the Right to Education Act as well as its ability to improve outcomes substantially in practice, the World Bank recommends that India strengthen public-private partnerships to "tap into the potential of the 60% of secondary schools which are

privately managed in India" and improve the way that the Right to Education Act works in practice (Ibid., 42).

Education Outcomes in India

In general, India's supply-side education policy has been successful in increasing primary enrollment to near universal levels, and this is very significant. However, the quality of education is still low, leading to poor educational outcomes in other measures. According to the 2016 UNDP Human Development Report, India's youth literacy rate for those aged fifteen to twenty-four is only 92.65%, which is significantly lower than those of Brazil and South Africa, whose literacy rates are near 100% (UNDP 2016). However, as we can see from Figure 5, the literacy rate has been on a steady incline since the early 1990s, when it was just over 60%, and has been quickly and steadily catching up to Brazil and South Africa's higher literacy rates (UNESCO 2016).

Looking at Figure 1, India has also seen large increases in primary enrollment rates to an all-time high of 97.74% in 2013, and as shown in the graph, primary enrollment rates began to spike in 2002 when the Elementary Education Project was launched. India's primary enrollment rates have been on par with Brazil's strong enrollment rates over the past decade and much higher than those of South Africa. Although there is limited data available for secondary school enrollment rates in India, according to Figure 2, the enrollment rates are much lower than primary rates and trail those of Brazil at only about 79.54% in 2014; however, secondary enrollment rates are still much higher than those of South Africa and appear to be on the rise (UNESCO 2016).

In terms of years of schooling, the average years of total school received among those aged 25 or higher is only 6.5 years in India, by far the lowest of the three countries studied and

nearly four years less than the leading country, South Africa, although it has been rising at rates similar to those of Brazil and South Africa, as evidenced by Figure 4 (UNESCO 2016). Additionally, the average adult female has received only 4.8 years of schooling in comparison to 8.2 years that the average male has received, demonstrating a much sharper gender-education divide in India than in Brazil or South Africa (UNDP 2016). Similarly, India has the lowest school life expectancy for students about to enter the primary school system of any of the three countries, at 11.6 years (UNESCO 2016). However, Figure 3 demonstrates that India has stronger and more consistent growth trends in this area than either Brazil or South Africa over the past three decades, with another jump in 2002 when the Elementary Education Project was established (Ibid.).

Analysis of Policy and Outcomes

In general, while India's literacy rates, average years of schooling, and school life expectancies are the lowest of the three countries I have studied, this may be partially due to the state's comparatively lesser ability to fund education policies as India has the lowest GDP per capita of the three countries. Despite this setback, India has demonstrated a consistent growth trajectory in these measures. However, regardless of a slightly more limited ability to fund its education programs, India has demonstrated very strong enrollment rates, especially at the primary level. Seeing as enrollment rates, especially at the primary level, spiked drastically in 2002 and the years immediately following, it seems likely that the Elementary Education Project, which launched in 2002 and aimed mainly to increase access to schools, was a major factor in raising enrollment rates, especially at the primary level. This supply-side policy appears to have been highly effective at achieving its goals. In contrast, neoliberal policies in India do not appear to have produced stellar results in terms of the education indicators I have measured, especially

in comparison to the demand-side reforms introduced in Brazil. These findings seem to support Hypothesis H1b:

> H1b: Primary and secondary education policies that emphasize liberal/supply-side reforms will improve educational outcomes more than those that emphasize neoliberal/demand-side reforms.

India's major supply-side reform has seen high levels of success, while its two major demand-side policies have not led to any clear positive results. But why do neoliberal education policies in India appear to have been less successful than those in Brazil? Perhaps India's policies were less effectively implemented than those in Brazil: both the World Bank and the OECD have recommended that the two major demand-side policies in India, the Grant-In-Aid System and the Right to Education Act, be overhauled in various ways to improve their effectiveness. However, based on the indicators I have measured, it appears that the Indian example indicates that supply-side policies are more effective at improving educational outcomes than demand-side policies.

South Africa

South Africa has achieved fairly solid progress in educational attainment and net enrollment levels relative to other less-developed countries; however, the quality of education is still very poor and highly unequal, which is perpetuated by uneven local school administration competencies and funding mechanisms (Murtin 2013, 2). According to *The Economist*, South Africa is among the world's worst education systems, and "few countries spend so much [on education] to so little effect;" public education expenditures are 6.4% of GDP in comparison to the average share of spending in EU countries which is 4.8% (2017). Students in much poorer African states are better off than the average South African student, as 27% of South African

students cannot read after six years of schooling in comparison with 19% in Zimbabwe and only 4% in Tanzania (The Economist 2017). According to Nic Spaull of the University of Stellenbosch, the South African school system is the most unequal in the world: the gap in test scores between the top quintile of schools and the bottom four is wider than in nearly every other country, and the number of white children that will do well enough in school to eventually study engineering is ten times the number of black children that will be able to accomplish the same feat (Ibid.).

