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Integrated Overview, Case-Studies and Analysis: Income Inequality in Latin America, Post-1980

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Abstract

This thesis presents an integrated overview of the historical and contemporary literature dedicated to the study of within-country income inequality in Latin America. As a sub-field of Developmental Economics, income inequality has been subject to increased interest in recent years due to its intrinsic link with poverty and its various policy-implications. The central hypothesis of this report is that there are underlying factors that drive the persistent levels of high within-country inequality, and that through analysis of the labor markets we can determine their link to inequality in specific cases.

Using macroeconomic indicators, statistics, empirical evidence and the wealth of knowledge compiled since the early 1980s, this study identifies driving factors and trends in income inequality. Focusing on periods of recession and post-stabilization growth in South American countries with unequal distributions of wealth, this report employs case-study methodology (see Chapters 5 and 6) based on supply-and-demand dynamics in the labor markets. This thesis' main findings are that the political and economic reforms during the post-1980s contributed to worsening income disparity in Latin America. Further analysis suggests that FDI and debt crises, cultural norms, market liberalization policies, ethnic and urban-rural disparities, and poor educational institutions are highly correlated factors as well.

The limitations of this research are, firstly, that regression analysis is inconclusive. No strong correlation between growth and inequality can be observed, even in highly unequal regions of Latin America. Further, tax data, which provides the basis for measurements of income inequality, varies from country to country, making statistical analysis difficult. Lastly, data was not collectible until the early 1980s, and has frequent missing observations, further complicating this task. Thus, this report bases its findings on macroeconomic indicators, empirical research, and economic theory in explaining the factors and causes of inequality.

Summary

Part I presents the historical and economic context for the study of inequality. Chapter 1 describes the measures social scientists use to study within-country inequality, and how inequality is understood within the traditional principles of macroeconomic supply and demand in the labor markets. Chapter 2 presents a brief literature review relevant to the study of inequality pre- and post-1980s, then gives a brief overview of inequality, beginning in the latter half of the 20th Century. Following this discussion, emphasis is placed on the period from 1980 to the present, when data becomes widely available on the topic. This section provides the theoretical and economic framework upon which to base our analysis

Following our discussion of the basic economic framework behind inequality, emphasis is placed on when and how traditional models have broken down, citing both developed and underdeveloped regions as examples; finally, evidence and analysis is presented on the multiple factors that economists propose may have caused the shift in trends. In Chapter 3, we briefly consider how globalization and industrialization in the post-war era brought about debt crises and reform-periods across Latin America. We must understand this period, as the after-effects of this period brought about massive reforms and growth upon which this study will base its conclusions. Consideration is given for how the developmental growth cycles experienced perpetuated or worsened income inequality in Latin America during the observed periods.

In Part II, we apply the theoretical framework to case-studies on Brazil and Bolivia, examining the makeup of income with respect to the labor market changes occurring during this period. These countries provide two examples on opposing ends of the developmental spectrum – Brazil is currently a booming economic power, while Bolivia is one of the poorest and least

developed countries in the world – yet both suffer from chronic income inequality. We conduct analysis on supply and demand fluctuations in the labor markets. Similarities and differences in the social, political, and economic history of each country are considered.

In the final chapter, a unified set of conclusions on the causes of perpetual income disparity in Latin America are developed, building the cohesive "driving-factor" theory behind inequality in this region. Following discussion of these underlying factors, the policy implications of the findings are considered, final conclusions reached and defended, and closing notes presented.

Part I

Chapter 1

Income Inequality: Introduction and Overview

In analyzing income inequality, it is useful first to understand conceptually and practically what it is. At the most fundamental level, "inequality is the absence of equality" and therefore, income inequality refers to a state in which national or global wealth is unevenly distributed (Firebaugh, 2003, p. 71).

The best way to describe within-country inequality, the topic of interest for this study, is with an example: if national income, delineated by $X, is spread over the entire population, N, in such a manner that each person owns $\$X/N$ dollars, then the country exhibits perfect equality in its distribution of wealth. That is to say, if every member of the country owns their true share of income per capita, then we have an equal distribution.

Further, it is necessary to distinguish between within-country and global or regional inequality. Firebaugh (2003) explains that between-country inequality deals with global income differences across nations, in effect studying why some nations make less GDP or own significantly less shares of world output than other countries. However, within-country inequality is concerned with inequality of the distribution of a country's national income amongst the population of that country.

Lastly, it is crucial to differentiate inequality and inequity, as the two are often used interchangeably, yet actually represent entirely different concepts. For example, take the distribution of lollipops amongst a class of fifth graders.

What is An Equitable Distribution of Lollipops?

Lollipop equity in this case evokes normative statements, meaning it is generally discussed in terms of opinions or value-judgments. That is to say, 'I think this many lollipops seems most fair,' or better yet, 'drawing on past experiences, I have concluded that giving the most lollipops to whoever needs them the most is the just distribution'. This, however, must be distinguished from lollipop equality.

What is An Equal Distribution of Lollipops?

Lollipop equality is a state in which all lollipops are distributed in a mathematically equal manner to each member of the class. This makes no claims on what is a fair or just allocation of those lollipops, but represents a purely mathematical allocation. For income, this same principle is applied: income inequality simply analyzes wages and earnings data for a given nation across the entire populous, comparing it to the mathematically equal distribution.

How We Measure Income Inequality

In 1905, Max O. Lorenz developed the Lorenz Curve, which plots the share of income against income share. Using a metric measuring the population, in this case the % of households, from poorest to richest on the x-axis against, we see their corresponding income share on the y-axis; the further below the line of equality, the less equal the distribution (see Figure 1.1).

Today, the most common metric used to measure within-nation income inequality is the Gini coefficient. This uses ratio analysis to measure the area between the line of perfect equality and the Lorenz curve diagram, representing the result as an index between 0 and 1, with 1 representing perfect inequality and 0 representing perfect equality (Figure 1.2).

First published in 1912 by Italian Corrodo Gini, the Gini index remains the most common mechanism used today with which to measure inequality.[1] Due to its derivation, the Gini is most sensitive to income transfers in the middle regions, leaving the upper and lower regions relatively unaffected. Thus, it is used more in international sources and studies than any other measure (Barros, 2009).

The other tool which this report employs is analysis on specific regions of the income distribution. In other words, we consider *n*th percentiles of the earnings composition.[2] This allows us to analyze trends over time, as income shifts in different regions of the distribution in response to fluctuations in the national labor markets.

To obtain these measures, we require tax information from reliable sources across a large population, which presented a practical problem in many underdeveloped countries until the 1980s, when data became widely available. Today, income inequality is measured using consumption, income and national earnings data, gathered from national and international surveys and tax data (Barros, 2009, p. 23).

What Determines the Distribution of Income?

While the goal of this thesis is to identify what causes persistently high levels of income inequality, one underlying principle must be made clear: the mechanism by which redistribution comes about is via the labor markets as we understand it in a traditional macroeconomic framework. Simply put, a macroeconomic notion of supply and demand in the labor markets actually determines the composition of within-country income. To explain it with this perspective, we describe the labor markets as such:

[1] For more see (Gini, 1912)
[2] This report uses decile and quintile analysis.

- there are two types of workers, skilled and unskilled, denoted as X_s and X_u
- they are available in quantities $q_s + q_u = q*$
- they receive wages $w_s + w_u = w*$
- the wage-differential, wage-premium, or wage-disparity gap between skilled and unskilled workers is w_s / w_u

(note: example changed slightly, but drawn from Atkinson, 2009, p. 87)

In this case, we can represent the labor markets with a basic supply and demand diagram (see Figure 3). In this model, the equilibrium wage and quantity of laborers $(q*, w*)$ is determined by the point of intersection between the supply curve for labor $S(q*, w*)$ and demand of labor $D(q*, w*)$ (See Figure 1.3).

For purposes of measuring wage dispersion, it is useful to further decompose this model into a relative comparison between skilled and unskilled workers. In this case, we assess demand of skilled workers relative to the demand for unskilled, or supply of skilled workers relative to unskilled, at the corresponding relative wage gap. In this case:

- relative demand for skilled workers is $D(\, q_s/q_u\,,\ w_s / w_u)$
- relative demand for unskilled workers is $D(\, q_u/q_s\,,\ w_u / w_s)$
- relative supply of skilled workers is $S\,(\, q_s/q_u\,,\ w_s / w_u)$
- relative supply of unskilled workers is $S(\, q_u/q_s\,,\ w_u / w_s)$

From history, we note that skilled workers tend to form the majority of the upper distributions of income and unskilled traditionally the lower. The relative supply and demand

framework provides more nuanced insights, as it enables us to capture demand, supply, and wage disparities not only over time, but in any given year.

Now, we see how these play out in the markets according to traditional macroeconomic supply-and-demand models. When demand increases with constant supply, then workers have higher bargaining power, leading to a higher wage-equilibrium.[3] Conversely, decreases in demand cause firms to raise prices and lower the bargaining region, leading to lower wages in the same manner. For supply increases at a constant wage, higher amounts of workers enable firms to be more selective, and at the same time, offer lower wages. A decrease relative or aggregate supply creates a leftward shift of the supply line, putting upward pressure on wages, as labor inputs are relatively fewer. Shifts in supply and demand can be caused by any number of things – in many cases economic and political reform, and in others, debt – but the after-effects are clear: fluctuating demand or supply in the labor markets can cause both short and long-term shifts in the allocation of wages or relative wages, as initial shifts are met by secondary-level shifts in the medium to long-run, affecting national earnings composition.

Supply and demand dynamics provide with a basic understanding of how within-country income inequality is measured statistically, and with what data. Now, we must we understand how to use traditional economic models to describe the underlying mechanisms that connect the labor markets to national income distribution.

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[3] Equilibrium = market clearing, or Pareto efficient point of (P, Q) or in this case (P, W)

Chapter 2: Literature Review

Introduction

There were important contributions to the field of inequality during the post-war era. As a result of increased interest in equity and poverty-reduction, many economists and researchers began to study it extensively. Particularly, industrialization increased drastically during this time, contributing 38.3% value added to world GDP in 1970 (World Databank, 2010, Industry Value Added). The effect of this rise in the industrial employment is what prompted Simon Kuznets' investigation into income disparity.

Industrialization, Kuznets, and the U-Curve Hypothesis

The first hypothesis regarding national income inequality came about in 1954, when Simon Kuznets proposed what has now come to be called "The Kuznets Hypothesis". He built a model dividing developing economies into agricultural and non-agricultural sectors, and noted that development was characterized by shifting labor from agriculture to non-agricultural sectors. In this model, he found that when agricultural wages and average incomes were lower than in the non-agricultural sectors receiving the inflow of labor, inequality increased initially, then fell in the long-run. From our framework, this can be explained as increases in labor supply raising competition, decreasing worker bargaining power, and lowering wages; at the same time, while the wage premium increases in skill-intensive sectors.

In 1966, he proposed the official "Kuznets U-Curve Hypothesis", noting that as countries experienced early stages of economic growth, their income inequality rose, but then decreased again once they surpassed a certain developmental threshold (Kuznets, 1966). He reasoned that industrialization boosts inequality initially because of employment shifts from agriculture to

emerging financial and industrial markets. This relates intrinsically to inequality, as this shift has a redistributive effect on wages, especially in the industrial sector, where skilled labor dominates.

Kuznets also observed lower income inequality in developed regions, leading him to formulate a theory expressing "long-term trend towards the diminution of inequality once a certain level of economic development had been reached" (Lecaillon, 1984, p. 8). This gave birth to the notion of the U-curve curve relation, with inequality on the vertical-axis and some measure of growth, often income or GDP per capita, on the x-axis (See Figure 2.1). This theory suggests that we see the highest rate of inequality in the middle stages of development, and low inequality only at the earliest and latest stages.

Between 1960 and 1980, several studies seemed to confirm the existence of the Kuznets curve. Irving Kravis in 1960 found a positive correlation between the degree of inequality and income per capita; in 1973, Paukert compared the before-tax incomes of 56 countries, 40 of which were developing, finding that the Gini ratio was linked to the GDP per capita (Lecaillon, 1984, p. 8-9). Other subsequent research also seemed to confirm this trend: in 1977, Lydall used World Bank data for 71 countries and estimated the actual turning-point of inequality. Monkek Ahluwalia (1974) corroborated the existence of the relation, and the Kuznets hypothesis. It was not until the 1980s that new theories began surfacing, as empirical evidence in numerous cases began to contradict the Kuznets curve. The following excerpt from Green et al, (2001) summarizes this changing trend:

What happens to wages and the allocation of labour during a period when a comparatively closed developing economy becomes increasingly exposed to international competition through a period of trade reform? Considerable interest in this question has emerged in recent years both for its policy implications and for its apparent ramifications for trade theories (Robertson, 2000). The traditional Stolper-Samuelson theorem leads to the expectation that trade liberalisation would raise the price of developing countries' abundant factor (unskilled labour), thus reducing the skilled wage premium and, by extension, wage inequality; this is the symmetric counterpart to the theory that trade expansion is a significant cause of rising inequality in industrialized countries (Wood, 1994). In a number of developing countries, however, no such fall in inequality has been detected; *au contraire*, some have even shown a rise in the skilled wage premium, for example Mexico (Hanson and Harrison, 1999; Robertson, 2000), Chile (Beyer *et al.*, 1999), Morocco (Currie and Harrison, 1997), Costa Rica (Robbins and Grindling, 1999), and Colombia (Robbins, 1996a).

(Source: ftp://ftp.ukc.ac.uk/pub/ejr/RePEc/ukc/ukcedp/0013.pdf)

Newer Analysis Methods

With the advent of more sophisticated analytical techniques in recent decades, new ways to measure and study inequality have arisen. Alcaraz (2008) explains that the microeconomic approach to studying inequality involves scalar decomposition and simulation analyses of particular subsets of the income distribution, with respect to certain variables, such as age, location, ethnicity, or others. [4] However, this approach has limitations, as noted by Bourguignon et al. (2005): first, it often yields unexplainable residuals, and cannot account fully for omitted variables. Further, it doesn't consider the entire distribution. For this reason, this report employs

[4] See Barros and Reis (1991), Juhn, Murphy and Pierce (1993), DiNardo, Fortin and Lemieux (1996), and Ferriera and Bourgiunon (2006) for examples

a macroeconomic understanding of the various forces acting labor market forces, and their distributional effects.

Contradicting Empirical Evidence & the Breakdown of Kuznets' U-Curve Relationship

From 1980 to the present, the empirical evidence begins to contradict Kuznets Hypothesis in both developed and undeveloped regions. Europe and the United States experienced high incidence of income inequality despite reaching the later stages of development (Gottschalk, 1997; Korzeniewicz, 2009). On the other side, many developing countries, such as those in Latin America, did not see their income inequality plateau or shrink, even during times of post-stabilization growth (ECLAC, 2010, Total GDP).

Cases of developed nations experiencing rises in inequality directly contradicts Kuznets hypothesis, as theoretically their income distribution should be stable or improving at this stage in development. The United States stands out: from 1980-2004, the bottom decile dropped nearly 10 percentage points, while the top decile rose nearly 15 percentage points (Gottschalk, 1997). Saez (2003) analyzed income data from 1913-1998 and found no evidence in support of a U-shaped, Kuznets relation for inequality in the United States.

