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Does Foreign Aid Promote Development? A Study Of The Effects Of Foreign Aid On Development In Sub-saharan Africa

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DOES FOREIGN AID PROMOTE DEVELOPMENT? A STUDY OF THE EFFECTS OF FOREIGN AID ON DEVELOPMENT IN SUB-SAHARAN AFRICA

by

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ABSTRACT

Foreign aid aims to improve economic conditions and quality of life in developing countries. The literature on the efficacy of foreign aid to date has been inconclusive; yet there is some evidence that institutional factors may condition the relationship between aid and development. This research focuses on the effects of foreign aid on development, taking into consideration the effects of political institutional factors as intervening in the connection between aid and development. Specifically, this study considers the effects of democracy (political rights and civil liberties) and level of corruption on the relationship between aid and development in sub-Saharan Africa. Development is determined by the Human Development Index, which takes into account gross national income, life expectancy, and education level. My findings indicate that aid is ineffective at promoting development in sub-Saharan Africa. Additionally, it is found that democracy, as determined by level of political freedom, is positively associated to development in aid recipient countries. HIV prevalence rate, the location of the country relative to the coastline, and percent of arable land were found to be significant factors affecting development. The level of corruption and political stability do not have a significant effect on development.

The study is conducted using a cross-national, longitudinal, statistical model. The impact of foreign aid on development is examined for 45 countries over a fourteen-year period, from 1995 to 2009. The results of the study show that foreign aid has a negative effect on development, yet development is affected by level of democracy, geographical location, percent of arable land, and HIV prevalence rate. Development is higher in countries located on the coastline, with a higher percentage of arable land, a higher level of democracy, and a higher rate of HIV.

This project is dedicated to my mother, whose strength, wisdom, and love exceed all others. Thank you for always believing in me, for listening to me, and for being my unofficial editor. You are simply the best mother and friend anyone could ask for.

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TABLE OF CONTENTS

LIST OF TABLES ... vii
LIST OF ACRONYMS/ABREVIATIONS ... viii
CHAPTER 1: INTRODUCTION ... 1
A Brief History of Foreign Aid and its Effectiveness ... 2
How Does This Study Contribute to the Existing Body of Research? ... 4
What is Foreign Aid? ... 5
CHAPTER 2: LITERATURE REVIEW ... 9
Institutional Factors ... 12
Corruption ... 17
Foreign Aid Efficacy ... 21
CHAPTER 3: METHODOLOGY ... 23
Alternative Explanations ... 23
Data and Methods ... 26
CHAPTER 4: RESULTS ... 30
CHAPTER 5: CONCLUSION ... 38
Limitations and Future Research ... 41
APPENDIX A: LIST OF COUNTRIES ... 48
APPENDIX B: DATA SOURCES ... 51
APPENDIX C: EXPLANATION OF DATA ... 53
APPENDIX D: SUMMARY STATISTICS ... 56
REFERENCES ... 58

LIST OF TABLES

Table 1: Effects on Development 37
Table 2: Descriptive Statistics for the Independent Variables 57
Table 3: Descriptive Statistics for Geographical Location 57
Table 4: Descriptive Statistics for the Dependent Variable 57

LIST OF ACRONYMS/ABREVIATIONS

CPI	Corruption Perception Index
EDA	Effective Development Assistance
FDI	Foreign Direct Investment
GNI	Gross National Income
GDP	Gross Domestic Product
HDI	Human Development Index
ICRG	International Country Risk Guide
LDCs	Less Developed Countries
MDGs	Millennium Development Goals
ODA	Official Development Assistance
PR	Proportional Representation
UNDP	United Nations Development Program
USD	United States Dollars

CHAPTER 1: INTRODUCTION

It is argued that the objective of foreign aid is to alleviate poverty and encourage economic growth in developing countries. However, foreign aid was conferred upon the developing world long before any compelling research was undertaken to prove its effectiveness (Boone 1996). States that have yet to reach the development threshold of second and first world countries suffer from a myriad of problems. Citizens of developing states often lack what most in the developed world would consider basic essentials: clean water, adequate nutrition, housing, and access to medical care. Yet, the research on the efficacy of foreign aid in relation to these goals has been inconclusive to date. While some studies indicate that foreign aid is successful at promoting growth by reducing poverty, other studies show that foreign aid contributes to the problem.

In a typical African country, one third of children under the age of five are suffering from stunted growth due to malnutrition. It has been reported that women in Nigeria are too weak from hunger to breast-feed their infants. Malnutrition lowers not only the life expectancy of children, but also their potential, and makes them much more vulnerable to fatal diseases. In Kwalala, Malawi, villagers are forced to drink contaminated lake water during the rainy season because wells break down due to lack of maintenance. Contaminated water leads to diseases such as diarrhea and schistosomiasis, which is caused by parasitic worms in contaminated water. Schistosomiasis leads to lung, bladder, and intestinal damage (Easterly 2006). These are simply a few of the problems residents of less developed countries (LDCs) have to endure each day.

Foreign aid has been touted as the solution to poverty, poor economic growth, failing health, and lack of education for developmentally stalled states. Yet, research has found that foreign aid increases dependence on outside sources and fosters the vicious cycle of corruption that prevents aid from benefiting, and often even reaching, ordinary citizens (Morton 1994, Moyo 2009). These researchers argue that for poor, less developed states to become members of the developed world, foreign aid should be gradually reduced before ultimately being discontinued (Moyo 2009).

A Brief History of Foreign Aid and its Effectiveness

It has been established that development is a precursor to the provision of necessities for citizens, and consequently it establishes a foundation for a higher quality of life. The roots of aid can be traced to back to 1896 when the United States provided food aid overseas. The British government disbursed grants for infrastructure projects under the Colonial Development Act of 1929. It was followed by the 1940 British Colonial Development and Welfare Act, which provided funding for activities in the social sector. However, the modern or post-war history of aid began at Bretton Woods in 1944. In the 1950s, the Marshall Plan was established to aid Europe in its efforts to rebuild after World War II (Moyo, 2009; Boone 1996). The focus of aid shifted from industrialization in the 1960s to poverty alleviation in the 1970s. Programs, such as Live 8, Make Poverty History, the Millennium Development Goals, the Millennium Challenge Account, and the Africa Commission have made it their mission to eliminate poverty and promote development (Moyo 2009). The United Nations established eight Millennium Development Goals (MDGs) to be achieved by 2015, each of which targets a sector of development. These goals are 1) eradicate extreme poverty and hunger, 2) achieve universal primary-school enrollment, 3) promote gender equality and empower women, 4) reduce child mortality, 5) improve maternal health, 6) combat HIV/AIDS, 7) ensure environmental sustainability, and 8) develop a partnership for development (Easterly 2006). It is 2011, and it seems those goals are far from becoming a reality.

Donor countries and multinational institutions, such as the World Bank, have provided $1 trillion USD over the past decades each year in foreign aid specifically to promote development in Africa alone. Despite this monetary assistance, many states have yet to improve their economic conditions (Moyo 2009). In the 42 years between 1965 and 2007, $568 billion USD was donated to Africa in the form of aid, with the median African nation experiencing per capita growth of nearly zero (Easterly 2007). Some, such as former Prime Minister Tony Blair remarked that more aid should be provided to Africa, stating that "the state of Africa is a scar on the conscience of the world" at the 2001 Labour conference (Moyo 2009). In 2005, then United Kingdom Chancellor of the Exchequer Gordon Brown called for a doubling of foreign aid to alleviate extreme poverty (Easterly 2006).

The question is not whether enough aid has been given, but rather whether foreign aid is the answer to the problem of stalled development. If foreign aid is the answer to the cycle of poverty and stagnating development, then why is there still a third world where people are dying of hunger and preventable diseases? While some research indicates that foreign aid has a positive effect on development, other research indicates that foreign aid has failed the developing world. Easterly argues that foreign aid and development experts are searching for the answer to a question that has been posed backwards. According to Easterly, the correct question is "What can foreign aid do for poor people?"[1] He argues that development researchers have assumed that foreign aid can solve the problem of stalled development. Perhaps, he contends, this is an unrealistic expectation; we should be asking what foreign aid is capable of achieving (2006).

[1] See Easterly 2006, p.11for further discussion on this topic.

Thus, it is not necessarily that foreign aid is ineffective; it is that foreign aid cannot possibly be expected to solve the development crisis.

While Easterly's question certainly deserves attention, this research will examine the traditional view that foreign aid is provided to promote development and that foreign aid is capable of achieving that goal. If foreign aid is indeed ineffective, it is reasonable to conclude that other methods should be employed to induce economic growth and development. Rather than spending billions of dollars on a cure that has been proven not only ineffective, but also a contributing factor to hindered growth, attention should be turned toward finding alternative methods of improving economic conditions in developing countries. The hope is that by determining what *does not* work, more resources will be devoted to searching for what *does* work to improve the lives of citizens of developing countries throughout the world. Foreign aid is designed to ameliorate suffering in developing countries and if it has failed in its attempt to do so, the developing world has fallen even more behind its developed neighbors leaving the international community struggling to help developing nations "catch-up." Greater economic development can provide citizens with better resources to live longer, healthier, more productive lives, perhaps ushering in an era of newly developed nations and ending the notion of the third world.