To fully understand the current state of the South African education system, it is important to understand the legacies left behind by apartheid. The official 1948 apartheid legislation and the later 1953 Bantu Education Act "set out to ensure that whites received a better education than blacks" (The Economist 2017) and "demanded the complicity of the education establishment in perpetuating a divided society" (Stenvoll-Wells and Sayed 2012, 93). At the time, black students received approximately one-fifth of the education funding that their white counterparts received (Ibid.). When Nelson Mandela took office in 1994, the education system underwent a variety of profound changes that aimed to address equity and affordability issues for education and devolve greater power to local communities in school governance (Murtin 2013, 6). Although the education gap between black and white students has declined since the end of apartheid, there is still dramatic inequality between black and white students. For example, only 57 percent of black students in grade twelve pass the National Senior Certificate examination in comparison to 99 percent of white students that pass (Murtin 2013, 7). Despite the good intentions of Mandela's administration and subsequent attempts to reform South African school systems, in practice, these reforms have replaced the formerly racially segregated schools with a system of schools that is still sharply divided by wealth (and often, still, along racial lines).

Although schools in poorer areas receive more state funding, schools in richer areas can charge fees, and the divide between schools in poor and wealthy neighborhoods is vast (The Economist 2017).

Key Components of South African Education Policy

The past two decades of South African education policy have included both supply-side and demand-side reforms. Key reforms have attempted to address racial and socioeconomic inequality, the domination of education policy by the central government, and the shortage of qualified teachers. These reforms have included incentivizing new teachers to enter the profession via wage increases and tertiary education subsidies for students pursuing teaching, redistributing education funding to poorer neighborhoods through the National Norms and Standards for School Funding, and decentralizing school governance by way of the South African Schools Act.

Incentivizing New Teachers to Enter the Profession. One of South Africa's biggest challenges with regards to education is the quality and quantity of available teachers. The income distribution for teachers is a "tightened version" of the national income distribution, meaning that high skill teachers have much lower wages than average high skill South Africans, but low skill teachers have much higher wages than average low skill South Africans (Murtin 2013, 23). As a result, low quality teachers are incentivized to enter the profession, while high quality teachers are incentivized to leave the profession. As a result, each year only 6,000 new students graduate with teaching degrees, a small fraction of the 20,000 annual graduates necessary to reach replacement levels (Ibid., 17). Additionally, a quarter of new teachers in South Africa intend to teach abroad and half of new teachers have recently thought about exiting the profession (Ibid.). In order to remedy this critical issue, South Africa has attempted to implement supply-side

reforms to change up the incentive scheme and increase the supply of qualified teachers. In 2007, the government implemented wage incentives amounting to 10% of typical starting teacher salaries in order to attract teachers to schools in remote rural areas (Ibid., 18). They also started the *Funza Lushaka* bursary program in 2007 to encourage students to enter the teaching profession by subsidizing student tuition, accommodation, food, and textbooks, contingent on the promise that students would teach in a public school after graduation (Ibid.). The program has experienced increasing popularity, and about 2000 new graduates of the bursary program were available to be placed in public schools in 2010 (Ibid.). However, an inadequate supply of teachers, especially high quality teachers, still persists.

National Norms and Standards for School Funding. Coinciding with the passage of the South African Schools Act in 1996, the associated National Norms and Standards for School Funding (NNSSF) had two main impacts that attempted to increase the demand for education by increasing school quality and reducing school fees for the poorest sectors of the country. First, it separated schools into five quintiles based on socioeconomic status in the geographic regions surrounding the schools, where schools in the poorest quintiles would receive the most public funding and schools in the richest quintiles would receive the least funding (Stenvoll-Wells and Sayed 2012, 93). The quintiles were calculated using the income, dependency ratio, unemployment rate, and education level of the community surrounding each school (Murtin 2013, 19). Funding for non-personnel recurring expenses was determined as follows: schools in the first quintile received 35%, the second received 25%, the third received 20%, the fourth received 15%, and the fifth received 5% (OECD 2008, 151). The NNSSF also dictated that schools in the first and second quintiles could not charge fees to students, and instead, were allocated a minimum amount of additional of state funding per student (Ibid.). The NNSSF was

designed to, in theory, allow for the partial privatization of school funding for those schools that could afford it, while taking some of the burden away from schools that could not.

Although this demand-side scheme appears progressive in theory, in practice, the quintiles are determined by the socioeconomic status of relatively large surrounding geographical regions rather than the socioeconomic status of the actual students attending a given school (Murtin 2013, 19). As a result, and according to OECD school visits made in November 2007, many of the poorest schools are classified in quintiles three and four, meaning that they do not receive as much government support and must resort to charging higher school fees to poorer children (OECD 2008, 161). The OECD has recommended that South Africa shift from a quintile system based on "crude geographical criteria" to one based on the median learner's socioeconomic status in each school in order to more accurately allocate funding to the most needy schools (Murtin 2013, 19).