There is similar discord in the evidence for developed Western European regions. Though between-country inequality has decreased since 1997, analysis by Bouvet (2010) shows that even in developed regions of Europe, inequality increased in the 1990s. The effects were most noticeable particularly the UK, who experienced a drastic increase in their national income inequality: during 1980-2000 period, the UK Gini coefficient rose by 36% (Korzeniewicz, 2009).

Firebaugh (2003) proposes that these cases give us a "new geography of inequality" characterized by declining across-nation inequality accompanied by rising within-country

inequality. In other words, what was not achieved, in many cases, is what Kakwani (2003) calls "pro-poor" growth, or growth that improves the income difference.

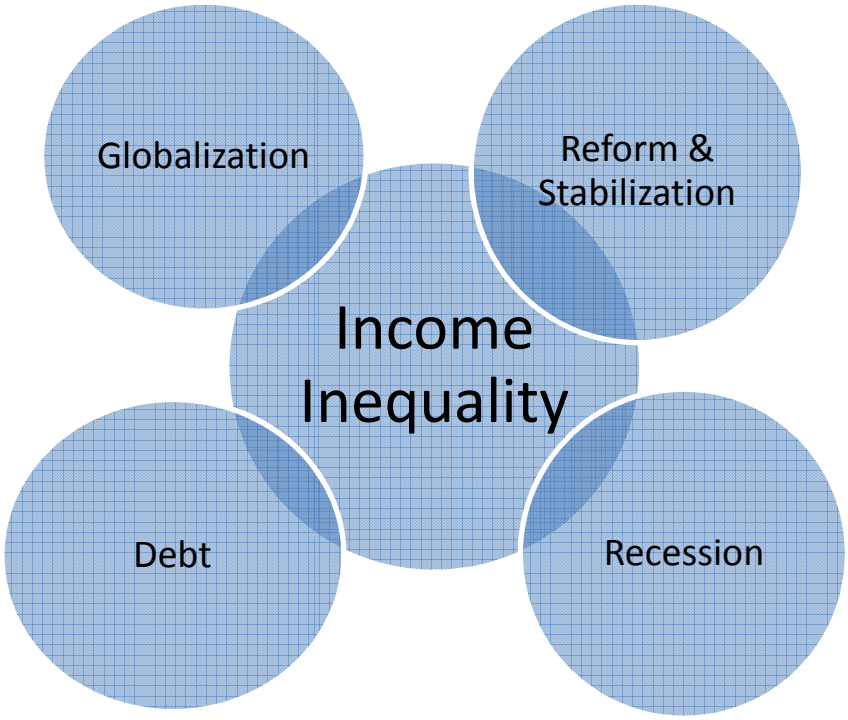
How Latin America Defies the Kuznets Hypothesis

Post-1980 the Gini coefficient worsened for many countries in Central and South America (ECLAC, 2010, Gini). As we see from the ECLAC data, Brazil's inequality grew from 0.627 in 1990 to 0.640 in 1999, and Costa Rica grew from 0.438 in 1990 to 0.473 in 1999. Chile, Colombia, Venezuela and Costa Rica also worsened their income disparity during this time period. Honduras improved during this period, however remained a leader in inequality in both 2003 and 2004. From this data, we find very few cases of countries whose income gap improved significantly during this period. Green et al. (2001) despite post-stabilization and high reform ratings

These rising Gini results lead to what Harrison and Bluestone (1988) call "the great U-turn". They argue that new empirical evidence represents a historical shift, calling into question the continued relevance of the inverted U-curve hypothesis. Before we explore the reasons for this shift, Chapter 3 will focus on setting the historical context for the recession and reform era in Latin America during the 1980s.

Chapter 3:

Contextual Factors: Globalization and Setting the Stage for the 1980s



Globalization: Trade, Technology and Immigration

The 20th century saw drastic increases in world GDP and GNI. As shown in Figure 3.1, World GNI per capita rose consistently from 1977-1995, decreasing only from 1981-1983, most likely as a result of the Latin American Debt Crisis, and accelerating post-1988 (World Databank, 2010, GNI Per Capita). GDP per capita followed a similar upward trend, decreasing only from 1981-1985 and briefly from 1996-1998, with accelerated growth from 2002 -2008, growing by nearly $4000 from $5303.5 to $9153.1 (World Databank, 2010, GDP Per Capita). Annual GDP evidence confirms this trend, growing throughout 1980s, late 1980s and early 1990s, and two brief drops in the later 1990s and early 2000s. confirms this world trend,

increasing from GDP annual growth was 4.1% in 1961; with the exception of two large drops from 1973--1975 (dropping from 6.5% - 0.9%), and from 1979--1982 (dropped 4.2% -- 0.3%).

Technological Change

There was a drastic increase in communications and production-technologies during this era. These do have some negative external effects on inequality, as the technologies developed have a skill-bias (Katz and Murphy, 1992). One aspect of technological change is that the rapid technological advancements allowed for the fragmentation of the production process, leading to two key trends: vertical specialization and outsourcing (Irwin, 2005). Vertical specialization allows for "companies' purchasing of intermediate goods and components on the market rather than producing them internally," and, conversely, outsourcing allows for the transfer of labor inputs from domestic to foreign. The first of these trends inhibits domestic production, while shifting labor inputs, in large amounts, would cause supply fluctuations.

Immigration & Labor Markets

From a short-term perspective, "the entry of immigrants into a labor market should lower the wages of competing workers…and perhaps increase the wages of complementary workers" (Borjas, 2005). Evidence also suggests that immigrants are more concentrated in lower-skill applications (Borjas et. al, 1997). Generally, immigration is thus thought to increase competition in unskilled labor positions, crowding out native labor, while simultaneously benefiting the wealthier natives. Data does indicate there is indeed a small negative correlation between immigration and wages, but it is not significant, while illegal immigration further complicates our understanding of this effect (Altanji and Card, 1990). On a basic level, immigration and trade

both have the effect of transferring resources from one economy to another, the former in the form of human and intellectual capital, the latter in terms of physical capital.

Does Globalization and FDI Affect Income Inequality?

Nunnenkamp (2006) proposes that it creates better employment and earnings opportunities for unskilled workers. In economic terms, more capital means more jobs, which is followed by higher demand for workers and lower wage premiums for skilled workers. However, empirical evidence, especially for countries in Latin America, does not always confirm this. As Te Velde (2003) explains, FDI impacts income and wage inequality through its effects on fiscal policy and the heavy expenditures it requires in interest payments. Both of these not only detract from what a government can spend on social, health, and other developmental sectors, but lead rising interest rates, prices, and inflation, which affect supply and demand in the labor markets. At the very least, notes Te Velde, “micro and macro evidence shows that… FDI is likely to perpetuate inequalities” (Te Velde, 2003).

Chapter 4

Latin America during the 1980s and 1990s:

Crisis, Reform Post-Stabilization Growth, and Distributional Effects

As discussed previously, the 1960s and 1970s show Latin America achieving sustained annual growth (See Figure 4.1). Many countries introduced market and trade friendly reforms, suffering increases in within-country income disparities as a consequence (Berry, 1997). What draws our attention to Latin America is the amount of inequality experienced by nearly every country. As summarized in Psacharopoulos et al. (1997, p. 15-16):

- Brazil, Chile, Guatemala, Honduras and Panama all have Gini coefficients exceeding 0.55
- Similarly, bottom 20% of distribution receives less than 3% of the income in those same countries

Other regional trends make Latin America ideal for this study. Firstly, it is characterized by high historical wage differentials between workforce members with differing levels of education (Borjas, 2005; figure 4.2). Furthermore, the region experiences cultural tension and racism, as well as historical social and educational inequalities.

Numerous historical and social factors contribute in many countries to a deeply entrenched class-system. As Borjas (2005) points out, there is a persistent wage difference between immigrants and native labor. Over time, as immigrant laborers integrate into and participate in the host economy, increased supply of labor should drive down real wages as a result of increased competition and lowered wage-bargaining potential.

The "Lost Decade", Reform, and Effects on Labor Markets

The effects of the "Lost Decade" on the 1990s on the labor markets are of particular importance. Unsurprisingly, GDP growth decreased markedly during 1980 – 1989 period (see Figure 4.4). The typical pattern during this period for Latin American countries, notes Morley (1995), was falling real wages and rising real exchange rates. To us, this suggests that either demand had decreased as a result of the recession, or supply had been increasing in labor markets had been increasing.

In the were forced to borrow to cover their deficits, causing a rise in real interest rates – and most of that borrowing coming from internal sources – the recession created a vicious cycle of inflation (Morley, 1995). This had numerous effects on the income distribution for each country, which we will examine in Chapters 6 and 7.

An Era of Widespread Reform

In most cases, the process of reform brought about similar changes across countries: the late 80s and early 90s were characterized by widespread financial liberalization, privatization, trade reform, tax reform, and capital reform (Green et al., 2009).

Unsurprisingly, poverty increased, and GDP growth decreased markedly during 1980 – 1989 period, while many countries experienced large rises in inequality (see Figure 4.4). Most notably, Argentina, Brazil, and Panama had sharp rises in inequality while Bolivia, Guatemala, Honduras, Mexico, and Peru had rising income inequality during the second half of the decade (Morley, 1995, p. 20).

Economist Albert Berry (2003), an expert on poverty and inequality studies, cites five key trends that characterized the reform-process in Latin America during this period:

1. Conservative macroeconomic policy:	
	○ Inflationary periods often precede periods of growth
	○ Social hysteresis theories surround and exacerbate business cycle fluctuations
2. Savings and investment policies	
	○ High savings, high investment in emergent markets
3. Human capital accumulation	
	○ Extremely important to growth and inequality
4. Technological change	
	○ Increases per worker productivity
5. Pro-market policies	
	○ Includes financial liberalization, trade reform, tax reform, privatization, and other market friendly reforms

Specific Reform Programs

There were programs employed nearly across-the-board during this period. We will only note a few of the most significant. Morley (1995) points out some significant reform packages employed during this time, noting the varying results:

> Chile program, PNAC, did not a focus on human capital and training, but rather menial and unskilled tasks, in an attempt to give more jobs to unskilled workers. However, many felt and expressed that the program was authoritarian, or debased workers, and thus it failed. Bolivia's emergency plan (FES) represented a demand-driven set of reforms established by Estenssoro in 1985, which succeeded in ending hyperinflation and cutting poverty rates, only to see growth decrease again in the post-reform era. We will discuss this in Chapter 6. Peru offered the PAIT plan in 1985 under Alan Garcia, offering three-month jobs at minimum wage for labor-intensive activities, such as reforestation, water and sewer construction, and other unskilled labor job; ultimately the PAIT failed in 1998 when Peru

faced a failing economy. The Perez plan in Venezuela took the difficult initiative of ending the costly price subsidies that had been costing the government an estimated $1 Billion per year, but saw limited success. El Plano real in Brazil, executed by Estenssoro in 1994, was the most successful anti-stabilization plan in Latin America, and led Brazil to becoming a worldwide economic power, for more on this see Chapter 6.

Morley et al. (1999) discusses the results of the reforms: Chile and Uruguay's index changed more than 50% over the time period from 1970 to 1982. "Between 1985 and 1990, the significant reformers were Bolivia, Costa Rica, and Paraguay. After 1990, Brazil, Peru, the Dominican Republic, and El Salvador all raised their reform index by over 50%" (Morley, 1999; Figure 4.5). Ultimately, these massive reforms led Latin America back from recession to growth but each country took its own path though the reform process. We note a general trend of increasing regional GDP from the 1990s (post-reform) lasting until the 2000s, when Latin America and the Caribbean region's average GDP increasing from 48.3 billion in to 66 billion in 2000 (ECLAC, 2010, Total GDP). However, the effects of this growth on the Gini coefficient for Latin America were ambiguous: despite a few larger fluctuations – rising to 0.602 in 1993 then dropping a full point by 1995 0.507 – the Gini increased subtly from 0.541 in 1990 to 0.564 in 2000 (ECLAC, 2010, Gini).

Chapter 5

Explanations of Regional Inequality: The "Durable Inequality" of Latin America, Post-1980s

Introduction

Te Velde (2003) notes that there are some constant identifiable forces that drive the perpetual high inequality rates in Latin America. As Te Velde summarizes, human capital and education maintain income inequality; as one's level of education determines their relative position on the income hierarchy, social mobility throughout most of Latin America is limited by poor educational opportunities. We see this manifest in the high wage differential between skilled and unskilled workers, which is particularly evident between differing levels of education (figure 6.6) We consider the varying returns to education by level, and other factors such increases in supply of workers, entrenched class structure, and a corresponding wage differential, with a notable premium for (figure xxx)

A History of Class Structure and Inequality

According to Korzeniewicz and Morgan (2009, p. 24), Latin America has a deeply entrenched class-system: "legally codified inequality intrinsic to slavery, and…the evolution of institutions that protected the privileges of the elites and restricted opportunities for the broad mass of the population." Korzenievicz (2009) also speaks of "selective exclusion" that manifests itself commonly, wherein it is considered acceptable in many circumstances to prevent members of lower social classes from moving up, for example through denying opportunities in education, politics or employment. Simply put, members of the upper class apparently find it acceptable or even beneficial to deny social mobility opportunities to members of the lower classes.

There are certainly more factors that play into the problem of inequality, but they will surface throughout the examination in the following chapters. Each country is a unique case,

with their own cultural histories and social issues, which is why applying the framework we have developed to specific countries over specific time periods of decelerated and accelerated growth may illuminate the effects of the factors driving inequality; our task will be to find which reasons are most plausible based on empirical evidence. While Part I can be seen as giving an in-depth overview, setting the context, and developing the framework for the study if inequality, Part II should conversely be seen as the "synthesis" section of this report.

Part II

Synopsis

Central Question:

Why in periods of post-recession growth does the income disparity not improve?

To answer this, we apply the framework developed in Part I to Brazil and Bolivia, studying the observable trends in inequality during the period of interest. Chapter 6 applies the framework we have set up to the case of Brazil in the post-reform period. Brazil is chosen as an example because it is a country that experienced massive growth resulting from reforms and stabilization, emerging as a player on the world-stage in the 2000s; at the same time, Brazil's inequality of income only worsened (ECLAC, 2010, Gini). Other socio-economic and political conditions that also contribute to inequality, such as poor health and education institutions, class-structure, and cultural perceptions, are considered in this section as well.

Chapter 7 studies Bolivia, arguably the poorest and least-developed nation in Latin America. Our supply-and-demand framework, as well as the cultural elements that contribute to income inequality, such as the rural-urban divide, racism, and the heavily uneducated and poor agricultural populous, will be discussed in depth.

Finally, Chapter 8 summarizes and defends the conclusions reached in the previous chapters and attempts to put the findings in a wider context, considering political, economic, and social implications of this research. We briefly acknowledge the limitations of the findings, and the cases against the "driving-factor" hypothesis. Finally, we consider why inequality is such an important issue, with increased relevance the world, and why our findings only affirm the pertinence of addressing the issue.