How Does This Study Contribute to the Existing Body of Research?

With such mixed findings on the effectiveness of foreign aid, this study has two objectives. First, it attempts to explore whether foreign aid induces human development in sub-Saharan Africa. Second, this research examines the conditioning effects of political institutional factors, including democracy and corruption, on the relationship between aid and development.

The research question for this study is whether foreign aid is effective at promoting development in third world countries. This study will examine the impact of foreign aid for the years 1995-2009 on several indicators of development, taking into consideration the influence of political institutions as intervening in the connection between aid and development. Specifically, this research will examine intervening institutional factors related to democracy and corruption. The measure of human development includes several indicators: economic growth, education level, and life expectancy. Each of these indicators will be discussed in detail in Chapter 3.

What is Foreign Aid?

Foreign aid can be broken down into three broad categories: humanitarian or emergency aid, charity-based aid, and systematic aid (Moyo, 2009). Emergency aid, such as aid distributed after a natural disaster, is vital to victim survival and for rebuilding infrastructure in affected areas; however, it does not target a country's development or economic growth directly. Charity-based aid is disbursed by charitable organizations, usually to specific institutions to achieve particular goals. Systematic aid is given from one country to another (termed bilateral aid) or through multinational institutions (termed multilateral aid). Additionally, foreign aid can often be given to support political goals. This type of aid disbursal is most common in bilateral aid commitments. For example, the United States has donated to both Israel and Egypt to support the Camp David Peace Accords. These funds were not intended to promote growth or development, but rather to encourage peace among hostile nations (Clemens et al. 2004).[2]

For this study, foreign aid will be measured as official development assistance (ODA), which takes into account grants and concessional loans net of repayment of previous aid loans

[2] For further discussion of political aid see Clemens et al. (2004, p. 1).

and treats forgiveness of past loans as current aid. ODA is considered systematic aid, combining donations from official agencies of the Development Assistance Committee (DAC), multinational institutions, and non-DAC countries. This study will attempt to explore the efficacy of foreign aid on several factors related to both economic and social development in sub-Saharan Africa. These factors include economic growth, life expectancy, and education level. Political institutional features in the study include level of democracy and level of corruption. The study will be conducted using a cross-national, longitudinal, statistical model. The effects of the interaction between foreign aid and institutional factors will be evaluated for the years 1995 to 2009.

Important to consider is the connection between aid and development. Consider foreign aid and foreign direct investment (FDI), both of which provide capital inflows to recipient countries. Yet, the two affect development differently. Kosack and Tobin (2006) contend that aid contributes to economic growth and the build-up of human capital necessary for sustained development in countries experiencing low levels of development. They find that FDI, in contrast, does little to increase economic growth or human development and may hinder LDCs.

As stated earlier, the literature on foreign aid is inconclusive. While some studies have shown that foreign aid may promote certain aspects of development, others have concluded that foreign aid is ineffective at encouraging growth and ameliorating poverty. Furthermore, several researchers have argued that foreign aid is contributing to the poverty and stagnating development that has been experienced in the third world. The latter research is far more convincing for several reasons. First, while some research has found foreign aid to be effective at promoting development, those positive effects are experienced only in countries where good political institutional structures exist. Second, some research specifically focused on the African continent has found that foreign aid fosters the cycle of corruption that leads to continued poverty and stagnating economic growth. I expect therefore that foreign aid will be associated with human development though it is unclear whether the direction of that association will be positive or negative. Thus, it is possible that foreign aid results in increased economic growth, increased lifespan, and high rates of education in developing countries. On the other hand, foreign aid may result in decreased economic growth, decreased lifespan, and poor rates of education in LDCs. Overall, it is expected the foreign aid affects quality of life in developing countries.

This study expands the scope of the research by examining how political institutional factors condition the relationship between foreign aid and development. Some researchers, including Moyo (2009), have found that foreign aid actually serves to encourage corrupt government actions. Thus, it is expected that when the level of corruption is high, the effect of foreign aid on standard indicators of development will decrease or become negative. I anticipate the opposite effect for countries with high levels of democracy. I expect that as the level of democracy increases, the effects of foreign aid on development will increase or become positive. Thus, the effect of foreign aid on development is conditional; that is, it is conditioned by the level of the intervening variables (corruption and democracy).

This research attempts to explore the impact of foreign aid on economic and social development, which directly relates to quality of life. The next chapter will examine the existing literature on the efficacy of foreign aid and discuss how it relates to the current study. While many researchers have examined the effects of corruption and regime type on foreign aid as intervening factors, this research will explore the conditioning effects of corruption and democracy on the relationship between aid and development. Chapter 3 will discuss the data and methods used for the study in detail. Each of the variables used in the study will be explained, as will the expectations for results. The explanation of the results of the statistical analysis will be provided in Chapter 4. It will be shown that foreign aid is ineffective at promoting growth in the developing world and serves to hinder the development process. However, when the effects of the intervening variables, democracy and corruption, are considered, it is found that the impact of foreign aid is not conditional upon the level of democracy or corruption. The level of democracy, however, is found to be positively associated with development. The paper will conclude with Chapter 5, which expounds the implications of these findings.

CHAPTER 2: LITERATURE REVIEW

Literature on the effectiveness of foreign aid has been inconclusive to date. Some researchers have found that foreign aid has a positive impact on development. Mosley et al. (2004), for example, argue that aid is capable of reducing poverty when allocated properly. They determine that three factors: corruption, inequality, and composition of public expenditure are particularly tied to aid effectiveness. When good macro and micro policies, as well as income inequality and GDP per capita, are taken into account as conditionality measures for aid allocations, the authors argue that aid has the ability to reduce poverty. A reduction in poverty could spur development in aid-recipient states. The authors explain that "good" macro and micro policies refer to expenditures that aid the poor. For example, the authors note that agriculture expenditures would aid the poor, while arms expenditures would not produce the same benefit for the poor. Mosley at al. contend that when these "new conditionalities" as they call them, are accounted for, aid is more likely to have a significant effect on poverty than when income inequalities and good microeconomic policies are not considered (2004).

Dalgaard et al. (2004) examine the effects of foreign aid on economic growth. They have found that aid is effective at spurring growth, a factor related to development. The magnitude of the positive effect, however, is dependent upon "climate-related circumstances." Theoretically, aid transfers should spur growth and positively affect poverty by increasing capital and productivity in LDCs. The authors note that there are obstacles to this seemingly simple theory. As might be expected, Burnside and Dollar (2000) find that poor government policies can render aid ineffective (Dalgaard et al. 2004). These 'poor policies' refer to irresponsible economic or fiscal policies. The authors measure "good policies" by weighting policy variables (budget surplus, inflation rates, and trade openness) in terms of their correlation to growth (Burnside and

Dollar, 2000), and use this measure to create the Burnside and Dollar index (Burnside and Dollar, 2000). This would result in a net negative effect on growth, poverty, and development. Structural characteristics, such as institutions and climate-related factors, may compensate for a poor policy environment, according to the authors. As the theoretical framework appears to be ambiguous, Dalgaard at al. examine aid effectiveness empirically. Their results show that in many countries aid can significantly improve productivity, which they relate to increased growth and development, as well as a reduction in poverty. They claim that while this bodes well for aid proponents and aid recipient states, they warn that aid is not the solution to poverty reduction, but rather acts as a stimulant for the process (Dalgaard et al. 2004). Thus, aid is not necessarily *the* solution to eliminating poverty in developing countries, but it can help ignite the process of poverty reductions in LDCs.

Unlike Burnside and Dollar (2000) whose research will be discussed shortly, Dalgaard et al. (2004) find that the interaction between policy and aid is weak, and thus, not a sufficient explanation for why aid works in some countries and not in others. However, they do find a trend they call "disturbing:" over the thirty-year period prior to the publication of their research, aid had been less effective in tropical areas. They posit that tropical regions may need more assistance than other regions, a need that has not been sufficiently met. While their research begins to examine the interaction between aid and climate, their results are far from conclusive on whether climate is a significant factor in determining aid efficacy (2004). While this research will examine sub-Saharan Africa specifically, their research on the relationship between aid and climate is relevant, as many have argued that climate does affect productivity (Moyo 2009). Additionally, while the tropics may be in particular need of aid, some have argued that Africa's lack of development is an inherent inability to succeed and grow (Moyo 2009). While the explanation that Africa is inherently different is absent much support, the lack of aid efficacy in the tropics lends additional credence to the notion that Africa is not that different from other regions; from the study conducted by Dalgaard et al., it is clear that aid disbursals to the tropics have failed to induce development. Thus, Africa is not alone in its ability to develop despite large aid flows to the continent. Perhaps there are specific factors common among several regions that affect aid efficacy. This research will explore two possible conditioning factors, democracy and corruption, on the relationship between aid and development.

