The Social Impact of the International Monetary Fund:  
Structural Adjustment Programs in Latin America  
from 1980-2000  

BY  
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A THESIS  

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Abstract

This paper examines 17 Latin American countries to study the IMF’s impact on their social development. I try to determine if the funds provided by the IMF are associated with improvements in social development, as measured by the United Nation’s Human Development Index (HDI), health, education, and GDP per capita.

Overall, I found that the impact of IMF lending on all of the variables was measurably small, but it was also statistically significant for three of the four variables. The results were also mixed, with IMF lending having a negative impact on HDI, but positive impacts on education and GDP per capita. The impact on health was negative, but statistically insignificant. These results indicated that I had to reject my a priori hypothesis that the IMF had a positive effect on the HDI, but that I could accept my hypotheses that the IMF had a positive or no impact on the social indicators of health, education, and GDP per capita.
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1. Introduction

This paper explores the International Monetary Fund’s (IMF) involvement in 17 Latin American countries\(^1\) from 1980 to 2000, to determine if IMF lending during that time had a positive or negative impact on the region’s social development. Although the IMF’s structural adjustment programs (SAPs) are designed to improve a country’s economic stability, they are often criticized for having a negative impact on social programs, especially for middle-to-lower income citizens (Shah, 2010; Woodroffe and Ellis-Jones, 2000; Stiglitz, 2000). In fact, in 1992, Michel Camdessus, the managing director of the IMF from 1987-2000, stated that international agencies such as the IMF, did not sufficiently regard the human costs associated with a country’s adjustments towards market economies (Naim and Camdessus, 2000).

In this study I explore whether participation in IMF programs negatively affected the socio-economic status of Latin American countries as measured by their Human Development Index (HDI), health, and education levels\(^2\). The United Nations’ (U.N.) HDI is just one measure the multidimensional aspects of social and economic development. More specifically, the HDI measures a country’s social achievements by looking at three dimensions: 1) a long and healthy life, 2) knowledge, and 3) a decent standard of living (U.N., 2007). In this study, I consider whether IMF lending impacted the HDI in Latin American countries, as well as the impact of these loans on the

---

\(1\) Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Uruguay, and Venezuela.

\(2\) The social conditions that impact developing countries are multidimensional and have multiple determinants including income, health, education, geographic and agro-climatic factors, infrastructure, and services (World Bank).
individual components embodied in the HDI—specifically, health, education, and per capita GDP. My a priori hypothesis is that IMF lending had a positive effect on all of these socio-economic indicators in Latin America.

Contrary to my hypothesis, the empirical results suggest that IMF lending has a small, negative and statistically significant impact on HDI in these countries. However, the results also suggest that the impact of IMF lending is not uniform across all sub-components of the HDI. I find that IMF lending has a positive influence on educational attainment and per capita GDP in these countries, but has no statistical impact on health in these countries. These results could have policy implications for IMF lending operations, help determine the credibility of IMF stabilization efforts over time, and help assess the effectiveness of international organizations in Latin America.

2. Background

The purpose of the discussion in this section is to explain the complex economic conditions within Latin America, and how the region became reliant upon IMF loans and their related SAPs in the 1980s and 1990s. Despite the differing economic problems the individual countries faced, the IMF SAPs were generally designed the same. As a result, the IMF has been criticized for their “cookie-cutter” approach towards solving Latin America’s economic downturns.

Latin America faced complex internal and external economic issues, which contributed to debt crises in the 1980s and 1990s, and led to their need for IMF credit and loans. Externally, Latin America’s agriculturally based economies did not experience the full benefits of trade reform due to the inelasticity of agricultural goods and declines in
export commodity market prices. They also faced continued agricultural trade barriers from industrial countries, such as tariffs and non-trade barriers, which stifled access to world markets (Todaro, 1999). Economists point to other external factors also responsible for weakening the Latin American economies—including declining terms of trade, a recession in industrial countries, higher interest rates around the world, and decreased access to international capital markets (Pastor, 1989; Lustig, 1995; Friedmann, Lustig, and Legovini, 1995; IMF, 2006). Osterholm and Zettelmeyer (2008) found that from 1994-2001, external shocks accounted for 50 to 60 percent of the variation in Latin American GDP growth. Individually, 18 percent of the variation was caused by world growth shocks, 6 percent by commodity prices, and 34 percent by U.S. financial conditions (Österholm and Zettelmeyer, 2008).

Internal factors also negatively affected Latin America’s sluggish growth. The IMF argued that domestic macroeconomic imbalances, weak financial regulatory and supervisory frameworks, and inconsistent structural reforms caused Latin America’s setbacks. Other internal factors, such as excessive fiscal expansion, capital flight, over-borrowing, and exchange rate overvaluation were also noted (Pastor, 1989; IMF, 2006).

For several Latin American countries, these economic problems, a lack of access to capital, and rising debt obligations culminated into balance of payments crises. As private banks tried to alleviate their lending risk, they looked for IMF assurance that economic reforms would be instituted, and that the IMF itself was willing to lend to these countries. As a result, many Latin American countries took part in IMF-sponsored stabilization programs through the 1980s and 1990s.
The IMF’s conditions for economic reform were often outlined in Structural Adjustment Programs (SAPs). Edward (1995) as referenced in Crisp and Kelly (1999) explained that “structural adjustments were advocated or mandated in five areas: (1) trade liberalization; (2) exchange rates; (3) tax reform; (4) financial reform; and (5) public enterprises reform and privatization.” (Crisp and Kelly: 537) Overall, the SAP was designed to facilitate short and medium term growth, and eventually, long term sustainable growth and development (Elu, 2000). The IMF’s implementation of inflation-targeting regimes and is credited with declines in inflation. In addition, the region also adopted more market-determined exchange rates and improved macroeconomic policy flexibility (IMF, 2006). I assume that if the economic conditions within Latin America improved, then I should expect to see improvements social conditions as well.

The conditionality attached to the IMF credit arrangements was designed to improve a country’s internal and external economic balance (Boughton, 2001). However, some have argued that the IMF’s focus on reducing deficits, raising taxes, and increasing interest rates actually stunted LDC economic growth (Stiglitz, 2002). Stiglitz wrote that the IMF’s contractionary monetary policies hindered job creation, and fostered rapid market liberalization, which forced developing countries to face unfair competition. In addition, he blames the IMF for mistakes in the sequencing and pacing of reforms. The IMF itself was frustrated with Latin America’s lack of economic growth in the 1990s. Anne Krueger, the IMF’s Deputy Managing Director in 2005, called the 1990s a “decade of disappointment.”
3. Literature Review

Many studies have focused on the economic impact of IMF SAPs on major macroeconomic indicators (Doroodian, 1993; Bird, 1996; Elu, 2000), but fewer studies have analyzed the social impact. (Crisp and Kelly, 1999; Garuda, 2000; Hajro and Joyce, 2004). The following discussion details the relationship between the IMF SAPs and their social ramifications.

There are several reasons why elements of IMF SAPs are blamed for exacerbating poverty and inequality. The removal of price controls and the devaluation of the local currency can rapidly increase the price of basic goods and services (Crisp and Kelly, 1999; Woodroffe and Ellis-Jones, 2000). When exports are promoted, the costs of imports may soar. Privatization can lead to massive layoffs and the loss of service to remote or poor areas (Woodroffe and Ellis-Jones, 2000). In addition, when the IMF advocates that public sector jobs be eliminated and domestic industries scale back to face foreign competition, then the country faces job losses, and thus increased unemployment. Finally, when fiscal austerity is implemented, government services to the poor may decline. These changes impact the middle-to-lower income families more than the elites, burdening the lower classes with a greater share of the social and fiscal cost of IMF programs (Crisp and Kelly, 1999).

The studies that focus on the IMF’s economic impact are also important, because economic growth can be translated into improvements in social conditions. Several economists found that the IMF had little to no effect on the Latin American economic growth (Doroodian, 1993; Elu, 2002; Mosley, Harrigan and Toye, 1995). Doroodian (1993) evaluated IMF stabilization programs from 1977-1983 for 43 developing
countries. His studied the IMF policy instruments used in SAPs, to include devaluing the domestic currency, reducing government expenditures, increasing taxes, reducing domestic credit growth, and increasing the domestic interest rate. He examined how IMF tools affected three important macroeconomic variables: the economic growth rate, the inflation rate, and the current account balance. Overall, Doroodian (1993) found that IMF programs had no effect on real growth, and that IMF programs reduced inflation and improved the current account balance.

Elu (2002) analyzed the 13 Caribbean Island countries in the Caribbean Community and Caribbean Common Market, and the effect of SAPs on unemployment, inflation, and international payments imbalances. She found that although the SAPs promoted export-led growth, they did not promote development (Elu, 2002). Mosley, et al. (1995) had mixed results. SAP implementation was favorable for export growth and the external account, but negative on aggregate investment, and neutral on national income and overseas financial flows.