Chapter 6:

Brazil: Booming Economy, Booming Inequality

Introduction:

Attempts to measure Brazil's income inequality were first made in 1960, the first year that data was collected on national income by the Brazilian census (Skidmore, 2004). Looking at these early attempts to characterize the income distribution suggest that Brazil has had consistent and grave problems with income inequality even as far back as mid-century.

Historical Context: Colonialism, Slavery and Import-Substitution

Brazil is the largest country in South America in terms of land, thus allowing access to nearly unlimited natural resources. Thus, Brazil has traditionally had a thriving agricultural sector, but the reform from 1988 on saw the advent of rapidly growing financial and industrial sectors. From 1950 to 1980 Brazil had the fastest growing economy in South America, growing at an annual rate of 4.3% (ECLAC, 2010, Total GDP).

Analysis in this section will focus on the period of recession, from 1980-1994 and the effects of the reforms undertaken during the Cardoso presidency. After 1994, monetary stabilization brought about a period of prosperity, lasting for more than a decade. However, despite increases in annual GDP growth during this post-recession period, we find that Brazil's level of inequality increased. We examine briefly the causes of this persistent inequality.

"The Lost Decade" and the Process of Reform: GDP Fluctuations

As previously discussed, the 1980s saw a significant decline in production and growth. GDP growth amounted to less than 6% annually in the 1980s, going far below 0 in 1983, and taking until the 1990s to recover (Figure 6.1).

In 1988, the crisis led Brazil to begin a process of reform. By the Fernando Color de Melo administration, 1990-1992, the reform process began to accelerate (Rudra, 2008, p. 185). As Rudra explains, many people sometimes call this "the decade of market-oriented reforms", as this period was characterized by the elimination of trade barriers, lowered tariff rates, the abolition of special import regimes, a floating exchange rate, and reduction of inward capital controls. Further, this period saw the privatization of public services and national companies, and substantial increases in foreign capital inflows, particularly foreign direct investment (Figure 6.2). Brazil's GDP arguably goes through two business cycles between 1980 and 1995, decreasing and even going below zero as a result of the recession, then recovering in 1986, only to decrease drastically again by 1990 (ECLAC, 2010, Total GDP).

Despite increases in GDP growth, the currency failed to stabilize until 1994. It was during this year that Fernando Henrique Cardoso announced "*El Plano Real*" (The Real Plan) to stabilize the currency by pegging its value to the US dollar. This translated into huge decreases in inflation, post-1994, and led to monetary stabilization.

Post-1994: Stabilization and Growth

Although Cardoso and his reforms led Brazil to a state of economic growth from 1992 on, the wealth generated was still disproportionately allocated across the country. There were decreases in poverty and absolute poverty, but we do not see the income gap improve by either the Gini coefficient or quintile analysis (Figure 6.3).

Labor Markets and Increased Competition

Using the reform-indices shown earlier by Green (2001) we can see that Brazil's reform process was generally slower than other Latin American countries. It was not until 1988 that we saw any significant improvements in the reform indices (Figure 6.4).

To examine the effects of these reforms, we turn to Brazil's labor markets. During the 1980s we see decreasing employment in agriculture overall (ECLAC, 2010, Labor Force). Following the 1980s, this data shows 1990 and 1992 as increasing employment in the agricultural sector again, only for it to continue on a downward trend, likely due to the effects of national industrialization and urban development in the post-stabilization period.

Though male rates of participation and employment generally stayed very constant, we observe increases in the amount of females employed both in agriculture and industry, with a huge jump in between 1992 and 1993 (Figure 6.5). The participation rate is of particular interest here as well: during this period it remained above 80% for males, but began decreasing in the 1990s, while the rate of females participating grew through both decades (ECLAC, 2010, Participation Rates).

All the evidence suggests that the supply of labor increased remarkably during this period. Again, this favors more skilled workers, as they have the educational advantage in labor force competition. This all combines together to drive the increasing wage differential between skilled and unskilled workers. Additionally, we see that in post-1994, Brazil maintained a very high wage differential between educated and uneducated workers, improving minimally since 1981, with college graduates making in some cases ten times the income of their illiterate counterparts (see Figure 6.6). During the equivalent time period, the Gini coefficient did not

increase or decrease significantly, rising modestly from 0.627 in 1990 to 0.637 in 1996 (ECLAC, Gini, 2010)

Indices point to financial liberalization, capital account privatization, trade and tax reforms that occurred during this era as having large effects on the labor markets. Green et al in 2000 conducts analysis on the effects of trade reform over the relevant period and finds that tariff rates play a large role in determining the industry wage premium, and thus the relative wage differential between skilled and unskilled. In addition, financial and tax reforms favoring skilled workers contributed to growth without redistribution. Green (2000) also finds significant effects related to the trade reforms: he finds a positive correlation between tariff rates and the industry wage, and as the trade reforms led to decreasing tariff rates in the post-1980s, this at least partially explains the falling wages and stark contrast between upper and lower percentages of the distribution (Figure 6.7).

Brazil: Education, Separation

Another problem Brazil faces is lack of wealth to devote to developing education institutions and other social development programs. In 1984, public spending on education was only 3.3% of GDP; in 1994, the year of the Real Plan and stabilization, the government only allotted 1.5% of GDP to education, devoting all of its resources to the new monetary and fiscal policies. By the ECLAC's rating, even after the stabilization in 1994 led to recovery and growth, the government never devoted more than 5% of GDP in a year to education (ECLAC, Expenditures). As a result, Brazil has a very low quality public education system, low enrollment rates, and low literacy rates. (ECLAC, Literacy Rates)

Prior to 1980, only an estimated 70% of children went to primary school in Brazil. By 1980, net enrollment had increased to above 80%, but did not increase during the recession period (See Figure 6.8). During the reform period and after 1994, net primary school enrollment rates fluctuate between 90% and 95% (ECLAC, Primary School Enrollment).

There is a notable increase as a consequence of the reforms, helping Brazil to achieve average primary enrollment rates relative to other Latin American countries, but these figures are still low relative to first-world enrollment rates (ECLAC, Primary Enrollment) Secondary and tertiary enrollment rates tell a different story: average enrollment in secondary school was below 20% in Brazil until 1994, which is extraordinarily low, below even Latin American averages (See Figure 6.9). Though secondary enrollment rates improved markedly by 2005 (up to 94.4%), we must conclude that low levels of education, leading to low labor force productivity, served to perpetuate inequality during this period (ECLAC, Secondary Enrollment).

Rural-Urban Divide

In Brazil, there is large contrast between the agricultural sectors – which largely employ the lesser-educated, rural populous – and the industrial and financial sectors, concentrated in urban areas. During the time period from 1990-2008, we see that the rural lowest regions actually improved their income share, while industry income share remained fairly constant; this is in large part due to the high returns Brazil experienced during this period through their exports, which played a large role in supporting growth (ECLAC, Quintiles) However, neither decile nor quintile analysis show significant changes, but rather small fluctuations around an average which remains high, with no decreasing trend emerging despite Brazil's advancement into later stages of development. This finding suggests that reform only played a small role in

inequality in Brazil, at worst perpetuating income inequality and causing implying that other cultural factors may be to blame.

All social indicators show that Brazil, despite its advanced stage of development, is far behind other countries with similar GDP outputs and levels of development. Investigating government expenditures on health as a % of GDP only supports this conclusion, as it never reached above 3.6% GDP spending in the health sector (ECLAC, Expenditures on Health). Total social public expenditures were low as well the 1980s and early 1990s, only breaking 20% in 1995, the first year after Brazil achieved monetary stabilization (ECLAC, Expenditures on Social Sector).

Summary of Conclusions

Our final conclusions regarding Brazil are a bit unsettling: despite massive reforms and increases in wealth, increasing public expenditures in the social, health, and education sector, increasing labor force participation and literacy rates, we still see no improvements in the income disparity gap. For this reason, we must conclude that Brazil's problem is attributable more to the cultural acceptance of inequality and norms within Brazil. High levels of racism – usually against the native, rural population, or lower class members in poor urban areas – contribute further to the continued stratification of Brazil. There are numerous barriers to social mobility as well: inequality of opportunity between poor and rich, and rural-urban disparities, poor education and human development, and entrenched class-structure.

Chapter 7

Bolivia: Obstacles to Long-term Growth, Social Mobility and Wealth Redistribution

Introduction

Bolivia provides us with a case contrasting perfectly with that of Brazil. It is arguably the poorest and least developed country in Latin America, an already underdeveloped region. All indicators show it as well below other Latin American in terms of social development, and the country has experienced consistent levels of inequality. In fact, it has the most unequal distribution of wealth in Latin America, as rated by the Gini coefficient. (See Figure 7.1)

In addition to analysis supply-and-demand fluctuations responding to the crisis and reform periods, and examination of the poor education institutions, we will find that the country's history and numerous other factors play into their wage and income differential.

Debt Crisis in Bolivia

In the first half of the 1980s, similar to almost all other LACs, Bolivia suffered the effects of the external supply shocks and decreasing values of exports that led to decelerated growth and financial collapse (ECLAC, Total GDP). Worse yet, in 1982, the country had just established civilian democratic rule for the first time under freely elected president Soles Zuazo. In 1985, President Victor Paz Estenssoro seceded him only to face failing economy: thus, he was forced to begin the process of reform for Bolivia, or face a similar fate to those before him.

Estenssoro Regime & Stabilization

Estenssoro and his advisors realized that to end the recession, they had to stabilize their currency. Of all the inflation-prone economies in Latin America, Bolivia was perhaps the most

vulnerable. In response, Estenssoro announced an overhaul in economic policy on August 29, 1985. The Estenssoro regime succeeded in cutting inflation from 25,000 percent per year to only 10.7 percent in 1987 (Sachs, 1986). Estensorro's policies eventually achieved monetary stabilization as the staples of his political agenda were encouraging capital inflows through liberal trade reform and capital regulations.

As shown from data, with the exception of 1992, Bolivia experienced growth as a result of Estenssoro's stabilization platform (Thiele, 2004) Inward FDI flows surpassed one billion US$ in 1990, and the country continued with capital market deregulation and liberalization (Nunnenkamp, 2006). Through this period of recession and growth, we now examine the forces acting on labor markets.

Labor Market Effects

Alcaraz (2008) decomposed observed changes in inequality into four components:

1. Shifts related to changes in employment rates and shares of wage and non-wage labor among employed population (participation effect)
2. Shifts related to changes in the remuneration of observed characteristics of the employed population (price effect)
3. a shift related to a change in the distribution of error terms of estimated earnings functions (error term effect)
4. a residual change in inequality not captured by the first three simulated changes in the income distribution

Alcaraz's findings suggest that 1 point in the Gini coefficient increase was explained by participation and the other 2 points by residual effects; this suggests that we must explore further what these residual effects are.

From 1988-1990, Bolivia's reforms had huge effects on labor markets: all data suggests there was a large restructuring in the employment across sectors during this period, with a notable shift from industrial to agricultural (See Figures 7.2 and 7.3). From 1988-1991, male employment in industry increased from 13.1% to 39.7%, while employment in agriculture fell by 45% between 1988 and 1989 (ECLAC, Male Employment in Agriculture; Male Employment in Industry).

The effects of this outward shift from the agricultural sector had no significant effects on income distribution (ECLAC, Quintile Distribution; Decile Distribution). Building off Spatz and Steiner in 2002, Nunnenkamp (2006) suggests reforms most benefitted skilled workers and unskilled workers who were previously employed in the informal sector, relative to unskilled workers in the formal sector.

During these years, the minimum wage dropped from 53.2 (1988) to 40.6 in 1990 while annual GDP growth was 4.6% in 1990 (ECLAC, Salario Minimo Real; Total GDP). Falling wages must be caused in our model by either fluctuations in aggregate demand or supply of labor. Analyzing Bolivia's FDI over this period, we see that this may have stimulated demand, which would account for mentioned later, this should theoretically help the income gap, but in the case of Bolivia, we see income distribution remain constant (ECLAC, FDI; Quintile; Decile). The evidence does confirm the effects of reform on the lower end of the distribution, witnessing

a drop from 1997-1999, but overall the Gini coefficient, decile and quintile analysis show income inequality is both perpetual and stable.

Constraints on Job Creation and Labor Market Issues

According to the Worldbank 2001 annual report, Bolivia has a thin localized labor market with burdensome business regulations. High costs in time and money for registration and operating licenses, and long delays in the process, make starting and running businesses difficult. Further, there are high capital requirements, high interest on loans, and difficulty obtaining credit. Growing supply of the labor force, describes the Worldbank 2001, creates "skilled labor bottlenecks", driving the relative wage differential. Further, enforcement of contract and property rights is unpredictable in Bolivia.

Other notable problems in Bolivia's labor markets include: high transaction and information costs, high cost of logistics, and volatile market conditions, weak supply chains with expensive and slow transportation of goods, and generalized poor quality of domestic services and inputs in poor areas (Worldbank, 2001). The vast informal sector in Bolivia, which many workers turn to if they are unable to find work in the formal sector, may play a role in the inequality issue. According to Arias and Bendini (2008) informal sector workers, compared to workers with the same skills and job characteristics in the formal sector, do appear to have a significant disadvantage, particularly in the lower deciles of the income distribution.

Ethnic and Rural-Urban Income Disparities

Thiele and Weibelt (2004) further conclude that the rising skill premium for white collar workers, combined with rising wages relative to self-employed workers illustrates growing disparities in the urban labor market of Bolivia. Notes Arias (2006), 55% of workers in Bolivia

are employed in informal sector, which is characterized by low productivity, unskilled labor, and no labor or health benefits. Disparity between large and small firms: further illustrates this point: small firms employ 83% of labor force in Bolivia, producing only 25% of output by unskilled labor; conversely, large firms control only 9% of labor force, but produce 2/3 of output (arias, 2006). We also note consistent gender wage disparities (See Figure 7.6).

Education: Inequality of Opportunity and Barriers to Social Mobility

Similar to the case in Brazil, we see that low government expenditures in education lead to low quality and quantity of education in Bolivia. For this reason, we must not underestimate the effects of poor educational and social institutions, and opportunity inequality, on the distribution of income in Bolivia. High opportunity costs and low returns to education discourage enrollment and completion rates in schools (Arias, 2006). From this same data set, we observe other related outcomes:

- Six out of ten graduates from high school are still at risk for poverty
- In rural areas only post-secondary education offers significant boosts to earnings
- There are large gaps between test scores of students in public schools and private schools
- Rural teachers are generally unqualified and lacking in full training

As a result, all indicators suggest that impoverished rural inhabitants do not receive adequate opportunities to improve their human capital. This results in low labor productivity for a large portion of Bolivia and restricted access to better-paying jobs (Arias, 2006). Theoretically, low labor force productivity hinders output and thus growth potential; this may partially explain Bolivia's low growth and cyclical boom-and-bust cycles (ECLAC, Total GDP).

What Does This Tell Us?

Primarily, we see that the same problems affecting both Brazil and Bolivia, despite the drastic differences in their development and national wealth. Low quality of education, especially in the rural regions where returns to education are low to begin with, leads to capital, compared with expensive, unaffordable private schools providing higher qualities of education; this drives the high wage differential, perpetuating stratification and remnants of class-structure from colonial history, all leading to the deeply-rooted nature of inequality in this region.

