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Foreign aid's impact on economic growth: conditional on accountable institutions?

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FOREIGN AID'S IMPACT ON ECONOMIC GROWTH:
CONDITIONAL ON ACCOUNTABLE
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Abstract

This paper studies the impact of foreign aid on economic growth in Latin America and the Caribbean and determines whether this relationship is conditional on institutional quality, utilizing an index of accountability. I examine whether or not accountability structures rather than fiscal policies as used in Craig Burnside and David Dollar's 2000 article "Aid, Policies, and Growth" are a better determinant for overall economic growth. Using a database spanning 1996 to 2008, this paper examines the relationship between foreign aid and economic growth in 19 Latin American and Caribbean countries and seeks a clear definition of institutional quality. The findings of this study fail to indicate a significant relationship between foreign aid, institutional quality, and economic growth. The results show a negative relationship between the accountability index and economic growth in the region. This indicates the need for further research on uncovering the vague concept of institutional quality and good governance. Surprisingly, economic growth in Latin America may be positively affected by more authoritarian institutions such as state-owned banks, strong executive leadership, less press freedoms, and those that can control monetary and fiscal policies to provide for smooth economic environments.

I. Introduction

Theoretically, foreign aid should be able to stimulate social and economic development in developing countries through an influx of money provided by more prosperous, developed countries. This aid should then stimulate economic development by building infrastructure, exporting new technologies and ideas, strengthening basic social services such as education, health, and political systems, providing humanitarian assistance during crises, and rejuvenating the economy after destructive, economic shocks. However, the direct relationship between foreign aid and economic growth has been hotly debated and after several decades of research, the results still remain inconclusive and ambiguous. In fact, several prominent authors have called for further analyses on the subject (Barro 1991; 2000; Durbarry, Gemmell and Greenaway 1998; Hansen and Tarp 2001; Veiderpass and Andersson 2001; Easterly, Levine and Roodman 2003). Many investigations into this relationship conclude with positive, negative, or no direct correlations at all between aid and economic growth. The most important study in this highly contentious subject has been Burnside and Dollar's "Aid, Growth, and Policies" article, which determined that aid effectiveness was conditional on fiscal policy and institutional quality. Almost every scholarly publication to date concerning foreign aid effectiveness has included this seminal work.

But what is institutional quality? What are its components? After Burnside and Dollar's pivotal research, there became a general consensus that variations in institutional quality can explain differences in economic development (Acemoglu, Johnson, & Robinson 2001; 2002; Knack and Keefer 1995). Studies still utilize "good governance" or "institutional quality" indicators that group together a wide range of social structures affecting economic outcomes such as contract enforcement, property rights, investor protection, and the political system (Knack and Keefer 1995). However, there still remains little knowledge concerning what exactly determines institutional quality; what institutional characteristics create an environment conducive for foreign aid success. Understanding its components is the main focus of this paper.

Finding the individual pieces that make up the vague concept of institutional quality could quite possibly be the solution to increased foreign aid efficacy. Once each component is discovered, agencies such as the Millennium Challenge Corporation (MCC) and the Organization for Economic Cooperation and Development (OECD) can be more selective in providing aid to those countries exhibiting reform in these specific economic and political areas.

In this study, I focus on political institutions to determine what makes up this good institutional environment needed for economic growth. I believe institutions of accountability are critical. Accountable institutions are the foundations of good governance. These institutions ensure public officials' decisions are dependent on supervision; therefore, governments can function proficiently without corruption and also be responsive to the needs of the community. Along these lines, Paolo Fajardo-Heyward (2010) asserts that accountability is the institutional characteristic that better explains why leaders choose to be mindful of the rights of their citizens. For the most part, political leaders' principal goals are to achieve and maintain power. In order to do this, leaders need to please the principals (or the general citizenry), in particular those members of the population whose support is necessary to assure that they maintain office. But this is not always the norm. Agents (or leaders) sometimes stray from the preferences of their citizenry and enact policies that do not necessarily agree. This problem is known as agency loss. Levels of agency loss increase when principals and agents have conflicting interests and when the principals cannot fully know about their agents' decisions and actions through a lack of proper outlets for communication and information. In order to minimize agency loss, principals develop institutions to reward or punish agents' performance and guarantee that agents are held accountable to their principals. Institutional accountability offers the instruments needed to make sure that the leaders' performance is indeed committed to citizens' preferences. When institutions of accountability are developed in a country, there is more motivation for leaders to enact policies that complement the preferences of their electorate. Political accountability is defined by two broad categories: *answerability*, the commitment

assigned to public officials to inform their constituents about their actions, decisions, and *enforcement strategies*, which are the capabilities of certain organizations to impose sanctions on public officials who violate such assigned duties (Stapenhurst and O'Brien, 2010). Horizontal accountability is the ability of institutions to check violations by other institutions and branches of government. On the other hand, vertical accountability is the means through which citizens, mass media, and civil society call for the enforcement of good performance on officials. I have thus chosen five indicators of horizontal and vertical accountability for this study:

1)   The legislature's level of constraint on the decision-making power of chief executives;

2)   The presence of an independent judiciary;

3)   The assessment of bureaucratic quality and its handling of public services;

4)   How much domestic credit is given to the private sector instead of to governments, government agencies, and public enterprises (a proxy for central bank independence); and

5)   The level of freedom of press and media.

These five indicators should fully encompass the idea of accountability and also best represent the components for good governance or good institutional environments.

To investigate my theory empirically, I have concentrated on a panel of 19 Latin American countries, representing Central America, South America, and the Caribbean, during the time period from 1996 to 2008. Restricting the analysis to Latin America helps control for such variables as culture, language, and colonization heritage. The Iberian colonial heritage is a main determinant for the area's institutional heritage such as the distribution of land and presidential dominance (North and Weingast 2000). I have also drawn on the recent empirical growth literature to control for the range of institutional and policy components other than my five "accountability" indicators to determine what environment foreign aid is dependent on for positive growth.

This paper is organized as follows. Section II provides background information on the history of aid in Latin America and the Caribbean. Section III reviews the literature of the effect of foreign aid on economic

growth. Section IV discusses the conceptual framework of the study. Section V presents the sample data used. Section VI shows the empirical results, and Section VII concludes and provides recommendations for policy implementation and future research.

II. Background

The United States has provided foreign aid programs in Latin America and the Caribbean since the 1940s; however, funding was minimal until the early1960s with the rise of communism and strategic interests in the region. Economic growth in Latin America and the Caribbean has generally remained "volatile and modest" since the 1960s (De Gregorio 2006). Yet, the 1980s can be remembered for the debt crisis and severely depressing growth rates in the region as compared to the rest of the world. The economies of the region in the 1990s and the start of the 21st century showed some improvements yet remained sluggish, unstable, and sustained growth proved to be elusive. In 2002, the average rate of growth of GDP per capita was 1.6 percent over the last forty-two years (Solimano and Soto 2005). Recently, the outlook for Latin America and the Caribbean shows promise even in the face of the global recession; however, growth performances have not yet reached the growth rate levels of the 1960s and 1970s and remain well below those observed in Asia, the Middle East, and Eastern Europe.

Latin America and the Caribbean also suffer from high-income inequality. In fact, it is notorious for being the most inequitable region in the world. Ten of the world's fifteen most unequal countries are in Latin America. The richest 20 percent of the population accounted for around 60 percent of the region's income, while the poorest 20 percent received around 3 percent (World Bank 2010). Stephen Haber finds that Latin America suffers exorbitantly from *crony capitalism*. He states that countries that lack limited governments, or those with weak institutions of accountability, choose to protect property rights and thus increase investments through guaranteeing a credible commitment to a few, the elite. Economic growth can occur through elites' investments because these elites can gain a monopoly and thus, have the capability to charge excessive prices to the underprivileged sections of the population. However, this 'crony capitalism' has dismal effects on the distribution of income as can be seen in the region's income inequality (Haber 2002).

Poverty is also a problem. Despite upward trends in poverty reduction for some countries in Latin America, over one-third of the population (over 190 million people) live below national poverty lines. Over 17 percent of the population of Latin America lives on less than US$2 a day. In Bolivia, Colombia, Guatemala, Honduras, and Nicaragua more than 40 percent of the population live on less than US$3 per day (IBRD 2010). Inflation also increased in 2008 and reached an estimated 8.9% during that year, which increased from 6.5% in 2007 (World Bank 2010).

Despite these bleak observations, the International Monetary Fund and other bilateral agencies have poured an incredible amount of aid into the region. Worldwide aid flows have currently reached their highest disbursement levels. In 2008 "total net official development assistance (ODA) from members of the Organization of Economic Cooperation and Development's Development Assistance Committee (DAC) rose by 10.2% in real terms to USD 119.8 billion, which is the highest dollar figure ever recorded "(OECD/WTO 2009, p. 23).

The Economic Survey of Latin American and the Caribbean 2009-2010 showed some positive trends. The highest growth rates in 2010 were in South America, led by the biggest economy in the region, Brazil, which grew to 7.6%, followed by Uruguay (7.0%), Paraguay (7.0%), Argentina (6.8%) and Peru (6.7%). Other countries in the region held lower growth rates such as the Dominican Republic (6.0%), Panama (5.0%), Bolivia (4.5%), Chile (4.3%) and Mexico (4.1%). Those exhibiting poor performances were Colombia (3.7%), Ecuador and Honduras (2.5%), Nicaragua and Guatemala (2.0%). Venezuela experienced negative growth (-3.0%), and Haiti fell to (-8.5%) (ECLAC 2009).

Does this mean that foreign aid helps in any way? Possibly. The literature on aid-growth relationships shows conflicting results, with the negative aid-growth studies dominating the field. However, this analysis seeks to understand under what conditions foreign aid can become effective.

III. Literature Review

   The literature on the determinants of economic growth is vast. Literature on foreign aid's effect on economic growth is less prevalent yet still somewhat substantial. However, decades of study have failed to come up with conclusive evidence of a direct relationship between foreign aid and economic growth. Even though there is a large literature on foreign aid and economic growth, there has not been much progress in coming to any hard conclusions. Some argue that aid positively contributes to growth (Burnside and Dollar 2000; Collier and Dehn 2001; and Hansen and Tarp 2000), while others maintain that there is no statistically significantly relationship between aid and growth; and still others assert that aid negatively affects economic growth (Mosley 1980; Boone 1996; Easterly 2003; Islam 2003; Easterly 2004). However, it is clear that public policies and institutions can indeed affect the rate of economic growth.

Positive Aid-Growth Relationships

   The most groundbreaking study to date on the relationship between foreign aid and economic growth was and still remains Burnside and Dollar's "Aid, Growth, and Policies" written in 2000. Examining fifty-six countries from several regions over a twenty-three year timeframe, Burnside and Dollar concluded that foreign aid's impact on economic growth and development was positive and statistically significant when interacted with each country's fiscal policy index. Their results showed that those countries with "good" fiscal, monetary, and trade policies were best suited to convert foreign aid into economic growth (Burnside and Dollar 2000). They described 'good policy' as low inflation, low budget deficits with an open trade regime, a liberalized financial sector, and a private sector friendly government. The results indicate that increasing the conditionality of aid on policies enhances the effectiveness of aid. Julian Simon (1987) points out that several other scholars have found the conditionality of aid on policies to be statistically significant when including a multitude of additional explanatory variables or substituting Burnside and Dollars' fiscal policy variable with the World Bank's Country Policy and Institutional Assessment.