Other authors found that Fund programs hurt growth and have negative distributional consequences (Vreeland 2003; Stiglitz, 2002; Hutchison and Noy, 2003). Hutchison and Noy (2003) studied the macroeconomic effects of IMF-supported stabilization programs, and conducted econometric tests using 67 countries from 1975-1997. They focused on the output growth and balance of payments adjustments in Latin America, and found no improvement in the current account. They also found that Latin American macroeconomic stabilization programs failed with and without IMF support. Mosley, Harrigan and Toye (1991) evaluated the effectiveness of adjustment policies imposed by the World Bank and IMF. Their analysis covering the period from 1980-1986 concluded
that compliance with adjustment policies had a small positive effect on GDP growth. However, the policies had a negative influence on aggregate investments, and was neutral for national income and financial flows from overseas (Mosley, Harrigan and Toye, 1991).

A few authors pointed out that adjustment and reform fostered economic growth in the long run, despite a heavy short-run cost (Morley, 1995; Sadoulet and de Janvry, 1995). Sadoulet and Janvry (1995) determined that if a Latin American country had no-policy adjustment, there was a low cost to economic growth in the short run, but that in the medium run, sharp increases in interest rates and inflation led to declining economic growth. They concluded that although fiscal adjustment hurt growth in the short run more than monetary adjustment, in the long run, fiscal adjustment was superior in helping economic growth.

Other studies considered both economic and social conditions in Latin America (Williamson, 2000; Crisp and Kelly, 1999; Burki and Perry, 1998; Lustig, 1995). Crisp and Kelly (1999)’s study of reforms in Latin American countries during the 1980s examined five economic and social factors: growth, inflation, recession, poverty, and inequality. For social factors, they examined the percent of population below the national poverty line, and the Gini coefficient, a commonly used measurement for income inequality. They concluded that adjustment was weakly associated with growth, and negatively associated with both poverty and equality, while reform seemed to reduce inflation. Thus, their analysis indicated that by improving economic conditions, reforms might have decreased the incidence of poverty and income inequality.
Some studies found that inflation reduction programs provided relief to the poor and reduced poverty (Williamson, 2000; Lustig, 1995), while other studies pointed out that reduced inflationary measures helped economic recovery but did not significantly help reduce poverty and inequality (Burki and Perry, 1997). However, Lustig (1995) wrote that programs that reduced inflation especially benefited the poor because their wages were less likely to be indexed to inflation.

Others found that the IMF programs improved employment and wages (Krueger, 1988; Sahn, 1994,1996). Krueger argued that the IMF’s development strategies increased employment and wages, as government distortions on the labor markets and international trade declined. Sahn (1994, 1996) found that adjustment marginally improved real income of the poor primarily through increased earnings to agricultural producers.

In my research, there were few articles that related IMF programs to health and education, and my study seeks to add to this body of literature. Hajro and Joyce (2004) studied 82 countries, and found that IMF programs had no significant direct impact on poverty from 1985-2000. However, they found that IMF programs increased the impact of growth on lowering infant mortality. They measured poverty using infant mortality rates and the HDI, and studied the effects of the IMF concessionary and non-concessionary programs, as well as economic and governance factors. Garuda (2000), as reported in Hajro and Joyce (2004) analyzed the impact of IMF programs on Gini coefficients in 39 countries from 1975-1991. He found that in countries with IMF programs, the income share fell for the poorest quintile, compared to countries that did not adopt IMF programs. However, the average income in the poorest quintile rose,
which he attributed to a positive growth effect from IMF programs. Both of these studies indicate that countries saw little to no change to their social conditions when they participated in IMF programs.

Other studies did not associate their research with the IMF specifically, but analyzed the social conditions during the timeframe of my study (Barros, Mendonca, and Rocha, 1995; Friedmann, Lustig and Legovini, 1995, Lustig, 1995; Raczynski and Romaguera, 1995). These studies also had differing conclusions. Some studies found that although poverty and inequality increased, infant mortality rates, life expectancy, and educational performance continued to improve in the 1980s, albeit at slower rates than the 1970s (Barros, Mendonca, and Rocha, 1995; Friedmann, Lustig and Legovini, 1995). Lustig (1995) suggests that the region reached a plateau after this period, and that the slower rates of improvement were not due to Latin America’s economic decline in the 1980s. Barros, Mendonca, and Rocha (1995) suggested that investments in public education made in previous decades and advances in health and technology helped. These investments included increases in the number of hospitals and doctors, improved water and sanitation facilities, greater levels of education reached by mothers, implementation of better health practices, and more widespread immunizations and inoculations.

However, other studies linked the decline in economic conditions to the slower pace of social improvements. They found that cyclical fluctuations in GDP affected infant mortality in Brazil (Barros, Mendonca, and Rocha, 1995) and infant birth weight and child nutrition levels in Chile (Raczynski and Romaguera, 1995). In addition, infant and preschool mortality due to nutritional deficiencies increased in Mexico in the 1980s.
Studies that analyzed literacy in the 1980s also varied in their conclusions. Although the number of students advancing to the next education level shrank in the 1980s (Friedmann, Lustig, Legovini, 1995) and literacy rates in Venezuela fell in the years of 1981-1990 (Marquez, 1995), the literacy rates improved and the years of schooling increased in six countries, but at a slower pace than the 1970s.

In the early 2000s, the IMF wanted to focus more on institutional change in order to sustain reform policies, and to reduce income inequality and poverty. This shift in focus has been called the second-generation of reforms. They include improving the quality of, and investing in the development of human capital, financial markets, legal and regulatory environments, and the public sector (Burki and Perry, 1997; Williamson, 2000). The timeframe of my paper does not enable me to analyze whether the second-generation reforms were more effective than the initial reforms. However, a similar study which analyzes the post-2000 years would be useful in determining if there is a difference from one decade to the next.

4. Method

To reiterate, the purpose of this study is to determine the impact of IMF lending on the Latin America’s social development between 1980 and 2000. In order to empirically explore this question, a precise definition of “Latin America” must first be identified. The definition of Latin America varies among sources. The U.N. Statistics Division identifies Latin America as Central America, South America, and the Caribbean, with Mexico included in the Central America classification (U.N., 2009). The IMF separates the Caribbean countries from their definition of Latin America, and classifies Mexico in
the North America region (IMF, 2009). Empirical studies have varied in their definition of Latin America. Some studies have used a weighted index of the largest regional economies (Österholm and Zettelmeyer, 2007; Kriljenko et. al, 2009) or have focused on individual countries (Singh 2005) closely related to their topic of interest. The definition of Latin America used in my paper most closely resembles that of Crisp and Kelly (1999) due to the similarity of our studies. I also included Guyana due to the availability of data for that country. Suriname has no transactions with the Fund since January 1,1984, and so was not included in this study. Malvinas and French Guiana are also omitted because IMF data was not available for these countries. In summary, the 17 countries used in this study include Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Uruguay, and Venezuela.

I consider the impact of IMF lending on the socio-economic development for each of these countries. It is therefore important to explain the variables I chose to capture the social aspects of economic development. I chose to use the U.N.’s Human Development Index (HDI) as my key dependent variable, as well as three additional indicators of development—health, education, and per capita GDP. The HDI is a composite index that measures a country’s achievement in these three latter dimensions.

The U.N. Development Programme (UNDP) is responsible for the Human Development Report (HDR), which calculates and reports the HDI in five-year intervals. The HDI is created from U.N.-developed indices which measure different three dimensions described below. To calculate each of these indices, the U.N. chose
underlying indicators, and then set minimum and maximum goalposts. The formulas in the following discussion are taken from the 2007/2008 HDR.

The first dimension, achieving a long and healthy life, is measured with the life expectancy index. This index has only one indicator—life expectancy at birth. The maximum value goalpost is 85 years, and the minimum value goalpost is 25 years. Thus, the life expectancy index formula is:

\[
\text{life expectancy index} = \frac{\text{life expectancy (yrs)} - 25}{85 - 25}
\]

The second dimension, knowledge, is calculated using an education index, which is a combination of two indices. The first is the adult literacy index, and it is given \( \frac{2}{3} \) weight in the overall education index. The adult literacy index uses an indicator for adult literacy, a minimum goalpost of 0, and a maximum goalpost of 100. Thus, the adult literacy index formula is:

\[
\text{adult literacy index} = \frac{\text{adult literacy rate(\%) } - 0}{100 - 0}
\]

The second index is called the gross enrollment index, and it is given \( \frac{1}{3} \) weight of the overall education index. The UN used the indicator of the combined primary, secondary, and tertiary gross enrollment ratio (%) to create this index. The minimum
goalpost is 0, and the maximum goalpost is 100. Thus, the gross enrollment index formula is:

\[
gross\ enrollment\ index = \frac{\text{gross\ enrollment\ ratio} - \text{0}}{100 - 0}
\]

Finally, the education index which measures the dimension of knowledge is:

\[
education\ index = \frac{2}{3}(\text{adult\ literacy\ index}) + \frac{1}{3}(\text{gross\ enrollment\ index})
\]

The third and last dimension is a decent standard of living, which is measured using a GDP index. The sole indicator in this index is the adjusted GDP per capita (PPP, US$). The minimum goal post is $100, and the maximum is $40,000. According to the HDR, income is adjusted “because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used.” (UNDP: 356).

\[
\text{GDP\ index} = \log (\text{country’s GDP per capita}) - \log (100) - \log(40,000) - \log(100)
\]

In conclusion, the U.N.’s HDI is calculated as a simple average of each of the dimension indices.

\[
\text{HDI} = \frac{1}{3}(\text{life\ expectancy\ index}) + \frac{1}{3}(\text{education\ index}) + \frac{1}{3}(\text{GDP\ index})
\]
HDI scores can range from 0 to 1 for each dimension, and are averaged for an overall score that also falls somewhere between 0 and 1. All countries are classified into one of three clusters, based upon their HDI score: high human development (HDI of 0.800 or above), medium human development (0.500-0.799) and low human development (less than 0.500) (U.N., 2002). A summary of the HDI scores for the 17 countries in this study is provided in Table 1. Of note, according to the 2002 HDR from which all HDI data was obtained, all countries in this study were either in the U.N.’s category of high human development (Argentina, Chile, Uruguay, Costa Rica) or medium human development (Guyana, Bolivia, Brazil, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Venezuela).

