Are There Economic Returns from Democracy?

The Experience of Sub-Saharan Africa from 1988-2007

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ABSTRACT

There is an enduring debate as to whether democracy promotes or hinders economic growth. This study examines the relationship between democracy and economic growth in 47 sub-Saharan African countries from 1988 to 2007. From the late 1980s until the mid-1990s, a period of democratization swept the continent. This period of democratization was followed by a period of strong economic growth from the mid-1990s through 2007. It is argued here that these events are not coincidental and that democracy is advantageous to economic growth, particularly in the sub-Saharan Africa region. Using statistical analyses such as bivariate correlation and multiple regression, the relationship between democracy and economic growth is examined using a number of control variables to test the strength of the relationship between democracy and growth. To date, the empirical research on democracy and economic growth provides conflicting results, ranging from positive to negative to neutral effects. The results of this study show that there is a correlation between higher levels of democracy and higher levels of economic growth during certain periods. However, this relationship weakens to levels that are not significant once certain combinations of control variables are included. While the results of the study do not provide a definitive answer to the debate, they do refute certain arguments that have been made about the main drivers of economic growth in the region. The results also show that democracy does not have a negative effect on growth, which highly suggests that there might be a sequence effect involved in the path towards democratization and economic growth.

CHAPTER ONE: INTRODUCTION

I. PROBLEM

Between 1996 and 2007, sub-Saharan African (SSA) economies achieved an average annual increase in economic growth of 2.42%.[1] This was one of the longest periods of sustained economic growth for the region since independence when, from 1965 to 1976, average annual economic growth was 2.26%.[2] In contrast, during the preceding years from 1977 to 1995, average annual economic growth was -0.26%.[3] While economic growth was positive for some countries from 1977 to 1995, the economies of many other countries contracted, leaving them much worse off from whence they started. Scholars point to unrelenting civil strife, war, corruption, volatile commodity prices and plundering of resources as factors contributing to SSA's negative economic growth during this time.

The recent period of positive economic growth (1996-2007) followed a wave of democratization in the early 1990s commonly referred to as SSA's *second independence*.[4] These democratic transitions were initiated largely by African civil society movements, seeking greater economic and political freedoms following years of economic and political mismanagement.[5] As a coda to the larger *third wave* of democratization that swept the world beginning in 1970s Portugal,[6] and extended through the end of the Cold War, sub-Saharan Africa witnessed a decisive shift towards competitive elections and multi-party politics with 35 of its 47 states holding a competitive founding election by 1995.[7] Although only 18 of these founding elections were deemed reasonably free and fair, and there have been subsequent

[1] Alan Heston, Robert Summers and Bettina Aten, "Penn World Table Version 6.3," Center for International Comparison of Production, Income and Prices at the University of Pennsylvania, August 2009.(http://pwt.econ.upenn.edu/) (accessed on July 15, 2010).
[2] Ibid.
[3] Ibid.
[4] Peter J. Schraeder, "Understanding the "Third Wave" of Democratization in Africa" *The Journal of Politics*, Vol. 57, No. 4 (November 1995):1160-1168.
[5] Michael Bratton and Nicolas Van de Walle, *Democratic Experiments in Africa: Political Transitions in Comparative Perspective* (Cambridge: Cambridge University Press, 1996), 2-9.
[6] Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century* (Norman, OK: University of Oklahoma Press, 1991), 3.
[7] Robert Mattes and Michael Bratton, "The Future of Democratization in Sub-Saharan Africa" (paper presented at the Panel on Regional Prospects for Further Democratization or State Failure during the 21st World Congress of Political Science, Santiago, Chile, July 2009), 2.

reversals, by 1995 not a single *de jure* one-party state remained in the region.[8] By the end of January 2007, 30 states in the region could boast governments elected through free and fair democratic elections.[9] This period of democratic transition was clearly a watershed for the region.

Yet some scholars suggest that the temporal sequence of democratization followed by growth is coincidental. Many would point to the fact that the period of economic growth also followed a related, but distinct, set of economic transitions because of pressure from International Financial Institutions (IFIs) (e.g., the World Bank and International Monetary Fund (IMF)). The IFIs encouraged many countries in SSA to implement good governance policies as part of a package of economic, political and social reforms mandated in structural adjustment programs (SAPs). Over 30 African countries eventually adopted SAPs, to varying degrees, during the 1980s and 1990s. Still other scholars would suggest that this period of economic growth reflects intense economic expansion in a small number of resource-rich countries.

In contrast to these arguments, one scholar has made it his life's work to point out that the problems in Africa's most destitute and troubled countries are not specifically related to economic growth or democratization but to *poverty traps.* *Poverty traps* involve geopolitical issues such as internal and external conflict, disadvantageous geography, mismanagement of natural resources, volatile neighbors and being small countries with poorly run governments.

With many possible explanations, this makes the period from the late 1980s through the late 2000s in SSA particularly interesting for political scientists investigating the relationship between democracy and growth. Was SSA's economic growth a result of the democratization of these states or was it an independent, isolated event? Was the economic growth only attributable to a few select resource-rich economies in SSA or were there other factors that benefitted states such as adopting good governance measures or avoiding poverty traps?

The reasons I believe democratic countries are poised to attain higher, more consistent levels of economic growth, particularly over the long-term, are three-fold. First, democratic institutions can create an environment built on transparency, stability and

[8] Mattes and Bratton, "The Future of Democratization in Sub-Saharan Africa."
[9] Ibid.

enforceability. Second, the civil liberties and political rights prevalent in strong democracies promote the free exchange of words, ideas and actions. Finally, there is a synergy among the people, government and industry of a democracy that engenders innovation, motivation and realization. I believe that the combination of these factors, which I will discuss in greater detail in subsequent chapters, provides an ideal environment for economic growth. Against this backdrop, my main research question will focus on the effect of democracy on economic growth in SSA during the period from 1988 to 2007. My hypothesis will build on and test theories contained in recent literature that extol democracy as a political regime that facilitates, and is a precursor to, economic growth and not one that inhibits it. To do this, I will first use Freedom House measures of civil liberties and political rights as a proxy for the level of democracy from 1988 to 1995 for 47 SSA countries. To assess economic growth, I will use the growth rate of gross domestic product per capita (GDP per capita) during the subsequent period (1996-2007). To control for other possible explanations, I will include variables that measure factors highlighted by other theories advanced by scholars who do not believe that democracy or democracy alone can affect economic growth. These main control variables include implementation of good governance reforms and economic reforms, resource-rich economies, and the presence of poverty traps. I will also control for initial levels of wealth and whether or not a country is an oil importing or exporting country.