Although this research will examine a composite amount of aid, aid can be dispersed for particular projects. Tilak (1988) argues that aid for education has many positive results related to growth, poverty, and income distribution. Additionally, Tilak argues that the development of rich nations is a function of poor countries economies, as well as their own. The author contends that education aid results in higher economic growth, combats poverty, and can improve income inequality gap in developing countries, as well as improving a country's social environment. There is evidence that education aid has an equal, if not greater, return on investment than other types of aid (1988). While this research will not examine education aid specifically, the measure of development used in the study will examine the impact of overall aid on gross national income, education, and life expectancy. Tilak (1988) notes that while education aid often forms, on average, nine percent of a country's educational budget, in some African countries aid constitutes half the education budget. Hence, education aid can have a significant impact on economic development. While the author argues that education aid can be effective, it is noted that aid does not eliminate all problems and may create new ones (Tilak 1988).

Despite some evidence of success, the majority of studies have shown that foreign aid has either no effect or a negative effect on development. Some research has even shown that while foreign aid has been touted as the solution to the problem of stalled development, it actually fosters a cycle of corruption and poverty, leading instead to lower levels of development in recipient countries. While much of the literature addresses aid effectiveness in relation to economic growth in general, the literature also addresses the effects of institutional factors, such as corruption and regime type, on the connection between foreign aid and development. This research explores whether aid affects development and whether democracy and corruption condition the relationship between aid and development. Prior to examining the empirical evidence, it is imperative to examine the literature concerning whether institutional factors and corruption condition the relationship between aid and development.

Institutional Factors

While this study examines political institutional factors, such as level of democracy, there are alternative institutional factors to consider in the relationship between aid and development. Regime type is often studied in connection with the effectiveness of foreign aid (See Islam 2003). Islam finds that foreign aid is not effective under tinpot regimes[3], but is effective under totalitarian regimes. He notes that aid has no significant impact on human rights or human development, though there is a small negative correlation with infant mortality.

Islam's research focuses only on authoritarian-type regimes, failing to examine how freedom might affect the relationship between aid and development. Boone (1996) studies how three types of regimes: egalitarian, elitist, and laissez-faire, would utilize foreign aid. He categorizes the regime types based on the type of interest groups that they support. In his

[3] The leader of a tinpot regime shows poor leadership or organization, yet is not controlling enough to be labeled totalitarian.

framework, Boone labels elitist governments as those that maximize the welfare of a fixed ruling coalition, whose optimal goal is to transfer aid flows to high-income political elite. Hence, an elitist government seeks to serve the elite in society. An egalitarian government, on the other hand, maximizes the welfare of a fixed group of citizens with relatively low endowments. An egalitarian government's goal is to transfer aid flows to low-income households whose initial endowments were low, which Boone indicates should improve poverty indicators. Finally, a laissez-faire government maximizes the welfare of a minimum and substantial proportion of the population and utilizes aid to lower "distortionary" taxes (Boone 1996). This implies that a laissez-faire government seeks to redistribute income among the population, lowering economic inequality among citizens.

Boone's research on aid flows to 96 countries shows that elitist political regimes best predict the use of foreign aid, indicating that there is a marginal propensity for elites to consume aid, rather than use it to positively affect development. It was found that foreign aid does not induce growth nor alleviate poverty. The empirical evidence indicates that capital shortage is not the cause of poverty or poor economic growth. Thus, Boone argues that a lack of sufficient amounts of aid is not the cause of its poor results in terms of growth. Unlike some other researchers, Boone determined that the level of democracy had no influence on the effectiveness of foreign aid in recipient countries (Boone 1996).

While some researchers (Boone 1996) have found no evidence that the level of democratic responsiveness of the recipient government has any impact on the effectiveness of either aid or FDI (Kosack and Tobin 2006). However, Kosack and Tobin (2006) do find that democracy is independently correlated with increased human development in all but very developed countries. The conclusion is that democracy does not directly affect foreign aid efficacy, but is correlated with increased human development in developing states.

The research by Chong et al. (2009) on political institutional factors partially refutes Kosack and Tobin's argument concerning the relationship between democracy and the efficacy of foreign aid. Chong et al. conclude that aid alone does not appear to have a statistically significant effect on inequality and poverty reduction. They conduct a cross-sectional analysis and dynamic panel estimation, which conclude that "good institutions," as measured by low corruption, may be necessary for aid to reach the poor. However, the findings in this matter are not robust even when institutional quality is taken into consideration. They find that while the institutional variable by itself is rarely statistically significant, the interaction with aid is weakly statistically significant in only 30 percent of the cases. Their results complement other recent research that suggests that foreign aid is ineffective at reducing income inequality and poverty. However, their study is one of many that show that institutional factors may play a role in determining aid effectiveness.

Foreign aid has indeed been found to be a contributing factor to economic growth and development in aid-recipient countries (Burnside and Dollar 2000). However, the positive effect discovered is conditional on countries exhibiting responsible fiscal, monetary, and trade policies. Countries that lack "good policies" do not experience the growth attributed to those countries with "good policies." "Good policies," as calculated by the Burnside and Dollar index, weights policy variables (budget surplus, inflation rates, and trade openness) in terms of their correlation to growth (Burnside and Dollar, 2000). Hence, foreign aid can produce positive effects, but only in countries where "good political institutional factors" exist. "Strong policies" are often the result of democratic governments. As such, the fiscal, monetary, and trade policies found to be essential to foreign aid effectiveness by Burnside and Dollar are likely to be correlated with degree of democracy in the aid-recipient countries.

It could be argued that corruption and a lack of democracy are the result of the institutional structure of donors and recipients of foreign aid. Easterly (2001) argues that the quest for growth in LDCs has failed due to a lack of proper incentives existent to foster the cycle of aid and growth. Easterly claims that aid is provided to countries with “responsible policies” who will implement the aid in a positive and productive manner. These “good policies” serve as incentives to continue to aid these particular countries. Those countries that lack “responsible policies” in terms of the use of foreign aid fail to provide incentives to donor countries, resulting in little aid and hence, little or no growth. Easterly contends that for foreign aid to be effective at inducing development incentives must exist for the recipient government, the donor institution, and for private individuals.

It is clear that the research presented so far points to the conclusion that political institutional factors condition the relationship between aid and human development. That is, “strong policies,” which refer to sound economic management, lead to efficacy, while less than stellar policies result in less effective use of foreign aid. Yet, not all studies have shown this to be true (Hansen and Tarp 2000; Morton 1994). Hansen and Tarp’s survey of the literature on foreign aid and their associated linear regressions beginning in 1961 show that there is no relationship between foreign aid and growth, even in the presence of strong policies (2000).

Morton (1994) has found that foreign aid actually exacerbates the problem of poverty or at least stalls progress, particularly in Africa. He attributes the failure of foreign aid to inconsistency. He notes that the "bottom-up" approach espoused by the World Bank, among others, is empty talk. According to Morton, the very notion of foreign aid, the distribution of money from the first world to the third world, is a "top-down" process. Rich, developed countries provide poor, developing countries with aid flows to promote development. Inconsistencies in aid agency policies lead to a cycle of policy changes and attempts to make aid more effective using various strategies. For example, Morton states that aid agencies call for accountability among aid recipient governments, yet the donor agencies are marginally accountable themselves. Additionally, the call by the developed world for Africans to empower themselves without allowing the developed world to infringe upon their rights, he contends, is an insincere statement. As a “top-down” exercise, aid must infringe upon the rights of the recipients. These processes, Morton argues, contribute to stalled development in the third world (1994).

However, Morton remains optimistic that a solution exists to improve the efficacy of foreign aid on development. He argues that there are three alternatives to the orthodox policies regarding aid. First, he suggests, foreign countries could have greater control over the use of aid, for which he uses the term “micro-colonialism.” The second, less aggressive approach the author suggests is that countries earn, through transparency and accountability, autonomy over the use of the aid that they receive (Morton 1994). This is particularly relevant to the argument made here. If institutional factors, related to democracy and corruption, indeed condition the relationship between aid and development, stronger accountability measures are necessary to ensure aid reaches its intended targets. Only corrupt government officials and the elite benefit from misappropriated or diverted aid flows. Greater transparency would allow aid agencies to track accountability measures in aid recipient governments. According to Morton, however, aid agencies are not held accountable to a higher authority. It is unlikely donor agencies will require greater accountability and transparency measures from their recipient governments without sounding hypocritical. Perhaps then, change needs to come from the top. As aid is a “top-down” approach, the measures to protect it are as well. If aid agencies boost their own transparency and accountability measures, they can require recipient governments to perform better also, ensuring aid at least has a chance to improve development.