Table 1. HDI Trends in Latin America

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<tbody>
<tr>
<td>Argentina</td>
<td>0.799</td>
<td>0.808</td>
<td>0.844</td>
<td>1.13%</td>
<td>4.46%</td>
<td>5.63%</td>
<td>High</td>
</tr>
<tr>
<td>Chile</td>
<td>0.737</td>
<td>0.782</td>
<td>0.831</td>
<td>6.11%</td>
<td>6.27%</td>
<td>12.75%</td>
<td>High</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>0.769</td>
<td>0.787</td>
<td>0.820</td>
<td>2.34%</td>
<td>4.19%</td>
<td>6.63%</td>
<td>High</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.777</td>
<td>0.801</td>
<td>0.831</td>
<td>3.09%</td>
<td>3.75%</td>
<td>6.95%</td>
<td>High</td>
</tr>
<tr>
<td>Guyana</td>
<td>0.679</td>
<td>0.680</td>
<td>0.708</td>
<td>0.15%</td>
<td>4.12%</td>
<td>4.27%</td>
<td>Medium</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0.548</td>
<td>0.597</td>
<td>0.653</td>
<td>8.94%</td>
<td>9.38%</td>
<td>19.16%</td>
<td>Medium</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.679</td>
<td>0.713</td>
<td>0.757</td>
<td>5.01%</td>
<td>6.17%</td>
<td>11.49%</td>
<td>Medium</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.69</td>
<td>0.724</td>
<td>0.772</td>
<td>4.93%</td>
<td>6.63%</td>
<td>11.88%</td>
<td>Medium</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0.673</td>
<td>0.707</td>
<td>0.732</td>
<td>5.05%</td>
<td>3.54%</td>
<td>8.77%</td>
<td>Medium</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0.586</td>
<td>0.644</td>
<td>0.706</td>
<td>9.90%</td>
<td>9.63%</td>
<td>20.48%</td>
<td>Medium</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0.543</td>
<td>0.579</td>
<td>0.631</td>
<td>6.63%</td>
<td>8.98%</td>
<td>16.21%</td>
<td>Medium</td>
</tr>
<tr>
<td>Honduras</td>
<td>0.566</td>
<td>0.615</td>
<td>0.638</td>
<td>8.66%</td>
<td>3.74%</td>
<td>12.72%</td>
<td>Medium</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.734</td>
<td>0.761</td>
<td>0.796</td>
<td>3.68%</td>
<td>4.60%</td>
<td>8.45%</td>
<td>Medium</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0.576</td>
<td>0.592</td>
<td>0.635</td>
<td>2.78%</td>
<td>7.26%</td>
<td>10.24%</td>
<td>Medium</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0.699</td>
<td>0.717</td>
<td>0.740</td>
<td>2.58%</td>
<td>3.21%</td>
<td>5.87%</td>
<td>Medium</td>
</tr>
<tr>
<td>Peru</td>
<td>0.669</td>
<td>0.704</td>
<td>0.747</td>
<td>5.23%</td>
<td>6.11%</td>
<td>11.66%</td>
<td>Medium</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.731</td>
<td>0.757</td>
<td>0.770</td>
<td>3.56%</td>
<td>1.72%</td>
<td>5.34%</td>
<td>Medium</td>
</tr>
</tbody>
</table>

Source: HDR 2002, Human Development Index Trends, p 153-156.
Overall, the region improved its HDI scores in both decades. Between 1980 and 2000, all countries experienced between a 5 to 20 percent increase in HDI scores. In this paper, I explore the possibility that IMF lending had a positive impact on human development and subsequently has a statistical influence on this positive trend.

5. Model and Data

5.1 Theoretical and Empirical Model

To test whether the IMF improved Latin America’s social conditions, I begin with a theoretical model, which stems from a Cobb-Douglas production function. A Cobb-Douglas functional form of the production function is commonly assumed as it easily lends to empirical investigation using linear regression analysis. Two factors of production most commonly included are physical capital (K) and labor (L). Assuming a production function where K and L are the only factors of production, the general production function would be written:

\[ Y = A F(K,L) \]  

(1)

where \( Y \) is the output of a country, and \( A \) captures variation between countries not accounted for by K and L. The Cobb-Douglas functional form of the general production function would appear as such:

\[ Y = A K^{\beta_0} L^{\beta_1} \]  

(2)
In order to study this function using regression analysis, I needed to derive a linear estimating equation. This was accomplished by taking the log of both sides. More specifically, my estimating equation is:

\[ \ln Y = \alpha + \beta_0 \ln K + \beta_1 \ln L \]  

The above provides a simplistic overview of using a production function with only two inputs—K and L—to obtain an estimation equation. I extended this simple model to consider the impact of additional inputs: IMF lending, total trade, and GDP in the base year. (I will discuss my rationale for including these as independent variables later in this section.) Each of these additional independent variables not only contributes to a country’s output but also more generally to their level of social and economic development. I consider four possible indicators of socio-economic development as possible dependent variables: HDI and each of its contributing components—health (H), education (EDU) and per capita income (GDPCAP).

5.1.1. Deriving the HDI equation

To derive the estimating equation for HDI, I begin with the general production function for HDI:

\[ \text{HDI} = A_1 F(K, L, \text{TFCLO}, \text{TRA}, \text{GDP}_{\text{base}}) \]  

where:

- HDI - Human Development Index
- K - physical capital stock
- L - labor
- TFCLO - IMF Total Funds Credit and Loans Outstanding
- TRA - total trade
- GDP\text{base} - GDP with a base year of 1979
Using a Cobb-Douglas functional form, the production function for HDI would appear as such:

\[
\text{HDI} = A_1 K^{\beta_0} L^{\beta_1} \text{TFCLO}^{\beta_2} \text{TRA}^{\beta_3} \text{GDP}_{\text{base yr}}^{\beta_4} \quad (5)
\]

This equation is then log linearized, in order to derive the following estimating equation:

\[
\ln \text{HDI} = \alpha + \beta_0 \ln K + \beta_1 \ln L + \beta_2 \ln \text{TFCLO} + \beta_3 \ln \text{TRA} + \beta_4 \ln \text{GDP}_{\text{base yr}} \quad (6)
\]

5.1.2 Deriving the Health, Education, and Per capita GDP Equations

As stated earlier, the HDI is comprised of three dimensions—health, education, and per capita GDP. In my empirical analysis, I also consider each of these dimensions as possible dependent variables. This is done to provide further insight into the factors that comprise a country’s HDI and determine if the IMF impact on each component is statistically significant.

**Health:**

\[
H = A_2 F(K, L, \text{TFCLO}, \text{TRA}, \text{GDP}_{\text{base yr}}) \quad (7)
\]

\[
H = A_2 K^{\chi_0} L^{\chi_1} \text{TFCLO}^{\chi_2} \text{TRA}^{\chi_3} \text{GDP}_{\text{base yr}}^{\chi_4} \quad (8)
\]

\[
\ln H = \alpha_2 + \chi_0 \ln K + \chi_1 \ln L + \chi_2 \ln \text{TFCLO} + \chi_3 \ln \text{TRA} + \chi_4 \ln \text{GDP}_{\text{base yr}} \quad (9)
\]

**Education:**

\[
\text{EDU} = A_3 F(K, L, \text{TFCLO}, \text{TRA}, \text{GDP}_{\text{base yr}}) \quad (10)
\]

\[
\text{EDU} = A_3 K^{\delta_0} L^{\delta_1} \text{TFCLO}^{\delta_2} \text{TRA}^{\delta_3} \text{GDP}_{\text{base yr}}^{\delta_4} \quad (11)
\]

\[
\ln \text{EDU} = \alpha_3 + \delta_0 \ln K + \delta_1 \ln L + \delta_2 \ln \text{TFCLO} + \delta_3 \ln \text{TRA} + \delta_4 \ln \text{GDP}_{\text{base yr}} \quad (12)
\]
Per Capita GDP:

\[ \text{GDPCAP} = A_4 F(K, L, \text{TFCLO}, \text{TRA}, \text{GDP}_{\text{base}}) \]  \hspace{1cm} (13)

\[ \text{GDPCAP} = A_4 K^{\theta_0} L^{\theta_1} \text{TFCLO}^{\theta_2} \text{TRA}^{\theta_3} \text{GDP}_{\text{base yr}}^{\theta_4} \]  \hspace{1cm} (14)

\[ \ln \text{GDPCAP} = \alpha_4 + \theta_0 \ln K + \theta_1 \ln L + \theta_2 \ln \text{TFCLO} + \theta_3 \ln \text{TRA} + \theta_4 \ln \text{GDP}_{\text{base yr}} \]  \hspace{1cm} (15)

It is important to note that the log linearized equations—equations (6), (9), (12) and (15)—are my final estimating equations used in my regression analysis.