II. SIGNIFICANCE

Despite the abundance of research on the topic of democracy and growth, findings are still contradictory in this area of study: there is no definitive evidence or obvious theory capable of describing the nature of the relationship. While there is a fairly broad literature that analyzes the impact of political regime type on economic growth and economic development (and vice versa), there is a relatively limited focus on sub-Saharan Africa, particularly in connection with the wave of democratic transitions in the 1990s and the ensuing economic growth. This makes the regional focus of this study particularly important because, despite recent movement towards democracy, SSA is still mainly composed of impoverished, authoritarian states with only a handful of established or slowly consolidating democracies.

It is clear that there is not a one-size-fits-all approach to political and economic development in the world and a recent study, which highlights this fact, found that democratization had distinctly different economic effects in several different regions in the world. The prevalence of cross-continental studies, which might include over 100 countries, may mask region-specific dynamics that ultimately affect economic trends. My study will build on this previous work looking at democracy, specifically in the SSA region.

Another significant factor that this study will capture is the contemporary period. Most studies range from the post-independence years and end around 1990. This study will capture a period of democratization and sustained economic growth not seen since independence. In addition, older studies include the Cold War years when many authoritarian regimes were tolerated and supported (both economically and politically) by the United States and the Soviet Union. These events likely hindered the development of both democracy and economic growth. Adam Przeworski notes that, "Remarkably, no statistical study published before 1982 found that democracies developed faster, and no study published after that date reported that they developed slower".[10]

Finding a correlation or putative link between democracy and economic growth would provide an important validation to current literature that cites democracy, particularly in developing countries, as one of the most important factors contributing to increased economic growth rather than the impediment proclaimed by earlier theories of development. Finding a positive relationship would also add greater significance to efforts already underway to strengthen SSA's governance and institutional framework by a number of stakeholders in the field such as bilateral donors, IFIs, academics and non-governmental organizations (NGOs) to name a few.

III. STATE OF KNOWLEDGE

For years, the relationship and direction of causality between democracy and economic growth has been contested: does democracy lead to economic growth or inhibit it? The literature on the subject can be consolidated into three broad

[10] Adam Przeworski, "A Flawed Blueprint: The Covert Politicization of Development Economics" *Development and Modernization*, Vol. 25 (1) (Spring 2003):1-10. http://hir.harvard.edu/index.php?page=article&id=1095 (accessed June 10, 2010).

questions: 1) Does modernization lead to democratization? 2) Does democracy only consolidate in wealthy countries? and 3) Does democracy affect economic growth? While there is no definitive answer yet to the main question posed above in the opening sentence, there is a large body of literature and data from which to build and test my research question.

Overview

From the mid 20th century, modernization theory held center stage in the debate on democracy and economic growth. Its proponents contended that a certain level of economic development, attained through strong rule and order (authoritative regimes if necessary), was a prerequisite for a country to transition to a sustainable democracy. Some scholars found that the increased consumption and particularistic pressures of the masses inherent in a democracy act as a drag on economic growth by displacing the very resources necessary for political organizations and institutions to grow and develop in order to better handle the increased demands.[11] Others believed that secure property rights, an important condition to attract investment and stimulate growth, would be undermined by demands for redistribution of wealth from newly engaged citizens in a democratic society.

On the other end of the spectrum, recent literature has found democracy advantageous to economic growth and socio-economic progress, with democratic regimes reaping the benefits that more representative and pluralistic political systems engender.[12] The importance of democratization as a means to increase economic growth gained prominence in the foreign policy of the West in the late 1990s. This change in focus challenged the widely held belief among policymakers (particularly during the Cold War in the United States) that authoritarian regimes were the key to economic growth and social development, with economic growth and development eventually leading the way to the political, social and economic freedoms that define most stable

[11] Samuel P. Huntington, *Political Order in Changing Societies* (New Haven, Conn.: Yale University Press, 1968), 49-53.
[12] Morton H. Halperin, Joseph T. Siegle, and Michael M. Weinstein, *The Democratic Advantage: How Democracies Promote Prosperity* (New York: Routledge, 2005) 7-10.

democracies.[13] For the first time, many scholars are now seriously looking at democracy as an independent rather than a dependent variable when examining its relationship with economic growth.[14]

Still other scholars find democracy's effect on economic growth to be insignificant, citing a host of other, potentially more important factors such as good governance, economic liberalization, natural resources and the avoidance of poverty traps. Scholars who have focused on regional contexts have discovered that democracy may negatively affect economic growth in Asian and Latin American countries, but that sub-Saharan African countries, in particular, seem to benefit from democratization movements because they are able to displace predatory regimes.[15] I will take into account several of these other competing explanations as I work through my analysis.

Does Modernization Lead to Democratization?