Hansen and Tarp (2001) study the relationship between foreign aid and economic growth in real GDP per capita by finding correlations with popular cross-country growth determinants. Their results show that aid does increase the growth rate. However, this finding surprisingly is not conditional on "good" policy as mentioned in Burnside and Dollar's study. They also find that there are decreasing returns to aid, in other words, the effect of additional aid will decline as aid amounts continue to grow. Another surprising result in the study showed that the approximate effectiveness of aid is highly sensitive to the choice of the statistical method used and the set of control variables.

A study investigating the effect of foreign aid on economic freedom and growth concluded that aid does not significantly increase economic freedom by and large; however, it is instrumental in policy formation and creating and sustaining institutional environments favorable to growth (Heckelman and Knack 2008).

Another study investigating the types of economic growth financed by foreign aid also found a positive and statistically significant relationship between aid and sector-specific economic growth. Unfortunately, the significance of aid was lost when interacted with the fiscal policy index variable created in the 2000 Burnside and Dollar study (Feeny and Outtara 2009).

Dowling and Hiemenz (1982) studied the effect of foreign aid on economic growth in the Asian continent to understand the miracle of economic growth in the region. They used a sample of thirteen Asian countries receiving a considerable amount of aid. After controlling for the effect of several variables such as trade, finance, and government intervention, they found that aid does have a positive and significant effect on economic growth.

Similarly, Levy (1988) studied the effect of aid in a sample of low-income Sub-Saharan African countries from 1968 to 1982 and found that aid is positively and significantly correlated with investment and economic growth.

Using a variety of samples and different econometric models, Durbarry, Gemmell, and Greenaway

(1998) studied the effect of aid, focusing on the most favorable amount of aid that would produce economic growth instead of diminishing returns. They found solid evidence that aid would boost economic growth. They assert that there is in fact an optimal level of aid that should be given to developing countries to generate economic growth. In those countries utilizing good macroeconomic policies, around 40% to 45% of foreign aid as a percentage of GDP would allow recipient countries to generate favorable economic growth.

Negative Aid-Growth Relationship

Unlike the aforementioned studies, this section identifies those studies that found aid to negatively impact recipient economies, usually through the creation or promotion of dependency or corruption (Papanek 1972; Brautigam and Knack 2004; Malik 2008). Corruption has been found to be a major obstruction for economic growth (Mauro 1995). It causes uneven distribution of resources, decreases foreign direct investments and private investment in both human and capital resources, increases transaction costs, distorts free market incentives, and reduces economic efficiency (Gyimah and Camacho 2006).

A 2004 study argued that foreign aid creates incentives for the continuance of weak institutions and non-accountability in recipient countries (Brautigam and Knack 2004). These incentives often lead to increased levels of corruption and dependence, which translate into decreased government efficiency and economic growth.

Angeles and Neanidis analyzed the role played by the elite classes in aid effectiveness of recipient nations and discovered historical factors of nations, especially those which fostered the advancement of certain groups in the population over another, were associated with the misuse of aid dollars (Angeles and Neanidis 2009).

Additionally, Wolfgang Kasper argued that during the past 50 years, the colossal amount of foreign aid estimated at USD 1 trillion given to sub-Saharan African countries had not yet produced any significant effect on economic growth. Furthermore, corruption impeded the economic growth of virtually all recipient countries

in Sub-Saharan Africa (Kasper 2006).

A United Nations study in 1994 found that income in some aid recipient countries had literally fallen. This study looked at over one hundred countries that had received aid during 1970 to 1994. The results were surprising. During the 1990s, seventy countries within the sample had average incomes lower than their average during the 1980s and forty-three countries had average incomes lower than their average during the 1970s (Vasquez 1998).

Aside from just topics of corruption, several authors further examined this seemingly illogical result of negative aid growth. Constantin Voivodas conducted one of the earliest studies of the effect of aid on economic growth. Voivodas found that for a sample of twenty-two under-developed countries from 1956 to 1968, aid had a negative impact on economic growth (Voivodas 1973). Nonetheless, these results have proven over time to be somewhat inaccurate due to poor quality of his data and the limited econometric techniques available during the early 1970s.

Later studies examining the effects of aid on economic growth found distinctions between long and short-term economic growth. Many theorists in this group believe economic growth occurs in the presence of aid over a short time period. However, it is noted that long-term negative impacts greatly overshadow most short-term gains, thus making the overall impact of aid on economic growth a depressing outcome (Lockwood 1990; Duc 2006;and Malik 2008). Large foreign aid inflows also affect the real exchange rate of dependent countries and undermine the competitiveness of their export sector. This occurrence is often called the 'Dutch disease' (Rajan and Subramanian 2005). Dutch disease-type effects have been noted in a number of African aid recipients (Younger 1992).

Peter Boone (1994) also finds that aid has not raised any growth rates in developing countries either. He conducted a study of the effect of aid on ninety-seven countries over a period of twenty-nine years and discovered aid does not have any positive effect in any element that promotes economic growth such as human

and capital resources or domestic investments.

An interesting study done by William Easterly in 2004 reexamined the results of Burnside and Dollar's pivotal research with the same model specifications and econometric techniques using more elaborate data. With a sample covering a timeframe from 1970 to 1997 (four years longer than the sampled used by Burnside and Dollar), Easterly uncovered evidence that aid does not promote economic growth, even in good policy environments (Easterly 2004).

Keefer and Knack (2000) investigated whether foreign aid and institutional quality have any relationship. Quality of governance is defined by the authors as bureaucratic quality, the level of corruption, and rule of law. The results show higher aid levels reduce the quality of institutions, in particular, recipient countries that are dependent on large amounts of foreign aid have low levels of accountability, have more rent-seeking opportunities, prevent talented people from entering the bureaucracy, and reduce pressure for reforming inefficient policies and institutions.

Brautigam (2004) also showed the weakening effect of large aid quantities on governance quality in Sub-Saharan Africa. She revealed that large-scale aid provides little encouragement for the country to improve its governance quality, thus creating soft budget constraints and more rent-seeking opportunities. Further, she proved that aid would increase corrupt activities. Aid dependence thus leads to circumstances in which bureaucrats are often not rewarded for staying true to their main developmental functions but rather on gaining money from donors.

No Aid-Growth Relationship

Neutral growth studies have often been prevalent in the literature on aid-growth relationships. One study focusing on the impact of aid on economic growth even with the inclusion of "bad" economic policies, found no significant results to affirm either a positive or negative relationship between aid and economic growth (Schwalbenberg 1998).

One of the first studies to conclude that aid had no impact on economic growth was published by Peter Boone in 1996. His analysis of the politics and effectiveness of foreign aid found that while aid was responsible for increasing government size, it had no impact on investment, growth, or human development indicators (Boone 1996).

A study comparing the impact of non-governmental organizations (NGOs) and official development assistance (ODA) on poverty reduction concluded that while NGO aid had a positive and statistically significant relationship with poverty reduction, ODA had no effect on poverty reduction or income inequality (Masud and Yontcheva 2005). These results were based largely on the fact that NGOs have the capabilities to speedily commit to addressing practical issues surrounding social inequalities.

A 2001 study investigating the impact of aid on growth concluded that once the outliers are removed from the population sample, aid has no impact upon economic growth (Dalgaard and Hansen 2001). A follow-up study performed three years later added a variable to account for the geographic location of developing countries. Their results showed that the relationship between aid and growth in countries situated in the tropics was non-existent (Dalgaard, Hansen and Tarp 2004).

Nonetheless, some scholars still assert that the lack of a relationship between foreign aid and economic growth does not deny the possibility of such an existence. They believe institutional and policy reform of receiving countries has the ability to foster a positive aid-growth relationship (Barro 1991; 2000).

Literary Contribution

My contribution to the literature mentioned above focuses on institutional development, in particular those institutions that promote accountability and its ability to increase aid's effectiveness on economic growth. For the most part, economists have largely ignored a long tradition in the political science literature, which establishes an historical connection between each country's level of economic development and its political and institutional attributes. And political scientists have largely ignored the political repercussions caused by foreign

aid, especially in developing countries where foreign aid is the leading component of economic activity and also is thought to have a very real and very significant impact on their political economies. The critical importance of good institutions to the development process is gaining acceptance in general opinion, not only among political scientists but also among economists (Rodrik 2003; Acemoglu et al. 2004). Jeffrey Sachs' (2005) analysis stating that good institutions are on the whole a result of economic development, instead of its cause, is now a pariah.

Aid is thought to work best in environments with high quality institutions, as part of an efficient developmental state (Burnside and Dollar 2000). As it so happens, measures of institutional quality such as the presence of property rights, the risk of expropriation, and bureaucratic quality are becoming a determining factor for aid disbursement, especially in the fairly recent formation of the Millennium Challenge Account. Thus, 'institutional quality' is routinely specified as an independent variable thought to affect the efficiency of aid, and consequently a decisive factor in selecting aid recipients. This is a timely addition to foreign aid allocation strategies. In Africa and in other developing states, political leaders have relied on wholesale neo-patrimonialism and of utilizing state resources for political ends. As a result, government resources, including development assistance funds, have not been employed properly to promote economic development. Ultimately, these political elites have acted in an exploitative manner to keep themselves in power.

In political systems where institutions of accountability are slack or non-existent, large continuous aid flows will essentially alter the relationship between government leaders and the constituents. When donor countries are providing large quantities of aid and these recipient governments are only accountable to those donors, it may not be possible to also expect a committed social contract to develop between the state apparatus and its constituents. In political systems where accountability structures are diminished, leaders and bureaucrats no longer need to acquire and maintain the support of their constituents or the approval of their legislatures when they receive unearned income in the form of foreign aid. They do not need to raise revenues through

taxation from the local population (Moss, Pettersson and van de Walle 2006). Foreign aid can also create low institutional quality because it lessens the motivations to adopt good policies and reform inefficient institutions, and in the end, weakens the government's developmental performance and encourages corruption and clientelism (Heller and Gupta 2002). North and Weingast (1989) show that the currently developed countries were better able to grasp institutions of democracy and accountability because of their capabilities to create accountability structures in the past. The emergence of parliamentary sovereignty in Britain in 1688 increased the ability of the government to raise taxes, and enhanced militaristic and economic success in the 18th and 19th century. Moss, Pettersson, and van de Walle (2006) argue that political systems with stronger traditions of both vertical and horizontal accountability are more positively affected by the allotment of foreign aid in regard to the African continent.

Consequently, there are many similarities between Africa and Latin America: both have a history of strong presidential rule and weak legislatures. In regard to Latin America, many countries have grasped this idea of accountability and reformed their poor institutions by improving the rule of law and increasing democracy. Essentially, in democracies, the executive must gain the support of critical members of the ruling party, legislature, and sometimes judiciary before the executive-favored policy can be put into practice. To further constrain the executive, the citizenry also influences the outcome through participation in elections. Elections provide a strong motivation for leaders to be sensitive toward the interests of the general population or else they will be voted out of office. These institutions of accountability help check decision-making in democracies.