5.2 Dependent Variables

Earlier in this section, I provided a thorough review of the Human Development Index (HDI). This is the key dependent variable in my empirical analysis as it is a comprehensive measure of socio-economic development in a country. However, as previously stated, I am also interested in exploring the impact of IMF lending on each of the contributing components of the HDI measure—namely health, education, and per capita GDP. Because the HDI data was available only in five-year increments, I decided to limit my data to the same five-year intervals. Thus, there are five observations for each country, to include the years 1980, 1985, 1990, 1995, and 2000. The one exception is the IMF lending variable, in which the year value is a sum of the previous five years.

The data I collected for health, education, and per capita income is similar to that which the U.N. uses to compute the HDI, but given the complexities of the HDI measurement, the data are not identical. In my analysis, health (H) in a country is measured using life expectancy at birth from the World Bank’s World Development Indicators (WDI) database. The World Bank obtains this information from census
I approximate education levels (EDU) in a country using their secondary school enrollment rates, as reported by the WDI. The WDI defines secondary school enrollment as the ratio of total enrollment in secondary school to the population of the age group that corresponds to the secondary school level of education.\(^3\) When data was not available for a specific year, I calculated the average yearly change using the nearest available data, and estimated the enrollment ratio value. According to Barro and Lee (2000), “the level and distribution of educational attainment has a strong impact on social outcomes, such as child mortality, fertility, education of children, and income distribution” (1), suggesting that there is a strong link between all of my dependent variables.\(^4\)

I use gross domestic product (GDP) per capita to represent the average income level in each country. Data on this variable was also collected from the World Bank’s WDI. According to the WDI, GDP per capita is the GDP divided by the midyear population. The WDI definitions for GDP per capita, as well as the other WDI variables used in this study are found in Appendix 2.

---

\(^3\) The WDI noted that there is a break in the series between 1997 and 1998 because of a change from the International Standard Classification of Education (ISCED76) to ISCED97. (WDI, 2009)

\(^4\) For my study, the Barro and Lee (2000) is another potential source of education data. Their research contained data on educational attainment in 138 countries and provided schooling estimates at five year intervals from 1960-1995, with projections for 2000. They also provide data for various levels of schooling, to include no school, primary, secondary, and higher levels of schooling, as well as the average years of school. Like the WDI, Barro and Lee also collect data from UNESCO. However, they adjust the gross enrollment ratios for school repeaters, and use census data to stratify the total population into two age groups--those over age 15, and those over age 25.
5.3 **Independent Variables**

**IMF Funds (TFCLO)**

The primary independent variable of interest is my proxy for IMF lending. A lending arrangement is an IMF-approved decision to provide foreign exchange or special drawing rights (SDR) to a member in accordance with the terms of the agreement (IMF\(^a\), 2009). IMF lending arrangements have different disbursement schedules and maturities. The arrangements support economic programs in which the member acts to “reduce their economic imbalance and achieve sustainable growth” (IMF\(^a\), 2009). In order to be eligible to receive a disbursement, the member is obligated to adhere to the particular terms of the arrangement (IMF\(^b\), 2009).

A Standby Arrangement (SBA) is one type of arrangement extended to many Latin American countries during the timeframe of this study. The SBA was designed to help countries with short-term balance of payment issues, and comprised the bulk of Fund assistance to middle-income countries. SBAs included monetary and budgetary targets which countries needed to meet within a certain timeframe to be eligible for continued Fund disbursements. In other words, disbursements were conditional on achieving certain macroeconomic performance criteria. This was known as “conditionality” (IMF\(^c\), 2009).

Besides the SBA, the IMF also created “facilities”—loan instruments that were tailored to address specific circumstances within low-income countries. These included the Extended Fund Facilities (EFF), established in 1974, and the Structural Adjustment Facilities (SAF), established in 1986. The SAF was replaced by the Enhanced Structural
Adjustment Facilities (ESAF) in 1987, which was then replaced by the Poverty Reduction and Growth Facility (PRGF) in 1999. The difference between the SAF, ESAF and PRGF was that the PRGF was designed to be more limited to the IMF’s core areas of expertise, and to increase its focus on living standards and poverty reduction as well (IMF, 2009). Because the SAF was replaced by the ESAF, which was followed by the PRGF, they are all listed together in Table 2. Table 2 provides short descriptions of each of these IMF lending facilities as well as their payment and maturity schedules.

Table 2. IMF Arrangements Disbursement Schedules and Maturities (IMF, 2009)

<table>
<thead>
<tr>
<th>Arrangement</th>
<th>Description</th>
<th># Installments</th>
<th>Repayment Schedule (# Yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand-By Arrangement (SBA)</td>
<td>Most common. Provides short-term financial assistance.</td>
<td>8 quarters</td>
<td>3 ¼-5</td>
</tr>
<tr>
<td>Extended Fund Facility (EFF)</td>
<td>Longer duration arrangements. Programs target reforms which may need more time to set up and take effect.</td>
<td>12 semiannual</td>
<td>4 ½-10</td>
</tr>
<tr>
<td>Poverty Reduction and Growth Facility (SAF/ESAF/PRGF)</td>
<td>Concessional loans to low-income members. Credit provided at interest rate of ½-1 percent.</td>
<td>10 semiannual</td>
<td>5 ½/10</td>
</tr>
</tbody>
</table>

To approximate the amount of IMF resources available to a country in a given year, I collected data on “total fund credit and loans outstanding” in a country, which is defined as the sum of outstanding loans under the SAF, PRGF, and Trust Fund, and the use of

---

5 The Trust Fund was money lent to low-income countries at an interest of ½ percent a year. Loans were made from January 1977 until February 1981. Reflows were expected from 1982 until 1992. The Trust Fund was replaced by the SAF. The GRA includes the SBA and EFF. (Boughton, 2001).
Fund resources within the General Resources Account (GRA)\textsuperscript{6}. The information was available from the IMF International Financial Statistics (IFS) online database. In my empirical analysis, this variable is abbreviated as “TFCLO”.

The TFCLO data is reported in Standard Drawing Rights (SDRs), the IMF unit of currency. The SDR value is determined by a basket of world currencies, which include the U.S. dollar, the Euro, the pound Sterling, and the yen. It is then summed in U.S. dollars. For my analysis, the SDR values reported in the IFS are converted from current to constant US$, in order to standardize and compare my currency variables. The formula below is used to compute this value. This study uses the reported US$/SDR exchange rate, for end of period. The source of the U.S. Consumer Price Index (CPI) is the World Development Indicators (WDI) database, where the 2005 base year CPI is 100.

$$\text{TFCLO \$US}_{\text{const 2005}} = \left[ \text{TFCLO SDR} \times (\text{US$/SDR}) \right] \times \frac{\text{CPI}_{2005}}{100}$$ \hspace{1cm} (16)

A summary of the TFCLO values is provided in Table 3.\textsuperscript{7} The TFCLO data is depicted in five-year intervals from 1980-2000. The value used for a given year is a sum of the previous five years of lending.