South African Schools Act: Decentralization Policy. At the same time that the NNSSF was created, the South African Schools Act implemented a neoliberal policy of school-based management that aimed to decentralize school governance power by devolving it from the federal government to local communities. According to Stenvoll-Wells and Sayed:

> In the light of its plans for redistributive spending, the government was wary of the possible loss of support from middle-class stakeholders, which might lead to their withdrawal from the system. Self-management and participatory school governance were ways of ensuring the public that all participants would have their say in individual schools' decision-making processes. The institution of school-based management (SBM) would become a yardstick of government's effectiveness at devolving power to local levels, and was seen as a way to 'promote greater accountability to the centre as well as to the community' (2012, 94).

Proponents of the policy posited that it would raise the quality of education, improve the transparency of school governance, and allow families to partake in shaping the education of

their children (Ibid., 91). However, once again, this reform has not accomplished these goals in practice. Stenvoll-Wells and Sayed once again note:

> What is striking is the discrepancy between the official justifications for participatory school governance and the actual effects on democracy at the local level in the form of school governance structures. The presumed equality of participation by all stakeholders at the local level is an illusion, as the evidence shows that in the past decade one or several stakeholder groups dominated decision-making within the school governing body. It is the powerful middle and professional classes who possess the necessary cultural capital that dominates such structures (Ibid., 106).

Families of lower socioeconomic status often have poor levels of literacy, limited time or transportation abilities, or have trouble navigating "the difficult-to-articulate psychological issues of asserting themselves in relation to others with much more education and knowledge of governance than themselves," which leads to struggles maintaining the active involvement of all stakeholders in school governance (OECD 2008, 143). As a result, stakeholders of higher socioeconomic status, and often, white stakeholders, are able to dominate the decision-making process at the school level.

In light of this fact, one of the most troublesome powers that school-based governments possess is the ability to determine the schools' budgets and to what extent student fees fund them. Although schools in the lowest two quintiles are barred from charging fees, many schools in the upper quintiles still serve low-income students. Rather than devolving decision-making power to schools, the South African Schools Act effectively devolved the need to fundraise to upper quintiles schools in order to supplement their low levels of public funding (Stenvoll-Wells and Sayed 2012, 106). Under this system, not only are the schools with wealthier parent bases able to afford more resources to produce top-tier schools while those with poor parent bases cannot, but they are also more equipped to recruit governors with strong financial and budgeting skills (OECD 2008, 142). Wealthier parents are also able to advocate for increased fees that

exclude poorer segments of the population from attending school at all. Because of this power, any equalizing mechanism that may have occurred from the NNSSF program's redistributive budgeting has been essentially counteracted by the ability to charge school fees (Murtin 2013, 20). In an attempt to remedy this issue, the South African government has created a program that allows low-income parents to apply for conditional, partial, or full exemption from school fee payments, and in exchange, the government provides additional funding to the school on a per-student basis (South African Government 2017). However, this funding often does not correspond with the full tuition amount, and according to the OECD, there have been many instances in which SGBs have misused their power to restrict admissions through high fees and neglected to publicize the option of applying for reduced or exempted school fees or aid parents in the process (OECD 2008, 143). Overall, neoliberal efforts to decentralize education policy to the local level and increase equality in the process, particularly the devolution of fee setting to individual schools, have actually magnified inequality. As a result, for most households, the price of education has substantially risen since 1994 when the reforms were introduced (Ibid., 145). Critics of the decentralization efforts have argued that local stakeholders were given too much power and the reforms were introduced too rapidly. In particular Stenvoll-Wells and Sayed warn that while decentralizing school governance is a noble goal, it should be done with extreme caution, particularly in societies that are highly unequal to begin with, as it can result in further inequality (2012, 106).

Education Outcomes in South Africa

In general, recent education policies in South Africa do not appear to have improved the educational outcomes that I have examined. South Africa's literacy rate for youth ages 14-25 is fairly high, slightly trailing that of Brazil and significantly higher than that of India at 98.6% as

we can see in Figure 5 (UNESCO 2016). However, this is not necessarily a result of any of the current education policies that were introduced post-apartheid. By 1996, the year that the South African Schools Act and NNSSF were introduced, the literacy rate had already reached 93.9%, indicating very little growth in the literacy rate as a result of the policies (Ibid.). At 10.3 years, average years of schooling for adults over 25 years of age are higher in South Africa than in India or Brazil, and have, on average, risen overtime. However, as Figure 4 demonstrates, average years of total schooling has been significantly higher than that of Brazil or India since at least 1985, long before any of the current education policies were set in place (Ibid.). Therefore, it is difficult to determine whether or not any current policies have positively impacted this indicator. In contrast, the total years of school that the average student entering the school system today is expected to attain has remained virtually the same since the education system was revamped following the end of apartheid. As Figure 3 demonstrates, school life expectancy today is identical to what it was in 1994, at approximately 13 years. This means that although the average years of schooling for adults over the age of 25 has generally increased, this increase may actually be due to students who attended school prior to the 1996 legislative changes turning 25 in recent years. In contrast, students starting school today are on average no better off than those who started school in 1994, indicating that although South Africa has a mid-tier school life expectancy below that of Brazil and above that of India, both Brazil and India are on track to continue to grow their school life expectancies, and India will likely outpace South Africa in the coming years if these trends continue (UNESCO 2016).