What then creates democracies' overall developmental success? Many democracies produce stronger institutions of accountability, an independent media, and rule of law than any other political system. And time after time, these institutions turn out positive social and economic results. Low-income democracies with stronger systems of accountability have annual economic growth rates that are 60% greater than democracies

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with weaker systems of accountability. What is more, autocracies that have stronger accountability institutions as opposed to other autocracies grow 30% more rapidly (Halperin, Siegle and Weinstein 2005).

Donor countries interested in improving effective development strategies should staunchly commit to analyzing the level of accountability within a government before dispensing foreign aid. The stronger the institutions of political accountability are in a given country, the greater the incentives for leaders to enact policies that agree with the preferences of the citizenry when there is indeed a general consensus. Idealistically, donor states as well as organizations such as the World Bank and the OECD should be evaluating each country individually and giving the biggest share of development assistance to those governments that are reforming and adhering to accountability structures.

Halperin, Siegle and Weinstein (2005) argue that many donors have implemented policies mentioned above giving increased foreign aid to countries with "good governance" in recent years. However, they confess that this generic term is often interpreted to mean a myriad of things such as ideas of economic governance, rule of law, or corruption. All of these are important. But they fall short of the central organizing framework that institutions of accountability provide. That is the hope of this study; to determine what exactly makes up 'good governance', specifically looking at these particular institutions, so that this generic term can become more precise and more specific and hopefully lead to better donor policies for foreign aid allotment.

IV. Conceptual Framework

The conceptual framework in this study is motivated by the current and on-going debate on foreign aid's effectiveness. However, little work has been done to find the right political environment needed for economic growth in the presence of foreign aid. Kaufmann, Kraay, and Mastruzzi (2010) argue that scholars excessively consider the concept of governance, yet there is still no agreement around a single definition of governance or institutional quality. Various definitions are thrown about with no empirical evidence to substantiate such claims. They are oftentimes so vague that they can mean almost anything, including rules, enforcement mechanisms, and organizations (World Bank 2002).

My hope is to provide the specific and exact framework through which we may better understand the conditions necessary for foreign aid to be most efficiently utilized in developing countries' economies.

This study proposes that the impact of aid is positive, conditional on "good institutional quality", which I believe are the five main indicators of accountability. According to Burnside and Dollar, the positive impact of aid on economic growth is greatest when it is interacted with fiscal policies such as low inflation, budget surplus, a fairly liberalized trade environment, and low government consumption; therefore, it is not a stretch to hypothesize that it will also be greatest when interacted with institutional quality components. Foreign aid might directly impact economies if funds are distributed properly and used as originally planned without misconduct (Feeny and Ouattara 2009).

The indicators that I believe promote accountability best are executive constraint, an effective bureaucracy, large amounts of domestic credit to the private sector, an independent judiciary, and press freedom. These indicators provide both vertical and horizontal checks on the individual branches of government and help alleviate corruption and neo-patrimonial practices.

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•Executive constraint.[1] This variable refers to the extent of institutionalized constraints on the decision-making powers of executives, whether individuals or collectives. Constraints may be enforced by any accountability structure. In most democracies, these are oftentimes legislatures, the ruling party in a one-party state, councils of nobles or influential advisors in monarchies, the military in systems where coups are predominant, and/or a strong, independent judiciary (Polity IV 2009). These structures are assigned with the duty of checks and balances between the various parts of the decision-making apparatus. The executive branch in Latin America is predominantly an inheritance of colonial Iberian institutions. Less constrained executives have more power to act in their short time horizons and also have the possibility to hurt the state's economy by pursuing selfish or patrimonial activities. Latin American executives seek to keep their jobs for as long as possible. However, unlike in American politics, the duration of incumbency is not definite due to frequent political upheaval. As a result, executives in Latin America take special measures to establish a base of support that will perpetuate their term in office. To form and maintain an alliance of support, they may rely on public expenditure to satisfy the base of support, which is inherently bad for economic growth and development (Morrison 2007). Here we can see that low levels of executive constraint can influence leaders' ability to retain as many resources as possible for personal use without endangering their term in office. I expect the coefficient for this variable to be positive, indicating that economic growth increases as more constraints are added to the executive branch.

•Bureaucratic Quality.[2] This variable measures the perception of quality of public services, the capacity of the civil service and its independence from political pressures, and the quality of policy formulation

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[1] This indicator is based on a scale from 1 to 7, with 1 representing unlimited executive authority and 7 signifying executive parity or subordination. Appendix A has the definitions for each rating.

[2] The bureaucratic quality index is based on a scale using standard normal units ranging from around -2.5 to +2.5, with -2.5 representing low bureaucratic quality and +2.5 the highest. The index is based on several aggregate surveys measuring bureaucratic quality.

(Kaufmann, Kraay and Mastruzzi 2010). Mauro (1995) finds bureaucratic quality to be a significant indicator in his growth equation. The World Bank cites that an improvement in bureaucratic quality by one standard deviation as measured by the indicators used in the Kaufmann, Kraay, and Mastruzzi study is associated with raising incomes by about three times in the long run, and reduces infant mortality by two thirds (World Bank 2010). The principal reasons for giving the public sector such a prominent place in this study on accountability are the influences of the public sector in the overall economy and because "the functioning of the public sector affects the private sector by means of taxation, government spending, and regulations" (van de Walle 2005). I hypothesize that economic growth will be higher in those countries that exhibit high bureaucratic quality.

•Domestic Credit to the Private Sector. This indicator in effect is a financial policy rather than a political institution; however, it serves as proxy for the extent of central bank independence or rather supervisory capacities of the banking system. If a bank is state-owned, then we should see low levels of domestic credit given to the private sector and higher levels given to public sector development. It measures the quality and quantity of the investment financed by the banking sector and shows banking sector development. The existing indices of central bank independence do not provide current data or information regarding developing countries. Domestic credit given to the private sector refers to financial resources provided to the private sector, such as through loans and other accounts receivable that establish a claim for repayment as a percentage of GDP (World Bank 2010). Private markets drive economic growth, utilizing strategies and investment to create productive jobs and raise incomes. In state-owned banking systems, non-commercial provisions may overtly influence credit allocation to the public sector. Political power and economic opportunity are too often synonymous. This indicator isolates credit issued to the private sector from credit issued to governments, government agencies, and public enterprises. Also, financial systems can help monitor managers and exert corporate controls, which reduce the principal-agent problems that lead to inefficient investment and poor economic growth. Excessive government borrowing will usually be balanced out by a credit squeeze, which then leads to the reduction in

private sector credit (Fry 1998). Therefore, increasing the amount of domestic credit given to the private sector rather than to the public sector should increase economic growth. Levine et al. (2000) show a robust positive relationship between domestic credit to the private sector and the growth rate of GDP per capita.

•Independent Judiciary. The simple logic here is that citizens should feel confident that the government will not be able to influence the judiciary, that the judiciary is truly independent. Once citizens are convinced of this, they will feel secure enough to make more investments. The judiciary helps ensure that the government is under the rule of law. An independent judiciary can be thought of as a mechanism for turning promises into credible commitments such as ensuring property rights and protection from expropriation, which then leads to an environment favorable to citizen's investments in physical capital and to a higher degree of specialization (Lucius and Plekovic 2003). Feld and Voigt (2003) find that while de jure judicial independence does not have an impact on economic growth, de facto judicial independence positively influences real GDP per capita growth within a sample of fifty-six countries. Determining independence of the judiciary is represented by the CIRI Human Rights Score. This score is based on the extent to which the judiciary is independent of control from another branch of the government or the military. A score of 0 indicates "not independent", a score of 1 indicates "partially independent" and a score of 2 indicates "independent". I, therefore, speculate that a higher score on the CIRI Index will provide successful economic growth.

•Press Freedom. This variable acknowledges how free the mechanisms of communication of a state are. Press freedom is crucial to sustaining and monitoring accountability. The media is the most effective form of inspection on governments. Most autocratic societies utilize state-run news organizations to promote the propaganda vital to maintaining an existing political power core and to stamp out any significant attempts by the media or individuals to question the decisions and actions of the government especially on heated issues. Most importantly, press freedoms provide an outlet for citizens to enact vertical accountability. Development scholars have long acknowledged the role mass media play in communication and development. Cross-national

studies of the relationships among political freedom, economic freedom, and economic growth and well-being have been reported in the literature for a quarter century. The variable representing press freedom is based on the Freedom of the Press Index published by Freedom House. In the Latin American and Caribbean countries covered in this study, the scale ranges from 4 to 96. The Press Freedom index ranks countries on a scale of 0 to 100, with 0 representing the highest press freedom and 100 the absolute lowest.[3] To avoid confusion and create a cohesive index, I reverse the scale and generate a variable measured so that high scores represent higher levels of press freedom.

Hypothesis

Drawing on all five indicators mentioned above my overall hypothesis is:

H_1: Foreign aid has a positive impact on economic growth when it is interacted with institutional characteristics of accountability.

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[3] The index is based on a scale of 0 to 100, with a score of 0 to 30 placing the country in the free press group; 31 to 60 in the partly free press group; and 61 to 100 in the not free press group. See Appendix A for the questions used to create the Press Freedom Index.

V. Data

This paper utilizes data accessed from the World Bank, the Polity IV Dataset, CIRI Human Rights Database, World Governance Indicators, and Freedom House. The dataset used in this analysis records the social, economic, and political trends of Latin America and the Caribbean from 1996 to 2008. This time frame is conducive to current studies as previous literature extends research only up to the mid 1990s. Table 1 categorizes the data by organization, database name, description, and number of variables.

TABLE 1. Breakdown of Information and Characteristics of Each Database

Organization	Database Name	Description	Variables
World Bank	World Development Indicators	Economic and Demographic Indicators (Annual)	9
World Bank	World Governance Indicators	Bureaucratic Quality Indicators (Annual)	1
Cingranelli & Richards Dataset	International Human Rights Dataset	Independence of the Judiciary Indicators (Annual)	1
Polity IV Project	Polity IV Dataset 2009	Polity and Executive Constraint Indicators (Annual)	2
Freedom House	Freedom of the Press and World	Civil Liberties and Press Freedom Indicators (Annual)	2

Research Design

The Pooled Cross Section Time Series Model using the generalized least squares random effects estimator will be used to examine the relationship between economic growth, institutional quality, and foreign aid. The assumption is that economic growth is positively correlated with foreign aid, conditional on the institutional quality of the recipient nation. This technique is characterized by having repeated observations on

fixed units, which means that the pooled data analysis combines cross-sectional data on N spatial units and T time periods to produce a data set of $N \times T$ observations (Podesta 2000). Using this model is advantageous because it allows for the capability "to capture not only the variation of what emerges through time or space, but the variation of these two dimensions simultaneously" (Podesta, 2000, p. 9).

Dependent Variable

The dependent variable in this study is the real Gross Domestic Product (GDP) growth rate adjusted for inflation or deflation. The GDP growth rate is the most important indicator of economic health (World Bank 2010). If GDP is growing, other sectors of a society will flourish such as personal income, business investments, and increased employment. If GDP decreases or stagnates, then businesses will hold off investing in new purchases and hiring new employees, which further weakens the economy.