Third, Morton proposes that donor agencies conduct thorough investigations of what is feasible and what is desired in potential recipient countries. Additionally, he recommends a more comprehensive survey of the impact of aid in terms of the goals set forth by the recipient country. For this last goal to be accomplished, Morton argues that the technical survey staff traditionally employed by donor agencies is not adequate and that more invested personnel are necessary (1994).

One could hardly argue that there is a single reason why the research points to such inconclusive results. However, one very important factor is the definition of each variable, which varies according to each study. For example, aid can include grants, loans, and concessional loans. Burnside and Dollar’s (2000) definition of aid includes effective

`development assistance (EDA), which includes the grant element of aid, and excludes concessional loans that are made at very low interest rates. Additionally, the definition of “good policies” can vary according to each author (Easterly 2003). While differences in definitions are certainly not the only factor that could influence results, it does account for some variation in the literature discussed thus far.

Corruption

Research on the relationship between aid and development has a strong focus on corruption. Economides et al. (2008) note that the association that researchers expect between institutions and aid is likely a result of the positive correlation found between institutions and economic performance, such as economic growth, citing the work of Mauro (1995) and Knack and Keefer (1995, 1997). Yet, the authors find conflicting results on the connection between institutions and aid. However, they do concede that the ineffectiveness of foreign aid can often be attributed to misused or misappropriated funds. The authors find that if aid flows are high enough the adverse effects of incentives can neutralize the direct positive effects that aid typically has on growth. The authors' theoretical model predicted that the effect of aid would become negative due to rent-seeking; however, the data do not support that hypothesis.

They use an econometric model to test their theory using a cross-section of 75 aid-recipient countries finding that foreign aid transfers can negatively affect growth due to distortion of individual incentives by encouraging rent seeking as opposed to productive activities.[4] The authors define rent seeking as "the socially costly pursuit of winning a contestable prize."[5] Their model "distinguishes two effects from foreign transfers: a direct positive effect, as higher transfers allow the financing of infrastructure" and an "indirect negative effect, as higher transfers induce rent-seeking competition by self-interested individuals."[6] Their primary focus is on the distorting effects of aid on private incentives. The results of their statistical analysis show that the net growth effect of aid is substantially smaller compared to the direct positive effect, when taking into account rent seeking activities. Additionally, the authors determine that this is especially true in recipient countries with sizeable public sectors. The

[4] Rent seeking refers to the idea is that foreign aid transfers increase the size of the prize that interest groups fight over. See Economides et al. (2008 p. 464) for more information.

[5] Originally defined by Drazen (2000), p. 335 and cited in Economides et al. (2008), p. 464.

[6] Economides et al. (2008, p. 463).

authors contend that this confirms popular theory that rent seeking and corruption occur mainly through government activities due to the effective property rights corrupt government officials have over the aid transfers they are allocating. This implies that corrupt government officials have total control over aid allocations and can divert transfers based on personal interests. They therefore find that the effects of aid on growth can be either positive or negative depending on whether aid triggers rent-seeking activities. The authors' findings support arguments "for conditional aid, where conditionality has to do with the size and the role of the government sector in recipient countries."[7] Research conducted by Svensson (2000) uses corruption as a proxy for rent seeking in the empirical model. Svensson argues, "corruption is likely to be highly correlated with other forms of discretionary redistribution, and therefore able to capture more than the empirical relationship between aid, corruption and the political equilibrium."[8] Political equilibrium refers to the ability of a country to make credible policy commitments and is related to level of corruption, as corrupt governments would find it difficult to engage in credible policy commitments. The research of Economides et al. supports the hypothesis that political institutional factors play a role in the effectiveness of foreign aid, specifically, that corruption hinders the positive effects of aid on economic growth and development.

Corruption is an umbrella term for "bad policies" that range from political tactics, such as nepotism to outright theft. The ineffectiveness of foreign aid in both Kenya and Zimbabwe can be traced to a neopatrimonialism, which prevents aid from reaching its intended targets, resulting in sustained poverty in both countries. While neopatrimonialism is obvious in Zimbabwe due to lack of regime change, the regime changes that have occurred in Kenya have only served to

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[7] Economides et al. (2008, p. 465).

[8] Svensson (2000, p. 455). For an in-depth discussion of the variables used, see Svensson (2000, p. 437-461).

make neopatrimonialism more overt in the country (Schoppert 2009). These results are not exclusive to these two countries, but are characteristic of Africa in general. The argument for solving African problems using African solutions is made. Self-interested governments and bureaucratic problems common among international refugee-relief agencies have prevented the two countries from pursuing the development of self-reliant host countries responses to poverty (Schoppert 2009). While not all regimes will suffer from neopatrimonalism, this study will examine the effects of perceived corruption on the impact of foreign aid.

The research presented so far has shown foreign aid to be ineffective. Schoppert is not the only researcher to suggest that corruption furthers the cycle of poverty and destitution in Africa. Moyo (2009) argues that the relationship between foreign aid and corruption is symbiotic: the two feed off one another; foreign aid leads to corruption, which results in stalled development and corruption leads to the ineffective use of foreign aid, which results in stalled development, rather than improvement. She goes on to suggest that while foreign aid targets growth and development, the product of such contributions is increasing domestic corruption and citizen dependence on international resources. Citing a World Bank report, Moyo explains that up to 85 percent of aid flows are used for purposes other than that for which they were intended. These flows were often used for unproductive and disadvantageous ventures. Moyo (2009) argues that foreign aid does not promote development; in fact, foreign aid can be detrimental. By fostering the cycle of corruption that prevents aid from being effective, aid itself hinders development in Africa.

The research by Chong et al. is particularly significant as the authors determine that while corruption and poor institutions are somewhat responsible for the lack of impact of foreign aid on inequality and poverty, they are not wholly to blame. They suggest that policy makers' preferences might also explain the poor link. Such preferences may be “inconsistent with reducing poverty and inequality in developing countries, but may instead be linked to considerations either of national security or of domestic politics.”[9] While the research of Chong et al. does not specifically address democracy, each of the political institutional factors being examined for this study (democracy and corruption) are likely correlated to one another. For example, countries with high levels of democracy are likely to experience lower levels of corruption due to the checks and balances high levels of democracy afford. Consequently, low levels of democracy likely correlate to high levels of corruption due to the absence of check and balances in the political system. This is relevant to the discussion of foreign aid because corrupt political institutions are unlikely to use foreign aid responsibly, meaning that ordinary citizens do not ever receive the funds or receive only a small portion of them.

Foreign Aid Efficacy

Not all foreign aid flows are widely considered ineffective. There are several success stories that show targeted aid can be effective. These programs target specific goals, related to education, family planning, business promotion, and other projects. For example, there has been some success related to getting the villagers in Kwalala, Malawi access to clean drinking water year-round. In Mbwadzulu, Malawi, two additional boreholes have been drilled, so that residents are no longer forced to drink contaminated lake water. This access to clean drinking water has resulted in a significant decline in cholera. Easterly argues that if aid agencies worked on smaller projects such as providing food, roads, water, sanitation, and medicine for the poor rather than utopian goals, the development crisis would be solved much faster (2006).

[9] Chong et al. (2009, p. 79).

While much of the recent literature on foreign aid has found it to be ineffective at inducing growth, optimism still endures. Researchers hope that foreign aid can be a viable method of development. Past research has indicated the political institutional factors may be correlated to the efficacy of foreign aid. Thus, this research explores the effectiveness of foreign aid on development, considering the impact of political institutional factors, such as democracy and corruption, on the relationship between aid and development.

CHAPTER 3: METHODOLOGY

The goal of the study is to determine in the effect of foreign aid on development, taking into consideration, political institutional factors, such as democracy and corruption, on the relationship between aid and development. Based on the literature, I expect foreign aid to be associated with human development (standard of living, life expectancy, and education rates) in sub-Saharan Africa; however, this association may be positive or negative. I hypothesize that political institutional factors, including democracy and corruption, condition the relationship between aid and development. It is expected that as corruption increases, the effect of aid on HDI may decrease or become negative. On the other hand, I expect that as the level of democracy increases, the effect of aid on HDI may increase or become positive. Additionally, I expect to find a positive relationship between democracy and development. It is anticipated that as levels of democracy increase, levels of development will increase as well.