Looking at enrollment rates, an interesting pattern has occurred in South Africa. According to Figure 1, primary school enrollment rates that were nearly 95% in 1995 had dropped significantly to approximately 88% by 2005, nearly ten percentage points lower than

rates in Brazil and India at the time (UNESCO 2016). In contrast, according to Figure 2, while secondary school enrollment rates remain much lower in South Africa than in Brazil or India, they still increased fairly dramatically between 1994 and 2005 from 42.2% to 65.6% (Ibid.). Unfortunately more recent data is not available for secondary school enrollment after 2005, but these data still show an interesting trend: in the decade following the implementation in 1996 of the main education policy frameworks that are still used today primary school enrollment declined significantly while secondary school enrollment increased significantly. It is unclear why this occurred and what the implications are for the success or failure of the policies. However, one potential explanation is that secondary students had already benefitted from the pre-1996 primary school system in the years prior, showing increasing secondary enrollment over the next nine years as these students entered secondary school, while new primary school students entering the system over the next nine years had not, thereby decreasing the primary enrollment rate overtime. If this hypothesis were true, we would expect to see a similar decline in secondary enrollment rates post-2005 as new students began to enter the secondary system not having attended school prior to the introduction of the 1996 policies. However, due to limited data availability, we cannot conclusively affirm this prediction. What we can conclude is that demand-side education reforms do not appear to have had a specifically strong, positive impact on overall enrollment rates within the first decade following their implementation.

Analysis of Policy and Outcomes

South Africa's education policies since 1996 have largely failed the students they were meant to serve. The deep racial and socioeconomic divisions left behind by apartheid are no easy feat to overcome in education or in any other sphere of life, and they have led well-meaning policies intended to reduce inequality to magnify it in practice. Although South Africa's supply

side program of incentivizing more South Africans to become teachers has seen some positive results, albeit limited ones, its demand-side programs have largely served to perpetuate economic and racial divides. South Africa has seen modest increases in new teachers since the implementation of the incentive programs in 2007, however, it is unclear if these new teachers have actually been of increased quality, and the program has not translated into a noticeable improvement in educational outcomes. If the program did improve overall student outcomes, these improvements were likely outweighed by the failure of demand-side policies to reduce inequality and integrate more low-income students into high quality schools. In general, the liberal policy of incentivizing more people to become teachers appears to have had modest positive results, and by contrast, demand side policies have overwhelmingly failed. For this reason, the South African case appears to support hypothesis H1b:

> H1b: Primary and secondary education policies that emphasize liberal/supply-side reforms will improve educational outcomes more than those that emphasize neoliberal/demand-side reforms.

However, it is important to note that while the case technically supports H1b, the relative absence of any large or overarching supply-side policies that might more directly or clearly impact the indicators I have measured indicates that supply-side policies in South Africa may not necessarily be particularly effective were they to be implemented on a larger scale. Additionally, similarly to the Indian case, demand-side policies, while theoretically positive, were poorly formulated and overlooked major issues that have led to increased privilege for wealthy students at the expense of poor students in many cases. Many commentators such as international education scholars and the OECD have argued that if the NNSSF or the South African Schools

Act were adjusted or reformed to address these issues, demand-side policies could still be effective in South Africa.

Conclusion

Once again, my research question is, "How have the respective education policies in Brazil, India, and South Africa impacted educational outcomes in these countries?" I have conducted my research with the aim of identifying what types of policies are most conducive to improvements in educational outcomes in developing countries. Throughout the past pages, I have attempted to answer these questions by examining in detail the types of policies at play in each of the three countries, including liberal policies focused on improving the supply of schools and teachers, and neoliberal policies focused on improving the demand for the available schools. Before setting out to examine each of the three case studies, I formulated four potential hypotheses:

> H1a: Primary and secondary education policies that emphasize neoliberal/demand-side reforms will improve educational outcomes more than those that emphasize liberal/supply-side reforms.
>
> H1b: Primary and secondary education policies that emphasize liberal/supply-side reforms will improve educational outcomes more than those that emphasize neoliberal/demand-side reforms.
>
> H2: Primary and secondary education policies that combine both neoliberal/demand-side reforms with liberal/supply-side reforms will provide better educational outcomes than policies that focus on one or the other.

Null: Neither the presence of neoliberal/demand-side policies nor the presence of liberal/supply-side policies will impact the effectiveness of educational development outputs.

As I examined the policies at play in Brazil, India, and South Africa, I analyzed their impact by comparing educational indicators overtime such as youth literacy rates, primary and secondary enrollment rates, and average and expected years of schooling.

In Brazil, I found that demand-side policies such as a relatively decentralized school system and conditional cash transfers corresponded with strong positive educational outcomes across the board. The Brazilian case appeared to support H1a, as demand-side reforms were relatively effective. However, Brazil lacks prominent supply-side policies, so it is unclear whether supply-side policies could be successful there. In India, supply-side policies focused on increasing enrollment rates were highly effective, whereas demand-side policies did not yield clear positive results, lending support to an alternative hypothesis, H1b. Similarly, in South Africa, supply-side programs designed to increase the supply of teachers appeared to produce modest positive results, while demand-side programs largely failed to improve student outcomes and may have even worsened them. For this reason, the South African case also lent support to hypothesis H1b. However, the OECD, the World Bank, and several prominent scholars of international education have postulated that demand side policies in India and South Africa have the potential to be relatively effective if reformed to improve their implementation.