In the late 1950s, Seymour Martin Lipset produced a seminal study that established a broad correlation between countries with high levels of industrialization, urbanization, education and wealth (mostly in the Americas, Europe, and places where democracy thrived).[16] Lipset and his colleagues called the process, whereby democracy emerges after a steady increase in economic and social indicators, modernization.[17] Yet while Lipset's empirical study revealed that almost all democracies were economically developed, it provided little insight into when, why and (most importantly) how the transition occurs. In addition, the study did not explore how democracy might affect economic growth or how modernization theory might explain the exogenous appearance and consolidation of democracy in a country such as India, which was not "modern" in many ways when it democratized in 1947 (India's GNP per capita level

[13] Przeworski, "A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10; Huntington, *Political Order in Changing Societies*, 41.
[14] Peter Mair, "Comparative Politics: An Overview," in *A New Handbook of Political Science*, eds. Robert E. Goodin and Hans-Dieter Klingmann,309-335(Oxford: Oxford University Press, 1996).
[15] Jonathan Krieckhaus, "Democracy and Economic Growth: How Regional Context Influences Regime Effects," British Journal of Political Science 36:2 (2006): 317-340.
[16] Seymour Martin Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy," *American Political Science Review* 53 (1959):69-105. 1959.
[17] Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy," 81-83. Daniel Lerner is credited with establishing a modernization process (urbanization, literacy and media growth) whereby democracy is one of the final stages.

was US$ 556 in 1947 versus US$1,100 in the US in 1830 – years when both countries established lasting democracies).[18i]

Samuel Huntington challenged one of the tenets of modernization theory by demonstrating that states focused on improving economic and social conditions must simultaneously increase political institutionalization and organization or risk political disorder and instability.[19] Huntington argued that increased particularistic demands during political modernization lead to policies that contribute to higher personal consumption instead of investment in the infrastructure and institutions necessary to sustain future economic and political growth (see Huntington and Dominguez 1975, Huntington 1965).[20] For Huntington and his colleagues, limiting democracy, at least temporarily, was necessary to promote policies and institutions that encourage economic growth (see Huntington & Nelson 1976, de Schweinitz, Jr. 1959).[21]

While Lipset and Huntington contributed much to the idea of modernization, it was not theirs alone. Walt Rostow focused on the economic side of the debate and argued (through his five-stage "take-off" economic development process) that economic modernization is democracy.[22] More recently, Ronald Inglehart's work has focused on cultural change and its effects within modernization theory. Inglehart, along with Christian Welzel, argued that a human development sequence (or broadening of choice and self-expression values) represented by "socioeconomic modernization, rising liberty aspirations, and the quest for democratic institutions" results in institutionalized democracy (for other examples of the modernization debate see Bollen & Jackman 1989).[23]

Does Democracy Only Consolidate in Wealthy Countries?

Adam Przeworski and his colleagues challenged and clarified previous theories of the relationship between democracy and economic growth. Through an empirical analysis of 135 countries between 1950 and 1990, Przeworski found that virtually any

[18] Przeworski,"A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10.
[19] Huntington, *Political Order in Changing Societies*, 39-53.
[20] Adam Przeworski and Fernando Limongi, "Modernization Theories and Facts," World Politics Vol. 49, No. 2 (January 1997): 54-55.
[21] Ibid.
[22] Walter W. Rostow, "The Stages of Economic Growth" *The Economic History Review*, New Series, Vol. 12, No. 1 (1959): 2-8.
[23] Ronald Inglehart and Christian Welzel, *Modernization, Cultural Change and Democracy: The Human Development Sequence* (Cambridge: Cambridge University Press, 2005),7.

country could democratize regardless of its level of wealth, but that richer countries had a better chance of sustaining those democracies: "no democracy ever fell in a country with a per capita income higher than that of Argentina in 1975—US$6055".[24] This both affirms and rebuts Lipset's modernization theory: democracy is more prevalent in rich countries and although it is not more likely to emerge when a country becomes modernized, it is more likely to consolidate and endure.[25] In contrast to Lipset's assertion that rapid growth destabilizes democracy, Przeworski and Limongi found that rapid growth is actually good for democracies as well as dictatorships while economic decline causes democracies to fail.[26]

Does Democracy Affect Economic Growth?

More recently, the causal arrow in the debate has begun to be reversed with findings from scholars investigating the impact of democracy on economic growth running the gamut, from some correlation to little or no (and even a negative) correlation.[27]

Huntington argued that increased demands from newly engaged citizens in a democracy were an impediment to economic growth because it destabilizes countries.[28] Likewise, Walter Galenson claimed in 1959 that "the more democratic a government," the "greater the diversion of resources from investment to consumption."[29]

In the 1990s, Przeworski's work falsified the earlier arguments made by Lipset, Huntington, and Galenson, boldly concluding that, "the views that dictatorships promote development and that development breeds democracy are both false. There is now a broad consensus that political regimes, dichotomized as dictatorships and democracies, do not differ on the average in their annual rates of growth of total income."[30] Przeworski also dispelled both Huntington's and Galenson's claims that

[24] Przeworski,"A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10.
[25] Ibid.
[26] Przeworski & Limongi, "Modernization Theories and Facts," 165-169.
[27] For the broadest analysis of older, mainly global, empirical studies (48 are analyzed), please see Kurzman,Werum and Burkhart (2002). For good literature reviews, see Larry Sirowy and Alex Inkeles, 'The Effects of Democracy on Economic Growth and Inequality: A Review', *Studies in Comparative International Development*, 25 (1990), 126–57; Przeworski and Limongi, "Political Regimes and Economic Growth," Journal of Economic Perspectives, 7 (1993), 51–69.
[28] Huntington, *Political Order in Changing Societies*, 49-53.
[29] Walter Galenson, "Introduction" in Labor and Economic Development, ed. Galenson, W., 17 (New York City: Wiley,1959).
[30] Przeworski,"A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10.

democracies invest less and suffer increased consumption, finding no support for this argument in the empirical evidence.[31] Przeworski instead cites a confluence of factors that influence economic growth, not the least of which is political institutions that "promote economic growth, internal peace, and general welfare."[32] The different economic and social conditions under which regimes operate over time also have a big impact on the relationship between the political regime and economic growth. While authoritarian governments can produce miracles such as the Asian Tiger economies of Singapore and Malaysia, they can also just as easily go into a downward spiral like Zimbabwe. For many, life under an authoritarian regime is short and grim and for that reason, Przeworski argues, "democracy does make a difference, not only for political liberty but also for material well-being."[33]