\textsuperscript{6} The GRA is the account from which the IMF finances regular lending operations.
\textsuperscript{7} Columbia and Paraguay did not receive any IMF lending during the time period studied in this paper. For that reason, the TFCLO data for Columbia and Paraguay is zero.
Table 3. TFCLO for Latin America (1000 USD)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>El Salvador</td>
<td>467</td>
<td>5,699</td>
<td>1,008</td>
<td>0</td>
<td>0</td>
<td>7,174</td>
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<tr>
<td>Nicaragua</td>
<td>1,218</td>
<td>668</td>
<td>0</td>
<td>1,614</td>
<td>4,315</td>
<td>7,815</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0</td>
<td>6,224</td>
<td>3,566</td>
<td>948</td>
<td>0</td>
<td>10,738</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2,195</td>
<td>7,317</td>
<td>4,228</td>
<td>3,366</td>
<td>7</td>
<td>17,113</td>
</tr>
<tr>
<td>Honduras</td>
<td>675</td>
<td>6,310</td>
<td>2,910</td>
<td>4,715</td>
<td>6,428</td>
<td>21,039</td>
</tr>
<tr>
<td>Guyana</td>
<td>2,197</td>
<td>4,601</td>
<td>5,461</td>
<td>8,443</td>
<td>7,373</td>
<td>28,075</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2,644</td>
<td>9,054</td>
<td>13,988</td>
<td>1,993</td>
<td>4,749</td>
<td>32,428</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0</td>
<td>8,107</td>
<td>19,703</td>
<td>7,250</td>
<td>4,958</td>
<td>40,017</td>
</tr>
<tr>
<td>Bolivia</td>
<td>2,058</td>
<td>5,447</td>
<td>10,959</td>
<td>12,457</td>
<td>12,553</td>
<td>43,474</td>
</tr>
<tr>
<td>Chile</td>
<td>14,816</td>
<td>25,285</td>
<td>65,446</td>
<td>24,466</td>
<td>0</td>
<td>130,011</td>
</tr>
<tr>
<td>Peru</td>
<td>16,885</td>
<td>31,111</td>
<td>38,873</td>
<td>41,129</td>
<td>41,331</td>
<td>169,329</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0</td>
<td>0</td>
<td>40,098</td>
<td>137,559</td>
<td>59,834</td>
<td>237,490</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>119,991</td>
<td>160,536</td>
<td>26,682</td>
<td>155,184</td>
<td>462,393</td>
</tr>
<tr>
<td>Argentina</td>
<td>9,478</td>
<td>45,840</td>
<td>164,553</td>
<td>186,587</td>
<td>271,366</td>
<td>677,823</td>
</tr>
<tr>
<td>Mexico</td>
<td>13,145</td>
<td>68,108</td>
<td>256,693</td>
<td>371,910</td>
<td>352,196</td>
<td>1,062,051</td>
</tr>
</tbody>
</table>

Source: International Financial Statistics (IFS) Online Database, 2009

*Physical Capital (K)*

Physical capital stock (K) is a factor of production (almost) always included in a country’s production function. Therefore, K can be viewed as a control variable. As physical capital increases, I would expect increases in a country’s GDP and, more generally, increases in economic development. Therefore, I would expect a positive relationship between K and the dependent variables of HDI, H, EDU, and GDPCAP.

However, it is important to note that if the IMF provided financial loans to a country, I could assume that a portion of the financial assets would be invested in capital, thus increasing physical stock. This might cause multicollinearity, but I find in my results that it did not.
My empirical analysis uses data on physical capital stock reported by Nehru and Dhareshwar (1995) and Briggs (2010). Nehru and Dhareshwar (1995) calculated the physical capital stock for 92 countries from 1960 to 1990 using the domestic country’s currency in constant 1987 prices. Based upon their study, Briggs (2010) extended the physical capital stock for the years 1990 to 2000 by using gross capital formation data as provided by the World Bank’s WDI database. She also created cross-country comparison opportunities by using the average period market exchange rate\(^8\) and converting the data into constant 1987 US$.

\textit{Labor (L)}

Labor is also included as a controlled variable. Labor is expected to have a positive impact on a country’s productivity and, thus, on the dependent variables under consideration. More workers could translate into more output, including output related to the social indicators of health and education. It should also improve the country’s GDP per capita as the amount of wages increases.

Total labor is a complicated to measure, due to the large informal employment sector that exists within developing countries. “The International Labor Office (ILO) estimated that, in 1995, no less than 57 percent of the region’s workers were employed in the informal sector, and increase from approximately 52 percent in 1990” (Burki and Perry, 1997: 91). To capture both the informal and formal employment, this study assumes full employment and creates a proxy using the total population within the ages of 15-64. Thus, it is not the employment rate but the number of workers. It does not account for

\(^8\) Rates provided by the IMF’s International Financial Statistics (IFS) database. The data has a base year of 1976, and is measured in constant 1987 US$. 

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the labor of children under the age of 15, although child labor may contribute to the overall labor force, especially in developing countries. I therefore use the following equation to determine total labor:

$$\text{Total labor} = (\text{population}_{\text{total}})\times(\% \text{ of total population between the ages 15-64})$$ \hspace{1cm} (17)

There is potential that the dependent variables of health and education could also impact the independent variable of labor. Healthier people have the potential to work longer hours and more days, and a more educated population could increase the number of people within a workforce. However, the variable of labor in this study is measured by population, and may avoid these particular endogeneity problems.

Population data is from the WDI database. The World Bank uses various sources, to include national statistical offices, census reports, the U.N. Population Division, household surveys, and ICF Macro to collect their data. The values provided are midyear estimates.

*Total Trade (TRA)*

The factor-price equalization theorem states that “International trade will bring about equalization in the relative and absolute returns to homogenous factors across nations” (Salvatore, 125). This theorem indicates that international trade will cause changes in the price of labor relative to the price of capital. For nations that are labor abundant and specialize in the production of labor-intensive commodities, the price of labor, or wage rate, increases while the price of capital, or real rents, decreases. Thus, based upon the
theoretical model, I would expect that there is a link between trade and income in a country.

In the case of Latin America, I assume that these countries are more labor abundant and capital scarce than its trading partners, the United States and European countries. Therefore theoretical underpinnings suggest that as Latin America increased trade, their wage rates would increase, and so trade would have a positive relationship to wage rates. However, Salvatore (1995) points out that many other forces can impact per capita income. “These other forces include the ratio of skilled to unskilled labor, the participation rate in the labor force, the dependency rate, the type of effort made by workers, as so on.” (Salvatore, 130)

According to the factor price equalization theorem, I would also expect the price of capital to decrease in labor-abundant Latin America. Therefore, I assume that trade will have a positive impact on wages and a negative impact on rents, given my assumption that Latin American countries are labor abundant relative to their trading partners. The opposing influence that trade has on rents and wages will likely cause conflicting influences on a country’s GDP.

To account for the impact of trade on the social conditions in Latin America, I added trade as an independent variable. To measure total trade, the amount of imports and exports of goods and services were summed together. These values were individually collected from the WDI.\(^9\) Data is reported in constant 2000 US$.

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\(^9\) The WDI value of imports and exports includes “…the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments.” (WDI Notes, 2009)
Total Trade = Exports of Goods and Services + Imports of Goods and Services \hspace{1cm} (18)

There is a potential for multicollinearity in the relationship between the IMF loans and trade. The conditionality of the IMF loans usually included the implementation of some level of trade reform. Latin American trade liberalization reforms were characterized by the reduction of tariff structures and import tariffs, the reduction of non-tariff barriers, and the reduction or removal of export taxes (Edwards, 1995). If trade reforms were implemented, I would expect to see an improvement in total trade, in both level of exports and imports. This issue can be addressed in future study of this topic.

\textit{Initial GDP} \hspace{0.5cm} (GDP_{\text{base}})

The initial level of GDP in a country is also included as an independent variable in this study. I use GDP with a base year of 1979, the year prior to the start of my data set (1980), in order to try to capture the impact of a country’s “starting off” point. In other words, the purpose of including the GDP_{\text{base}} variable as an independent variable is to account for the starting level of each individual country’s GDP in my analysis. If the coefficient of GDP_{\text{base}} is significant and positive, then I would determine that countries starting with higher levels of GDP are more likely to see a positive improvement in social conditions. If the coefficient of GDP_{\text{base}} is insignificant, than I would assess the IMF’s impact on a country’s social conditions does not depend on the initial level of GDP a country has prior to IMF involvement. Empirical results suggest that multicollinearity does not exist between these variables.
Based upon the HDI trend analysis in Table 1, I hypothesize that the GDP$_{\text{base}}$ would be insignificant, because the countries with the largest improvement in HDI were some of the poorer countries in the study, such as Bolivia, Honduras, and Guatemala. The analysis may find that the poorer a country was prior to receiving IMF funding, the more of an impact the IMF could make to the basic social conditions in a country.

6. Results

Table 4 provides a summary of the descriptive statistics for all countries in the study. The lowest HDI values were held by Guatemala and Bolivia in the 1980s, with values below .580. The highest values were held by Argentina in 2000 with an HDI of .844. Other countries with relatively high HDI included Chile and Uruguay. Health, as measured by life expectancy, was also lowest for Guatemala in the 1980s, as well as for Bolivia, El Salvador, and Nicaragua. The highest rates were held by Costa Rica and Chile in the late 1990s. Costa Rica had the longest life expectancy rate, at 77.8 years in 2000.

As mentioned previously, the education levels are a measurement of a country’s secondary school enrollment rates. For education, the lowest rates were in Guatemala, at 18 percent, which were low from 1980-1995. Guatemala’s highest rate was reached in 2000, with a rate of 38 percent. Education levels progressively improved with each five year interval for most countries. The highest rates were held by Brazil (104 percent) and Uruguay (98 percent) in 2000. Brazil’s rate above 100 percent may be due to the computation method for enrollment. It is a ratio of total enrollment to the population of the age group that corresponds to the level of education. Therefore, I conjecture that
Brazil’s 104 percent enrollment may be due to a larger number of students enrolled in secondary schools than were in the age group associated with secondary school, possibly due to repeaters.