However, through decomposition of factors (see Yanez, 2009) we find that only between 20- 30% of inequality is explained by differences in schooling, and between 12-16% is explained by occupational differences (Molina and Yanez, 2009). This means so far we have only succeeded in explaining roughly half the causes of inequality in Bolivia.

Health and Social Development Indicators: Racism and a Poor Social Climate

From the data we see observe that in 1995 Bolivia drastically improved its social sector spending, improving GDP output (See Figure 7.4 and ECLAC, Expenditures in Social Sector & Total GDP). However, Bolivia still ranked higher than any other country in Latin America in their self-evaluations of racism, with nearly 17% of the population describing themselves as mistreated due to their ethnic-background (See Figure 7.5). Compared to other countries, Bolivia also has a high adolescent birthrate, malnutrition prevalence, and infant mortality rates as well, suggesting that social sector spending is either unequally allocated between urban and rural residents, or that it is simply ineffective (See Figure 7.6). Both of these likely add to the poor social and health climate, contributing to the low social cohesions and racial tensions that

promote inequality. There are numerous other social health indicators which Bolivia ranks poorly on (see Figure 7.7).

Foreign Direct Investment

FDI plays a role in income inequality in Bolivia, but to what extent is unclear. FDI flows enhance growth in skilled labor sectors, but comparing FDI in Bolivia to inequality yields no conclusive results (ECLAC, FDI, Quintile and Decile). Nunnekamp (2006) reasons that inflows are generally concentrated in industrial, skill-intensive:

> In summary, important gaps remain when it comes to the distributional effects of FDI in developing countries in general, and Bolivia in particular. It may be for different reasons that FDI does not appear to have had the inequality-reducing effects that conventional trade theory predicts for developing host countries. Rather than locating in unskilled labor intensive industries, in which developing countries may have comparative advantages, FDI is often concentrated in skill intensive industries.[12] Moreover, foreign companies may apply more skill intensive technologies than domestic companies in the same industry, and they may induce skill-biased technological change.[13] As shown by Matsuoka (2001) and Zhao (2001), FDI may increase inequality even if it does not lead to skill-biased technological change, namely when it locates in host countries characterized by labor market segmentation and impediments to labor mobility. As we argue below, this is highly relevant for the case of Bolivia. Country-specific labor market conditions may also account for the fact that there is no consistent relationship between FDI and wage inequality, even when the same test format is applied for several countries in the same region (as in Te Velde and Morrissey 2002, and Te Velde 2003).

Rural-Urban Income Disparity

Related to the preceding discussion of increase FDI, we see that Bolivia transformed from rural to urban in less than two decades (Molina, Yanez, 2009). Significant wage premiums between urban and rural workers with the same skills and in the same occupation are the result of

this: a worker in urban areas makes anywhere 20% and 400% more than his or her identical counterpart in rural Bolivia (Molina and Yanez, 2009).

Relating also to our discussion of educational issues, the rural population is generally native, indigenous unskilled laborers or famers who have less access to educational opportunities. (Molina and Yarez, 2009). In their research, Molina and Yarez uncover a correlation between income and education that differs between indigenous and non indigenous population: returns from education are positive for all workers, but higher for non-indigenous workers with the same amount of education than for non-indigenous. Overall, this contributes to the problem of inequality, where rural areas have a noticeably higher incidence of poverty than urban zones (Thiele, 2004)

Even amongst the indigenous population there are great disparities, depending on region, local quality and availability of education and resources, and other cultural factors. For example, the Quechua population has averagely lower levels of education than the Aymara population (Yarez, 2009). Molina and Yanez propose that the combined share of GDP for the mining and manufacturing sectors remained constant over the 1985-1999 period, while the agricultural share decreased. They present evidence regarding low productivity of firms in the informal but labor intensive sector, affecting income inequality. In addition, their results fiscal retrenchment contributed to the inequality issue (Thiele, 2001). When the government was forced to downsize to reduce their debt burden and expenses, many public workers lost their jobs and were forced to seek employment in commercial activities in the industrial sector.

Other Contributing Factors

The low health and social spending leads to low social cohesiveness, resentment, and a politically unstable environment (ECLAC, Health and Social Expenditures). Racism between the native and migrant populations adds to the issue, with Bolivia ranking as the country in Latin America with the highest percentage of their population feeling mistreated or unfairly denied opportunities because of their skin color or race (see figure 49). Generally, as in Brazil, inequality is accepted as a cultural norm, with many elites actively denying lower class members opportunities for advancement.

Conclusions

In summary, we see that the recession and reform periods in Bolivia in effect did not change income drastically. This is both good and bad: during the reform process many Latin American countries did experience improvements in their income distribution. In the case of Bolivia however, we see that stratification and unequal wage dispersion are so deeply entrenched in the culture that they transcend boom-and-bust cycles.

The major factors we identified in this chapter relate to the rural-urban divide within Bolivia, focusing on wage and employment gaps between native and non-native labor. Further, we considered the low quality of educational and human development institutions, especially in the rural regions described. Racism plays a large role, as those with higher education, resources, and power, can actively prevent the lower classes from advancing out of the lower socio-economic classes.

Foreign direct investment plays an ambiguous role, again, for Bolivia: though it helped in ending the recession and spurring short-term growth, it ultimately led to a second crisis in the

late 1990s. Further, we observed that the capital inflows are generally directed towards skilled labor sectors, and favor the higher ends of the income distribution.

Chapter 8:

Final Conclusions, Outcomes, Policy-Implications, and Applications

"The Driving-Factor" Theory Explained and Defended

Throughout this examination, we focused on macroeconomic trends and labor markets to explain the consistent levels of inequality in regions of Latin America. Focusing on Brazil and Bolivia's labor markets through periods of restructuring and reform, we found that reforms did perpetuate the high levels of inequality in Brazil and Bolivia during the considered periods, as they tended to promote wealth accumulation only by those in the upper or middle classes.

However, had this been the case, inequality being purely the result of economic policies and reforms surfacing through developmental cycles, then we would actually be relieved. Indeed this would suggest that in order to end inequality, we would simply need to employ well thought-out and carefully planned package of "pro-poor" reforms in place of market-friendly, deregulating policies that exhibit a bias towards skilled labor. [5]

Instead, we find that cultural norms and deeper issues relating to education and ethnic composition drive high levels of inequality, regardless of economic and political climate. This problem is endemic in Latin America: the low education levels create self-sustaining forces that perpetuate cultural stereotypes and pass-on class-structures to future generations. Despite increases in education and social sector spending from 1990 to the present, literacy and enrollment rates in Latin America remain well below world averages, especially in countries

[5] Which some countries have attempted to do, with mixed effects, due to the culturally-rooted causes of income inequality in the region

with large rural populations. Unpredictable market conditions, combined with large informal sectors create labor markets that are volatile and hard to regulate, exacerbate the problems. External-shocks and other pressures on supply and demand for labor contribute to this problem.

In addition, we found that foreign direct investment, used to finance short-term growth, in many cases contributed to the perpetuation of inequality, advancing the status only of the middle and upper classes. Simultaneously, racism and elite perceptions of inequality as acceptable or intrinsic to the nature of their country lead to social stratification. In many instances, the upper classes have the resources and wealth to determine policy, and thus we see them actively preventing lower classes from advancing, to protect their status and wealth.

First-Level and Second-Level Causes

While the effects of FDI, debt, and other economic factors that contribute to inequality certainly explain a large portion of the inequality issue, these effects can be seen as secondary: the core issue of inequality lies in the lack of opportunities for social advancement through education. In this sense, the unequal distribution of educational opportunities and institutions is directly correlated with unequal distributions of wealth; these two are in fact one and the same. Low levels of education lead low productivity and participation in the labor force, decreasing growth, only leading to less national capital to invest in education; it is a cyclical process.

Long-Term vs. Short-Term Growth

One of the greatest problems with inequality is that instead of enhancing educational opportunities across the country to produce long-term growth, governments in Latin America seek the faster route through developmental stages, investing large quantities of foreign capital

into emergent markets, at high cost. Though short term growth is generally positive in its effects on poverty, it does not decrease inequality but in these cases increases it.

Instead, governments, most importantly those in Latin America, need to concentrate on investing in long-term growth policies, specifically education and social development institutions. At the same time, they need to do this with as much internal capital as possible in order to avoid liquidity issues and debt-burdens, such that they can sustain their debt long enough to capitalize on the increases long-run returns from educational spending. Governments support inequality, either intentionally or inadvertently, often facing tough choices with short-term consequences in recession periods. Especially in the inflation-prone economies of Latin America, the only way to stabilize currencies, end inflation, and promote growth is through deregulatory reforms and fiscal spending, yet it is precisely these measures that prohibit long-term growth or social and educational institutions that would fix the labor markets.

Policy-Implications:

This research seem to support one common trend: increasing education is the only way to guarantee long-term growth and stability in the labor markets. Though stabilization packages succeed in attaining growth, this often comes at the cost of equality. Simply put, if governments were to invest greater proportions of GDP into human capital development and social spending, they would see positive effects in the labor markets in the long-run. However, policies like this, especially in lesser-developed political systems, are generally unpopular. Further, developed countries such as the United States and Western European Nations do just this, and have varied results.

For this reason, governments need to consider new ways to increase education levels. Investing in school-building and teacher training is a start, but ensuring that children desire to learn is an entirely different issue. Currently, children in rural Brazil or Bolivia have no concept of "long-run returns" to education; all they understand is that they are hungry, now, and school only takes time from them that they could better use around the house, helping with income-generating tasks or farming. Accordingly, governments need to make clear the benefits of education, and encourage or even mandate that their countries residents receive education. Increasing the number of trained teachers and the quality of schools would increase education in the long-term, but these measures would be most effective if combined with other strategies of incentivizing youth enrollment in schools. If a mother is uneducated, her children likely will be as well; values are instilled in us from our family, thus instilling the importance of education in the minds of the population needs to be a high priority.

Another important implication is that governments need to actively work on changing cultural paradigms that promote racial discrimination and ethnic disparities. One of the reasons education rates remain so low is because the upper classes want it that way; it is in their best rational interest to maintain the status quo, as improving the income distribution would inevitably decrease their shares of national income. Owing to their aristocratic roots, a notion of meritocracy or freedom of social mobility is unheard of in Latin America, and changing this cultural mindset is perhaps the most difficult but also the most important task.

Increasing tolerance and decreasing racism is no easy task, as these are products of cultural norms. Changing cultural norms is something that transcends any political organization or leader, especially when class-structure is so deeply-entrenched in the socio-economic and political history of their country. However, realistically, if no one has the courage to stand

against the issues of class discrimination, these problems will simply persist or grow worse, indefinitely.

There are alternative routes to achieving wealth distribution, though they are generally equally unpopular. Increasing taxes on the wealthy could accomplish this, but this would be no easy task in Latin America. Similarly, increasing subsidies and labor returns in rural areas is another route; however these would be of limited value to an uneducated populous. Imposing strict labor market regulations relating to worker protections and raising minimum wages are policies that governments in Latin America should consider, as they are more feasible in the short-term.

Why Income Inequality Matters

For one thing, as we just saw in Bolivia, inequality leads to negative health and social outcomes. Though this is a debated topic requiring much depth due to its complexity, it is worth highlighting a few of the relevant negative effects that income inequality has on social welfare.

Graham and Felton (2005) cite evidence and empirical works that show a negative correlation between inequality and individual welfare and happiness levels in Latin America. Corroborating past findings, they also suggest that the effects of perceived inequality may be just as detrimental as actual inequality in terms of individual happiness (Graham and Felton, 2005). In Latin America especially, income inequality has the affect of loosening social cohesion, creating tension between both those in the upper classes, who fear losing their status and wealth from the lower classes. Conversely, the lower classes resent the upper classes for having such a disproportionate share of wealth, which can and does in many cases lead to resentment, and even revolts or violence.

Further, as briefly discussed in the first section of this report, income inequality does not only affect poor countries. The United States has a high and rising rate of inequality between the poorer classes and the working middle and wealthy classes, despite being one of the most advanced, developed nations in the world. This is unsettling, at best. Considering our standards of healthcare and education, our advanced technologies and wealth in both physical and human capital, we stand out as an anomaly in the field of income inequality.

Anna Bernasek (2005) summarizes recent work on the outcomes of inequality in the United States. Firstly, she notes, there is evidence that it has a negative effect on health, which also causes reductions in worker efficiency, and forces more public resources to be investing in health than other more productive sectors as a consequence. She also writes of the negative effects it can have in the political atmosphere, "breeding corruption" which "can hurt growth by reducing efficient allocation of public resources" (Bernasek, 2005). Edward Glaeser (2005) writes that unequal societies have less overall redistribution and generally are less likely to have stable, democratic forms of government with institutional protections of property rights. Lastly, Bernasek (2005) goes on to write: "as the rich become richer and acquire greater political influence, they may support policies that make themselves even wealthier at the expense of others." All in all, one thing is clear: income inequality is not just a statistic. Rather, it is a fundamental characteristic of modern society, with implications and effects all across the socioeconomic and political realms.

Morality and Economic Rationale: On the Topic of Inequality

The topic of this paper is income inequality, not income inequity; one simply cannot prove that a more equal distribution is more just, as justice in itself is not objectively

quantifiable. At the same time, inequity involves not only what is fair, or just, but what is moral. Morality, however, has been defined and redefined by philosophers for centuries: what constitutes morality in one train of thought is promoting and protecting one's own rational best interests (rational egoism), while, conversely, morality dictates that one should sacrifice their own happiness for the sake of others (altruism). Thus, the wealthy members of Latin America who actively restrain other classes from moving upward through the social hierarchy are by some definitions acting morally, while people holding opposing beliefs may be repulsed at the thought of taking away such a fundamental human right. However, it is worth noting that extremely unequal distributions of income do lead to negative outcomes, and moreover, depriving someone of a fundamental right, such as freedom or education, is generally considered to be immoral.

On the issue of redistribution, one thing must be made clear: if an individual acquires wealth through proper channels (that is to say, he or she does not rob a bank), then that person is in entitled to that money, legally and morally insofar as they acquired it through a fair exchange of either capital, goods, or services. Thus, redistributing the wealth from rich to poor would be akin to suggesting that the poor, by virtue of their needing it more, are entitled to that money more so than the rich are; this would simply be the reversal of the current situation, wherein the rich hold that they deserve more income by virtue of them being born into a higher social class with ample opportunities for education and advancement. Thus, simply redistributing national wealth is not the solution, but rather a careful mix of policies aimed at increasing social capital, favoring pro-poor growth, and changing of cultural norms of intolerance and racism need to be of the highest priority.