Synthesizing all three of the cases, it appears that the more accurate hypothesis may actually be the null hypothesis:

Null: Neither the presence of neoliberal/demand-side policies nor the presence of liberal/supply-side policies will impact the effectiveness of educational development outputs.

Both supply-side policies and demand-side policies have demonstrated their potential to be effective, but they have also both demonstrated their potential to fail. This finding is contrary to the dominant strands of education policy literature, which both tend to argue that one school of thought is inherently better or more effective than the other. Perhaps it does not matter whether or not a policy is liberal or neoliberal; instead, what may be more important is how it is implemented. An abundance of factors may influence the implementation of a policy, including culture, geography, historical legacies, inequality, demographics, economic structures, or corruption. In India, the largest issue impeding the effectiveness of the neoliberal Grants-In-Aid program has been the administration of the program, and meanwhile in South Africa, public officials have devolved power to schools and allowed the wealthiest families to determine the types of education that the poorest students receive. These shortcomings are not necessarily a result of the style of these policies; rather, other intervening factors such as corruption in India or legacies of apartheid in South Africa could be the true culprits.

Although my study has only examined a handful of cases and education policies, and as a result, it is not possible to confirm the null hypothesis with full confidence, it still appears very likely that supply-side versus demand-side policies should not necessarily be the only issue at the heart of the debate on education policy. My findings suggest that other factors related to policy formulation and implementation such as administrative difficulties, corruption, or historical legacies may be more accurate predictors of whether an education policy will succeed or fail. Although further research should comparatively examine the results of liberal and neoliberal

policies in more developing country cases, there are other areas of research that may be even more fruitful in terms of identifying successful educational models for development.

My research has yet to achieve my goal of attempting to identify a model for education policy that is an effective means for improving educational outcomes, and by extension, an effective means for improving social, economic, and political development. Further research should comparatively examine similar education policies that had disparate outcomes in different countries and take a closer look at why some policies succeeded while others failed. For example, perhaps compulsory education laws were more successful at increasing enrollment in some countries than others, or perhaps some countries succeeded in promoting educational equality through decentralizing school governance while others did not. Studies of this type should be done with both supply-side and demand-side policies. Taking a closer look at similar policies and identifying what contributed to their success or failure in different cases may shed more light on how to effectively implement policies or onto the role that other factors such as culture, geography, historical legacies, inequality, demographics, economic structures, or corruption may play in a policy's ability to improve educational outcomes. As the world increasingly recognizes the crucial role that quality education plays in the social, economic, and political development of states, these questions are becoming more and more important to answer.

Appendix

Figure 1. *Adjusted Net Enrollment Rate, Primary School, Both Sexes (%). Data is from UNESCO Institute for Statistics.*