Independent Variables

The independent variables in this study are foreign aid and the five main institutions of accountability mentioned above. Aid is represented by net Official Development Assistance (ODA) per capita for each country. ODA "consists of disbursements of loans and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients" (World Bank 2010). ODA excludes all military assistance. Foreign aid given in a developmental package has every hope and theoretical basis on uplifting economies; therefore, this variable should increase the GDP growth rate – *ceteris paribus*. The five institutions of accountability are combined into an index using factor analysis and should also increase economic growth. [4] The interaction term is foreign aid in the form of Official Development Assistance and the accountability index combined.

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[4] See Appendix B for Descriptive Statistics on the Accountability Index.

The literature on economic growth determinants is extensive. To isolate the effect of my independent variables, I control for other factors including civil liberties, gross secondary school enrollment, government consumption, energy use per capita, trade openness, population growth rate, initial GDP, inflation rate, and the polity score.

•Initial GDP. This indicator is often used in economic studies to show conditional convergence, which theorizes that poor countries should grow faster than rich ones due to diminishing returns to factors of production. This theory is measured by real gross domestic product lagged by one year (1995). It provides a control for the initial position of the economy.

•International Trade Openness. Trade no doubt affects economic growth and it usually affects it in a favorable manner. It allows for increased specialization, which then allows countries to gain from their own unique advantages. Trade liberalization also minimizes the incentives for businesses to conduct corrupt rent-seeking activities. Usually the indicator used for prior research is Jeffry Sachs' and Andrew Warner's index of trade openness policy, which takes into account average tariff rates, non-tariff barriers, black market exchange rates, and the availability of export marketing committees (Sachs and Warner 1995). However, this index only extends to 1992 and falls quite short of the time frame for this analysis. I use instead the volume of trade (real exports plus imports) over GDP.

•Inflation. Because Latin America suffers from some of the worst inflation rates in the world, it was important to include such a control. High inflation rates lead to more modest investments, which then leads to economic decline. Inflation may also reduce a country's overall competitiveness, creating expensive exports. It also has a negative effect on the value of money. Broadly speaking, inflation, if in excess, hurts any economy. The inflation rate is measured annually as the rate of change of prices for a given country.

•Government Burden. Inasmuch as government expenditures are spent for social programs such as health, education, and the police, many expenditures are not utilized in such a manner. Instead, the government

may consume large quantities of revenue for unproductive activities such as paying off the bureaucracy's wage bill (Loayza, Fajnzylber and Calderon 2004). Therefore, I speculate that economic growth should decrease in the presence of heightened government spending. To measure the burden of government, I use government revenues as percent of GDP.

•Education and Human Capital. This indicator is also utilized in many studies on economic growth. Education and human capital can control the amount of technological innovations in a given country. Lucas (1998) discovered that human capital is conducive to long-term economic growth by offsetting diminishing returns. In this study, I go along with Lucas' study and predict that education and human capital is conducive to economic prosperity. I use the rate of gross secondary school enrollment as a measurement for the amount of human capital available.

•Another important indicator is the availability of public services and infrastructure. This indicator can be seen in many economic growth models (Barro 1990; Barro and Sala-i-Martin 1992) and is usually positively correlated with long-term economic growth. Public services and infrastructure are good growth determinants because they are used as "inputs of the production function, by serving to improve total factor productivity, and by encouraging private investment through property rights protection" (Loayza, Fajnzylber and Calderon 2004, p. 23). Many studies use different avenues of public services such as kilometers of paved road per capita or the number of main telephone lines per capita; however, I use megawatts of electricity used per capita and believe it to be most crucial for increased productivity.

•Democracy.[5] Despite numerous studies on the subject of political regimes and economic growth, a direct relationship remains elusive. Some studies maintain the idea that democracies are associated with higher human capital accumulation, lower inflation, political stability, and economic freedom. Yet, there is also

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[5] I use the Polity IV Dataset's Polity Score, which ranges from -10 to +10, where -10 represents "strongly autocratic" and 10 "strongly democratic". The Polity Score is generated by subtracting the AUTOCRACY score from the DEMOCRACY score of a given country.

evidence that democracies are associated with larger, more corrupt governments and more restrictions on trade. Democracies also may be more defenseless against citizens' demands for re-distribution and equality while authoritarian regimes can impose fiscal and social policies needed for economic growth. In East Asia, the key to economic success was, as mentioned by many scholars, due to the insulation from interest groups and unions provided by state autonomy, which is possible only under authoritarianism. Przeworski and Limongi (1993) conclude that they do not know whether or not democracy weakens economic growth. However, they do argue that there is some scraps of evidence that political institutions matter. In this study, I speculate democracies have a more favorable chance at promoting economic development.

•Civil Liberties. These are an expansive and broad group of personal rights as well as avenues of well-being. These rights are basic such as the right to life, freedom from torture, freedom from slavery, the right to liberty and security, right to a fair trial, the right to privacy, freedom of expression, freedom of assembly and association, and the right to marry and have a family. Studies are once again inconclusive on the direct relationship between civil liberties and economic growth. However, I speculate that more civil liberties will increase economic development through more investments, trust in government, less conflict, and so on. The civil liberties index is based on a scale from 1 to 7, where 1 represents high levels of freedom and 7 low levels of freedom.[6]

•Population Growth Rate. Some optimistic scholars assume that population growth encourages economic growth by increasing the tax pool and potential work force. On the other hand, these rewards may not outweigh the resulting escalation in urban sprawl, traffic congestion, and loss of open space. Also, the amount of basic requirements of life such as food and water cannot expand as rapidly as some areas experiencing rapid population growth rates. Population growth in this study is assumed to have a negative impact on economic

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[6] See Appendix A for index definitions.

growth because it reduces family savings rates and creates difficulties in the government's capabilities to provide basic services to a growing population.

Data Limitations

Pooled cross sectional time-series analysis tends to have some complications involved such as heteroskedasticity and autocorrelation. Heteroskedasticity means that errors may have differing variances across ranges or sub sets of nations. Autocorrelation is a complication that involves errors at one time period being correlated with first lag of the errors at the next time period. However, STATA version 11 provides commands to correct such problems: **corr(psar1) panels(h) force**. The first command corrects first order autocorrelation and also calculates the estimate of the autocorrelation function separately for each country. The second command corrects heteroskedasticity, and the last command forces STATA to provide model estimates even if there are any missing observations.

VI. Empirical Results

The results of all five models are surprisingly inconsistent with the hypothesis that the impact of foreign aid on economic growth is conditional on the institutional environment, specifically an accountable environment, in Latin America and the Caribbean. The direction of the relationship between aid and growth are positive; however, the strength is unexpectedly weak. Unfortunately, when the accountability index is added, the statistically significant variable negatively affects overall GDP growth.

Table 2 and 3 show the model estimation results. Table 2 analyzes the effect of an accountability index and the interaction term on economic growth without fixed effects. Table 3 analyzes the effect of an accountability index and the interaction term with fixed effects. For the most part, economic growth decreases when governments do not carry out policies conducive to economic stability.

- Trade Openness. The coefficient for the level of trade openness variable is positive and as expected shows an overall increase in economic growth, yet only in the fixed effects model is the variable significant. Holding constant all other growth determinants, countries with more liberalized trade strategies prospered more than those without. The direction of the relationship is positive and statistically significant in four of the five estimation models.

- Inflation Rate. When all other factors are held constant, the statistical significance of the inflation rate variable indicates that a one-unit increase in the inflation rate as a whole results in a 0.046 to 0.072 percent decrease in the economic growth rate. High inflation rates do seem to decrease economic growth overall. It is also consistent and positive in all five models. This is crucial evidence that Latin American and Caribbean should reform economic policies to lower inflation rates as it is a significant determinant of growth.

- Population Growth. The estimated coefficient of this variable is curiously positive, is one of the strongest indicators in the model without fixed effects, and is statistically significant. However, in the more stringent model accounting for fixed effects, the coefficient is negative and not significant at all. This would

seem that an elevated population growth rate may increase the opportunities for economic development and may indeed do so by creating a large tax base for increased revenues.

•Secondary School Enrollment. The coefficients in both models representing a population with higher education are inconclusive due to the fact that economic growth increases with improvements in education in one model and decreases in another. However, the estimates are statistically significant and show a decrease in GDP growth with the more stringent model with fixed effects.

•Government Consumption. Like the other economic determinants, such as trade openness and inflation, this variable performs well and consistently in all five models. When all factors are held constant, a one unit increase in government consumption results in a 0.198 to 0.693 percent decrease in the economic growth rate. As expected, when governments do not allocate resources and funds properly, development and prosperity suffers.

•Public Infrastructure. The coefficients for the energy usage per capita variable is positive yet miniscule and not at all statistically significant in all five models. Public infrastructure in the form of the amount of energy used is not a telling determinant for economic growth in the region.

•Civil Liberties. This variable performs the way it was originally hypothesized in every model. With or without fixed effects, higher levels of civil liberties increase economic growth. The civil liberties score ranges from 1 (the highest form of civil liberties) to 7 (the lowest). Therefore, a negative coefficient was anticipated.

•Conditional Convergence. The coefficient on the initial level of GDP per capita is negative and statistically insignificant. However, this implies that there is some kind of "conditional convergence;" that is, holding constant other growth determinants, poorer countries may grow faster than richer ones due to diminishing returns of production.

•Democracy. The polity score coefficient in both models is highly significant and positive as expected. That is democracies have a heightened ability to increase economic growth; however, it seems that its

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capabilities for accountability are not the determining factor. It may be due to its propensies for lower inflation rates, political stability, and economic freedom.

When the interaction term is added to check for the conditionality of economic growth on foreign aid and the index measuring institutional variables, aid shows no significant effect on economic growth. These results are inconsistent with those found in the Burnside and Dollar study (2000). Burnside and Dollar conclude that the impact of aid on economic growth is truly conditional on the policy environment of each individual country. The results from all five models show the non-statistically significant relationship between foreign aid and economic growth in Latin America and the Caribbean. These results remain unchanged when the accountability index and foreign aid and interaction term variables are included into the equation, as seen in Table 2 and 3.

To check the robustness of my accountability index, I replaced the index with each of its component parts separately, namely, the indicators on bureaucratic quality, press freedom, executive constraint, independence of the judiciary, and the amount of domestic credit given to the private sector as can be seen in Tables 3, 4, and 5. [7]

The model representing the disaggregation of the accountability index offers some similarities to the other models. Official Development Assistance offers once again a positive, miniscule, yet statistically insignificant relationship with economic growth. Additionally, once the fixed effects are added in the model the resulting relationship further diminishes.

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[7] See Appendix B for the results of each individual variable.

Table 2. Parameter Estimates for Pooled Cross Section Time Series Models of Economic Growth in Latin American Countries Including the Accountability Index With Fixed Effects, 1996 to 2008.