Part III

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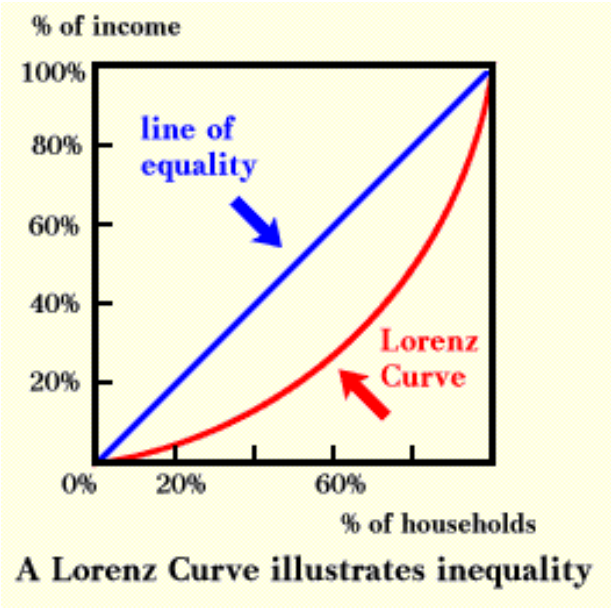
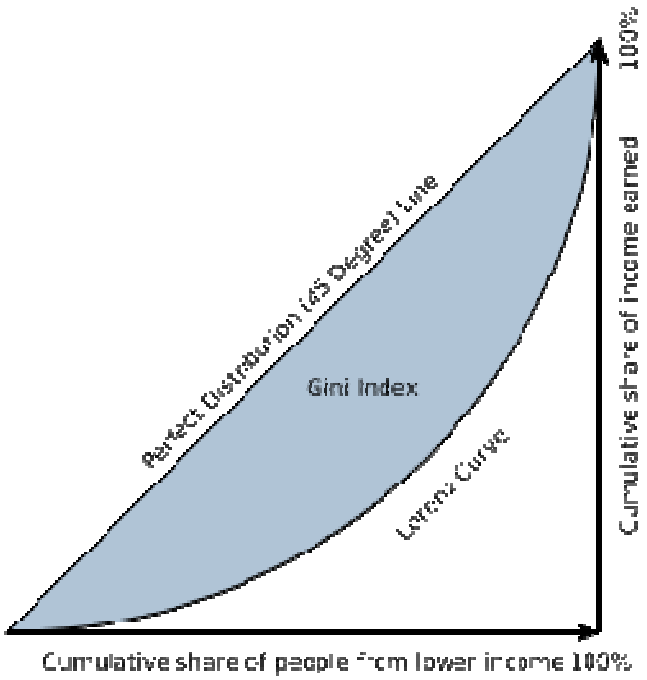
Appendix, Graphs, and Tables

Figure 1.1: Lorenz Curve



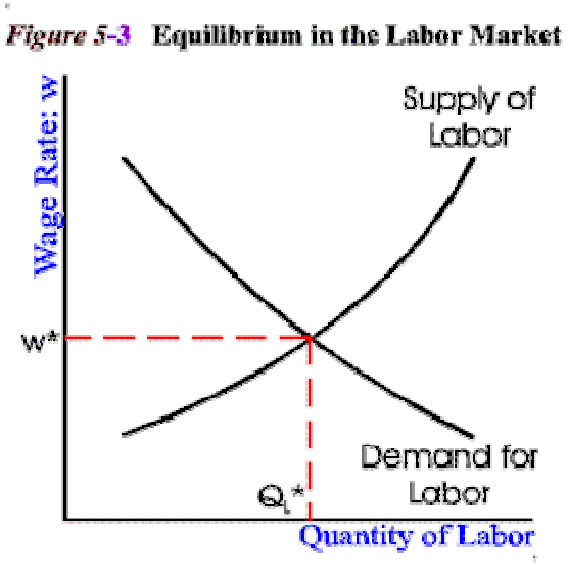
(source: http://ingrimayne.com/econ/AllocatingRationing/Figure6.5.gif)

Figure 1.2: Gini Diagram



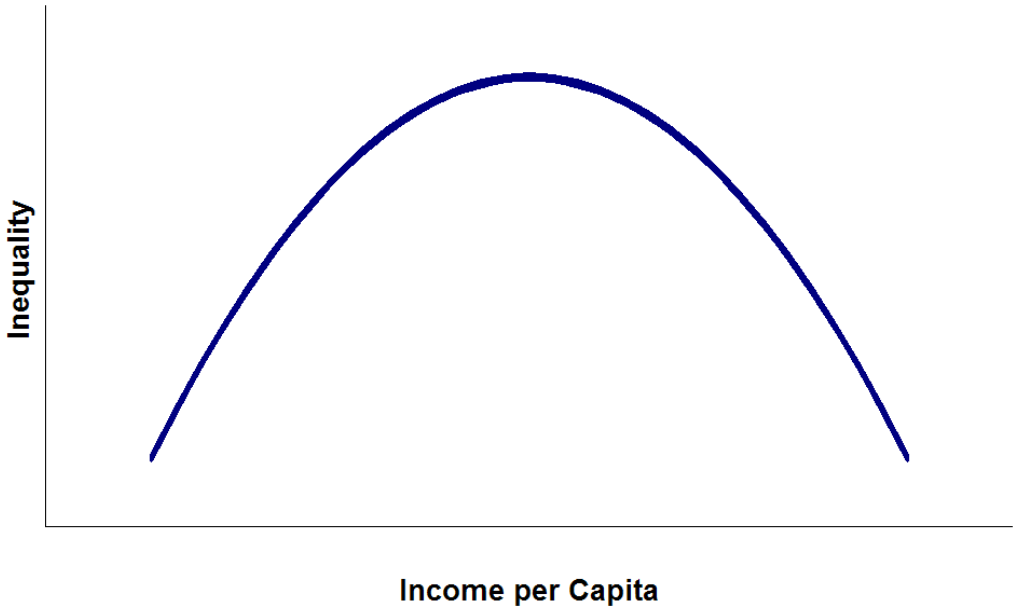
(source: http://img.search.com/thumb/5/5b/Economics_Gini_coefficient.svg/300px-Economics_Gini_coefficient.svg.png)

Figure 1.3: Basic Supply and Demand in Labor Markets



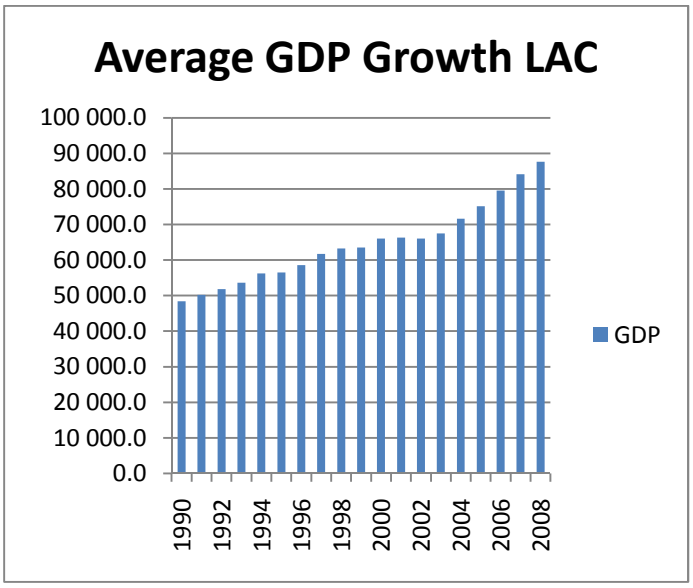
http://www.colorado.edu/Economics/courses/econ2020/section5/gifs/fig53.gif

Figure 2.1: Kuznets U-Curve



Source: http://upload.wikimedia.org/wikipedia/commons/6/6b/Kuznets_curve.png

4.1



Source: ECLAC, (2010). *Total Gross Domestic Product at Constant Market Prices* [Data File]. Retrieved from ECLAC web site: <http://www.eclac.org/default.asp?idioma=IN>.

*Note: Graph made by hand from data

4.2

Table 4: Mean Real Wage* by Educational Level

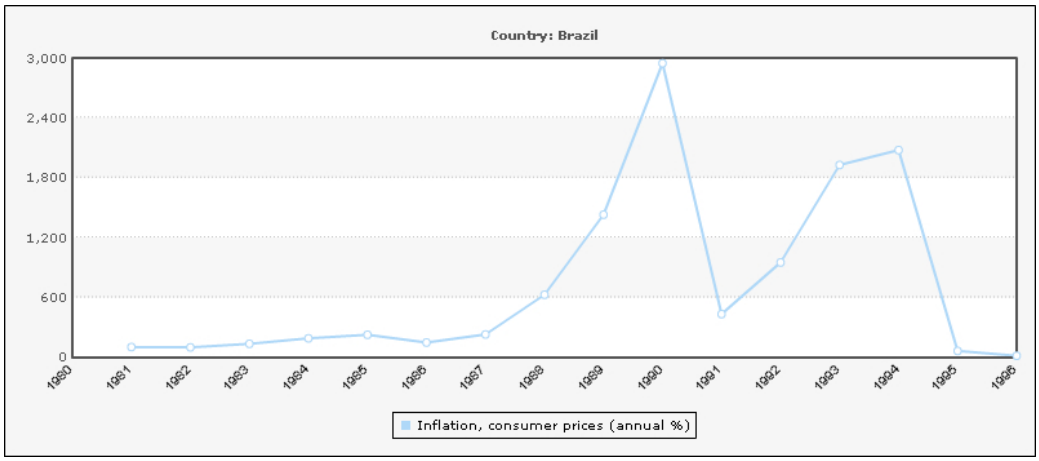
	Education Level					
Year	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
1981	1.151	1.646	2.249	3.061	5.159	12.215
1982	1.114	1.569	2.234	3.184	5.225	12.422
1983	0.934	1.320	1.805	2.508	4.223	9.919
1984	0.910	1.309	1.754	2.431	4.078	9.442
1985	1.000	1.454	1.999	2.785	4.703	11.248
1986	1.571	2.267	2.994	3.827	6.188	14.726
1987	1.076	1.571	2.073	2.820	4.878	11.537
1988	0.897	1.332	1.808	2.521	4.380	10.888
1989	1.033	1.578	2.085	2.872	4.897	11.328
1990	0.962	1.418	1.919	2.608	4.419	10.557
1992	0.920	1.248	1.624	2.217	3.626	7.967
1993	0.940	1.273	1.638	2.211	3.774	8.989
1995	1.098	1.472	1.980	2.630	4.333	10.956
1996	1.148	1.532	1.988	2.655	4.268	10.834
1997	1.085	1.480	1.945	2.559	4.227	10.608
1998	1.103	1.450	1.872	2.469	4.042	10.763
1999	1.045	1.363	1.763	2.264	3.710	10.000

Education level definitions:

1. Illiterate (less than one year of study)
2. Some elementary education
3. Completed elementary, no or some primary
4. Completed primary, no or some secondary
5. Completed secondary, no or some college
6. Completed college

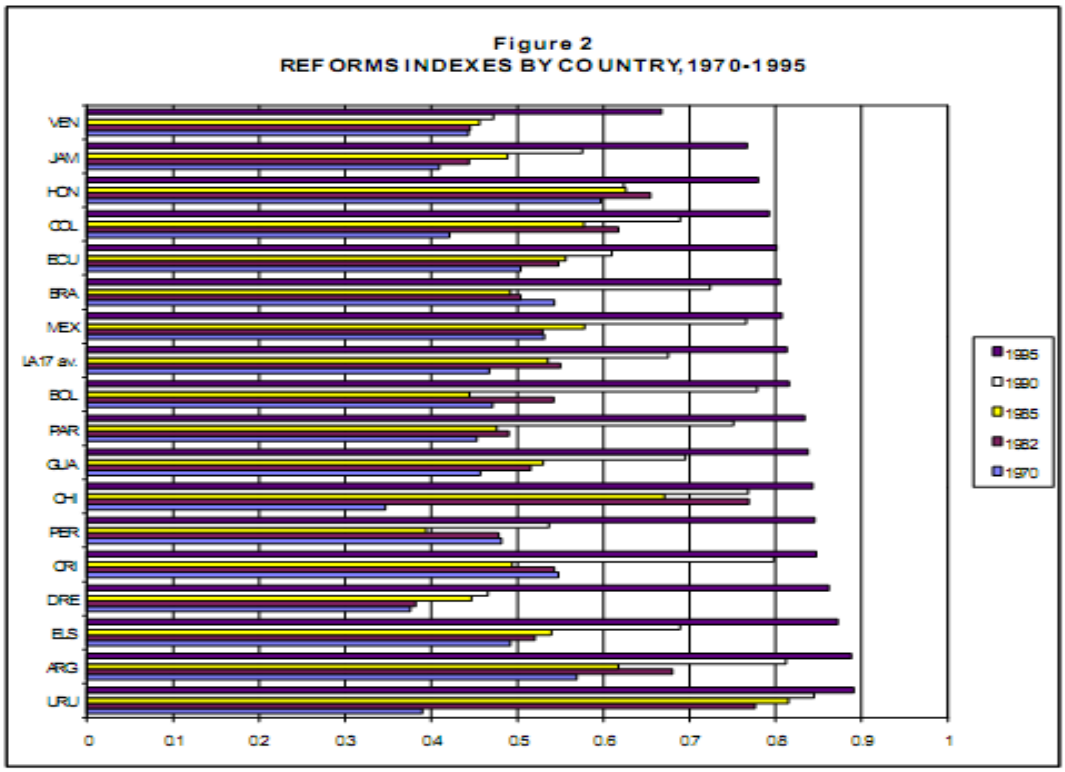
Source:

Green, Francis & Dickerson, Andy & Saba Arbache, Jorge. (2001). "A Picture of Wage Inequality and the Allocation of Labor through a Period of Trade Liberalization: The Case of Brazil." World Development, Elsevier, vol. 29(11), pages 1923-1939.