A subsequent study by Tavares & Wacziarg (2000) found that the indirect links (e.g., trade openness, government consumption, political instability, human capital, and investment rate, among others) between democracy and economic growth examined in the literature are much better grounded theoretically than the direct links.[34] While their main results showed that the impact of democracy on economic growth is negative but moderate, they were able to determine that this result was driven by an increase in human capital expenditures and a decrease in physical investment, thus reaffirming both Huntington and Galenson's argument.[35] This runs counter to Przeworski's claim that the high capital accumulation and low physical investment argument made by Huntington and others has not been proven in the literature, but perhaps Przeworski was right when he said, "investment rates are simply low in poor countries. Poverty is so tightly constraining that there is no room for political regimes to make a difference."[36]

The recent work of Morton Halperin *et al* does find that the type of political regime makes a difference so long as that regime is democratic. Halperin *et al* dispute Przeworski's study of democratic backtracking based on income level (i.e., once

[31] Ibid.
[32] Ibid.
[33] Ibid.
[34] José Tavares and Romain Wacziarg, "How Democracy Affects Growth," *European Economic Review* 45 (2001): 1341-1348.
[35] Tavares and Wacziarg, "How Democracy Affects Growth,"1341-1348; Przeworski,"A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10.
[36] Przeworski,"A Flawed Blueprint: The Covert Politicization of Development Economics,"1-10.

democratic countries reach certain levels of GDP it is very unlikely they will backtrack to authoritarian regimes). Instead, Halperin *et al* cite other factors such as the rate of growth, inflation rates, strength of the private sector and level of dependence on natural resources as factors that have a greater impact on whether or not democracy will backtrack in prosperous and poor countries alike.[37] Halperin *et al* also dispute modernization theorists such as Rostow, stating that policymakers should not wait for an economic "take-off" point to encourage democracy because even poor, developing countries can (and need to) democratize.[38]

The results of Halperin *et al*'s study, which covers over 40 years (1960-2001), persuasively dispels the belief perpetuated by the modernization school of thought that democracies hinder growth and development, particularly in poor countries. Halperin *et al* assert that the dispersal of power is one of the main characteristics of a democracy that makes it work. Democracies are also able to consider a broader range of issues on a more regular basis and policy decisions are more moderate and nuanced; characteristics that contribute to another one of democracy's most distinctive qualities – steadiness.[39] This steadiness is also seen in the economic growth and development in a democracy: foregoing boom and bust for moderate gains and small declines.[40] The authors also found that democracies performed better across a wide range of development indicators (e.g., life expectancy, secondary school enrollment, cereal yields and childhood mortality), which they attribute to shared power, openness, and adaptability.[41]

A 2006 study by Jonathan Krieckhaus examined the influence of democracy on economic growth within regions, comparing this relationship between regimes in Africa, Asia and Latin America. Krieckhaus hypothesized that democracy has a positive impact in sub-Saharan African countries, where patrimonialism is particularly strong, due to the ability to evict corrupt politicians through democratic processes.[42] In contrast, Krieckhaus hypothesized that democratic demands in Asia would negatively affect growth by impeding the implementation of policies focused

[37] Halperin, Siegle and Weinstein, *The Democratic Advantage*, 75.
[38] Ibid.
[39] Ibid, 12-16.
[40] Ibid.
[41] Ibid.
[42] Krieckhaus, "Democracy and Economic Growth: How Regional Context Influences Regime Effects," 317-323.

on expanding growth (e.g., the industrial policies implemented in developmental states like Singapore, South Korea and Malaysia), while redistributionist demands of social groups in Latin America would hinder economic growth through populist politics focused on ending inequality.[43] Krieckhaus' point of departure for this study was based on the fact that many recent statistical studies had shown null findings regarding the influence of democracy on economic growth, but the case studies were saying something entirely different, namely that democracy does influence growth. Using cross-sectional and time series cross-sectional analyses over two, 20-year periods from 1960-2000, Krieckhaus confirmed his theory that economic growth is highly contingent upon the broader political context and that in sub-Saharan Africa democracy, generally, has a small, but positive effect.[44] These findings validate the criticism that the statistical literature in this area of study is guilty of "excessive homogenization" of countries, regions and regimes.[45] Regionally focused area-studies such as this one may help uncover details that could be drowned out in global studies.

Are There Other Factors That Affect Economic Growth Not Related to Regime Type?

Notwithstanding these debates, many scholars of democracy and economic growth focus on other factors. Paul Collier, an economist at Oxford University, recently argued that regime type does not really make a difference if a country is stuck in a *poverty trap*. The four traps that Collier identified (conflict, the presence of natural resource, being landlocked with bad neighbors and bad governance in small countries) are based on a confluence of factors that extend beyond just political regime type and encompass social, geographic, political and economic factors.[46]

The residents of the countries that have fallen victim to these traps, a majority of which are in Africa, comprise what Collier calls the *bottom billion*. Traditionally, development assistance has been viewed as one billion people in the rich world trying to help the five billion that are developing. Collier points out that the focus should change because a majority of the five billion resides in countries that are clearly on a

[43] Ibid.
[44] Ibid, 339-340.
[45] Ibid.
[46] Paul Collier, *The Bottom Billion: Why The Poorest Countries Are Failing and What Can Be Done About It* (New York: Oxford University Press, 2008), 17-75.

development path, some on a very quick development path indeed.[47] The real problem, Collier points out, is with the bottom billion – people who live in countries beset by "civil war, plague, ignorance," among other things.[48]

Collier identified and diagnosed the traps (and its victims) almost like a syndrome ready for a cure, but small, landlocked, resource-scarce countries with volatile neighbors and poor governance will have to make a Herculean effort on many levels in order to surmount all of these obstacles. Due to the intractable nature of most of these traps, it is little wonder that the economies in these countries are stymied, the politicians inept or corrupt and the prospects limited. According to Collier, these four traps severely impede economic growth and development in these countries (and those around them).