Alternative Explanations

Moyo (2009) notes that the lack of foreign aid efficacy in Africa cannot be traced to a single source. She argues that institutional factors, such as corruption and level of democracy, are partially responsible for the lack of efficacy, and she offers suggestions as to additional factors affecting the impact of aid. First, she notes that the geography and topography of each country make a difference in terms of the success of agriculture and livestock (Moyo 2009). Moyo notes that the climate, flora, fauna, and terrain all contribute to the ability of a people to provide food for both private consumption and public export. This has an impact on GDP and economic growth for the country. However, Moyo argues that many environmental factors can be overcome. She cites Switzerland, which is landlocked and Saudi Arabia, where the heat can become unbearable. Both these countries have experienced far better economic conditions than those in sub-Saharan Africa.

Moyo also addresses the point made by Collier concerning geographic location and resources. Collier organized African countries into three categories: those that have a coastline, but are resource-poor, those that are landlocked and resource-poor, and countries that are resource rich (regardless of having a coastline or being landlocked). Collier determined that resource-poor countries faired better economically than did their resource-rich counterparts. The landlocked, resource-poor countries were the worst performers. Collier attributed a one-percentage point loss in growth to these conditions. He noted that unfortunately the population centers of Africa are located in the landlocked, resource-poor areas of the continent (Collier 2006).

Although not all types of natural resources will be taken into account in this study, it is expected that geographical location will be a significant factor related to development. While Moyo cites Switzerland as a developed landlocked state, Collier (2007) points out that Uganda, a landlocked LDC, is in a far different situation. While Switzerland depends on the infrastructure of Italy and Germany for access to the coast, Uganda depends on the far more unstable infrastructure of Kenya. Landlocked sub-Saharan countries are "hostages" to their costal neighbors, to use Collier's term. Therefore, I hypothesize that countries with a coastline (regardless of the amount of coastline) will experience higher rates of development than landlocked countries.

Another environmental factor to consider is the percentage of arable land a country possesses. As Moyo notes, topography, like geography affects agricultural success (2009). Agriculture provides nutrition and income for a family, among other things. Lack of proper nutrition can make children more susceptible to disease and ultimately shorten lifespan (Easterly 2006). The income earned through agriculture and livestock may provide enough profit to make school affordable for the family's children, increasing education levels. However, families with large plots of arable land may also require their children's assistance, forcing them to forgo school in favor of helping support the family, resulting in reduced education levels. Despite the mixed effects this variable could have on education levels, it is expected that countries with greater percentages of arable land will experience higher rates of human development due to increased access to nutritious foods resulting in longer life expectancy.

Collier (2006) has suggested that civil war resulting from small populations and ethnic divisions is a contributing factor to stalled development. He contends that civil war drains a country's economic resources, leading to a lack of development. For this study, political stability will used as a proxy for civil war. As posited by Collier, political instability can divert attention and resources from development goals toward solving political fracas and quelling violence. When such attention is diverted, development goals are less likely to be accomplished, resulting in stagnating development or a decrease in development levels. It is expected that political stability will have a positive effect on development, while instability will hinder LDCs by diverting resources from development targets.

One of the biggest factors negatively affecting life expectancy in sub-Saharan African is the prevalence of HIV/AIDS. Africa is the only continent where life expectancy is less than sixty years. In Swaziland, a typical lifespan is only thirty years. Again, the stagnation in life expectancy is mainly attributed to the rise in HIV rates (Moyo 2009). Based on the effect HIV has on life expectancy, I hypothesize that HIV rates will be negatively associated with development. That is, as HIV rates rise, development rates will decrease due to the decrease in life expectancy. In the next section, the specifics of the data and methods used in this study will be discussed.

Data and Methods

I use a cross-national, longitudinal, statistical model to study the effectiveness of foreign aid over a fourteen year time span, from 1995-2009 (for the years 1995, 2000, 2005, and 2009 due to data access limitations) for 45 countries in sub-Saharan Africa.[10] The goal of the study is to determine whether foreign aid is effective at promoting development, considering political institutional factors, including democracy and corruption, as intervening in the connection between aid and development, while controlling for alternative explanations.

The measure of foreign aid used is official development assistance (ODA) per capita, which takes into account grants and concessional loans net of repayment of previous aid loans and treats forgiveness of past loans as current aid. It is unlikely that foreign aid has a significant, effect, if any, on development the same year it is received. To account for this variation between the time ODA is received and the time development is affected, foreign aid is lagged both one year and two years in the model. Thus, when examining foreign aid for 1998, the analysis will examine the effect on HDI for 2000, using a two-year lag. This research examines the impact of foreign aid over a 14-year time span. It is important to note that an examination of aid over a shorter or longer period of time would likely indicate different results. Clemens et al. (2004), for example, examine the foreign aid flows that might reasonably affect growth over several four-year time periods (which accounts for 53 per cent of all aid flows). The authors disaggregate aid

[10] While there are 48 countries in the region, the HDI does not contain data for three of those countries: Eritrea, Seychelles, and Somalia. Thus, those countries are excluded from the study.

flows into three types: humanitarian aid, aid that would only affect growth over a long period of time, and aid that might impact growth over a four year period. They also differentiate between aid flows and debt repayments. They claim that the previously mentioned research of Burnside and Dollar (2000) is flawed. They note that the authors detected a positive aid-growth relationship only in the presence of strong policies and institutions due to the aggregation of aid. Clemens et al. find a strong, positive, causal relationship between short-impact aid (their term) and economic growth over a four-year period They argue that this relationship is two-to-three times larger than that found in studies where foreign aid is aggregated, like that of Burnside and Dollar (2000). The authors also contend that although the result is not dependent on the strength of institutions or the quality of policies, the impact on growth is larger in the presence of strong institutions and in countries with longer life expectancies (Clemens et al. 2004).

Development is measured using the Human Development Index (HDI), established by the United Nations Development Program (UNDP). The HDI takes into account both economic and social factors related to human development. The aggregate variable combines the measures of economic growth, education, and health to create a single number representation of human development in each country. Economic growth is measured by gross national income (GNI) per capita, while health is measured by life expectancy at birth. The measure of education considers both the number of mean years of schooling and expected years of schooling.[11] Prior to including HDI as the measure of development for this study, I had collected data on both poverty and economic inequality. The data on both measures was limited for the period established for

[11] For more information on how the HDI is calculated, see the United Nations Development Program website.

sub-Saharan countries. It was determined that HDI would provide a more consistent measure over the 14-year time span.

Political institutional features studied include democracy, which is an aggregate measure that includes political rights and civil liberties provided by Freedom House.[12] The measure of corruption is provided by the Corruption Perception Index (CPI), established by Transparency International. While this measure does not provide an estimate of actual corruption, it combines survey data from businessmen and country experts on perceived corruption at the country specific level.[13] This measure was chosen due to data access limitations on the International Country Risk Guide (ICRG), which provides an aggregate measure of several tangible indicators of corruption, such as nepotism and bribery.

To account for the possible alternative explanations discussed in the previous section, several control variables will be employed, including political stability, percent of arable land, HIV prevalence rate, and whether the country is landlocked or coastal. The first three of these measures are provided by the World Bank Development Indicators Database and are calculated as percentages. The dichotomous geography variable is coded with a "0" indicating a landlocked country and a "1" indicating a country with a coastline.[14] The prevalence of HIV among the population is measured as the percent of adults age 15-49 that have contracted the disease.[15]

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[12] See the *Freedom in the World* country ratings for 1972-2009 by Freedom House for further information on how the measures of Political Rights and Civil Liberties are calculated.

[13] See the Corruption Perception Index at Transparency International for more information on how the figure is calculated.

[14] Note that the amount of coastline in not taken into account.

[15] See the World Bank Indicators Database for further information on each of the following variables: Political Stability/No Violence, Arable Land (% of land), HIV Prevalence Rate (% of adults 15-49 years).

While this variable is possibly correlated to life expectancy, it does act as a control variable related to overall health of the population.

The equation used for the model is:

(1) development =f(aid*democracy+aid*corruption+democracy+ corruption+political stability+arable land+location+HIV rate)

The results of this analysis are discussed in the next chapter.

CHAPTER 4: RESULTS

The regression analysis was run for 48 sub-Saharan African countries. Due to lack of development data for three countries (Eritrea, Seychelles, and Somalia), the sample size was reduced to 45 countries, a list of which can be found in Appendix A. The results of the study, using robust random effects, were partially consistent with the hypothesis. Foreign aid was found to have a small negative effect on development when lagged at a two-year interval. The interaction variables, democracy*foreign aid and corruption*foreign aid were both found to be insignificant. Democracy was found to have a positive effect on development, while corruption has an insignificant effect on development. Additionally percent of arable land and geographical location were found to have a positive significant effect on the dependent variable, as anticipated. HIV rate was found to be positively correlated with development, meaning that as HIV rates rise, so do development rates. A possible explanation for this puzzling finding will be provided. Overall, the model accounts for 51.77% of the variation in development. Thus, my hypothesis was partially correct. Foreign aid does not induce development, yet corruption and democracy do not condition the relationship between aid and development. Each of the findings will be discussed individually in this chapter.