Source: ECLAC

4.4



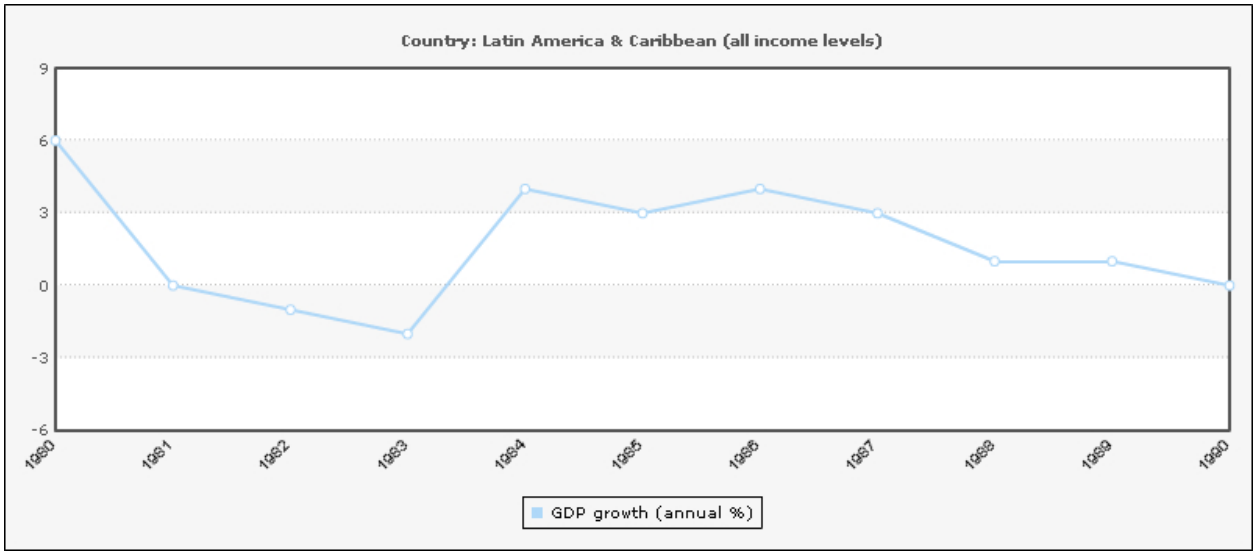
Souce: Green et al. 2001

4.5

Table A1
GENERAL REFORM INDEX

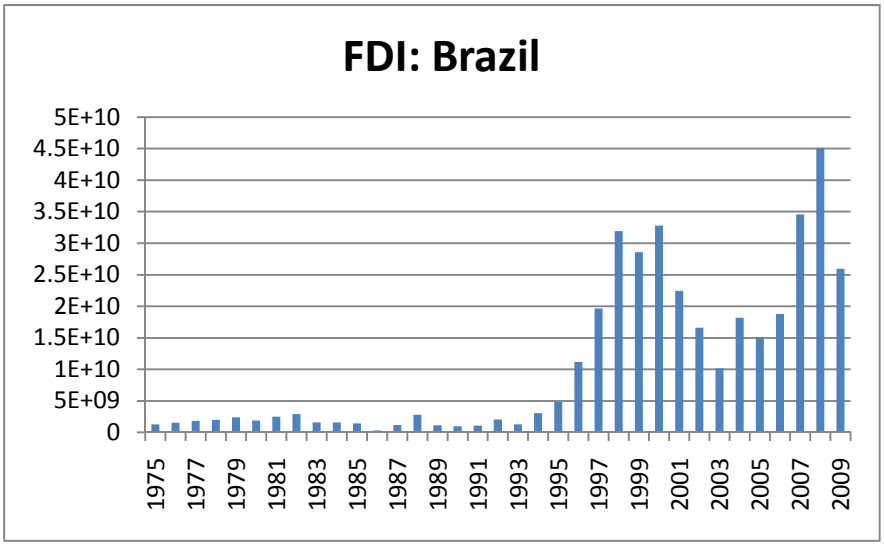
	ARG	BOL	BRA	CHI	COL	CRI	DRE	ECU	ELS	GUA	HON	JAM	MEX	PAR	PER	URU	VEN	LA17 av.
1970	0.569	0.471	0.543	0.347	0.421	0.548	0.376	0.504	0.492	0.457	0.597	0.409	0.531	0.453	0.482	0.390	0.443	0.472
1971	0.565	0.472	0.544	0.310	0.427	0.543	0.375	0.499	0.491	0.471	0.603	0.405	0.537	0.455	0.447	0.385	0.439	0.469
1972	0.564	0.480	0.553	0.309	0.430	0.540	0.380	0.503	0.488	0.481	0.611	0.401	0.538	0.458	0.423	0.380	0.440	0.469
1973	0.388	0.534	0.547	0.316	0.434	0.520	0.380	0.498	0.489	0.492	0.618	0.396	0.542	0.462	0.403	0.436	0.437	0.464
1974	0.385	0.540	0.525	0.409	0.459	0.506	0.377	0.492	0.489	0.502	0.623	0.392	0.550	0.465	0.391	0.465	0.441	0.471
1975	0.410	0.542	0.504	0.576	0.557	0.537	0.385	0.493	0.491	0.513	0.626	0.388	0.559	0.471	0.392	0.497	0.442	0.493
1976	0.408	0.539	0.495	0.640	0.555	0.539	0.374	0.493	0.496	0.509	0.641	0.392	0.602	0.472	0.426	0.501	0.446	0.502
1977	0.583	0.551	0.526	0.687	0.555	0.542	0.361	0.491	0.504	0.511	0.645	0.399	0.594	0.473	0.440	0.499	0.449	0.518
1978	0.631	0.552	0.525	0.726	0.616	0.552	0.349	0.502	0.515	0.513	0.649	0.401	0.586	0.473	0.439	0.679	0.451	0.539
1979	0.671	0.552	0.493	0.742	0.621	0.551	0.344	0.513	0.518	0.518	0.648	0.409	0.578	0.497	0.464	0.753	0.421	0.547
1980	0.698	0.551	0.493	0.748	0.610	0.559	0.343	0.518	0.504	0.520	0.646	0.408	0.598	0.502	0.460	0.759	0.404	0.548
1981	0.700	0.578	0.500	0.788	0.610	0.549	0.358	0.540	0.523	0.520	0.649	0.434	0.599	0.489	0.500	0.774	0.417	0.560
1982	0.680	0.542	0.504	0.768	0.617	0.543	0.382	0.548	0.520	0.515	0.654	0.444	0.529	0.490	0.479	0.776	0.445	0.555
1983	0.584	0.534	0.498	0.649	0.608	0.498	0.428	0.549	0.524	0.515	0.635	0.435	0.549	0.494	0.447	0.768	0.452	0.539
1984	0.574	0.510	0.490	0.646	0.591	0.487	0.427	0.543	0.531	0.512	0.633	0.452	0.557	0.470	0.414	0.795	0.433	0.533
1985	0.617	0.445	0.492	0.671	0.578	0.494	0.446	0.556	0.540	0.530	0.626	0.489	0.578	0.476	0.394	0.815	0.456	0.541
1986	0.608	0.555	0.489	0.705	0.579	0.524	0.440	0.549	0.548	0.628	0.620	0.509	0.609	0.556	0.437	0.809	0.476	0.567
1987	0.604	0.659	0.480	0.721	0.656	0.689	0.450	0.553	0.545	0.669	0.618	0.536	0.633	0.556	0.458	0.821	0.462	0.595
1988	0.664	0.655	0.517	0.741	0.599	0.760	0.438	0.548	0.547	0.694	0.620	0.548	0.668	0.563	0.479	0.835	0.467	0.608
1989	0.733	0.634	0.696	0.755	0.676	0.785	0.437	0.565	0.548	0.698	0.622	0.560	0.766	0.589	0.484	0.835	0.493	0.640
1990	0.813	0.779	0.724	0.768	0.689	0.798	0.466	0.610	0.689	0.695	0.624	0.575	0.771	0.751	0.537	0.844	0.472	0.683
1991	0.864	0.787	0.719	0.795	0.658	0.797	0.618	0.626	0.763	0.825	0.650	0.695	0.794	0.746	0.758	0.861	0.522	0.734
1992	0.884	0.810	0.739	0.812	0.755	0.830	0.712	0.782	0.821	0.830	0.731	0.708	0.796	0.804	0.809	0.873	0.562	0.780
1993	0.888	0.815	0.756	0.820	0.764	0.836	0.758	0.789	0.856	0.841	0.750	0.748	0.804	0.825	0.828	0.877	0.620	0.799
1994	0.889	0.830	0.795	0.833	0.713	0.842	0.802	0.795	0.856	0.843	0.764	0.759	0.813	0.832	0.841	0.883	0.641	0.808
1995	0.888	0.816	0.805	0.843	0.792	0.847	0.862	0.801	0.872	0.838	0.780	0.767	0.807	0.834	0.845	0.891	0.667	0.821

6.1



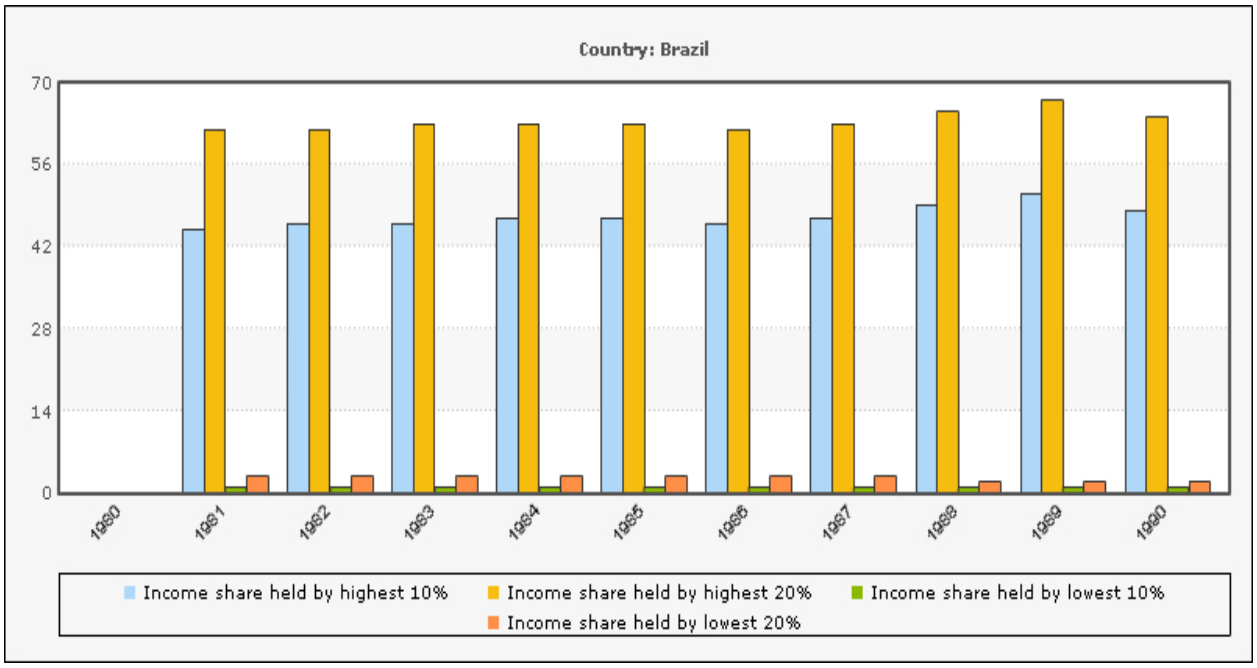
Note: Graph generated by World Databank

6.2



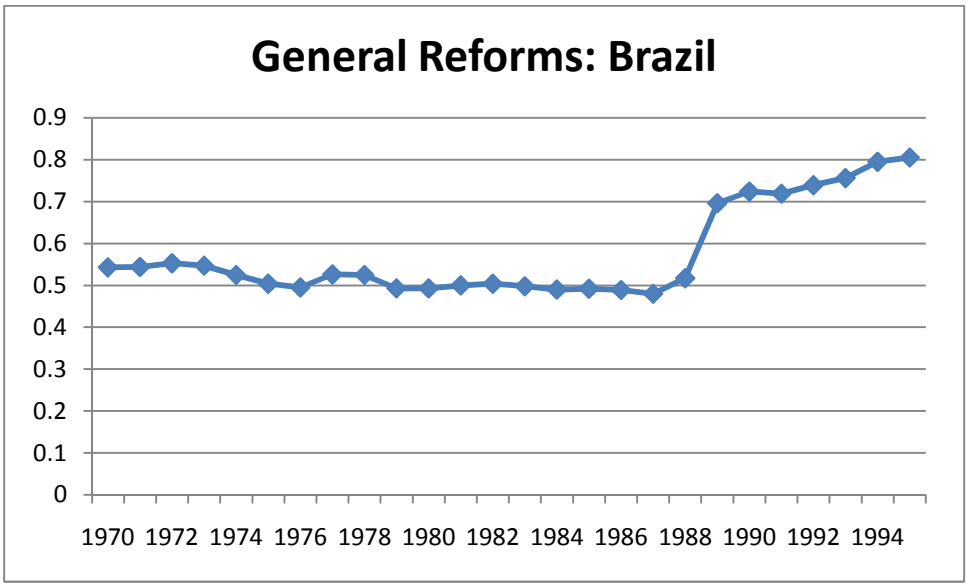
Note: Graph made by hand from ECLAC data, y-axis in US $

6.3



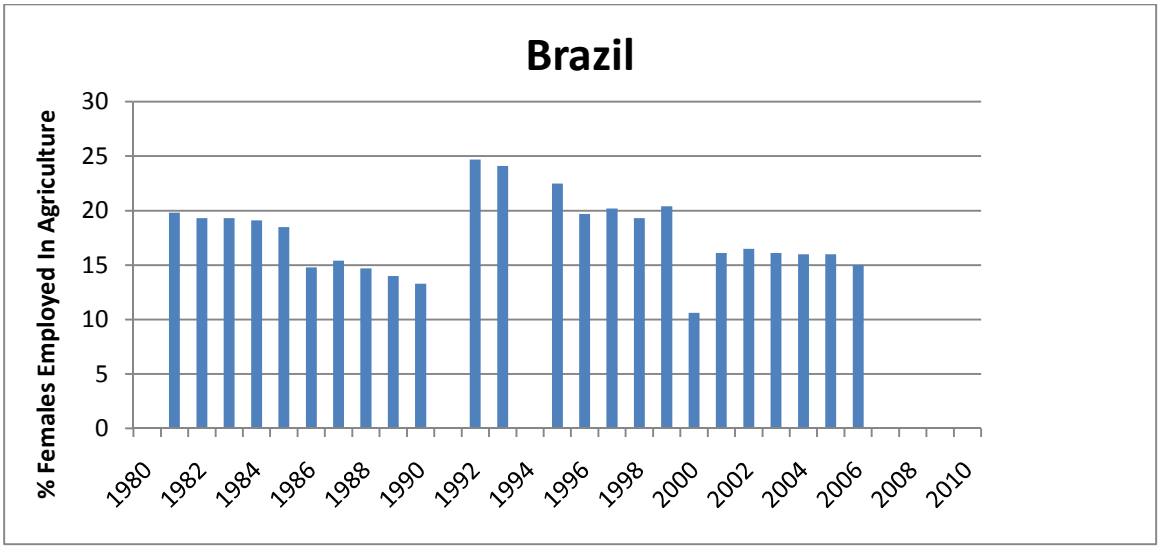
Note: Graph made by hand from ECLAC data, y-axis in %

6.4



Note: Graph made by hand from ECLAC data

6.5



Note: Graph made by hand from ECLAC data

6.6

Table 4: Mean Real Wage* by Educational Level

	Education Level					
Year	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
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1982	1.114	1.569	2.234	3.184	5.225	12.422
1983	0.934	1.320	1.805	2.508	4.223	9.919
1984	0.910	1.309	1.754	2.431	4.078	9.442
1985	1.000	1.454	1.999	2.785	4.703	11.248
1986	1.571	2.267	2.994	3.827	6.188	14.726
1987	1.076	1.571	2.073	2.820	4.878	11.537
1988	0.897	1.332	1.808	2.521	4.380	10.888
1989	1.033	1.578	2.085	2.872	4.897	11.328
1990	0.962	1.418	1.919	2.608	4.419	10.557
1992	0.920	1.248	1.624	2.217	3.626	7.967
1993	0.940	1.273	1.638	2.211	3.774	8.989
1995	1.098	1.472	1.980	2.630	4.333	10.956
1996	1.148	1.532	1.988	2.655	4.268	10.834
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1998	1.103	1.450	1.872	2.469	4.042	10.763
1999	1.045	1.363	1.763	2.264	3.710	10.000

Education level definitions:

1. Illiterate (less than one year of study)
2. Some elementary education
3. Completed elementary, no or some primary
4. Completed primary, no or some secondary
5. Completed secondary, no or some college
6. Completed college

Source: Green et al. 2001

6.7

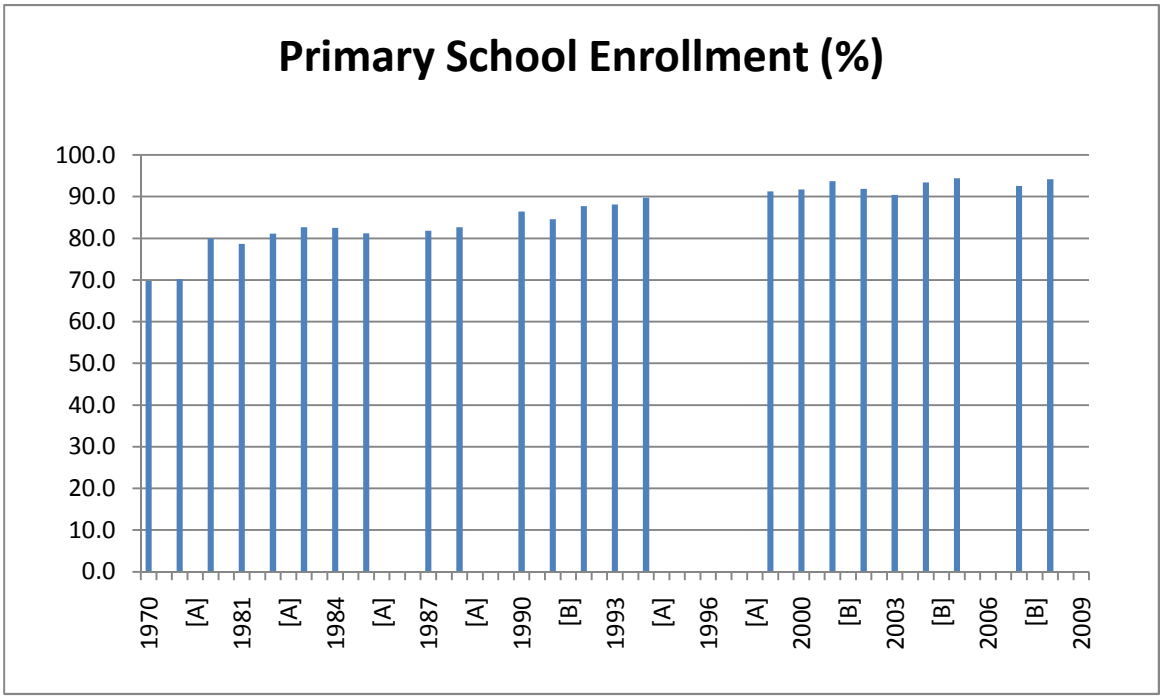
Table 5: Trade Reform, and Changes in Industry Wages, Relative College Wages and Employment Allocation, 1987 to 1995: Correlation Analysis

	Changes in:		
Changes in:	Effective Tariffs	Nominal Tariffs	Imports
Nominal Tariffs	0.912 [0.00]	1.000	
Imports	-0.447 [0.05]	-0.268 [0.27]	1.000
Relative Wage of College-Educated Workers *	0.123 [0.60]	0.016 [0.95]	0.272 [0.25]
Proportion of College-Educated Workers	0.044 [0.85]	0.075 [0.76]	0.150 [0.53]
Industry Wage Premium #	-0.612 [0.00]	-0.546 [0.02]	0.523 [0.02]
Industry Share of Aggregate Employment	-0.180 [0.45]	-0.258 [0.29]	0.305 [0.19]

Note: Spearman rank correlation coefficients; 20 industry observations are used, except for nominal tariffs for which there are 19 observations; p-values are given in [ ].
* The ratio of the mean wage of college-educated-workers to the mean wage of all workers.
# The inter-industry wage premium was estimated using the methodology of Haisken-DeNew and Schmidt (1997), with wages regressed on education level dummies, a quadratic in work experience, a gender dummy and a full set of industry dummies.

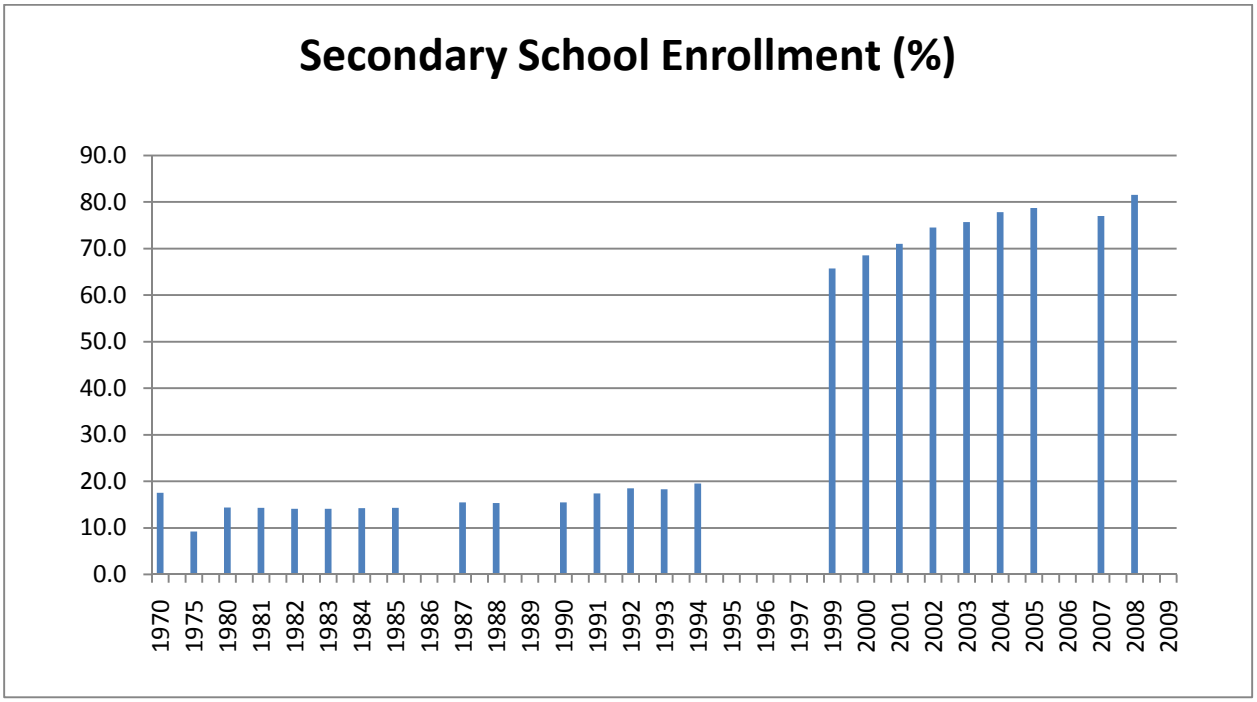
Source: Green et al. 2001

6.8



Note: Graph made in Excel by hand from ECLAC data

6.9



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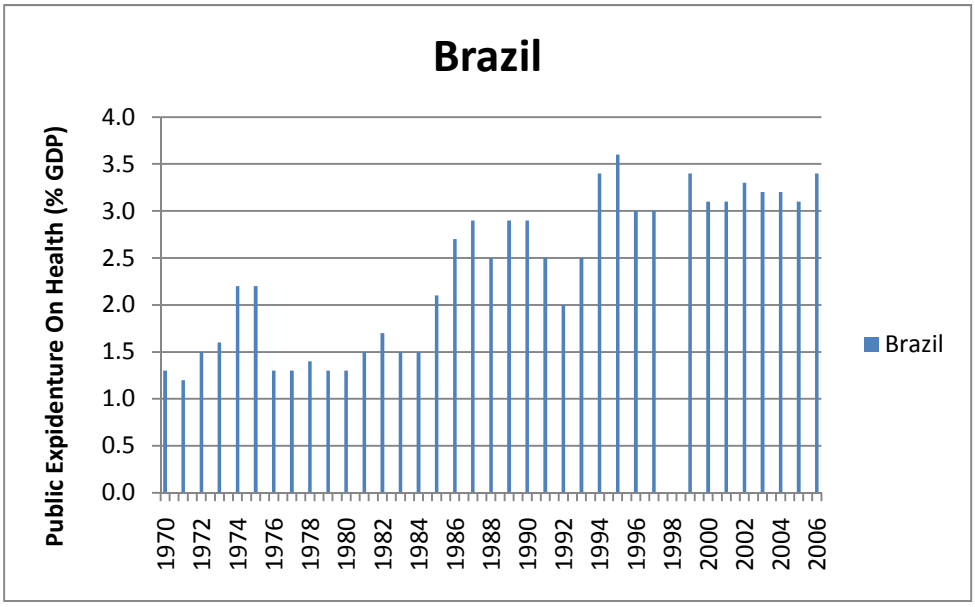

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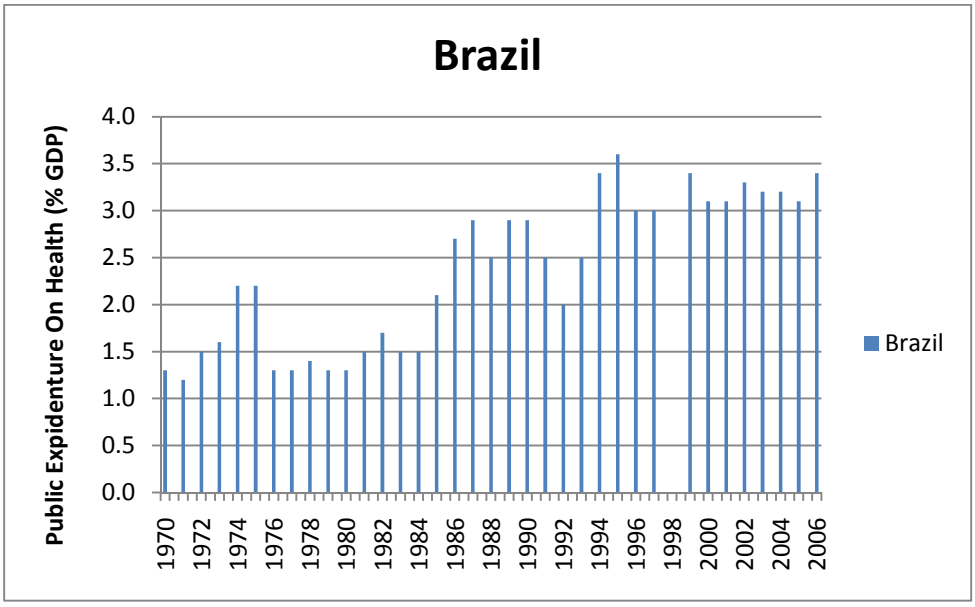


Note: Graph made in Excel by hand from ECLAC data

6.12

Table 2: The Urban Labor Force by Sector of Activity and Type of Employment (percent), 1985–1999

	1985	1989	1999
Sector of activity			
Agriculture	2.2	2.2	3.8
Mining	3.0	2.0	0.9
Manufacturing	17.8	14.1	18.4
Construction	6.1	7.8	8.8
Commerce	23.5	26.1	33.1
Transport	7.8	7.8	8.6
Services	30.7	32.6	22.5
Administration	8.9	7.2	3.9
Type of employment			
Wage Earners	/a	50.7	44.7
Blue collar	/a	11.6	10.3
White collar	/a	39.1	34.4
Employer	/a	2.7	4.3
Informal Sector	/a	46.7	50.0
Self-employed	/a	38.0	39.1
Family workers	/a	8.7	8.8
House employee	/a	/	3.0
Unemployed	6.0	10.4	7.2

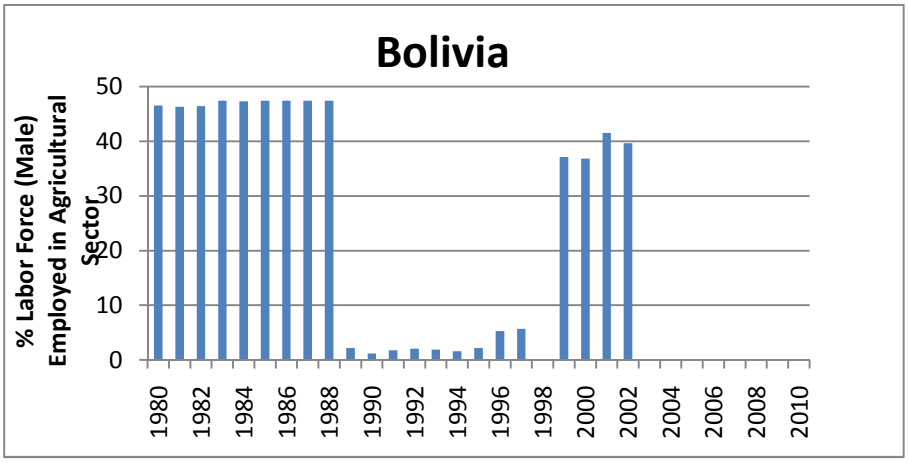
[a]No comparable data available.

Source: Jemio (2000); Vos et al. (1998); own calculations based on the 1999 survey (INE 2001b).