Research Methods and Results in the Literature

The empirical studies performed to date have shown a range of results (positive and negative, significant and not significant) between democracy and economic growth yet still offer no definitive answer quantifying the importance of the relationship. This is not surprising given the wide range of methodological approaches. With the goal of this study to focus exclusively on sub-Saharan Africa and uncover even small relationships between democracy and economic growth within the sample of 47 states, I will first discuss the methodological shortcomings of the literature compared to my study and then explain how I will address them.

Many of the indicators used in the literature are dated. Lipset's seminal work was based on a number of different indices (e.g., the number of motor vehicles, telephones, radios and newspapers present in a population) from the 1950s that he used to measure the relationship between the level of economic development and democracy for European, English-speaking and Latin American countries.[49] The data are now obsolete and for this study Lipset's theory, which states that economic growth and development lead to democracy, is diametrically opposed to my hypothesis.

[47] Ibid, 3.
[48] Ibid.
[49] Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy," 75-80.

The definition of democracy has varied a great deal from study to study and over time. Lipset's definition was fairly loose and based more on whether or not a democracy was challenged by rival political parties or held elections than the prevalence of rights and institutions.[50] Przeworski dichotomized regimes into democracies and dictatorships, missing the nuances of using a scale that measures democracy (or lack thereof) across a continuum. Halperin *et al* measured the level of democracy across a continuum but used *Polity IV*, which is focused more on institutionalized democracy.

Most of the studies cover a broad swath of time stretching from the 1960s to the 1990s, with a few including the first few years of the new millennium. Because of this, the work of Prezworski, Halperin *et al* and many others does not include the most recent decade and crucially, many of the older studies miss the post-Cold War years, which have been transformative for many former communist countries as well as Communist proxy states.

Finally, case selection in the literature varies widely and has run the gamut from all developing countries to all Organization for Economic Co-Operation and Development (OECD) countries, from small regional groupings of countries to OECD plus all developing countries. This has made it difficult to use the studies for broad comparison or application and because there has been such little focus on sub-Saharan Africa in particular, there is very limited historical data that addresses my hypothesis.

To address these shortcomings in the literature my study will use the most recent indicators available and I will measure democracy based on the very comprehensive Freedom House *Freedom in the World* index, which focuses on the level of civil liberties and political rights for over 190 countries in the world. The *Freedom House* index provides a broader definition of democracy that runs along a continuum, allowing scholars the ability to capture the nuances of democracy where it might not be as easily measured in other indices; a stark contrast to Lipset's or Prezworski's categorical classifications. The period of my study, from 1988 to 2007, will cover the most recent wave of democratization and the most recent period of economic growth, as well as the post-Cold War period – three very important events that will broaden

[50] Ibid, 73-74.

the literature. My study will also add to the very limited contemporary research of democracy and growth focused specifically on sub-Saharan Africa.

CHAPTER TWO: RESEARCH DESIGN

I. ARGUMENT

With many different points of entry into the study of democracy and economic growth, I will focus on the specific time and place of sub-Saharan Africa from 1988 to 2007. The early and middle years of this period witnessed the watershed events related to the region's *third wave* of democratization and *second independence*[51] while the latter part of the period was evidenced by one of the region's longest periods of sustained economic growth since many states became independent over 30 years earlier.

I believe that the co-occurrence of these two trends is not a coincidence and that there is a positive relationship between them. My argument rests upon the hypothesis that countries that are more democratic will provide the better political organization and institutional framework necessary to attain higher, more stable levels of economic growth over the long-term. The basic rights and freedoms that comprise the foundation of a democracy also provide the foundation for countries to grow economically, politically and socially. Having the right to free speech, own property and elect leaders through free and fair elections provides the checks and balances, stability and civil liberties necessary for prosperity. Although there are many different factors (political, economic, social, etc.) that can influence economic growth, I believe that a democratic foundation (and the extent to which it is present in a country, particularly in SSA) is advantageous.

I do not expect the effects of democracy on economic growth to be simultaneous. There is most certainly a time lag between an increase (or decrease) in the level of democracy in a country and the level of economic growth or contraction. To determine the extent of the time lag I will test several different periods of various lengths, but ultimately I expect to find a positive relationship between democracy and economic growth.

II. HYPOTHESIS

[51] Huntington, *The Third Wave: Democratization in the Late Twentieth Century*.

Based on the problem identified in Chapter 1, and building on the research findings in the literature review, I have formulated one main hypothesis using economic and political data from 47 sub-Saharan countries between 1988 and 2007:

- Countries with higher levels of democracy at 1995 or that increased their level of democracy between 1988 and 1995, attained higher levels of subsequent economic growth than countries that backtracked, stayed at the same levels or had a relatively lower level.

I will test this relationship by looking at two different periods, based on: 1) the absolute level of democracy as measured in 1995; and 2) the change in the level of democracy beginning in the year of a country's first free and fair or first competitive national election.

Control Variables: After I test the main hypothesis, I will add several additional control variables that could potentially falsify my hypothesis. I will perform various statistical analyses to see how the variables interact and to see if the results from the original hypothesis still hold true. Controlling for a potential "third" variable like this could uncover spurious results where another explanatory variable is affecting the results.

Once I determine the relationship between democratization and economic growth I will then test to see what happens to the relationship by adding the following control variables (described in more detail in the Key Concepts section that follows):

- Countries that have good governance, as measured by the:
  - World Bank Governance Matters VIII indicators Government Effectiveness, Rule of Law and Regulatory Quality.
- Countries that liberalized their economy through structural adjustment programs (SAPs), as measured by the:
  - World Bank review of Structural Adjustment.
- Countries that derive a large part of their economic activity from resource wealth, as measured by the:
  - Work of Collier and O'Connell.
- Countries that fall into one or more poverty traps, based on:
  - The research of Paul Collier.

- Controlling for initial wealth, as measured by the:
    - GNI per capita, PPP 1995.
- Controlling for oil dependence, as measured by the:
    - Oil importing or exporting status of the country identified by the International Monetary Fund.