The analysis confirmed the hypothesis that foreign aid has an effect on development, though the association was shown to be negative. The model showed that foreign aid fails to promote development, when lagged for two years ($p\text{-value} \leq 0.04$). The aid variable has a small, statistically significant, negative effect on development with a two-year lag. Thus, foreign aid does not promote development and the analysis shows that aid may hinder the development process. The study also showed that foreign aid was insignificant when lagged one year. Again, when foreign aid is lagged one year, the effect on development is insignificant. Yet, when given two years to take effect, foreign aid begins to have a negative effect on development in sub-Saharan Africa.

The results indicate that foreign aid does nothing to promote development, its chief goal. Clearly, foreign aid is not accomplishing its primary task of alleviating devastating conditions in developing countries. Foreign aid does not appear to be the solution to the development crisis in sub-Saharan Africa. Additionally, the analysis indicates that aid may be detrimental to the African people, resulting in lower levels of development.

To study the effects of foreign aid on development considering democracy and corruption as intervening in the connection between aid and development, two interaction variables were generated. The first interaction variable was generated by multiplying democracy (the combination of political rights and civil liberties) and aid. My expectation that the effect of aid on development would be conditioned by the level of democracy has not been confirmed. Thus, the level of democracy has no effect on the relationship between aid and development.

The second interaction variable was generated by multiplying corruption and foreign aid. This interaction variable, like the first, was found to be insignificant. Contrary to expectations, corruption was not found to condition the relationship between aid and development. Also, the study indicates that the level of corruption has no effect on development. Thus, high levels of corruption do not result in less effective foreign aid, as was hypothesized. Additionally, the model shows that low levels of corruption do not result in a greater positive effect of foreign aid on development.

The measure of corruption used for this study could be the source of the insignificant empirical results. The CPI accounts for perceived corruption, rather than instances of actual corruption, such as nepotism or bribery. If a measure of actual corruption was used, it is possible that the results would differ. These findings indicate that perception of corruption, whether high or low, has no effect on the relationship between aid and development. It appears that corruption is not a determining factor in whether foreign aid is effective at inducing development in sub-Saharan Africa.

Additionally, consistent with the hypothesis, I find that democracy significantly improves development in sub-Saharan Africa ($p\text{-value} \leq 0.043$). While the coefficient is negative, democracy does not have a negative effect on development. Democracy is measured on a seven-point scale, with one indicating the highest level of freedom and seven indicating the lowest level of freedom. As the scale on democracy decreases, that is, as countries increase in level of freedom, development levels rise. Specifically, as the level of freedom increases, the level of development increases at a rate of .018. This appears to be a very small number, but HDI is measured on a scale from zero-to-one, with one indicating a highly developed country. An almost .02 point increase is significant, considering very few sub-Saharan African countries scored highly on both the democracy and human development scales. This indicates that a small increase in democracy creates a significant difference in development.

While democracy does not affect the efficacy of aid, it is clear that democracy promotes development. The right to participate in the political process and express one's beliefs is vital to the development process. These results support Collier's (2006) argument that in countries with high ethnic fractionalization, as can be found in sub-Saharan Africa, the ability for minority ethnic groups to participate in the political process in often limited or non-existent. Collier posits that ethnic divisions seep into politics, resulting in slower policy processes and stagnating development (2006). This study confirms Collier's findings that the ability to participate in the political arena has a positive effect on development in sub-Saharan Africa. The results are also similar to those of Kosack and Tobin (2004) who found that democracy is positively correlated with human development. My empirical results illustrate that a country's level of democracy is a significant determining factor in the level of development.

Contrary to expectation, the effect of corruption on development was found to be insignificant. The results demonstrate that corruption is not related to development. From these findings, it could be argued that democracy is a far more important factor in determining development than corruption. Corrupt governments do not impede development, yet democracy encourages development. An interesting line of research would include political regime type, along with democracy and corruption, examining the effects on development.

Though I had expected HIV rate to be negatively correlated with development, the opposite was found to be true. HIV prevalence was found to be significant factor in the development process. The HIV prevalence rate has a positive effect on development (p-value$\leq$0.00). Hence, as rates of HIV prevalence rise, the rates of human development increase. At first, this seems counterintuitive. It was expected that HIV rates hinder development by decreasing life expectancy. However, the positive relationship is likely due to increased levels of targeted aid, meaning aid that is specifically geared towards HIV treatment or prevention. While foreign aid was found to be ineffective at promoting development in this study, Easterly notes that small, targeted aid projects, like those related to access to clean drinking water in Malawi, have been shown to increase development (2006). The analysis is most likely capturing increased development due to increased HIV awareness programs and antiretroviral treatments. While HIV rates continue to rise, they may be rising at a slower rate, resulting in increased development due to longer life expectancy and education levels. Programs targeted toward family planning may also account for slower rates of HIV infection. These programs provide family planning assistance, including condoms, which reduce the chance of transmitting HIV from partner to partner. While these programs may also distribute birth control pills, these medications are not effective at preventing the transmission of HIV. Thus, the increase in development is likely a result of HIV awareness and education programs and the wider availability of antiretroviral drugs and condoms that result in lower HIV infection rates than would be experienced without these programs. Additionally, this effect may be due to the reciprocal relationship between HIV rate and development. In the literature, it is shown that higher levels of development are found to be associated with higher rates of HIV.

Geographical location relative to the coastline was also found to be a significant factor in development ($p\text{-value} \leq 0.00$). This is especially pertinent, as Collier's research indicated that geographical location alone was not a significant factor. He determined that geographical location combined with natural resource availability was a significant determinant of development (2006). This study found that coastal countries are more likely to have higher development rates, than those that are landlocked. Collier notes that Sach's work found that being landlocked resulted in a reduction in half a percentage point in development (2007). In this model, coastal countries are associated with an increase in development of almost .13, a significant increase considering the zero-to-one HDI scale. Collier notes that landlocked countries are hostages to their neighbors for access to the sea. Consider Uganda, for example, which depends on Kenya for access to the coast. As stated previously, Moyo (2009) counters this argument, stating that Switzerland, a landlocked country is highly developed. However, consider the context in this case. Switzerland depends on the infrastructure of Germany and Italy for access, while Uganda is dependent upon Kenya's infrastructure. Clearly, Switzerland is in a better situation (Collier 2007). The geographical location variable was significant, even when amount of coastline was not taken into consideration. It remains to be studied whether countries with larger coastlines would experience even greater development than those with only a sliver of coastline.

The percent of arable land a country possesses is also related to development. I find that a country's agricultural standing is weakly related to the standard of living experienced among the population. This study shows that the percent of arable land is an important determining factor related to development. This could be due to a variety of factors. For instance, a country that possesses little arable land would have difficulty providing adequate nutrition for its citizens without importing large stocks of food. Possessing little arable land would also limit the export capacity of a country. Countries with small percentages of arable land are forced to support their citizens and their economy in other ways. This would indicate a need for training in other areas. FDI would encourage citizens to learn a new trade and provide countries that cannot rely on the agriculture industry with an alternative business practice. Micro-financing might also be an option in these non-agriculturally focused countries. Micro-financing would provide a group of citizens with funds to start up their own businesses, possibly exporting the goods to other countries. States with large percentages of arable land should be wary as overuse could render the land unproductive.

Despite my expectation that political stability would improve development, the study shows that political stability has no effect on development. It was found that political stability and violence are insignificant in the model. This is an interesting finding considering the literature on political stability and development. Collier contends that political stability is costly for both the countries experiencing violence and their neighbors, diverting resources and attention from development goals (2006). Despite Collier's persuasive argument, the empirical results indicate that political stability does not affect development.

It is clear from the empirical results that foreign aid is ineffective at promoting development and may even hinder development. It is also shown that aid efficacy is not conditioned by either democracy or corruption. Yet, there are determinants of development in sub-Saharan Africa. The results indicate that as levels of democracy increase, as measured by political rights and civil liberties, development rates increase as well. Additionally, coastal countries experience higher rates of development than landlocked countries. High percentages of arable land and a high prevalence of HIV are also correlated to higher rates of development in sub-Saharan Africa, while political stability has no effect on development levels.

Table 1: Effects on Development

Effects of Foreign Aid (lagged one year and two years), Political Freedom, Corruption, interaction of Political Freedom and Foreign Aid, interaction of Corruption and Foreign Aid, Political Stability, Geographical Location, Percent Arable Land, and HIV Prevelance Rate on Development. N=46. Countries of Sub-saharan Africa. 1995 to 2009.