Additive Model Without Fixed Effects			Multiplicative Model Without Fixed Effects		
Variable	b	Z	Variable	b	z
Intercept	0.846	0.41	Intercept	1.161	0.52
Developmental Assistance (+)	0.003	0.44	Developmental Assistance (+)	0.002	0.34
Accountability Index (+)	-1.108	-3.08***	Accountability Index (+)	-1.002	-2.30**
Trade Openness (+)	0.011	1.35	Interaction (ODA*Index) (+)	-0.001	-0.17
Inflation Rate (-)	-0.046	-1.89*	Trade Openness (+)	0.011	1.34
Population Rate (-)	1.130	3.54***	Inflation Rate (-)	-0.043	-1.76*
Secondary School Enrollment (+)	0.035	1.94*	Population Rate (-)	0.983	2.63***
Government Consumption (-)	-0.198	-2.81***	Secondary School Enrollment (+)	0.036	1.86*
Energy Usage Per Capita (+)	0.001	1.01	Government Consumption (-)	-0.197	-2.73***
Civil Liberties (-)	-0.760	-2.11**	Energy Usage Per Capita (+)	0.0005	0.67
Initial GDP (-)	-0.0001	-0.30	Civil Liberties (-)	-0.757	-1.98**
Polity Score (+)	0.344	3.55***	Initial GDP (-)	0.000	-0.18
			Polity Score (+)	0.324	3.12***
N		246	N		246

Notes:
The dependent variable is the annual gross domestic product growth rate.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

In Tables 3 and 4, the bureaucratic quality variable's coefficient points in the right direction; however, is only significant in the model without fixed effects. However, it shows that efficiency, competency, and honesty are good for economic development in the region for the most part. This variable is the only indicator that behaves as speculated but only in Table 4. Under these model estimations, I assume that economic growth decreases as the other accountability measures are increased. Independence of the judiciary, increased domestic credit to the private sector, and higher press freedoms are statistically significant indicating their ability to stifle growth in Latin America and the Caribbean. It would seem that political freedom and institutions providing checks and balances are less of a determinant in explaining economic growth.

Though lacking any statistical power or consistency across models, those variables classified as insignificant are able to provide some explanatory insights; analyses of the direction of coefficient estimates indicate if they have the potential negatively or positively to affect economic growth.

•Gross Secondary School Enrollment. This variable does not consistently affect growth. In Table 4, as speculated, economic growth increases as enrollment in higher education grows; however, its impact changes directions as fixed effects are added. It would seem that in much of the region, this variable bears hardly any weight on economic growth, which is a very odd occurrence. This may lead us to believe that there is an underlying problem of measurement or experimental testing for this indicator.

•Democracy. How democratic a given country is also does not perform consistently. In some models democracy affects the economic development of Latin America negatively and, in others, positively. However, in Tables 2 and 3, when adding the accountability index, higher democracy scores lead to statistically significant increases in economic growth.

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Table 3. Parameter Estimates for Pooled Cross Section Time Series Models of Economic Growth in Latin American Countries Excluding the Accountability Index Without Fixed Effects, 1996 to 2008.

Additive Model With Fixed Effects			Multiplicative Model With Fixed Effects		
Variable	*b*	*z*	Variable	*b*	*z*
Intercept	3.782	1.42	Intercept	2.119	0.87
Developmental Assistance (+)	0.009	1.02	Developmental Assistance (+)	0.009	1.00
Accountability Index (+)	-2.377	-4.69***	Accountability Index (+)	-2.881	-4.56***
Trade Openness (+)	0.100	5.84***	Interaction (ODA*Index) (+)	0.016	1.45
Inflation Rate (-)	-0.072	-2.81***	Trade Openness (+)	0.104	6.03***
Population Rate (-)	-0.095	-0.11	Inflation Rate (-)	-0.068	-2.64***
Secondary School Enrollment (+)	-0.054	-2.63***	Population Rate (-)	0.094	0.11
Government Consumption (-)	-0.693	-5.95***	Secondary School Enrollment (+)	-0.056	-2.65***
Energy Usage Per Capita (+)	0.001	0.74	Government Consumption (-)	-0.677	-5.80***
Civil Liberties (-)	-0.811	-2.56**	Energy Usage Per Capita (+)	0.000	0.59
Initial GDP (-)	-0.002	-0.81	Civil Liberties (-)	-0.826	-2.56**
Polity Score (+)	0.579	4.29***	Initial GDP (-)	0.000	0.98
			Polity Score (+)	0.644	4.68***
N		246	N		246

Notes:
The dependent variable is the annual gross domestic product growth rate.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

Table 4. Parameter Estimates for Pooled Cross Section Time Series Models of Economic Growth in Latin American Countries Excluding the Accountability Index Without Fixed Effects, 1996 to 2008.

Model Without Fixed Effects

Variable	b	z	
Intercept	5.697	1.77*	
Official Development Assistance (+)	0.001	0.25	
Bureaucratic Quality (+)	1.245	2.10**	
Press Freedom (+)	-0.041	-2.13**	
Executive Constraints (+)	-0.048	-0.13	
Independent Judiciary (+)	-0.638	-1.74*	
Domestic Credit to the			
Private Sector (+)	-0.540	-2.97***	
Trade Openness (+)	0.027	2.63***	
Inflation Rate (-)	-0.042	-1.70*	
Population Rate (-)	0.392	0.75	
Gross Secondary School Enrollment (+)	0.045	2.27**	
Government Consumption (-)	-0.201	-2.81***	
Energy Usage Per Capita (+)	0.0004	0.69	
Civil Liberties (-)	-0.436	-1.09	
Initial GDP (-)	-0.0003	-0.89	
Polity Score (+)	0.321	1.90*	
N		246	

Notes:
The dependent variable is the annual gross domestic product growth rate.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

•Conditional Convergence. This theory, represented by the lagged initial GDP growth rate variable, is

highly inconsistent and for the most part, insignificant and minuscule.

•Population Growth Rate. This variable does not have a statistically significant impact on growth.

However, the coefficients are positive and seem to imply that a larger population has the possibility to increase

GDP growth.

Table 5. Parameter Estimates for Pooled Cross Section Time Series Models of Economic Growth in Latin American Countries Excluding the Accountability Index With Fixed Effects, 1996 to 2008.

<u>Model With Fixed Effects</u>

Variable	b	z	
Intercept	12.095	2.32**	
Official Development Assistance (+)	0.0003	0.03	
Bureaucratic Quality (+)	1.093	1.50	
Press Freedom (+)	-0.109	-4.46***	
Independent Judiciary (+)	-0.618	-1.91*	
Executive Constraints (+)	-0.310	-0.33	
Domestic Credit to the			
Private Sector (+)	-0.071	-2.86***	
Trade Openness (+)	0.088	5.35***	
Inflation Rate (-)	-0.077	-2.99***	
Population Rate (-)	0.275	0.26	
Gross Secondary School Enrollment (+)	-0.037	-1.32	
Government Consumption (-)	-0.585	-4.36***	
Energy Usage Per Capita (+)	0.001	0.69	
Civil Liberties (-)	-0.705	-1.72*	
Initial GDP (-)	0.003	2.41**	
Polity Score (+)	0.564	1.32	
N		246	

Notes:
The dependent variable is the annual gross domestic product growth rate.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed.

In Table 6, each individual accountability component and its correlation with economic growth are accounted for. The only variables of statistical significance are the amount of domestic credit given to the private sector and press freedoms. Inasmuch as an increase in private sector activity and a free media should stimulate economic growth, on the whole, they do the opposite in the region. Bureaucratic Quality coefficients remain positive yet chronically insignificant. And the rest of the index indicates a negative direction for the economies of Latin American and Caribbean countries.

<u>Summation of Results</u>

What does this all mean then? The models show that foreign aid and accountability structures do not have any impact on economic growth in Latin America and the Caribbean. However, economic factors such as increased trade openness, lower inflation rates, and decreased government consumption rates consistently perform well across all five models. I would speculate that this region responds well to a strong executive, state owned banks, and lower press and political freedoms. Iberian traditions and heritage may explain why this region has higher propensities towards the acceptance of a *caudillismo* culture. In colonial Latin America, the Spanish policy was to supplement small troops of professional soldiers with large militia forces recruited from local populations to maintain public order. These militiamen were exempt from certain taxes and community work assignments and most importantly, exempt from criminal or civil prosecution, which may explain the lack of importance of an independent judiciary in the region. Perhaps trust in protection of property rights and expropriation comes from ingrained patronage and clientelistic practices in Latin America.

What matters the most for economic growth seems to be consistent with Burnside and Dollar's conclusion that foreign aid only increases economic growth when interacted with good fiscal or monetary policies such as trade openness, low government consumption, and low inflation. Here we can see that governments that can control inflation rates and increase trade while lowering government consumption are better able to increase growth. These countries have smooth economic environments, allocate resources efficiently, and maintain strong leadership. Vinod Thomas and Yan Wang in their 1996 study "Distortions, Interventions, and Productivity Growth: Is East Asia Different?" speculate government intervention, distortions, trade and geographical proximity as possible explanations for East Asian economic performance. They come to the conclusion that the most crucial determinant in their miraculous growth was due to their economic policy environment. In fact, trade openness and macroeconomic stability were the most important policies and had a significant and positive correlation with economic growth in East Asia overall (Thomas and Wang, 1996).

I believe Latin America can benefit from a balance of an authoritarian-style regime as seen in Korea, Japan, and Taiwan, which can control fiscal and monetary policies to repress interest rates and direct credit in order to increase investments, and a market-friendly economy, which creates avenues for trade openness and competitiveness through increased technology as well as stable macroeconomic policies. These policies coincide with less government consumption, controlling overspending by the government, which ultimately leads to inflation or overvaluation of currency (Thomas and Wang, 1996). Democracy at times can exhibit growth inhibiting aspects such as the propensity to redistribute income in systems of majority voting as well as the increased role of interest groups in representative legislatures. Nondemocratic governments can occasionally prevent such outcomes and yet ensure economic freedom.

Robert Barro asserts that most OECD countries encouraged economic development in burgeoning systems with limited political rights, then progressed into representative democracies much later (1996). Autocracies can prevent economic growth; however, when they pilfer funds for their own use and mismanage fiscal and monetary policies. It is a risky gamble in trusting a nondemocratic regime will enhance economic growth, but in many cases, it is the key to success. Of course, another possibility could stem from Seymour Lipset's (1959) study that economic success encourages democracy, rather the opposite of the democratic argument mentioned previously in this study. Lipset believed that only in a society where poverty was uncommon could the majority participate in politics responsibly and knowledgeably. In Barro's study, there is strong evidence to suggest that Lipset's hypothesis is correct. When standard of living measures are increased, there seems to be a gradual rise in democracy. On the other hand, democratic governments with low economic development tend to expire (Barro 1996).

VII. Discussion

Policy Implications

The results of this paper hope to better assist with the formation of effective aid policies. What then must be done to improve aid effectiveness in Latin America and the Caribbean? Recently, many donors and aid recipients are both actively searching for ways in which to improve aid effectiveness. As we can see from the results, foreign aid in the region almost has a nonexistent influence on economic growth rates. However, foreign aid may show signs of strength when it is utilized in a system that has "good" fiscal and monetary policies such as trade openness, low inflation, and low government consumption. Multilateral organizations such as the United Nations and the OECD are researching and implementing several policies designed to enhance economic growth and also working with donor nations to better understand how foreign aid can help in actuality and over a long term. The Millennium Development Goals and the Paris Declaration stress the importance of the recipient's duty to actively participate in the process of aid allocation. Also, better understanding the aspects of a given country that need improvement such as monetary and fiscal policymaking can help donors inject non-fungible aid into that specific area with a reduced threat of corruption.