III. KEY CONCEPTS

Conceptualizing Democracy and Economic Growth

The definition of democracy in the literature has varied widely, leading political scientist Robert Dahl to astutely state, "democracy has meant different things to different people at different times and places."[52] Przeworski, for example, takes a Schumpeterian, or procedural, angle in defining democracy, which he states as simply "a political regime in which rulers are selected through free and contested elections" and "in which incumbents lose elections and leave office if they do."[53] Halperin *et al* broaden that definition, highlighting additional characteristics inherent to democracy such as "popular participation, genuine competition for executive office, and institutional checks on power."[54] For the purposes of this study, I will consider democracy to have a broader definition, based on several elements prevalent in the literature: recurring, free and fair elections; personal and political rights; separation of power; and checks and balances on the executive office.

While different countries may adhere to these elements of democracy to varying degrees over time, this study will not dichotomize countries and solely focus on whether they are authoritarian or democratic based on a certain cut-off level, but rather seek to assess the level of democracy based on a composite score that spans a continuum, resulting in levels of democracy. The variables I will use (described in detail later) to measure the level of democracy take into account many facets of democracy, not simply whether elections have been held or not although elections, and the quality of the election, can provide a good indication of a country's commitment to achieving democratic ideals. A broader definition of democracy will

[52] Robert A. Dahl, On Democracy (New Haven: Yale University Press,2000).
[53] Adam Przeworski, "Democracy and Economic Development," in *The Evolution of Political Knowledge*, eds. Edward D. Mansfield and Richard Sisson, 3 (Columbus: Ohio State University Press, 2004).
[54] Halperin, Siegle and Weinstein, *The Democratic Advantage*, 1-14.

also allow this study to consider countries that may have elements of both regimes or may not have fully implemented some features of democracy as completely as other countries. The road to a consolidated, liberal democracy is often not a straight one or an identical one.

Approaching the study in this way is important due to the limited success SSA has had in sustaining and consolidating democracy. Mattes and Bratton note, "taking 1995 as the high-water mark of the initial wave of democratizations, 12 countries successfully transitioned from an authoritarian state directly to a liberal or electoral democracy and then consistently maintained that status between 1996 and 2008."[55] I will measure the change in the level of democracy in the region during the period 1988 to 1995 by looking at whether or not a country held either a first "free and fair"[56] or first competitive national election during this time and then comparing the change in the Freedom House score from the year of the election to the score three years earlier. To measure the level of democracy in a different way, I will also use the level of democracy at the high-water mark in 1995 for all countries. I will then test to see what the effects were on economic growth over several different lagged periods.

The meaning of economic growth is less contested and generally measured as the annual change in a country's GDP or GNP.[ii] While the term economic growth can take on a broader meaning when considering economic development, which can include factors such as human development indicators, institutionalization and income distribution, I will focus solely on economic growth at the macro level. My focus does not intend to diminish the importance of these other measures, but it is simply beyond the scope of this minor dissertation.

Definitions and Measures

a. Democracy

Over time, democracy has meant different things to different people. Some believe that holding an election is sufficient to merit the classification of democracy while others believe that elections are only the beginning and that a true measure of democracy must be complemented by extensive civil rights, political rights and a

[55] Mattes and Bratton, "The Future of Democratization in Sub-Saharan Africa," 4.
[56] For a good overview of free and fair elections in Africa please see Staffan Lindberg, *Democracy and Elections in Africa* (Baltimore: Johns Hopkins University Press, 2006).

separation of power within government. For this study, I will operationalize the level of democracy in SSA through the *Freedom House* index *Freedom in the World*. Based largely upon the Universal Declaration of Human Rights[iii], the Freedom House index provides an evaluation of global freedom based upon the belief that:

> political rights enable people to participate freely in the political process, including the right to vote freely for distinct alternatives in legitimate elections, compete for public office, join political parties and organizations, and elect representatives who have a decisive impact on public policies and are accountable to the electorate. Civil liberties allow for the freedoms of expression and belief, associational and organizational rights, rule of law, and personal autonomy without interference from the state.[57iv]

While Freedom House does not label countries as democratic or autocratic, the 1 (free) to 7 (not free) scale – with partly free in the middle- on which they rate levels of civil liberties and political rights has become one of the best proxies[58] to measure attributes that many consider to form the foundation of democracy. To operationalize this variable I will average the Civil Liberties and Political Rights scores to arrive at one combined Freedom House score. In order to aid in the ease of understanding and interpreting the statistical analysis on the relationship between democracy and economic growth, I will invert the 1 to 7 scale so that it runs from 0 (not free) to 6 (free) so that the higher the number on the scale, the higher the level of democracy. This will make the correlation and regression results easier to understand since the scales run in the same direction. Freedom House has published the ratings, most recently for 194 countries, since 1972.

b. Economic Growth

I will operationalize economic growth as the annual change (increase or decrease) in real Gross Domestic Product (GDP) per capita. This widely used measure is calculated by dividing GDP (quantity of goods and services produced in a country for

[57] Freedom House, www.freedomhouse.org.

[58] Laza Kekic, "The Economist Intelligence Unit's Index of Democracy," *Economist,* (www.economist.com/media/pdf/**democracy** index 2007 v3.pdf.) (accessed on November 6, 2010).

any given year) by the population size. For the study, I will use the growth rate of the RGDPCH[59] (real GDP per capita) variable calculated by Penn World Table. Using a base year (which adjusts for inflation) of 2005 makes this calculation more easily comparable across countries over time. While GDP per capita does provide a general measure of the standard of living per person, it does not address dispersion or national income equality within a country.

Testing Alternative Hypotheses

To address the argument from some critics who might say that the economic growth attained in sub-Saharan Africa in the 2000s is due to factors other than democratization, I have included the following control variables:

- ***Good Governance***

From a policy and institutionalization perspective, some critics may point to the increase in good governance initiatives implemented in sub-Saharan Africa in the early to mid 1990s as having a potentially larger impact on economic growth during the late 1990s and 2000s rather than increased democratization. Indeed, powerful IFIs such as the World Bank and other international organizations such as the United Nations (through the United Nations Development Programme - UNDP[v]) have promoted democracy as well as transparent and accountable governance as part of their development plans.