	(1) Random Effects GLS Regression, Robust
Aid (lagged one-year)	0.0004 (0.00037)
Aid (lagged two-years)	-0.0006 (0.0003)**
Political Freedom	0.0184 (.0091)**
Corruption	0.0132 (0.0170)
Political Freedom * Aid	0.0000 (0.0000)
Corruption* Aid	-0.0000 (0.0001)
Political Stability	0.0025 (0.0125)
Geographical Location	0.1294 (0.0333)***
Percent Arable Land	0.0021 (0.0013)*
HIV Prevalence Rate	0.5547 (0.1374)***
Wald Chi-square	147.97
Prob	0.000
N	46
R^2	0.52

Notes: Standard errors in parentheses.
* Significant at the 10-percent level
** Significant at the 5-percent level.
***Significant at the 1-percent level

CHAPTER 5: CONCLUSION

Many have claimed that foreign aid is the solution to poverty and a lack of growth in the developing world. They contend that if enough aid flows are designated toward development projects, the cycle of poverty and destitution can be reversed. The proponents of aid argue that aid can increase economic growth, promote education, and improve health, ultimately increasing the quality of life for those in developing countries. Yet, other research, including that described in the previous chapter, illustrates that aid has not lived up to the hype.

My hypothesis that foreign aid affects development in LDCs was confirmed, with the results showing a slight negative effect of aid on development. While foreign aid has been paraded as a solution to poverty and stagnating economic growth in developing countries, aid has a small negative effect on human development, as measured by the HDI, which as stated before, accounts for standard of living, life expectancy, and education level. The empirical evidence illustrates that foreign aid is ineffective at promoting development in sub-Saharan Africa.

The expectation was that the relationship between aid and development is conditioned by political institutional factors, including democracy and corruption. It was anticipated that high levels of democracy would increase foreign aid efficacy, while high levels of corruption would decrease aid efficacy. Both of these hypotheses were not confirmed in the analysis. Neither democracy nor corruption had a significant effect on the relationship between aid and development. The results indicate that foreign aid is simply not the solution to improve conditions in the developing world.

Despite these results, there is some evidence that sub-Saharan Africa can achieve developed country status. The empirical evidence shows that higher levels of democracy, as measured by political rights and civil liberties, is positively associated with development in the region. Democracy does not appear to have an effect on the relationship between aid and development, but high levels of democracy increase development in sub-Saharan Africa. This indicates that a focus on democracy is a possible alternative to aid flows. As democracy has been shown in this study and by Collier (2006) and Kosack and Tobin (2004) to have a significant positive effect on development, initiatives targeted toward the promotion of democracy may have a greater positive influence than aid flows in the region.

While one might assume that high levels of corruption would decrease development, the results show that corruption does not have a significant relationship to development. The level of political stability also has no significant effect on development in the region. Several other factors are shown to significantly affect development. Coastal countries experience higher development, as do those with higher percentages of arable land. HIV rate is also positively correlated with development, meaning that as HIV rates increase, development rates increase as well. It is likely that this is due to programs that target HIV prevention and treatment.

This research indicates that foreign aid is not the solution to stalled development in sub-Saharan Africa. Foreign aid has not been shown to increase development, even when lagged for one-year and two-year periods. However, this study has not confirmed that foreign aid decreases development in all cases. This study demonstrates that higher levels of democracy increase development. Based on these results, increased promotion of democracy in sub-Saharan Africa could lead to increased levels of development in the region. If the positive association between HIV rate and development is due to programs that educate the population on prevention and provide courses of treatment for infected individuals, this would indicate an area of focus for foreign aid that could result in a significant positive impact on development. Increased health conditions would positively affect life expectancy, increasing education levels and life potential across the region.

For countries with little arable land, improvement can be tied to targeted aid projects as well. Aid can be targeted to agricultural initiatives that educate farmers on the most efficient ways to utilize land. The establishment of greenhouses and alternative crop techniques could improve conditions for countries with small percentages of arable land. Greenhouses would allow farmers to grow in areas without large plots of arable land and to avoid harsh weather conditions where arable land is available. Greenhouses and alternative crop techniques would increase innovation and promote modernization in the region. In addition, these initiatives would create new industries and jobs vital to human development.

Countries on the coast have a greater chance of development due to ease of access to the sea. Although it seems that this variable cannot be artificially created, there may be ways for landlocked LDCs to improve conditions. While a coastline cannot be created for landlocked countries, partnerships with coastal countries can be established to improve imports and exports for landlocked states. Partnerships would allow landlocked countries greater access to the sea, while fostering relationships between what otherwise might be hostile countries.

There are other possible methods by which aid can be transformed into the solution its proponents desire. Clearly, coastal countries are in a far better position to develop simply due to their geographical position. In addition, Easterly (2006) argues that aid targeted toward small, specific projects has been shown to be effective. This study did not specifically examine such projects, and as such, no assumptions on the matter should be drawn. However, the results pertaining to the positive association between HIV rate and development indicate that programs targeted to projects, such as preventing and treating HIV/AIDS may have a positive effect on development. Specific research regarding targeted aid is necessary to determine if a correlation exists. Additionally, the evidence that democracy is positively associated with aid provides evidence that development can be achieved in countries with democratic political institutions. Further research on democracy and regime type in relation to aid would establish a firmer connection. Furthermore, the significance of high percentages of arable land indicates that an increased focus on agriculture could improve development in the region. The research demonstrates that increased development is possible if the developed world focuses its attention to the areas affecting development in sub-Saharan Africa.

Limitations and Future Research

While this research indicates that development is possible under certain conditions in sub-Saharan African, there are important limitations to consider, mostly pertaining to the data used in the study. The study is focused in sub-Saharan Africa and it should not be assumed that the results would be similar for all developing regions. Additionally, an examination over a longer period of time could indicate different results. The UNDP data on HDI is a widely respected indicator of development; however, it does not account for several factors influencing development. While HDI considers GNI, education level, and life expectancy, it does not account for poverty or level of economic inequality. These additional indictors of development are important factors to consider in the study of development. A measure of poverty should take into account persons living below the poverty line and may also consider the depth of poverty among the population. This provides an indication of the wealth (or lack thereof) among the population and the quality of life they experience on a daily basis. Economic inequality is also a significant factor as it measures the income gap between the highest earning and lowest earning members of society. This measure could provide an indication of wealth distribution, which is possibly correlated to corruption or other institutional or societal factors.

Aid can be targeted to specific goals, such as increased education rates, family planning assistance, and improved health conditions. However, this research does not examine targeted aid and does not attempt to ascertain whether targeted aid is more effective than overall aid. The disaggregated measure of health used by the HDI is life expectancy at birth. It is likely that several other factors influence health over time, such as nutrition, disease rates, age of the mother at time of birth, and number of children the mother has delivered. This study examined overall human development, rather than just health and will not account for all possible variances in health. However, there are alternative factors to consider, such as nutrition level and access to clean water that could provide an indication of development as well.

Regarding the measure of foreign aid, ODA is a common and reliable measure, but is not the only measure of foreign aid to consider. Effective development assistance excludes concessional loans that are made at very low interest rates and does not treat forgiveness of past loans as current aid (unlike ODA). According to Chong et al., country aid commitments are considered firm obligations "undertaken by an official donor to provide specified assistance to a recipient country or a multilateral organization."[16] The authors explain, "bilateral commitments are recorded in the full amount of expected transfer, irrespective of the time required for the completion of disbursements."[17] Inclusion of these two additional measures of foreign aid could indicate different results in terms of the effect on development.

[16] Chong et al. (2009, p. 63).

[17] Chong et al. (2009, p. 63).

The measure of corruption used, the CPI, does not measure actual instances of corruption. An estimation of actual corruption, such as that provided by the International Country Risk Guide (ICRG), may indicate different results in terms of the relationship between aid and development and the effect of corruption on aid efficacy. The ICRG measures each country's corruption risk potential based on a variety of factors, such as nepotism and bribery.

Additional factors to consider in the relationship between aid and development include colonial history and availability of natural resources. An interesting line of research would consider the whether a country's specific past as a colony has an effect on development (and the relationship between aid and development). Many have argued that the political structures established by different colonial powers were and still are incompatible with the indigenous population of Africa (Moyo 2009). It might also be pertinent to determine whether colony ownership has a significant effect on development. For instance, it could be examined whether former British colonies have fared better than former Dutch colonies on the development spectrum. Others have posited that the African people are somehow different from other peoples and are thus inherently incapable of achieving developmental success (Moyo 2009). I do put much stock in this argument. There is no fundamental difference between Africans and any other peoples that would result in a failure to thrive.

Collier (2006) has posited that in addition to geographical location, the availability of natural resources is a significant factor in determining developmental success in Africa. While this research has shown that coastal countries are significantly more developed than their landlocked neighbors are, this study did not consider the availability of all types of natural resources. As percentage of arable land has a positive association with development and land could be considered a valuable resource, it is likely that the availability of other natural resources, such as gold and diamonds, play an important role in a country's development. It is also possible that natural resource exploitation and the exploitation of the population to gather these resources have a detrimental effect on development. While natural resources are often considered a desirable commodity, Moyo notes that for Africa, the abundance of natural resources has been more of a curse than a blessing. Many countries (with the exception of five: Chad, Sudan, Gabon, Equatorial Guinea, and Nigeria) did not receive any of the foreign aid disbursed in the 1970s. Additionally, misappropriation and corruption has led to the income from natural resources being squandered.