7.1

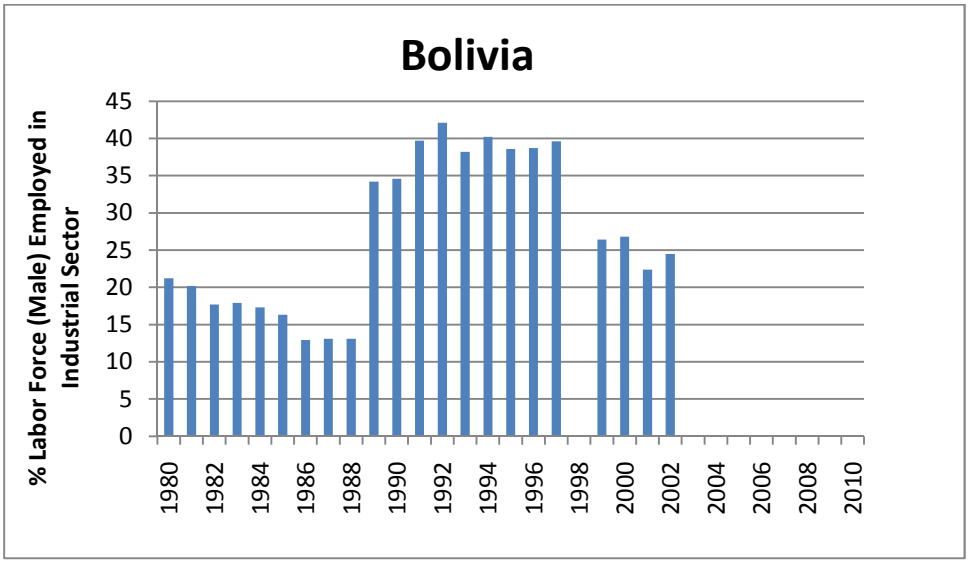

Figure 3
Income Inequality
Gini Index in Latin America, 2007*
BOLIVIA 60.1
Haiti 59.2
Colombia 58.6
Paraguay 58.4
Brazil 57.0
Panama 56.1
Guatemala 55.1
Chile 54.9
Honduras 53.8
Ecuador 53.6
El Salvador 52.4
Peru 52.0
Dominican Rep. 51.6
Argentina 51.3
CostaRica 49.8
Venezuela 48.2
Mexico 46.1
Jamaica 45.5
Uruguay 44.9
Nicaragua 43.1
0% 10% 20% 30% 40% 50% 60% 70%
*A value of 0 represents absolute equality
A value of 100 absolute inequality
Source: UNDP 2007-2008

7.2



Note: Graph made in Excel by hand from ECLAC data

7.3



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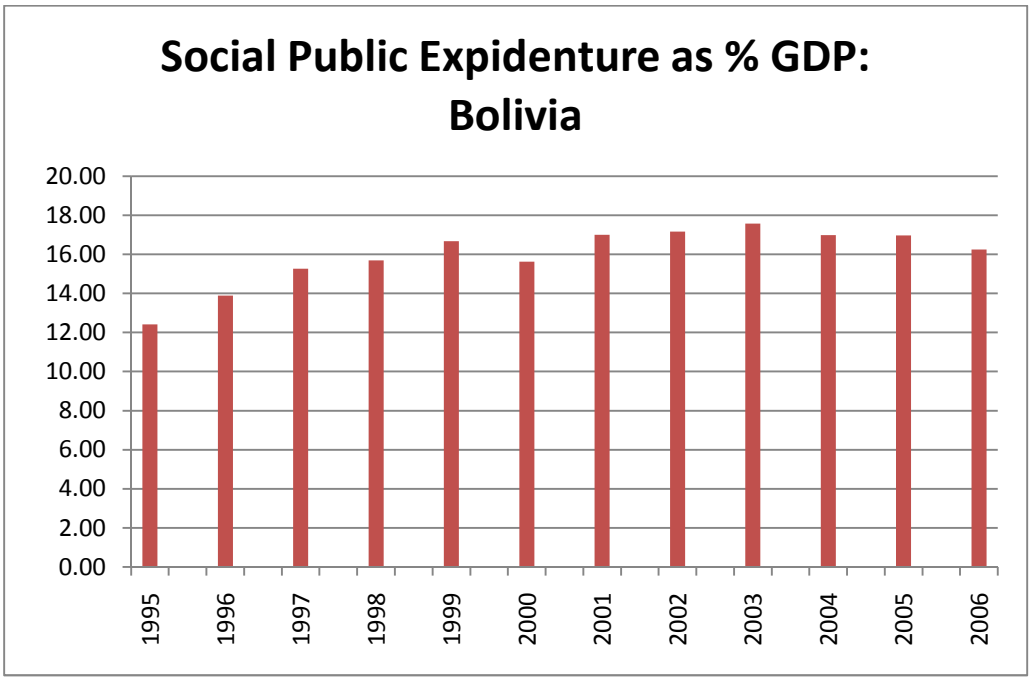

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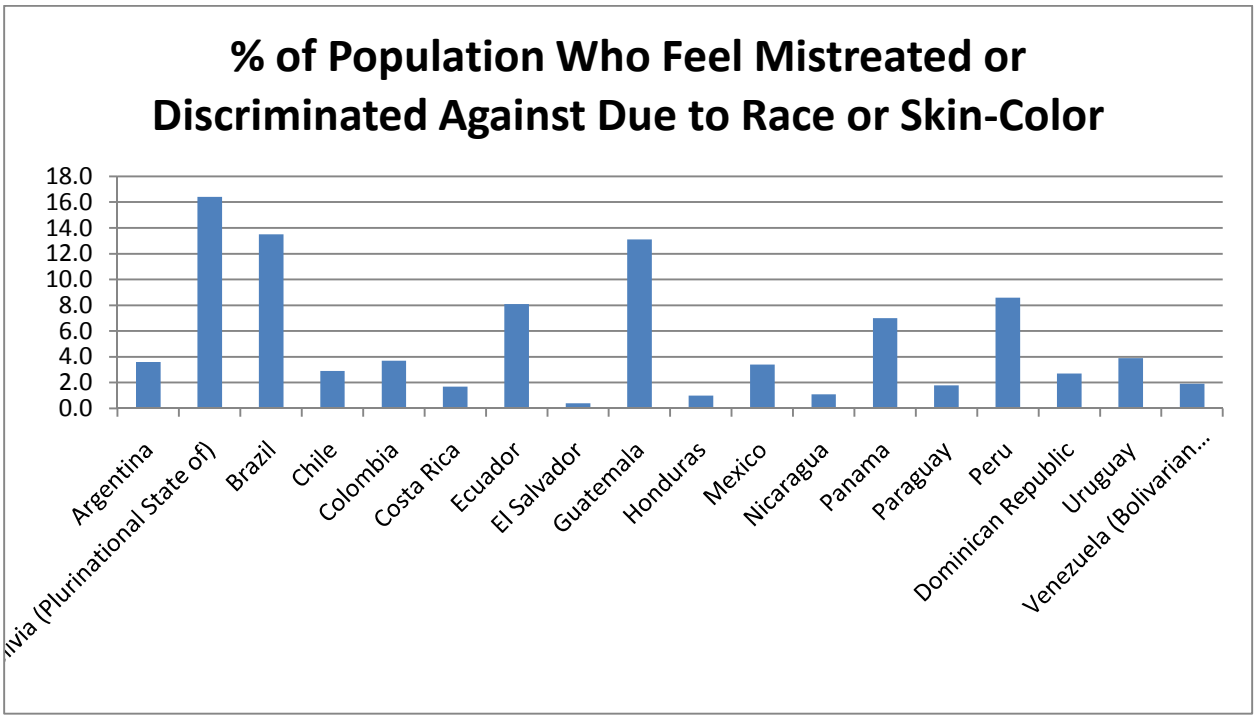
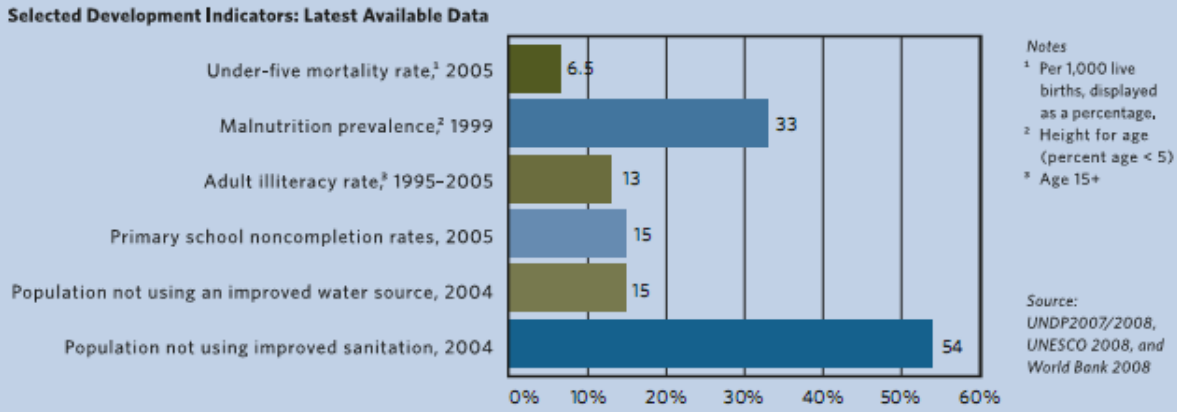
7.5



Note: Graph made in Excel by hand from ECLAC data

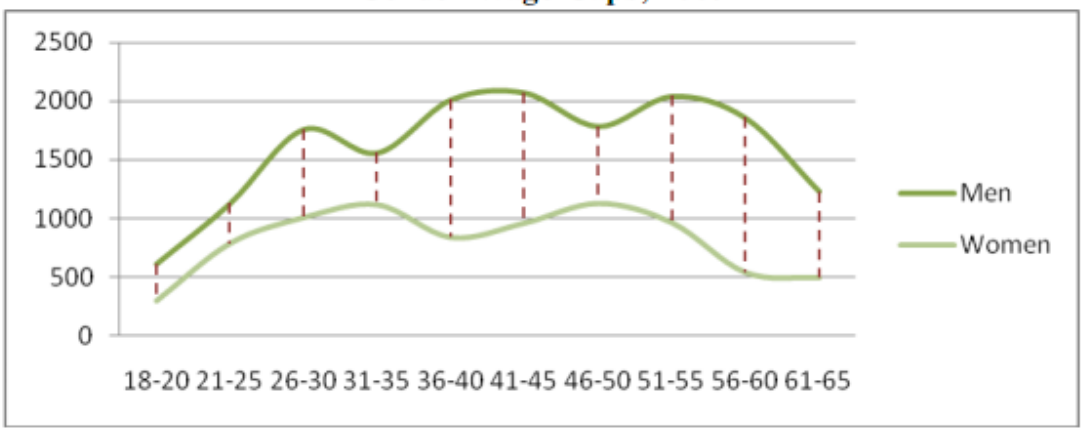
7.6

Figure 1 A Snapshot of Data on Human Development: Bolivia



7.6

Graph 4
Gender Wage Gaps, 2007



Source: Espinoza (2009).

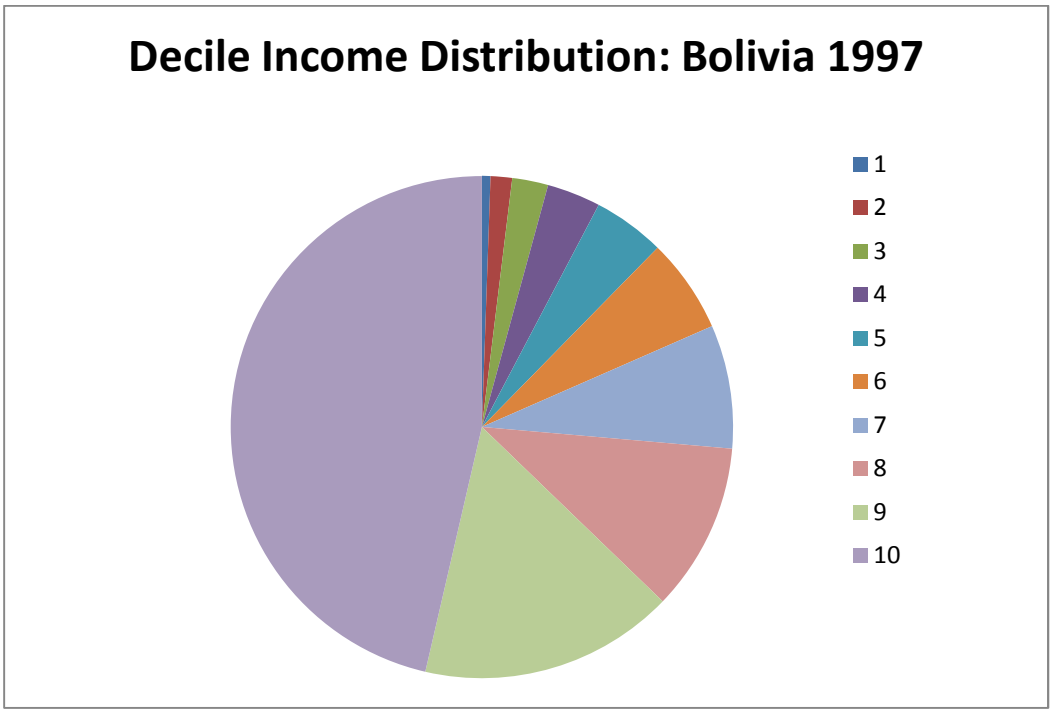
7.7

Table 8 — Selected Health Indicators, 1985–1998

Indicator	1985	1989	1994	1998
Infant mortality rate (per 1000 live births)	108	96	75	67
Under five mortality rate (per 1000 live births)	148	130	116	92
Child malnutrition (% under 5 years)	n.a.	13.3	15.7	7.6
Vaccination rates for children				
DPT3	n.a.	28.3	42.8	48.6
Measles	n.a.	57.5	55.7	50.8
Polio	n.a.	37.8	47.5	39.1
Access to and usage of medical personnel				
Percent of births with some prenatal care by trained medical personnel	n.a.	44.0	49.5	65.1
Percent of births occurring in medical facilities	n.a.	37.6	42.3	52.9
Percent of severe diarrhea cases treated by medical personnel	n.a.	24.0	32.4	36.4

Source: World Bank (1999; 2000b).

7.8



Note: Graph made in Excel by hand from ECLAC data

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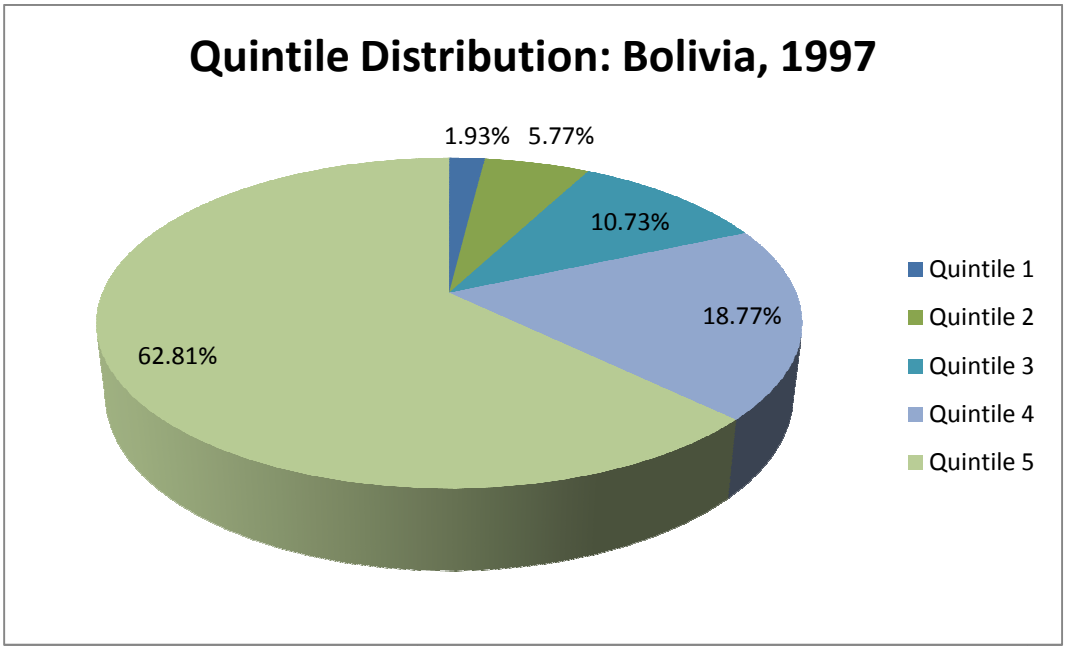

Note: Graph made in Excel by hand from ECLAC data

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Lastly, I would like to thank whomsoever took their time to read this thesis. My hopes are that I did this topic justice in the month that I devoted to it, and that you found this analysis to be both informative, well-argued, and interesting.

Best regards, and thank you all so much,

Sincerely, Aaron Campbell