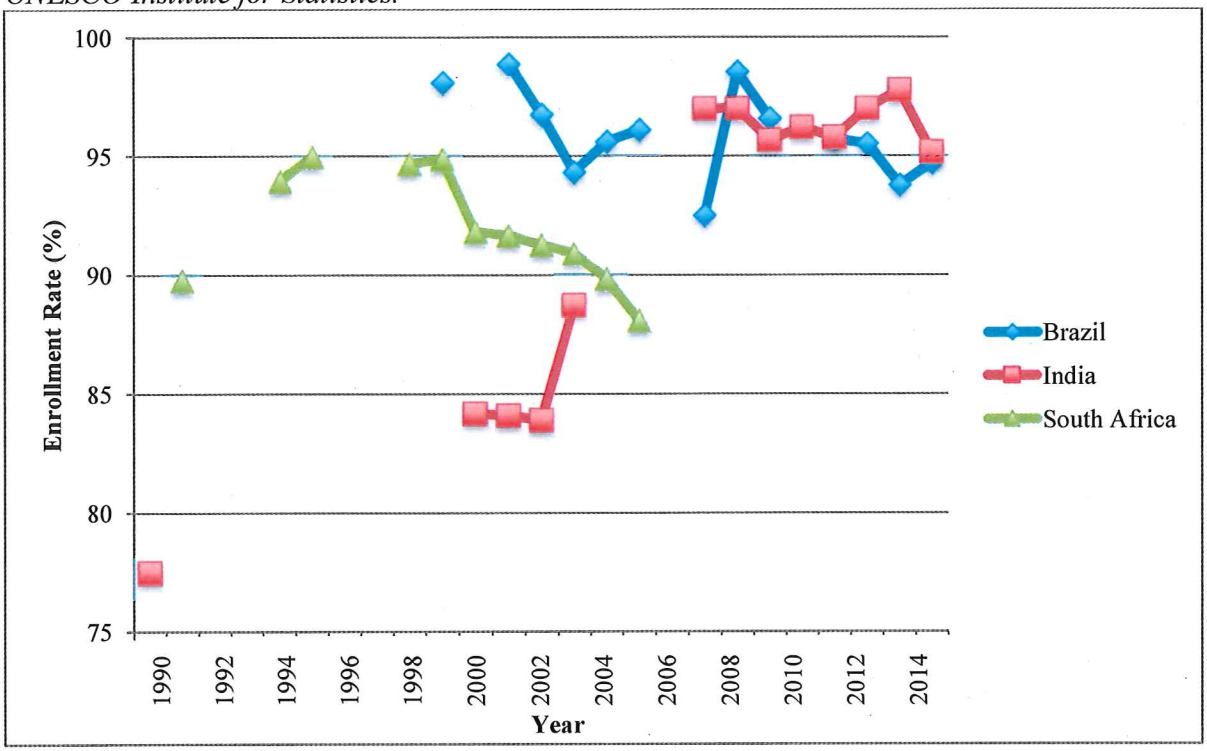


Figure 2. *Adjusted Net Enrollment Rate, Low Secondary School, Both Sexes (%). Data is from UNESCO Institute for Statistics.*

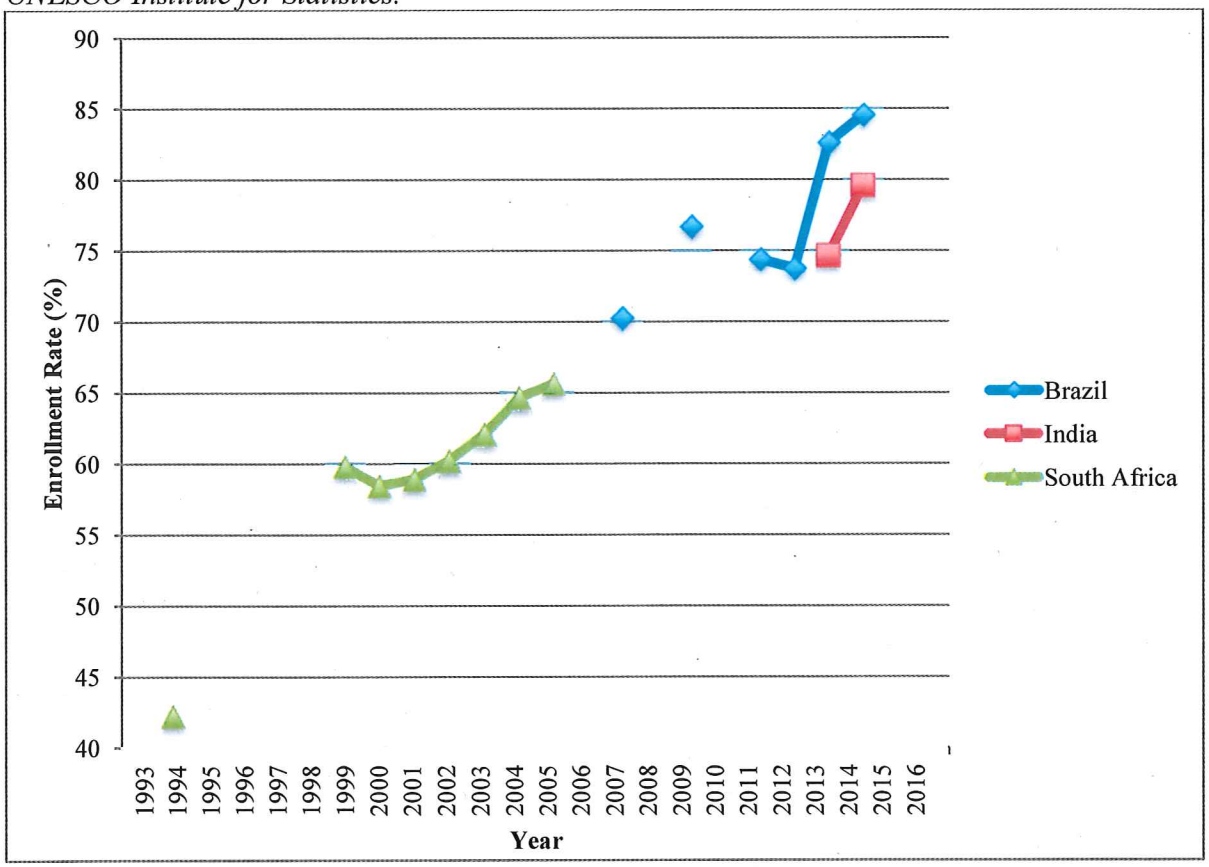


Figure 3. *School Life Expectancy, Primary to Tertiary, Both Sexes (Years). Data is from UNESCO Institute for Statistics.*