Collier also notes that ethnic heterogeneity is higher in Africa than in any other region. He claims that autocracy has failed Africa in terms of economic growth due to ethnic fracas. He contrasts Africa with the example of China, an autocracy with high levels of ethnic homogeneity, which has experienced high economic growth. Collier argues that in an autocracy the military power often rests with a single ethnic group. The more diverse the society, the smaller the share of the population the ethnic group in power will constitute. Even during peaceful times, it can be difficult for various ethnic groups to come to an agreement on political and economic matters. However, ethnic heterogeneity cannot be the source of stalled development. As Moyo points out, countries such as Botswana, Ghana, and Zambia are characterized by heterogeneity, yet the ethnic groups manage to coexist in a peaceful manner.

Moyo argues that rather than blame ethnic heterogeneity for stagnating development, the culprit is more likely the lack of influence Africans have over societal policies (2009). Ethnic heterogeneity and the inability to compromise is not the source of the problem. Rather, it is Collier's argument: the lack of equal influence each ethnic group has in the political process. A society in which there is a dominant ethnic group, which Collier terms "ethnic dominance," creates an unequal representation system in government (2007). Consider, for example, proportional representation systems (PR) in Europe. In multiple party systems, there are often one or two dominant parties and several smaller parties. Africa's tribal system in relation to the political process is very similar. When the smaller parties or tribes are unable to coalesce, forming a majority over the dominant party or tribe, the ethnically dominant tribe will succeed. It is not the existence of various tribal groups that slows human progress, but the individual's strength of representation in the decision making arena. The positive effect of democracy on development supports this theory. Moyo concedes that while political institutions exist in Africa, they have very little power and hence, could be a contributing source to the ineffectiveness of aid. It is this factor, that this study was interested in examining. While a lack of representation hinders growth and development, ineffective political institutions, resulting from lack of representation (as measured by democracy) reduces development.

Alesina and Glaeser (2004) argue that ethnic heterogeneity negatively affects redistribution. Their argument is based on a comparison of the United States, which is highly heterogeneous and European countries, which are significantly more homogeneous. The authors contend that the lack of redistribution in the form of a welfare state has been impossible due to high levels of ethnic heterogeneity in the United States. In Europe, however, the process was much easier due to ethnic homogeneity. This argument is relevant to LDCs as well; it is possible that ethnic heterogeneity is related to income inequality in sub-Saharan Africa. If sub-Saharan African countries suffer from both a high degree of ethnic heterogeneity and economic inequality, then redistributive policies are likely lacking, leading to stalled development. While this research did not examine economic inequality, Alesina and Glaeser's argument could explain low levels of development in sub-Saharan African countries with high levels of economic inequality.

While the study has shown that democracy is positively correlated to development and I have suggested further research related to economic inequality as a partial measure of development, future research could also examine ethnic or religious heterogeneity as a separate independent variable. While ethnic heterogeneity has been shown to be related to political instability (Collier 2006), lack of democracy (Collier 2006), and lack of redistributive policies (Alesina and Glaeser 2004), it may have an independent effect on development.

This research specifically focuses on factors related to the aid recipient country. The goal was to determine if human development is improved by the receipt of foreign aid in sub-Saharan countries. By examining political institutional factors related to democracy and corruption, it was determined that levels of democracy and corruption do not condition the relationship between aid and economic development. While these are important factors to consider, there are additional factors related to the donor institution or donor country that may play a role in the impact of aid. Donors often have great discretion in terms of which countries receive aid, what form the aid takes (such as commodities or cash funds), how the aid is disbursed (lump sum or in installments), who is employed to make the goods, and what accountability measures are utilized to ensure aid is properly managed (Moyo 2009). While each of these aspects could arguably have an impact on the efficacy of foreign aid, these features fall outside the scope of this particular research and thus have not been considered for this study.

While Moyo (2009) notes that many countries have experienced economic success that has made reliance on aid no longer necessary, those successes are due to circumstances not typical of aid recipient states. Moyo explores the economic effects of foreign aid on recipient countries, concluding that foreign aid is part of the problem, not the solution. While it is clear that the foreign aid is not currently effective at promoting development, it has not affected the process in a negative manner either. Foreign aid efficacy could be induced in several ways. Specifically, aid targeted toward small projects has been shown to be effective at improving living conditions. Support for more small-scale projects rather than funneling large amounts of aid to be used for a variety of projects, may result in an improvement in levels of development in sub-Saharan Africa.

APPENDIX A: LIST OF COUNTRIES

1	Angola
2	Benin
3	Botswana
4	Burkina Faso
5	Burundi
6	Cameroon
7	Cape Verde
8	Central African Republic
9	Chad
10	Comoros
11	Congo, Republic of (Congo-Brazzaville)
12	Côte d’Ivoire (Ivory Coast)
13	Democratic Republic of Congo (Congo-Kinshasa)
14	Djibouti
15	Equatorial Guinea
16	Eritrea
17	Ethiopia
18	Gabon
19	Gambia, The
20	Guinea
21	Guinea-Bissau
22	Kenya
23	Lesotho
24	Liberia
25	Madagascar
26	Malawi
27	Mali
28	Mauritania

29	Mauritius
30	Mozambique
31	Namibia
32	Niger
33	Nigeria
34	Rwanda
35	Sao Tome and Principe
36	Senegal
37	Sierra Leone
38	South Africa
39	Sudan
40	Swaziland
41	Tanzania
42	Togo
43	Uganda
44	Zambia
45	Zimbabwe

APPENDIX B: DATA SOURCES

Corruption Corruption Perception Index	Transparency International
Foreign Aid ODA received per capita (USD)	World Bank Development Indicators
Development Human Development Index (HDI)	United Nations Development Program
HIV Prevalence Rate Percent of Adults Age 15-49	World Bank Development Indicators
Landlocked/Coastal	Dichotomous Variable (“0” landlocked, “1” Coastal)
Percent Arable Land	World Bank Development Indicators
Political Freedom Political Rights and Civil Liberties	Freedom House, Inc.
Political Stability/No Violence	World Bank Development Indicators

APPENDIX C: EXPLANATION OF DATA

Independent Variables

Political Freedom	This variable is an aggregate measure of political rights, which capture the freedom individuals have to participate in the political process and civil liberties, which allow for freedom of expression and belief. It is measured on a scale from one-to-seven, with one representing the highest degree of freedom and seven, the lowest degree.
Corruption	The Corruption Perception Index measures of perceived corruption through surveys with businessmen and country experts. Corruption extends on a scale of zero-to-ten with ten representing no corruption.
HIV Prevalence Rate	This variable is measured using the percent of the adults, age 15-49, in the population that have contracted HIV.
Percent Arable Land	This captures the percentage of available land that can be cultivated for agricultural use. This includes land defined by the Food and Agricultral Organization as land under temporary crops, temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.
Political Stability/No Violence	This is an aggregate measure of the rate of political stability in the country. Political instability is indicated by a negative number.
Landlocked/Coastal	This is a dummy-coded variable representing the geographical location of each country in relation to the coastline. Countries that are landlocked are coded with a zero, while countries on the coast are coded with a one.

Dependent Variable

Human Development Index	Disaggregated, the HDI captures elements of health, education, and living standards. The aggregated number provides a single rating of human development. Health is measured by life expectancy at birth, with a minimum of 20 and a maximum of 83.2 years. Education combines both the mean years of schooling for individuals age 25 and the expected years of schooling for school going age children. Living Standard is measured in Gross National Income (PPP USD), instead of Gross Domestic Product (PPP USD).

APPENDIX D: SUMMARY STATISTICS

Table 2: Descriptive Statistics for the Independent Variables

Variable	Mean	Standard Deviation	Minimum	Maximum	Observations
Aid	57.76	65.05	-11.56	657.29	672
Political Freedom	4.35	1.61	1	7	720
Corruption	2.97	1.12	.69	6.4	351
Political Stability/ No Violence	-0.58	0.97	-3.28	1.14	480
Percent Arable Land	12.80	13.00	0.04	49.26	672
HIV Prevalence Rate	0.06	0.07	0.00	0.29	543

Table 3: Descriptive Statistics for Geographical Location

Location	Frequency	Percent
Landlocked (0)	15	31.25
Coastal (1)	33	68.75

Table 4: Descriptive Statistics for the Dependent Variable

Variable	Mean	Standard Deviation	Minimum	Maximum	Observations
HDI	0.39	0.12	0.19	0.70	158

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