The GDP per capita was lowest for Guyana in the 1990s, with a value of $590. Of note, Guyana had a higher GDP per capita in 1980, when the value was $804. The highest values were in Argentina for most years sampled. In 2000 their GDP per capita was $7703.

The last value I would like to briefly discuss is the TFCLO variable. The lowest value was zero, mainly due to Columbia and Paraguay, who did not take IMF loans from 1980-2000. Also of note, Venezuela and El Salvador did not use IMF monetary assistance from 1980-1985, and 1995-2000, respectively. Mexico used IMF funds the most, with values at 372 million USD in 1995 and 352 million USD in 2000.

Table 4. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>85</td>
<td>0.7064</td>
<td>0.0785</td>
<td>0.543</td>
<td>0.844</td>
</tr>
<tr>
<td>Health^1 (yrs)</td>
<td>85</td>
<td>67.6</td>
<td>5.34</td>
<td>52.4</td>
<td>77.8</td>
</tr>
<tr>
<td>Education^2 (%)</td>
<td>85</td>
<td>54.9</td>
<td>18.4</td>
<td>18.0</td>
<td>104</td>
</tr>
<tr>
<td>GDP per capita (const. 2000 USD)</td>
<td>85</td>
<td>2772</td>
<td>1933</td>
<td>590</td>
<td>7703</td>
</tr>
<tr>
<td>L (persons in millions)</td>
<td>85</td>
<td>1,410</td>
<td>2,280</td>
<td>42.7</td>
<td>11,300</td>
</tr>
<tr>
<td>TFCLO (const. 2000 USD in millions)</td>
<td>85</td>
<td>34.7</td>
<td>74.9</td>
<td>0</td>
<td>372</td>
</tr>
<tr>
<td>Trade (const. 2000 USD in billions)</td>
<td>85</td>
<td>24.9</td>
<td>49.1</td>
<td>.575</td>
<td>371</td>
</tr>
<tr>
<td>GDP_base (const. 2000 USD in billions)</td>
<td>85</td>
<td>70.1</td>
<td>116</td>
<td>.613</td>
<td>394</td>
</tr>
</tbody>
</table>

Notes: 1 Health is a measure of life expectancy, and is measured using the number of years a newborn would live, given the current patterns of mortality at the time of its birth. Further detail is provided in Appendix 1.

2 Education is a measure of a country’s secondary school gross enrollment ratio, and is depicted as a percentage. It is the ratio of total enrollment, regardless of age, to the population of the age group that would attend secondary school. Further detail is also provided in Appendix 1.
Table 5 provides a correlation matrix between all dependent and independent variables. This table reveals that the correlation between the variables of labor, GDP in the base year, and trade is high. There is a 93 percent correlation between GDP in the base year and labor, a 90 percent correlation between GDP in the base year and trade, and an 89 percent correlation between trade and labor. These high levels of correlation provide preliminary evidence that certain variables in my fully specified estimation equation may be collinear. Further Variance Inflation Factor (VIF) tests conducted after the regression analysis revealed that the labor, total trade, and GDP in the base year in Columns I and III of Tables 3-7 were, in fact, multicollinear. The VIFs for these three variables ranged from 6.02 to 10.82, far surpassing the commonly used cut-offs of 4 or 5. As a result, I re-ran my regressions omitting the variables of GDP_base and trade. (Note, of the three collinear variables, I chose to keep L in the estimating equation, due to its importance in the theoretical underpinnings of the Cobb-Douglas production function.)

This caused the variance inflation factors (VIF) to fall significantly to levels between 1.03 and 1.38.

### Table 5. Correlation of Variables

<table>
<thead>
<tr>
<th></th>
<th>Log(K)</th>
<th>Log(L)</th>
<th>Log(TFCLO)</th>
<th>Log(TRA)</th>
<th>Log(HDI)</th>
<th>Log(H)</th>
<th>Log(EDU)</th>
<th>Log(GDP_CAP)</th>
<th>Log(GDP_base)</th>
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</thead>
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<td>Log(K)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Log(L)</td>
<td>0.5136</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Log(TFCLO)</td>
<td>0.1621</td>
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</tr>
<tr>
<td>Log(TRA)</td>
<td>0.3684</td>
<td>0.8925</td>
<td>0.109</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Log(HDI)</td>
<td>0.1906</td>
<td>0.0947</td>
<td>-0.1218</td>
<td>0.2393</td>
<td>1</td>
<td></td>
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<tr>
<td>Log(H)</td>
<td>0.0973</td>
<td>0.2841</td>
<td>0.0432</td>
<td>0.5323</td>
<td>0.7197</td>
<td>1</td>
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<tr>
<td>Log(EDU)</td>
<td>0.1494</td>
<td>0.2132</td>
<td>0.3251</td>
<td>0.3112</td>
<td>0.1987</td>
<td>0.4549</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Log(GDP_CAP)</td>
<td>0.2198</td>
<td>0.5743</td>
<td>0.1499</td>
<td>0.7458</td>
<td>0.4835</td>
<td>0.6499</td>
<td>0.374</td>
<td>1</td>
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<tr>
<td>Log(GDP_base)</td>
<td>0.4712</td>
<td>0.9397</td>
<td>0.159</td>
<td>0.8955</td>
<td>0.1976</td>
<td>0.3728</td>
<td>0.246</td>
<td>0.7889</td>
<td>1</td>
</tr>
</tbody>
</table>
My regression results are reported in Tables 6-9. Column I includes all variables specified in my theoretical model, including the multicollinear variables: labor, total trade, and GDP in the base year. The collinear variables total trade and GDP in the base year are removed from the regressions reported in Column II. The regressions reported in Columns III and IV are similar to those in I and II, respectively. The key differences are that the regressions in Columns III and IV account for variation between years by including year dummy variables. The preferred empirical specifications are Columns II and IV.

Table 6 reports my regressions results when HDI is my dependent variable. As demonstrated in Column I, a 1 percent increase in IMF lending will result in a 0.004 percent decrease in a country’s HDI level. Given the t-statistic is 2.5 in absolute terms, this result is found at the 95% significance level. When multicollinearity is accounted for (Column II), the magnitude and direction of the impact of IMF lending remains similar (0.003), but the significance level drops to 90 percent. Finally, accounting for the variation between years (Column III and IV), a one percent increase in IMF lending is found to have between a 0.003 (Column IV) and a 0.005 (Column III) percent decrease in a country’s HDI. Notice that while this impact of IMF lending is shown to have a statistically significant impact on a country’s level of development, as measured by HDI, the magnitude of this impact is small.
Table 6: HDI Regression Results

<table>
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<tbody>
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<td>K</td>
<td>.007***</td>
<td>.004**</td>
<td>.006**</td>
<td>.005**</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td>(.002)</td>
<td>(.002)</td>
</tr>
<tr>
<td>L</td>
<td>-.120***</td>
<td>.000</td>
<td>-.146***</td>
<td>-.004</td>
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<tr>
<td></td>
<td>(.020)</td>
<td>(.012)</td>
<td>(.018)</td>
<td>(.012)</td>
</tr>
<tr>
<td>IMF loans</td>
<td>-.004**</td>
<td>-.003*</td>
<td>-.005***</td>
<td>-.003**</td>
</tr>
<tr>
<td></td>
<td>(.001)</td>
<td>(.001)</td>
<td>(.001)</td>
<td>(.001)</td>
</tr>
<tr>
<td>Trade</td>
<td>.060***</td>
<td>.012</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.021)</td>
<td>(.025)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP_base</td>
<td>.048**</td>
<td>.102***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.019)</td>
<td>(.021)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>constant</td>
<td>-.594**</td>
<td>-.442**</td>
<td>-.307</td>
<td>-.420**</td>
</tr>
<tr>
<td></td>
<td>(.237)</td>
<td>(.216)</td>
<td>(.236)</td>
<td>(.215)</td>
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<td>year dummies</td>
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<td>yes</td>
<td>yes</td>
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<tr>
<td>N</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>R²</td>
<td>.275</td>
<td>.060</td>
<td>.435</td>
<td>.167</td>
</tr>
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</table>

Notes: All above variables are in logged form. ***, ** and * indicate 99%, 95%, and 90% significance, respectively. Robust standard errors in parentheses.

Overall, I can conclude from the HDI analysis that IMF loans had a very small but negative impact on the HDI of Latin American countries. This was not what I expected, as my hypothesis predicted that the IMF SAPs had a positive relationship on the social development of a country. However, it is possible that IMF aid impacted the components of the HDI differently —perhaps not each in a negative way (as the impact on total HDI might suggest). Further analysis of the remaining variables of H, EDU, and GDP_cap is needed before making a final conclusion.

Table 7 reports my regressions results when health is my dependent variable. As demonstrated in Column I, a 1 percent increase in IMF lending will result in a 0.004 percent decrease in a country’s health level. Given the t-statistic is .45 in absolute terms, this result does not have statistical significance. When multicollinearity is accounted for (Column II), the direction of the impact of IMF lending is reversed (0.0002) to show a
very small positive impact, but again, the results are statistically insignificant, with a .24 t-statistic. Finally, accounting for the variation between years (Column III and IV), a one percent increase in IMF lending is found to have between a 0.0002 (Column IV) and a 0.002 (Column III) percent decrease in a country’s health. The significance in Column III is at the 95% level, but all other Columns are statistically not significant, indicating that IMF lending has a statistically insignificant and small impact on Latin America’s overall health as measured by life expectancy.