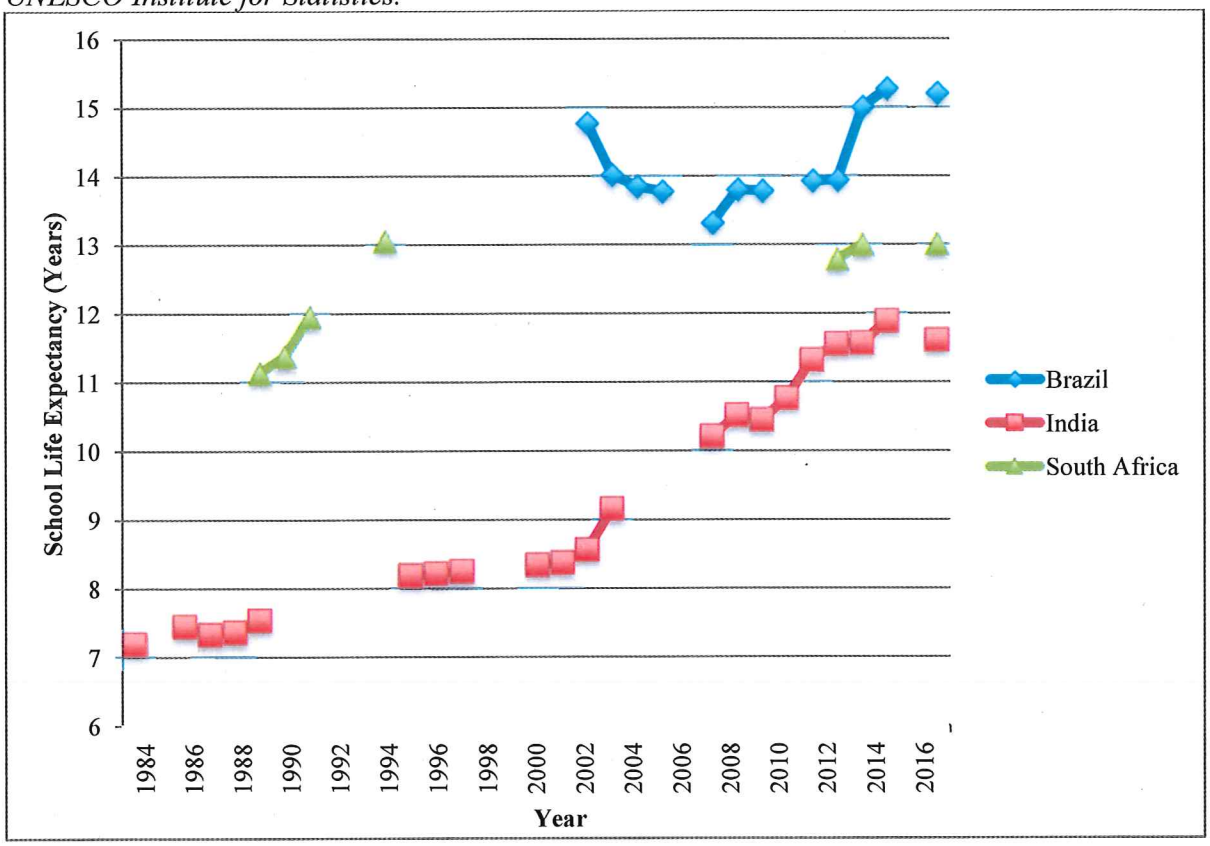


Figure 4. *Barro-Lee Indicator: Average Years of Total Schooling, Age 25+. Data is from UNESCO Institute for Statistics.*