Future Research

Future research should understand that each country in Latin America and the Caribbean is a completely different entity and could thus, cause completely different results. Perhaps there is no overarching key to the puzzle of aid effectiveness. This is why future research should concern itself less with multi-country studies and concentrate more on single case studies. Single case studies can illuminate specific problems a country is experiencing which may be based on historical occurrences, ethnic conflicts, and/or natural disasters. Perhaps the ambiguity of the results in this paper is due to the aggregation of such similar and dissimilar countries. Also, I believe that the research in finding a clear definition for institutional quality should anticipate ambiguity and negative results. In finding treasure, one must suffer many obstacles. Research should also continue as

databases become more up-to-date. For instance, there is a lack of current databases for central bank planning

and bureaucratic quality. Newer studies will have the benefit of a wider pool of data. Altogether, continual

evaluation of aid effectiveness in every recipient country gives us insight on how well foreign aid is working. If

the negative aid-growth relationship believers are correct, perhaps there should be a massive reform for the

foreign aid programs and specifically should be given in just those areas where it is seen to be benefitting.

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Appendix A
Index Ratings

I. General characteristics of each executive constraint rating
The index definitions below were taken directly from the **Polity IV Project: Dataset Users' Manual.**
(http://www.systemicpeace.org/inscr/p4manualv2009.pdf)

(1) Unlimited Authority: There are no regular limitations on the executive's actions (as distinct from irregular limitations such as the threat or actuality of coups and assassinations). Examples of evidence:
    i. Constitutional restrictions on executive action are ignored.
    ii. Constitution is frequently revised or suspended at the executive's initiative.
    iii. There is no legislative assembly, or there is one but it is called and dismissed at the executive's pleasure.
    iv. The executive appoints a majority of members of any accountability group and can remove them at will.
    v. The legislature cannot initiate legislation or veto or suspend acts of the executive.
    vi. Rule by decree is repeatedly used.
Note 3.4: If the executive is given limited or unlimited power by a legislature to cope with an emergency and relents this power after the emergency has passed, this is not a change to unlimited authority.

(2) Intermediate Category

(3) Slight to Moderate Limitation on Executive Authority: There are some real but limited restraints on the executive. Evidence:
    i. The legislature initiates some categories of legislation.
    ii. The legislature blocks implementation of executive acts and decrees.
    iii. Attempts by the executive to change some constitutional restrictions, such as prohibitions on succeeding himself, or extending his term, fail and are not adopted.
    iv. The ruling party initiates some legislation or takes some administrative action independently of the executive.
    v. The legislature or party approves some categories of appointments nominated by the executive.
    vi. There is an independent judiciary.
    vii. Situations in which there exists a civilian executive, but in which policy decisions, for all practical purposes, reflect the demands of the military.

(4) Intermediate Category

(5) Substantial Limitations on Executive Authority: The executive has more effective authority than any accountability group but is subject to substantial constraints by them. Examples:
    i. A legislature or party council often modifies or defeats executive proposals for action.
    ii. A council or legislature sometimes refuses funds to the executive.
    iii. The accountability group makes important appointments to administrative posts.

iv. The legislature refuses the executive permission to leave the country.

(6) Intermediate Category

(7) Executive Parity or Subordination: Accountability groups have effective authority equal to or greater than the executive in most areas of activity. Examples of evidence:
    i. A legislature, ruling party, or council of nobles initiates much or most important legislation.
    ii. The executive (president, premier, king, cabinet, council) is chosen by the accountability group and is dependent on its continued support to remain in office (as in most parliamentary systems).
    iii. In multi-party democracies, there is chronic "cabinet instability."

II. Checklist of methodology questions for 2010 press freedom
The index checklist below was taken directly from the Freedom House website.
(http://www.freedomhouse.org)
A. LEGAL ENVIRONMENT (0–30 POINTS)

1. Do the constitution or other basic laws contain provisions designed to protect freedom of the press and of expression, and are they enforced? (0–6 points)
2. Do the penal code, security laws, or any other laws restrict reporting, and are journalists punished under these laws? (0–6 points)
3. Are there penalties for libeling officials or the state, and are they enforced? (0–3 points)
4. Is the judiciary independent, and do courts judge cases concerning the media impartially? (0–3 points)
5. Is freedom of information legislation in place, and are journalists able to make use of it? (0–2 points)
6. Can individuals or business entities legally establish and operate private media outlets without undue interference? (0–4 points)
7. Are media regulatory bodies, such as a broadcasting authority or national press or communications council, able to operate freely and independently? (0–2 points)
8. Is there freedom to become a journalist and to practice journalism, and can professional groups freely support journalists' rights and interests? (0–4 points)

B. POLITICAL ENVIRONMENT (0–40 POINTS)
1. To what extent are media outlets' news and information content determined by the government or a particular partisan interest? (0–10 points)
2. Is access to official or unofficial sources generally controlled? (0–2 points)
3. Is there official or unofficial censorship? (0–4 points)
4. Do journalists practice self-censorship? (0–4 points)
5. Do people have access to media coverage that is robust and reflects a diversity of viewpoints? (0–4 points)
6. Are both local and foreign journalists able to cover the news freely? (0–6 points)
7. Are journalists or media outlets subject to extralegal intimidation or physical violence by state authorities or any other actor? (0–10 points)

C. ECONOMIC ENVIRONMENT (0–30 POINTS)

1. To what extent are media owned or controlled by the government, and does this influence their diversity of views? (0–6 points)
2. Is media ownership transparent, thus allowing consumers to judge the impartiality of the news? (0–3 points)
3. Is media ownership highly concentrated, and does it influence diversity of content? (0–3 points)
4. Are there restrictions on the means of journalistic production and distribution? (0–4 points)
5. Are there high costs associated with the establishment and operation of media outlets? (0–4 points)
6. Do the state or other actors try to control the media through allocation of advertising or subsidies? (0–3 points)
7. Do journalists receive payment from private or public sources whose design is to influence their journalistic content? (0–3 points)
8. Does the economic situation in a country accentuate media dependency on the state, political parties, big business, or other influential political actors for funding? (0–4 points)

III. General characteristics of each civil liberties rating
The index definitions below were taken directly from the Freedom House website. (http://www.freedomhouse.org)

Rating of 1 – Countries and territories that receive a rating of 1 for political rights come closest to ensuring the freedoms embodied in the checklist questions, beginning with free and fair elections. Those who are elected rule, there are competitive parties or other political groupings, and the opposition play an important role and have actual power. Minority groups have reasonable self-government or can participate in the government through informal consensus.
Rating of 2 – Countries and territories rated 2 in political rights are less free than those rated 1. Such factors as political corruption, violence, political discrimination against minorities, and foreign or military influence on politics may be present and weaken the quality of freedom.
Ratings of 3, 4, 5 – The same conditions that undermine freedom in countries and territories with a rating of 2 may also weaken political rights in those with a rating of 3, 4, or 5. Other damaging elements can include civil war, heavy military involvement in politics, lingering royal power, unfair elections, and one-party dominance. However, states and territories in these categories may still enjoy some elements of political rights, including the freedom to organize quasi-political groups, reasonably free referendums, or other significant means of popular influence on government.

Civil Liberties
Rating of 1 – Countries and territories that receive a rating of 1 come closest to ensuring the freedoms expressed in the civil liberties checklist, including freedom of expression, assembly, association, education, and religion. They are distinguished by an established and generally equitable system of rule of law. Countries and territories with this rating enjoy free economic activity and tend to strive for equality of opportunity.

Rating of 2 – States and territories with a rating of 2 have deficiencies in a few aspects of civil liberties, but are still relatively free.

Ratings of 3, 4, 5 – Countries and territories that have received a rating of 3, 4, or 5 range from those that are in at least partial compliance with virtually all checklist standards to those with a

combination of high or medium scores for some questions and low or very low scores on other questions. The level of oppression increases at each successive rating level, including in the areas of censorship, political terror, and the prevention of free association. There are also many cases in which groups opposed to the state engage in political terror that undermines other freedoms.

Rating of 6 – People in countries and territories with a rating of 6 experience severely restricted rights of expression and association, and there are almost always political prisoners and other manifestations of political terror. These countries may be characterized by a few partial rights, such as some religious and social freedoms, some highly restricted private business activity, and relatively free private discussion.

Rating of 7 – States and territories with a rating of 7 have virtually no freedom. An overwhelming and justified fear of repression characterizes these societies.

Individual Accountability Index Components

Table 6. Parameter Estimates for Pooled Cross-Section Time Series Models of Economic Growth in Latin American Countries for Each Separate Accountability Component, 1996 to 2008.

Variable	Bureaucratic Quality		Press Freedom		Executive Constraints		Independent Judiciary		Domestic Credit to the Private Sector	
	b	*z*	*b*	*z*	*b*	*z*	*b*	*z*	*b*	*z*
Intercept	2.867	1.04	6.277	2.48**	0.592	0.20	4.980	1.78*	1.549	0.62
ODA (+)	0.002	0.33	0.005	0.9	0.000	0.02	0.001	0.17	0.002	0.32
Bureaucratic Quality (+)	0.502	0.77	…	…	…	…	…	…	…	…
Press Freedom (+)	…	…	-0.056	-3.01***	…	…	…	…	…	…
Executive Constraint (+)	…	…	…	…	0.523	1.33	…	…	…	…
Independent Judiciary (+)	…	…	…	…	…	…	-0.550	-1.44	…	…
Domestic Credit to the Private Sector (+)	…	…	…	…	…	…	…	…	-0.041	-2.44**
Trade Openness (+)	0.025	2.82***	0.0172	2.09**	0.029	3.12***	0.021	2.39**	0.025	2.82***
Inflation Rate (-)	-0.042	-1.65*	-0.046	-1.92*	-0.046	-1.86*	-0.048	-1.95*	-0.050	-1.99**
Population Rate (-)	0.283	0.51	0.565	1.21	0.411	0.78	0.217	0.36	0.651	1.83*
% Secondary School (+)	0.040	1.75*	0.037	1.74*	0.039	1.73*	0.032	1.39	0.048	2.55**
Government Consump. (-)	-0.148	-1.93*	-0.134	-1.88*	-0.139	-1.83*	-0.137	-1.80*	-0.228	-3.01***
Energy Usage (+)	0.000	0.16	0.000	0.76	0.000	0.17	0.000	0.05	0.001	1.04
Civil Liberties (-)	-0.004	-0.01	-0.546	-1.54	-0.085	-0.23	-0.341	-0.89	-0.257	-0.71
Initial GDP Growth Rate (-)	0.000	-0.16	0.000	-0.20	0.000	0.27	0.000	0.21	0.000	-0.78
Polity Score (+)	-0.194	-1.50	-0.111	-0.86	-0.401	-2.04**	-0.208	-1.60	0.212	2.16**
N	260		260		260		260		246	

Notes: The dependent variable is the annual gross domestic product growth rate.
*$p < .10$, two-tailed. **$p < .05$, two-tailed. ***$p < .01$, two-tailed

Individual Accountability Index Components

Table 7. Parameter Estimates for Pooled Cross-Section Time Series Models of Economic Growth in Latin American Countries for Each Separate Accountability Component With Interaction, 1996 to 2008.