Daniel Kaufman *et al* define governance, broadly, as "the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them."[60]

[59] RGDPCH is a chain index obtained by first applying the component growth rates between each pair of consecutive years, t-l and t (t=1951 to 2000), to the current price component shares in year t-1 to obtain the DA growth rate for each year. This DA growth rate for each year t is then applied backwards and forwards from 2005, and summed to the constant price net foreign balance to obtain the Chain GDP series.

[60] Daniel Kaufman, Aart Kray, and Massimo Mastruzzi, "Governance Matters VIII: Aggregate and Individual Governance Indicators 1996-2008," World Bank Policy Research Working Paper 4978 (June 2009), 5-6.

To operationalize governance and test for its relationship with economic growth I will use three (Government Effectiveness, Rule of Law and Regulatory Quality) of the six different indicators developed by Kaufman and his colleagues at the World Bank. All three of these indicators capture elements that are important to economic growth and development and could potentially have a stronger relationship with the dependent variable. The Government Effectiveness dimension captures perceptions of the "quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies."[61] The Rule of Law measures "perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence."[62] Finally, the Regulatory Quality measure captures "perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development."[63] These governance measures are drawn from diverse sources that are then aggregated and weighted according to the team's methodology.

While countries can be considered democratic and have low governance scores and vice versa, I believe that more democratic countries will also perform better on governance measures. To verify this hypothesis, I will look to see how certain governance measures interact with levels of democracy and the ensuing economic growth during the period under investigation.

- ***Economic Liberalization***

Other scholars may point to economic liberalization policies (specifically, SAPs) implemented in the 1980s and 1990s as potential drivers of economic growth in the 2000s. Although SAPs have largely been viewed by developing country governments and development agencies as worsening the situation in SSA's most vulnerable countries, there are also many who believe that these policies were necessary in order for SSA to address "existing macroeconomic problems and the structural constraints

[61] Ibid.
[62] Ibid.
[63] Ibid.

on growth."[64] While growth has ranged widely for SSA countries, it has improved and stabilized for many countries and some researchers point to adjustment policies, rather than democratization, as a key to the "major turnaround in the region's overall economic performance" that began in 1995.[65]

Set against the backdrop of rising import prices, declining export prices and drought in many SSA countries, SAPs were mainly implemented and administered by the World Bank and International Monetary Fund in order to rectify inappropriate economic policies pervasive throughout SSA.[66] The reforms addressed the serious problems related to "price distortions (notably overvalued exchange rates), poor investment choices, increasing budget deficits, a proliferation of loss-making public enterprises, growing inflationary pressures, and a loss of international competitiveness." In order to tackle these problems the IMF and World Bank advised countries to reduce government spending, tighten monetary supply through high interest rates or limited access to credit, eliminate subsidies for food (particularly agricultural products), privatize entities previously operated by the government and reduce barriers to trade, foreign direct investment and ownership.[67] The aim of these policies was to improve the economic performance of all participating developing economies by increasing reliance on market forces, reducing state intervention and keeping expenditure to a minimum.

In the late 1990s the World Bank produced several reports that assess sub-Saharan Africa's compliance to recommended reforms. The most recent report was prepared in 1997 and reviews the bank's experience with adjustment lending from 1980 to 1996 in 37 SSA countries. The World Bank produced compliance ratings for each participant country based on indices created from three policy arenas - macroeconomic policy, public-sector management, and private-sector development - and captures both initial loan agreements and eventual policy shortfalls and

[64] Evangelos Calamitsis, "Adjustment and Growth in Sub-Saharan Africa: The Unfinished Agenda," *Finance & Development* (March 1999),6-7.
[65] Ibid.
[66] Ibid.
[67] Robert Naiman and Neil Watkins, "A Survey of the Impacts of IMF Structural Adjustment in Africa: Growth, Social Spending, and Debt Relief," *Center for Economic and Policy Research*, April 1999. http://www.cepr.net/index.php/a-survey-of-the-impacts-of-imf-structural-adjustment-in-africa/. (accessed on October 5, 2010).

reversals.[68] Within these three broad categories, there are also a number of sub-categories, as follows:

> **Macroeconomic Policy:** includes all conditions regarding fiscal deficit reduction, fiscal revenues, public expenditure levels, exchange rate, etc;
>
> **Public-Sector Management:** includes civil service reform, public expenditure reform and public enterprise restructuring and privatization; and
>
> **Private-Sector Development:** financial sector reform, trade policy reform, pricing policies and incentives, and regulatory environment.[69]

The World Bank then grouped the scores for each country into good, weak and poor compliance levels based upon an underlying score that ranges from one (complete compliance) to four (total lack of compliance). I will operationalize economic liberalization by using these broad categories of adherence to SAPs in order to test whether the steps taken to improve macroeconomic policy, public-sector management and private-sector development in the 1980s and 1990s had any effect on economic growth from 1996 to 2007.

- ***Resource-Rich Economies***

Some critics may say that the real cause of the recent economic growth is tied to the disproportionately large increase in the demand and prices of commodities within a few of SSA's resource-exporting economies. It is true that very high growth in a handful of SSA countries could mask much weaker growth experienced by the majority of countries in the region, but I will be able to control for this effect through my statistical analysis.

Generally, I believe that this hypothesis misses the point with regard to the benefits and ability of democracy to increase economic growth stably over the long-term. While nominal growth rates may not be as high for democracies without resources as for those that are resource-rich, I believe that the growth relationship with democracy is still strong for more democratic countries and that many resource-rich economies are likely not as democratic. In addition, resource-rich and commodity driven economies are often caught in a cycle of boom and bust so that even if a resource-rich economy grows exponentially one year, it might suffer a contraction the next, making

[68] World Bank, "Adjustment Lending in Sub-Saharan Africa: An Update," Operations and Evaluation Department Report No. 16594, (Washington D.C.:World Bank, 1997), 10.
[69] Ibid.

the job of managing these economies tricky for governments on many levels. Again, I believe that a democratic foundation helps stabilize economic growth.