<table>
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<th>IV</th>
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<td>K</td>
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<td>-0.001</td>
<td>0.001</td>
<td>-0.001</td>
</tr>
<tr>
<td>L</td>
<td>0.076***</td>
<td>0.020***</td>
<td>-0.096***</td>
<td>0.016***</td>
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<td>0.0002</td>
<td>-0.002**</td>
<td>-0.0002</td>
</tr>
<tr>
<td>Trade</td>
<td>0.080***</td>
<td>-</td>
<td>0.054***</td>
<td>-</td>
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<tr>
<td>GDP_base</td>
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<td>-</td>
<td>0.047***</td>
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<td>constant</td>
<td>3.56***</td>
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<td>3.72***</td>
<td>3.85***</td>
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<td>Yes</td>
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<td>N</td>
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<td>85</td>
<td>85</td>
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<tr>
<td>R2</td>
<td>0.479</td>
<td>0.084</td>
<td>0.659</td>
<td>0.297</td>
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</table>

Notes: All above variables are in logged form. ***, ** and * indicate 99%, 95%, and 90% significance, respectively. Robust standard errors in parentheses.

In effect, of all four dependent variables, the IMF SAPs had the smallest impact on health. However, among my two preferred empirical specifications (Column II and IV), the values were statistically insignificant. Future analysis could focus on other measures of health in order to determine if a relationship exists. These variables could include
other WDI statistics, such as health expenditures per capita, malnutrition prevalence, or infant mortality rates.

Table 8 reports my regressions results when education is my dependent variable. The results prove that a 1 percent increase in IMF lending will result in a 0.015 percent increase in a country’s education level. Given the t-statistic is 3.09, this result is significant at the 99% level. Accounting for multicollinearity (Column II), the impact of IMF lending is slightly higher (0.016), producing a relatively small positive impact. In addition, the results remain statistically significant. Finally, accounting for the variation between years (Column III and IV), a one percent increase in IMF lending is found to have between a 0.013 (Column III) and a 0.016 (Column IV) percent increase in a country’s education, at the 99% significance level. Although these levels are very small, it is worthy to note that the IMF funds have shown the most impact upon the education variable among the three dependent variables discussed thus far.

<table>
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<td></td>
<td>(.007)</td>
<td>(.007)</td>
<td>(.006)</td>
<td>(.006)</td>
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<tr>
<td>L</td>
<td>-.103</td>
<td>.049</td>
<td>-.163***</td>
<td>.034</td>
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<td></td>
<td>(.089)</td>
<td>(.033)</td>
<td>(.062)</td>
<td>(.031)</td>
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<tr>
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<td>.016***</td>
<td>.013***</td>
<td>.016***</td>
</tr>
<tr>
<td></td>
<td>(.005)</td>
<td>(.005)</td>
<td>(.004)</td>
<td>(.004)</td>
</tr>
<tr>
<td>Trade</td>
<td>.167***</td>
<td>-</td>
<td>-.013</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(.060)</td>
<td>-</td>
<td>(.066)</td>
<td>-</td>
</tr>
<tr>
<td>GDP_base</td>
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<td>-</td>
<td>.165**</td>
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<td></td>
<td>(.061)</td>
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<td></td>
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<td>(.549)</td>
<td>(.542)</td>
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<td>N</td>
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<td>85</td>
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<tr>
<td>R2</td>
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Notes: All above variables are in logged form. *** , ** and * indicate 99%, 95%, and 90% significance, respectively. Robust standard errors in parentheses.
Table 9 is the final table of regressions results, and portrays the results when GDP per capita is my dependent variable. Looking at Column I and III, in which all independent variables were included, IMF lending has a negative relationship to GDP per capita. However, Column II and IV are my preferred empirical models, and indicate that a 1 percent increase in IMF lending will result in a .010 percent and .013 percent increase in a country’s GDP per capita, respectively. For Column IV, I found that the .013 percent increase could be said at the 90% significance level. In summary, the impact of IMF lending has a statistically significant impact on a country’s level of development, at the 90% level, as measured by GDP per capita. However, the magnitude of this impact is also small.

<table>
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<td></td>
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<td>(.014)</td>
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<td>L</td>
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<td>.338***</td>
<td>-.978***</td>
<td>.340***</td>
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<td></td>
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<td>(.062)</td>
<td>(.048)</td>
<td>(.064)</td>
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<td>-.005</td>
<td>.013*</td>
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<tr>
<td></td>
<td>(.003)</td>
<td>(.007)</td>
<td>(.003)</td>
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<tr>
<td>Trade</td>
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<td>-</td>
<td>.211***</td>
<td>-</td>
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<td></td>
<td>(.043)</td>
<td>-</td>
<td>(.046)</td>
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<tr>
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<td></td>
<td>(.045)</td>
<td>-</td>
<td>(.044)</td>
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<td>constant</td>
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<td>1.23</td>
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<td></td>
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<td>(.972)</td>
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<td>Yes</td>
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<tr>
<td>N</td>
<td>85</td>
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</tr>
<tr>
<td>R2</td>
<td>.933</td>
<td>.348</td>
<td>.951</td>
<td>.362</td>
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</tbody>
</table>

Notes: All above variables are in logged form. ***, ** and * indicate 99%, 95%, and 90% significance, respectively. Robust standard errors in parentheses.

My results may still face the problem of endogeneity. This problem occurs if my dependent variables affect my independent variables, which in this case, would happen if
HDI, H, EDU, or GDP per capita were affected by TFCLO. This is plausible, because a country may select to use IMF loans if they believe it will improve their social conditions. Future studies could conduct a “two-stage least squares” analysis or use lagged variables to address this endogeneity. If future analysis used the TFCLO as a lagged variable with a one-year lag, the potential equation could be written:

$$\ln(\text{HDI}_t) = \alpha + \beta_0 \ln(K)_t + \beta_1 \ln(L)_t + \beta_2 \ln(\text{TFCLO})_{t-1} + \beta_3 \ln(\text{TRA})_t + \beta_4 \ln(\text{GDP}_{\text{base yr}})_t$$ (19)

In this case, I would reduce the endogeneity since the TFCLO last year may have an impact on HDI this year, but HDI this year most likely would not have an impact on TFCLO in the previous year. Of note, Harjo and Joyce (2004) used lagged variables, but did not find a significant difference with their results.

7. Conclusion

Based upon the results, my overall conclusion is that IMF lending had a statistically significant, but mixed impact on the socio-economic conditions in Latin America. In total, the impact was very small for all variables. First, the impact on the HDI was small and negative, but statistically significant. This was the only negative impact measured among the four variables tested. The IMF’s impact on health was also small, but statistically insignificant in three of the four models depicted. Finally, this paper found small but positive and statistically significant results for the IMF’s impact on education and GDP per capita. In this case, I must reject my original hypothesis that the IMF had a
positive effect on the HDI, but accept my hypothesis that the IMF had a positive or no impact on the social indicators of health, education, and GDP per capita.

The impact on HDI is perhaps the most perplexing. The components of the HDI had generally positive relationships with IMF lending. However, the HDI relationship was negative, with a one percent increase in IMF lending resulting in a -.004 percent decrease in the HDI. Looking back at Table 1, all HDI values increased over the timeframe of this study, so the negative relationship was not expected. Therefore, I conclude the increase in Latin America’s HDI must have occurred for reasons other than IMF lending.

The IMF lending had the smallest relationship with health, as measured by life expectancy. This small measurement may be due to the timeframe of this study, which only covers twenty years. Improvements to health related factors may not appear over this limited scope. However, one could assume that it is possible to see changes to life expectancy within the span of a generation, which has generally been measured in twenty-year increments. The lack of relationship between the TFCLO and health may be because IMF loans were not directed towards the areas of health improvement. The argument that fiscal austerity measures cut social services to the poor may support this conclusion.

The relatively largest relationship occurred between IMF lending and education enrollment rates, with a one percent increase in IMF lending resulting in a .016 percent increase in secondary enrollment. The increase in education levels could be attributed to the need for a more educated workforce as Latin America decreased their agricultural sectors and increased their industrial sectors. This trend cannot be directly attributed to
the IMF and may possibly have to do with the globalization of the Latin American economies.