Variable	Interaction b	z	Bureaucratic Quality b	z	Press Freedom b	z	Executive Constraints b	z	Independent Judiciary b	z	Domestic Credit to the Private Sector b	z
Intercept	6.874	1.93*	2.867	1.04	6.277	2.48**	0.592	0.20	4.980	1.78*	1.549	0.62
ODA (+)	-0.0003	-0.05	0.002	0.33	0.005	0.9	0.000	0.02	0.001	0.17	0.002	0.32
Bureaucratic Quality (+)			0.502	0.77	…	…	…	…	…	…	…	…
Press Freedom (+)			…	…	-0.056	-3.01***	…	…	…	…	…	…
Executive Constraint (+)			…	…	…	…	0.523	1.33	…	…	…	…
Independent Judiciary (+)			…	…	…	…	…	…	-0.550	-1.44	…	…
Domestic Credit to the Private Sector (+)			…	…	…	…	…	…	…	…	-0.041	-2.44**
Interaction (+)	0.005	0.61										
Trade Openness (+)	0.030	2.75***	0.025	2.82***	0.0172	2.09**	0.029	3.12***	0.021	2.39**	0.025	2.82***
Inflation Rate (-)	-0.039	-1.55	-0.042	-1.65*	-0.046	-1.92*	-0.046	-1.86*	-0.048	-1.95*	-0.050	-1.99**
Population Rate (-)	0.166	0.27	0.283	0.51	0.565	1.21	0.411	0.78	0.217	0.36	0.651	1.83*
% Secondary School (+)	0.046	2.09**	0.040	1.75*	0.037	1.74*	0.039	1.73*	0.032	1.39	0.048	2.55**
Government Consum. (-)	-0.201	-2.82***	-0.148	-1.93*	-0.134	-1.88*	-0.139	-1.83*	-0.137	-1.80*	-0.228	-3.01***
Energy Usage (+)	0.000	0.51	0.000	0.16	0.000	0.76	0.000	0.17	0.000	0.05	0.001	1.04
Civil Liberties (-)	-0.506	-1.19	-0.004	-0.01	-0.546	-1.54	-0.085	-0.23	-0.341	-0.89	-0.257	-0.71
Initial GDP Growth Rate (-)	0.000	-0.89	0.000	-0.16	0.000	-0.20	0.000	0.27	0.000	0.21	0.000	-0.78
Polity Score (+)	0.262	1.34	-0.194	-1.50	-0.111	-0.86	-0.401	-2.04**	-0.208	-1.60	0.212	2.16**
N	246		260		260		260		260		246	

Notes: The dependent variable is the annual gross domestic product growth rate. *p < .10, two-tailed. **p < .05, two-tailed. ***p < .01, two-tailed.

Appendix C
Descriptive Statistics of the Accountability Index Using Factor Analysis

Factor analysis/correlation   Number of obs = 257
  Method: principal-component factors   Retained factors = 1
  Rotation: (unrotated)   Number of parameters = 5

Factor	Eigen Value	Difference	Proportion	Cumulative
Factor1	2.74904	1.85729	0.5498	0.5498
Factor2	0.89175	0.25383	0.1784	0.7282
Factor3	0.63792	0.22512	0.1276	0.8557
Factor4	0.41280	0.10432	0.0826	0.9383
Factor5	0.30848	.	0.0617	1.0000

LR test: independent vs. saturated: chi2(10) = 410.70
Prob > chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor 1	Uniqueness
Domestic Credit to Private Sector	0.6095	0.6285
Bureaucratic Quality	0.8008	0.3588
Executive Constraint	0.6232	0.6116
Independence of the Judiciary	0.7872	0.3804
Freedom of the Press	0.8534	0.2717

Scoring coefficients (method = regression)

Variable	Factor1
Domestic Credit to the Private Sector	0.22170
Bureaucratic Quality	0.29129
Executive Constraint	0.22669
Independence of the Judiciary	0.28634
Freedom of the Press	0.31045

Appendix D
Descriptive Statistics of All Five Models

Accountability Index Without Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups   =   19
Estimated coefficients   =   12   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.003	0.006	0.44	0.657	-0.009	0.014
Accountability Index	-1.108	0.360	-3.08	0.002	-1.813	-0.403
Secondary School Enrollment	0.035	0.018	1.94	0.052	-0.0003	0.071
Government Consumption	-0.198	0.071	-2.81	0.005	-0.336	-0.060
Trade Openness	0.011	0.008	1.35	0.177	-0.005	0.026
Energy Use	0.0006	0.0006	1.01	0.315	-0.0006	0.002
Civil Liberties	-0.760	0.361	-2.11	0.035	-1.47	-0.054
Population Growth Rate	1.130	0.319	3.54	0.0002	0.504	1.756
Inflation Rate	-0.046	0.025	-1.89	0.059	-0.095	0.002
Polity Score	0.343	0.097	3.55	0.0004	0.154	0.533
Initial GDP	-0.0001	0.0003	-0.30	0.765	-0.0008	0.0006
_constant	0.846	2.087	0.41	0.685	-3.245	4.937

Accountability Index With Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups   =   19
Estimated coefficients   =   29   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.009	0.009	1.02	0.307	0.008	0.026
Accountability Index	-2.377	0.507	-4.69	0.000	-3.37	-1.381
Secondary School Enrollment	-0.054	0.020	-2.63	0.008	-0.094	-0.014
Government Consumption	-0.693	0.116	-5.95	0.000	-0.922	-0.465
Trade Openness	0.100	0.017	5.84	0.000	0.067	0.134
Energy Use	0.0008	0.001	0.74	0.460	-0.001	0.003
Civil Liberties	-0.811	0.317	-2.56	0.011	-1.432	-0.189
Population Growth Rate	-0.095	0.826	-0.11	0.908	-1.715	1.523
Inflation Rate	-0.072	0.026	-2.81	0.005	-0.123	-0.022
Polity Score	0.579	0.135	4.29	0.000	0.314	0.843
Initial GDP	-0.002	0.002	-0.81	0.415	-0.007	0.003
Argentina	20.014	15.736	1.27	0.203	-10.827	50.855
Bolivia	8.912	1.818	4.90	0.000	5.349	12.475
Brazil	20.475	7.630	2.68	0.007	5.521	35.429
Chile	13.567	8.156	1.66	0.096	-2.417	29.552
Colombia	14.704	5.074	2.90	0.004	4.759	24.649
Costa Rica	10.381	6.137	1.69	0.091	-1.648	22.409
Dominican Republic	4.185	3.212	1.30	0.193	-2.111	10.481
Ecuador	4.965	2.353	2.11	0.035	0.353	9.576
El Salvador	2.829	3.250	0.87	0.384	-3.541	9.199
Guatemala	2.084	2.119	0.98	0.325	-2.070	6.238
Mexico	12.208	10.015	1.22	0.223	-7.421	31.837
Nicaragua	1.156	1.333	0.87	0.386	-1.457	3.769
Panama	4.465	5.559	0.80	0.422	-6.430	15.361
Paraguay	-0.739	1.619	-0.46	0.648	-3.913	2.435
Peru	10.431	3.487	2.99	0.003	3.597	17.266
Uruguay	12.916	10.864	1.19	0.234	-8.377	34.208
Venezuela	18.034	13.592	1.33	0.185	-8.605	44.673
_constant	3.783	2.669	1.42	0.156	-1.449	9.014

Accountability Index and Interaction Included Without Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups   =   19
Estimated coefficients   =   13   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.002	0.006	0.34	0.731	-0.010	0.014
Accountability Index	-1.002	0.436	-2.30	0.022	-1.855	-0.147
Interaction	-0.001	0.008	-0.17	0.867	-0.017	0.014
Secondary School Enrollment	0.036	0.020	1.86	0.062	-0.002	0.075
Government Consumption	-0.197	0.072	-2.73	0.006	-0.338	-0.056
Trade Openness	0.011	0.009	1.34	0.180	-0.005	0.028
Energy Use	0.0005	0.0007	0.67	0.503	-0.0009	0.002
Civil Liberties	-0.757	0.382	-1.98	0.047	-1.506	-0.009
Population Growth Rate	0.983	0.374	2.63	0.009	0.250	1.716
Inflation Rate	-0.00006	0.0003	-0.18	0.858	-0.0007	0.0006
Polity Score	-0.043	0.025	-1.76	0.078	-0.091	0.005
Initial GDP	0.324	0.104	3.12	0.002	0.120	0.527
constant	1.161	2.222	0.52	0.601	-3.20	5.512

Accountability Index and Interaction Included With Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups   =   19
Estimated coefficients   =   30   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.009	0.009	1.00	0.316	-0.009	0.028
Accountability Index	-2.881	0.632	-4.56	0.000	-4.12	-1.642
Interaction	0.016	0.011	1.45	0.147	-0.006	0.038
Trade Openness	0.104	0.017	6.03	0.000	0.070	0.137
Secondary School Enrollment	-0.056	0.021	-2.65	0.008	-0.097	-0.014
Government Consumption	-0.677	0.117	-5.80	0.000	-0.906	-0.448
Energy Use	0.0006	0.001	0.59	0.557	-0.002	0.003
Civil Liberties	-0.826	0.323	-2.56	0.010	-1.459	-0.194
Population Growth Rate	0.094	0.825	0.11	0.909	-1.524	1.712
Inflation Rate	-0.0002	0.0008	-0.24	0.812	-0.002	0.001
Polity Score	-0.068	0.026	-2.64	0.008	-0.118	-0.018
Initial GDP	0.644	0.138	4.68	0.000	0.374	0.915
Argentina	8.220	4.959	1.66	0.097	-1.499	17.939
Bolivia	6.972	1.912	3.65	0.000	3.225	10.719
Brazil	14.93	2.780	5.37	0.000	9.480	20.374
Chile	7.688	3.226	2.38	0.017	1.365	14.010
Colombia	10.454	1.797	5.82	0.000	6.933	13.976
Costa Rica	4.866	2.542	1.91	0.056	-0.116	9.848
Dominican Republic	0.841	1.527	0.55	0.581	-2.151	3.833
Ecuador	3.0006	1.704	1.76	0.078	-0.339	6.341
El Salvador	0.578	1.345	-0.43	0.667	-3.214	2.058
Guatemala	-1.452	1.461	0.99	0.320	-4.314	1.41
Mexico	4.269	2.981	1.43	0.152	-1.574	10.112
Nicaragua	0.458	1.544	0.30	0.767	-2.568	3.485
Panama	-1.199	2.534	-0.47	0.636	-6.167	3.767
Paraguay	-3.323	1.379	-2.41	0.016	-6.025	-0.621
Peru	7.559	1.399	5.40	0.000	4.816	10.303
Uruguay	8.116	3.862	2.10	0.036	0.548	15.685
Venezuela	4.179	4.243	0.98	0.325	-4.138	12.495
_constant	2.485	2.655	0.94	0.349	-2.718	7.688