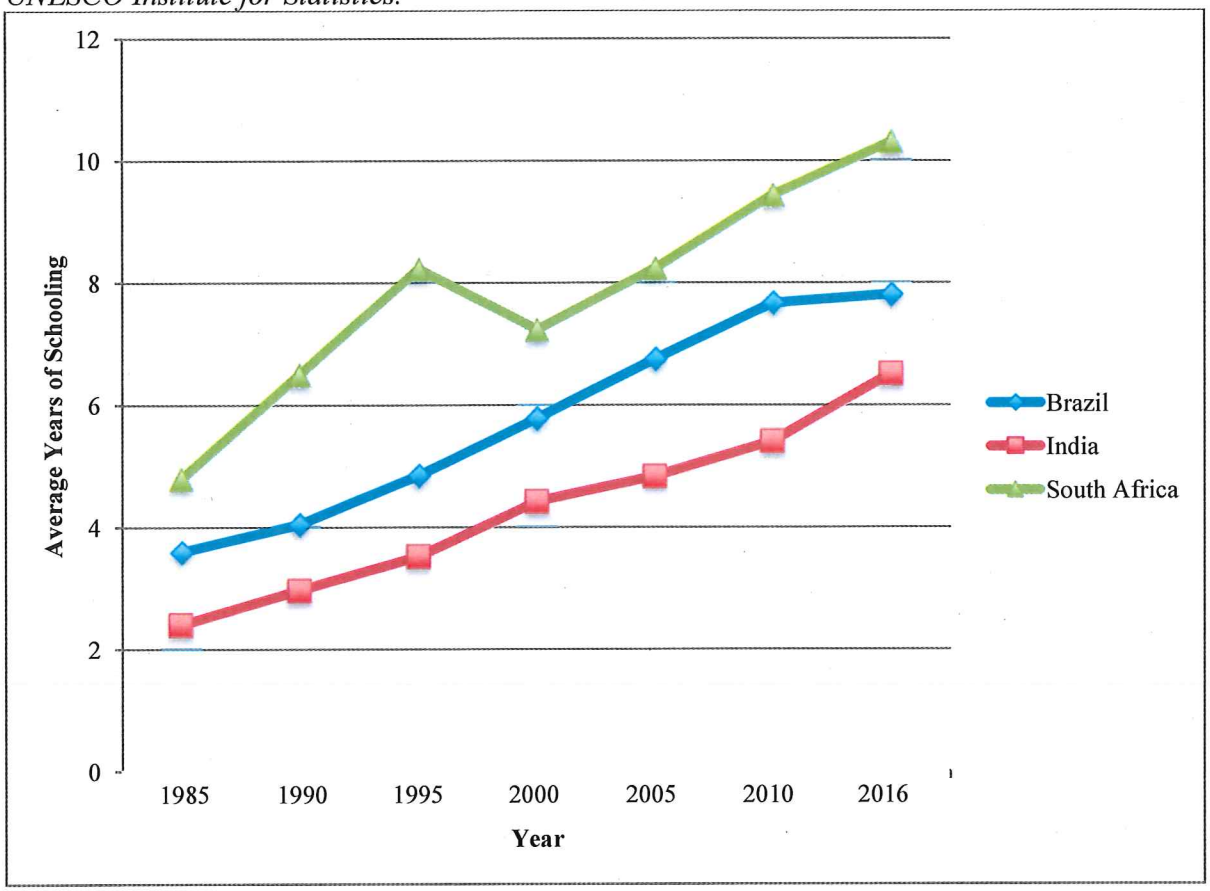
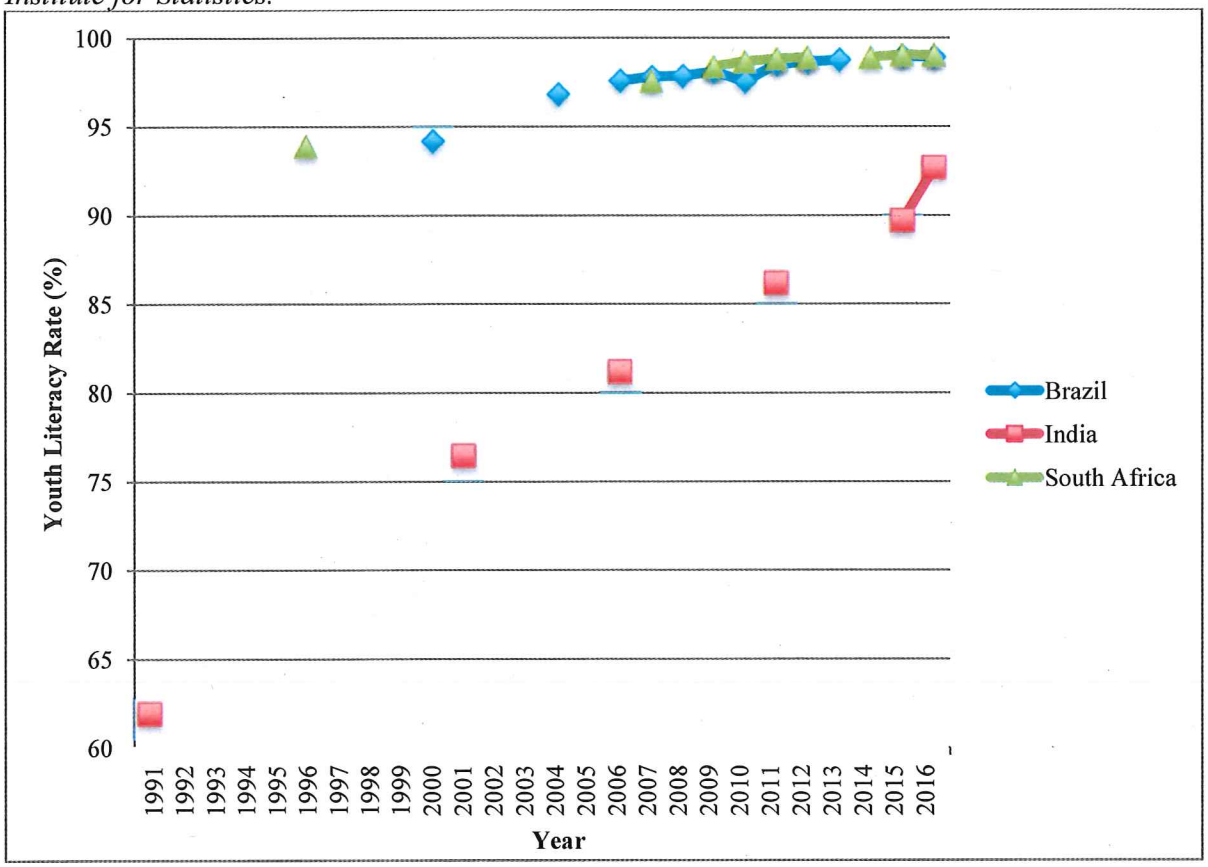


Figure 5. *Youth Literacy Rate, Population 15-24 Years, Both Sexes (%). Data is from UNESCO Institute for Statistics.*



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