However, the positive relationship between GDP per capita and the IMF lending was expected because one of the main goals of IMF SAPs was to improve GDP growth. Changes in GDP growth would most likely affect GDP per capita, so this relationship was expected to be positive. Other studies have shown a positive relationship between growth and adjustment programs, as well (Burki and Perry, 1997; Crisp and Kelly, 1999; Elu, 2002; Mosley, et al., 1991; Sadoulet and de Janvry, 1995).
Appendix 1

WDI INDICATORS: DEFINITIONS AND SOURCES

**CPI:** Consumer price index reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used. Source: International Monetary Fund, International Financial Statistics and data files. **NOTE: Used to determine TLFCO in constant US$**

**EXPORTS OF GOODS AND SERVICES:** Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments. Data are in constant 2000 U.S. dollars. Source: World Bank national accounts data, and OECD National Accounts data files. **NOTE: Used to determine Total Trade by summing EXPORTS and IMPORTS**

**GDP:** GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2000 U.S. dollars. Dollar figures for GDP are converted from domestic currencies using 2000 official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used. Source: World Bank national accounts data, and OECD National Accounts data files. **Note: Used to determine variable GDP**

**GDP PER CAPITA:** PPP GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant U.S. dollars. Source: World Bank national accounts data, and OECD National Accounts data files. **Note: Used to determine GDP per Capita**

**IMPORTS OF GOODS AND SERVICES:** Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments. Data are in constant 2000
U.S. dollars. Source: World Bank national accounts data, and OECD National Accounts data files. NOTE: Used to determine Total Trade by summing EXPORTS and IMPORTS

LIFE EXPECTANCY AT BIRTH: Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. Source: World Bank staff estimates from various sources including census reports, the United Nations Population Division's World Population Prospects, national statistical offices, household surveys conducted by national agencies, and Macro International. Note: Used to determine Health variable

POPULATION, AGES 15-64: Population ages 15 to 64 is the percentage of the total population that is in the age group 15 to 64. Source: World Bank staff estimates from various sources including census reports, the United Nations Population Division's World Population Prospects, national statistical offices, household surveys conducted by national agencies, and Macro International. Note: Used to determine Labor variable by summing Population Ages 15-64 / Population total

POPULATION, TOTAL: Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are midyear estimates. Source: World Bank staff estimates from various sources including census reports, the United Nations Population Division's World Population Prospects, national statistical offices, household surveys conducted by national agencies, and Macro International. Note: Used to determine Labor variable by summing Population Ages 15-64 / Population total

SCHOOL ENROLLMENT, SECONDARY: Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Secondary education completes the provision of basic education that began at the primary level, and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers. Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics. Note: Break in series between 1997 and 1998 due to due to change from International Standard Classification of Education (ISCED76) to ISCED97. Recent data are provisional. Note: Used to determine Education variable

Appendix 2

Economic Development Theory

Latin America has experienced setbacks in sustaining their economic development. To best understand why these setbacks occur, an understanding of the leading economic development theories is necessary. Over time, economic theories have shifted emphasis on the importance of various factors. The classic theories which pertain to this study include the structural-change theory, or structuralism; the neo-Marxist or international-dependence models; and the neoclassical free-market revival. (Contreras, 1999; Todaro, 1999; Smith, 2003)

Following World War II, the industrialized nations focused on rebuilding Western Europe’s devastated economies. The economists in the developed countries were strongly influenced by the success of the Marshall Plan and the rapid re-industrialization of Europe. According to Todaro (1999), they hoped to transform the backward agrarian economies of developing countries in much the same way, using massive amounts of capital and technical assistance. This approach has also been called “capital fundamentalism”.

However, it was more difficult to apply this model to the developing world than to the post-WWII European countries. Although economic aid and foreign investment were transferred to developing countries, they often lacked the societal structure to produce high levels of investment and savings. Moreover, developing countries did not have the level of skilled workers or strong institutional frameworks that existed in Europe. The
lack of “structural, institutional, and attitudinal conditions” impeded their drive towards sustained growth. (Todaro, 1999)

This may affect my model because although IMF loans injected capital into Latin American economies, other variables can have an impact on the economic and social development of a country, such as institutional reform.

Another economic development approach related to the Latin American economies is structuralism. Structuralism gained a strong influence in Latin America through the 1960s and 1970s. The theory concentrates on the structural transformation of a traditionally agricultural subsistence economy into a modern industrial economy. It assumes that markets are imperfect and government intervention is needed, especially in areas without robust private sectors or regulation.

Structuralists saw the structure of the domestic and international economy as impediments to economic growth of developing countries. In part, growth was stunted because foreign demand for primary exports prevented developing economies from shifting their economies towards industrialization. Moreover, structuralists argued that although Latin America had a comparative advantage in raw materials, the declining price of primary exports and increasing cost of manufactured products made it harder to pay for needed manufactured imports. Even though advances in technology reduced the production cost of manufactured products, industrialized nations maintained higher prices to increase their profits and pay higher wages. (Contreras, 1999) Thus, to modernize and transform the developing economies, structuralists advocated state intervention to expand the industrial sector and contract the agrarian sector.
For structuralists, state-led development and “import-substitution” policies were essential to encourage industrialization. Import-substitution policies imposed tariffs on manufactured imports to protect “infant” industries—the intention was to remove the tariffs once the industry could effectively compete with imports. State ownership and regulation of domestic industries that required huge influxes of start-up capital were also needed to assist industrialization.

Beginning in the 1960s, these policies faced mounting criticism. Government intervention began to be associated with high rates of inflation, inefficient and wasteful government policies, and macroeconomic disequilibria. (Contreras, 1999; Caldentey, 2008) Thus, structuralism played a role in the economic conditions of Latin America, and delayed movement toward free market reforms.

The third major theory is the neo-Marxist or the international-dependence model. It believes underdevelopment in lesser developed countries (LDCs) is caused by the policies of developed countries and their extensions, in the form of powerful elites in the LDCs. In this view, the IMF imposed itself on Asia and LDCs and exacerbated their problems in order to serve the interests of the developed countries and their financial institutions. This theory focuses not only on market forces, but also on the social and political forces that control the allocation of scarce resources.

Todaro discusses two specific aspects of this theory that are related to my study, the neocolonial dependence model and the false-paradigm model. The neocolonial dependence model says that the international system is divided into the powerful and rich “center” countries and the poor “periphery” countries, to include the lesser developed countries (LDCs). The views and activities of the elites in both the rich and poor countries perpetuate chronic poverty and underdevelopment in the LDCs.
The second approach within the international dependence model, the false-paradigm model, “attributes underdevelopment to faulty and inappropriate advice provided by well-meaning but often uninformed, biased, and ethnocentric international-‘expert’ advisers from developed-country assistance agencies and multinational donor organizations.” (Todaro, 125) Within this model, complex development models based upon Western views and experiences are inappropriately applied to LDC development problems. The focus on econometric measures of growth, such as GDP, prevents focus from being placed on needed structural and institutional reforms. (Todaro, 1999) This is often the format of arguments against IMF SAPs in developing countries.

Most recently, the neoclassical free market revival had a strong influence on international economic policies since the 1980s. This theory, also known as the neoliberal theory, focuses on the importance of free markets and open economies. The traditional neoclassical growth theory states that output growth results from one or more of three factors: increases in labor quantity and quality, increases in capital through savings and investments, and improvements in technology. (Todaro, 1999)

The SAPs are based upon the neoclassical growth model and the free market mechanism (Elu, 2000). “The whole programme is based on free market mechanism and open trade analysis with emphasis on privatization. Using the orthodox neoclassical trade theory, free trade promotes growth and eventually leads to development.” (Elu, 210)

The neoclassical free market revival believes market forces can best balance themselves, and that the market should have minimal government involvement. It assumes that government intervention causes distortions and inefficiencies detrimental to
grew. In 1990, John Williamson summarized the neoliberal policy reforms that major
Washington-based economic institutions, to include the IMF and World Bank, agreed
were needed in Latin America. The “Washington Consensus”, a term coined by
Williamson, captured the ten main reform measures based upon this theory.

JOHN WILLIAMSON’S ORIGINAL LIST OF 10 POLICY REFORMS:
THE WASHINGTON CONSENSUS

- Fiscal discipline
- A redirection of public expenditure priorities toward fields offering both high
economic returns and the potential to improve economic distribution, such a
primary health care, primary education, and infrastructure
- Tax reform (to lower marginal rates and broaden the tax base)
- Interest rate liberalization (later changed to financial liberalization)
- A competitive exchange rate
- Trade liberalization
- Liberalization of inflows of foreign direct investment
- Privatization
- Deregulation (to abolish barriers to entry and exit)
- Secure property rights

Source: Williamson, 2000 pp. 252-253

The Washington Consensus had both strong proponents and opponents in economics
and politics. Proponents argued that neoliberal reforms improved economic growth and
checked inflation within developing countries. (Williamson, 2000, Crisp and Kelly, 1999)
Opponents argued that the IMF made Latin American countries privatize and liberalize
trade faster than private institutions and adequate regulations could be put into place to
ensure a smooth transition. This opened the way for government and private sector
corruption and economic decline, which negatively impacted the poor. (Stiglitz, 2002)

Neoliberalism continues to dominate the thinking of development institutions such as
the IMF, who use this framework to implement market-based reforms. According to the
IMF, economic growth problems are in part caused by internal government policies and
barriers, which needed to be identified and removed. By reducing government involvement through deregulation and privatization, developing countries could reduce inefficiencies and costs. Market forces would then be able to help stagnating economies.
References


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