Disaggregated Index Without Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups   =   19
Estimated coefficients   =   16   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.001	0.006	0.25	0.805	-0.010	0.013
Bureaucratic Quality	1.245	0.592	2.10	0.036	0.083	2.406
Freedom of the Press	-0.039	0.019	-2.13	0.033	-0.077	-0.003
Executive Constraints	-0.048	0.375	-0.13	0.897	-0.783	0.686
Independence of the Judiciary	-0.638	0.366	-1.74	0.081	-1.355	0.079
Domestic Credit	-0.054	0.018	-2.97	0.003	-0.090	-0.018
Secondary School Enrollment	0.045	0.020	2.27	0.023	0.006	0.085
Government Consumption	-0.201	0.071	-2.81	0.005	-0.341	-0.061
Trade Openness	0.027	0.010	2.63	0.009	0.007	0.046
Energy Use	0.0005	0.0007	0.69	0.489	-0.0009	0.002
Civil Liberties	-0.436	0.340	-1.09	0.276	-1.220	0.348
Population Growth Rate	0.392	0.523	0.75	0.454	-0.634	1.417
Inflation Rate	-0.042	0.025	-1.70	0.089	-0.091	0.006
Polity Score	0.321	0.169	1.90	0.057	-0.009	0.651
Initial GDP	-0.0003	0.0004	-0.89	0.375	-0.001	0.0004
_constant	5.697	3.226	1.77	0.077	-0.626	12.019

Disaggregated Index With Fixed Effects

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups =   19
Estimated coefficients   =   33   Obs per group: min =

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.0003	0.009	0.03	0.973	-0.017	0.018
Bureaucratic Quality	1.093	0.730	1.50	0.135	-0.339	2.524
Freedom of the Press	-0.109	0.024	-4.46	0.000	-0.156	-0.061
Executive Constraints	-0.310	0.935	-0.33	0.740	-2.142	1.523
Independence of the Judiciary	-0.618	0.324	-1.91	0.056	-1.252	0.016
Domestic Credit	-0.071	0.025	-2.86	0.004	-0.119	-0.022
Secondary School Enrollment	-0.037	0.028	-1.32	0.186	-0.093	0.018
Government Consumption	-0.585	0.134	-4.36	0.000	-0.848	-0.322
Trade Openness	0.088	0.017	5.35	0.000	0.056	0.121
Energy Use	0.0008	0.001	0.69	0.493	-0.001	0.003
Civil Liberties	-0.705	0.410	-1.72	0.085	-1.509	0.098
Population Growth Rate	0.275	1.056	0.26	0.794	-1.795	2.35
Inflation Rate	-0.077	0.025	-2.99	0.003	-0.127	-0.026
Polity Score	0.564	0.427	1.32	0.187	-0.273	1.400
Initial GDP	0.003	0.001	2.41	0.016	0.0006	0.006
Argentina	-16.961	7.136	-2.38	0.017	-30.947	-2.974
Bolivia	6.259	1.984	3.15	0.002	2.370	10.149
Brazil	1.106	2.777	0.40	0.690	-4.336	6.549
Chile	-8.066	4.005	-2.01	0.044	-15.917	-0.216
Colombia	-0.070	1.898	-0.04	0.971	-3.791	3.650
Costa Rica	-7.969	3.026	-2.63	0.008	-13.900	-2.036
Dominican Republic	-4.229	1.658	-2.55	0.011	-7.480	-0.978
Ecuador	0.164	1.689	0.10	0.922	-3.147	3.476
El Salvador	-4.495	2.001	-2.25	0.025	-8.419	-0.572
Guatemala	-5.496	1.309	-4.20	0.000	-8.063	-2.929
Mexico	-2.761	1.989	-1.39	0.165	-6.660	1.138
Nicaragua	-13.487	4.353	-3.10	0.002	-22.021	-4.954
Panama	0.805	1.546	0.52	0.602	-2.224	3.836
Paraguay	-9.334	3.502	-2.67	0.008	-16.199	-2.470
Peru	-6.723	1.515	-4.44	0.000	-9.695	-3.752
Uruguay	-14.883	6.123	-2.43	0.015	-26.885	-2.882
Venezuela	-11.716	5.237	-2.24	0.025	-21.981	-1.451
_constant	12.095	5.223	2.32	0.021	1.856	22.334

Bureaucratic Quality

Estimated covariances   =   20   Number of obs   =   260
Estimated autocorrelations =   20   Number of groups   =   20
Estimated coefficients   =   12   Time periods   =   13

GDP Growth Rate	b	Standard Error	z	$P > |z|$	[95% Conf. Interval]
Official Development	0.002	0.006	0.33	0.740	-0.009
Bureaucratic Quality	0.502	0.655	0.77	0.444	-0.782
Secondary School	0.039	0.022	1.75	0.080	-0.004
Government Consumption	-0.147	0.076	-1.93	0.053	-0.297
Trade Openness	0.024	0.008	2.82	0.005	0.007
Energy Use	0.0001	0.0007	0.16	0.872	-0.001
Civil Liberties	-0.003	0.388	-0.01	0.992	-0.765
Population Growth Rate	0.283	0.555	0.51	0.610	-0.805
Inflation Rate	-0.042	0.025	-1.65	0.099	-0.092
Polity Score	-0.193	0.129	-1.50	0.135	-0.447
Initial GDP	-0.00006	0.0003	-0.16	0.877	-0.0008
constant	2.866	2.747	1.04	0.297	-2.518

Press Freedom

Estimated covariances   =   20   Number of obs   =   260
Estimated autocorrelations =   20   Number of groups =   20
Estimated coefficients   =   12   Time periods   =   13

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development	0.005	0.005	0.90	0.366	-0.006	0.016
Freedom of the Press	-0.056	0.018	-3.01	0.003	-0.092	-0.019
Secondary School	0.036	0.020	1.74	0.082	-0.004	0.077
Government Consumption	-0.133	0.071	-1.88	0.060	-0.272	0.005
Trade Openness	0.017	0.008	2.09	0.036	0.001	0.033
Energy Use	0.0005	0.0007	0.76	0.447	-0.0008	0.001
Civil Liberties	-0.545	0.353	-1.54	0.123	-1.239	0.147
Population Growth Rate	0.565	0.465	1.21	0.224	-0.346	1.477
Inflation Rate	-0.046	0.024	-1.92	0.054	-0.093	0.0008
Polity Score	-0.110	0.129	-0.86	0.392	-0.363	0.142
Initial GDP	-0.00007	0.0003	-0.20	0.841	-0.0007	0.0006
constant	6.277	2.531	2.48	0.013	1.316	11.238

Executive Constraints

Estimated covariances   =   20   Number of obs   =   260
Estimated autocorrelations =   20   Number of groups   =   20
Estimated coefficients   =   12   Time periods   =   13

GDP Growth Rate	b	Standard Error	z	$P > |z|$	[95% Conf. Interval]	
Official Development Assistance	0.00009	0.006	0.02	0.988	-0.012	0.012
Executive Constraints	0.522	0.393	1.33	0.184	-0.248	1.293
Secondary School Enrollment	0.038	0.022	1.73	0.083	-0.005	0.082
Government Consumption	-0.139	0.075	-1.83	0.067	-0.287	0.009
Trade Openness	0.028	0.009	3.12	0.002	0.010	0.045
Energy Use	0.0001	0.0007	0.17	0.865	-0.001	0.001
Civil Liberties	-0.085	0.377	-0.23	0.822	-0.825	0.655
Population Growth Rate	0.411	0.524	0.78	0.433	-0.617	1.440
Inflation Rate	-0.046	0.025	-1.86	0.064	-0.095	0.002
Polity Score	-0.401	0.196	-2.04	0.041	-0.786	-0.015
Initial GDP	0.0001	0.0003	0.27	0.790	-0.0006	0.0008
constant	5.917	3.011	0.20	0.844	-5.311	6.495

Independence of the Judiciary

Estimated covariances   =   20   Number of obs   =   260
Estimated autocorrelations =   20   Number of groups   =   20
Estimated coefficients   =   12   Time periods   =   13

GDP Growth Rate	b	Standard Error	z	P > |z/	[95% Conf. Interval]	
Official Development Assistance	0.001	0.006	0.17	0.867	-0.011	0.013
Independence of the Judiciary	-0.550	0.381	-1.44	0.149	-1.298	0.197
Secondary School Enrollment	0.032	0.023	1.39	0.164	-0.013	0.077
Government Consumption	-0.136	0.075	-1.80	0.072	-0.285	0.012
Trade Openness	0.020	0.008	2.39	0.017	0.003	0.037
Energy Use	0.00003	0.0007	0.05	0.957	-0.001	0.001
Civil Liberties	-0.341	0.381	-0.89	0.371	-1.089	0.406
Population Growth Rate	0.217	0.609	0.36	0.721	-0.977	1.412
Inflation Rate	-0.048	0.024	-1.95	0.051	-0.096	0.0002
Polity Score	-0.208	0.130	-1.60	0.110	-0.463	0.047
Initial GDP	0.00007	0.0003	0.21	0.832	-0.0006	0.0008
constant	4.979	2.789	1.78	0.074	-0.488	10.447

Domestic Credit to the Private Sector

Estimated covariances   =   19   Number of obs   =   246
Estimated autocorrelations =   19   Number of groups =   19
Estimated coefficients   =   12   Obs per group: min =   12

GDP Growth Rate	b	Standard Error	z	P > |z|	[95% Conf. Interval]	
Official Development Assistance	0.001	0.006	0.32	0.752	-0.009	0.013
Domestic Credit to the Private Sector	-0.040	0.016	-2.44	0.015	-0.073	-0.007
Secondary School Enrollment	0.047	0.018	2.55	0.011	0.011	0.084
Government Consumption	-0.228	0.075	-3.01	0.003	-0.377	-0.079
Trade Openness	0.025	0.008	2.82	0.005	0.007	0.042
Energy Use	0.0007	0.0007	1.04	0.300	-0.0006	0.002
Civil Liberties	-0.257	0.362	-0.71	0.478	-0.967	0.453
Population Growth Rate	0.651	0.355	1.83	0.067	-0.044	1.347
Inflation Rate	-0.050	0.025	-1.99	0.047	-0.099	-0.0007
Polity Score	0.211	0.098	2.16	0.031	0.019	0.404
Initial GDP	-0.0002	0.0003	-0.78	0.437	-0.001	0.0004
Constant	1.549	2.494	0.62	0.535	-3.340	6.438

Vita

      Anna Castrillo was born in Houma, Louisiana, in 1984. She is a 2003 graduate of Terrebonne High School where she was a valedictorian, performed in the marching band, and served as the president of the school's chapter of the National Honor Society. She is a 2008 graduate of Louisiana State University. During her graduate program, she has received a graduate assistantship, performing immigration services for the university's international faculty and staff. She will graduate from Louisiana State University with a Master of Arts in May 2011.