In order to test this hypothesis, I will use criteria based on the work of Collier & O'Connell (2006) that uses data stretching back to the 1960s. Collier and O'Connell define countries as resource-rich based on the first year the country satisfied the following criteria:

- current rents from energy, minerals and forests exceed 5% of GNI;
- a forward moving average of these rents exceeds 10% of GNI; and
- the share of primary commodities in exports exceeds 20% for at least a 5-year period following this initial year.[70]

The IMF uses similar groupings based on the authors' work, which is "meant to identify countries in which natural resource wealth is large enough to play a central role in economic management and in the interface of the country with global markets."[71] In accordance with the annual *IMF Regional Outlook: Sub-Saharan Africa* publications, I will breakdown resource-rich economies into oil and non-oil exporters throughout the period under study. By Collier and O'Connell's standards, only Equatorial Guinea (1996) and Ethiopia (1994) became resource-rich during the period under examination. All designations made by the IMF remained consistent with no countries transitioning between oil and non-oil resource wealth. All of the other countries have been considered resource-rich based on the aforementioned criteria from the 1960s and 1970s (a full list of Resource Rich countries is available in the Descriptive Statistics section that follows).

- ***Countries Caught in Poverty Traps***

Beyond the typical economic and political conditions and policies used to explain economic growth, economist Paul Collier has identified four poverty traps that keep the bottom billion of the world's population mired in poverty, war and isolation. Collier describes the countries where the bottom billion reside as generally characterized by high indebtedness, low income, little or no GDP growth and small

[70] Paul Collier and Stephen A. O'Connell, "Opportunities and Choices," Draft chapter for the synthesis volume of the African Economic Research Consortium's *Explaining African Economic Growth* project, Oxford University and Centre for Study of African Economics and Swarthmore College and Centre for Study of African Economics, Oxford 2006. (http://users.ox.ac.uk/~econpco/research/pdfs/OpportunitiesandChoices-chapter2ofSynthesis.pdf.) (accessed on July 25, 2010).

[71] Ibid.

populations. Furthermore, Collier posits that the reason these countries are among the poorest in the world is that they are caught in one or more poverty traps, as follows:

- *Conflict*: patterns of violent internal challenges to government such as civil war, *coup d'état* and other political conflict keep many developing countries in a state of upheaval and impoverishment.[72]
- *Natural Resource*: mismanaged resource wealth in small, developing countries can lead to conflict, corruption or limit economic growth of other export activities (e.g., Dutch Disease) resulting in limited upside benefit to the general population.[73]
- *Landlocked with Bad Neighbors*: elevated overland shipping costs (versus shipping costs for countries with a coast), particularly through neighboring countries where lack of infrastructure, corruption or violence are rife, often relegates landlocked countries to diminished returns and opportunities (this is especially true for non resource-rich countries).[74]
- *Bad Governance in a Small Country*: excellent governance and economic policies can help the growth process up to a point, but terrible policies can much more quickly destroy a country (e.g. Zimbabwe) particularly a landlocked, non resource-rich country.[75]

Collier believes that 80% of the five billion people that live in developing countries are on a solid path towards development – it is the other 20% (the *bottom billion*) who live in countries where development has been stagnant or contracting in recent decades.[76] Although Collier did not specifically identify the countries that are home to his bottom billion in his first book (*The Bottom Billion*) due to the fact that "this is not company that countries are keen to be in, and because stigmatizing a country tends to

[72] Collier, *The Bottom Billion*, 17.
[73] Ibid, 39.
[74] Ibid, 53-63.
[75] Ibid, 64-75.
[76] Ibid, 3.

create a self-fulfilling prophecy,"[77] he does disclose a list in a subsequent book called *Wars, Guns and Votes: Democracy in Dangerous Places*. Collier ultimately disclosed the list so that policies and aid can be focused and disbursed where it is most needed. I have operationalized this variable by using Collier's list, but categorizing them myself using various sources. Incorporating poverty traps as a variable will provide an interesting check on the existing arguments that focus on the causality arrow running between democracy and growth. If any relationship exists at all between countries that are stuck in a poverty trap and growth I would expect it to be negative.

IV. A SUMMARY OF VARIABLES AND INDICATORS

To restate, the key variables and measures are:

Dependent Variable: economic growth: annual growth rate of real GDP per capita[78] measure from *Penn World Tables*;

Independent Variable: level of democracy: *Freedom House* measure of political rights and civil liberties; and

Control Variables:

1. **Good Governance** – *Governance Matters VIII* score for Government Effectiveness, Rule of Law and Regulatory Quality from 1996.
2. **Economic Liberalization** – Overall assessment of adherence to SAPs from 1980 to 1996, based on a score of 1 to 4 categorized into good, weak or poor compliance levels as presented in a 1997 World Bank report**.**
3. **Resource-Rich Economies** – Designation based on the measures outlined by Collier and O'Connell (2006).
4. **Poverty Traps** – Designation of poverty traps (*Conflict, Natural Resource, Landlocked with Bad Neighbors and Bad Governance in a Small Country)* using various sources from a list of countries identified by Collier in his book *Wars, Guns and Votes: Democracy in Dangerous Places*.

[77] Ibid, 7.

[78] Called 'grgdpch' by Penn World Tables.

I will also control for initial levels of wealth using GNI per capita, PPP and whether or not a country is an oil importing or exporting country based on IMF classifications.

While the data for the dependent and independent variables are available for each year for the relevant period under study, the other control variables are not. The good governance indicators, which are the best around, are only available beginning in 1996 and while this is one year after the initial period for which democracy will be examined (1988-1995) it is very likely that almost all of the policies were implemented earlier in the period so that the review in 1996 is capturing effects from prior years. The year 1996 was also early on in the plan led by IFIs and other organizations to promote good governance.

Likewise, the World Bank review of adjustment lending was published in 1997. While the report examines lending through the end of 1996 (just over the 1988 to 1995 period), none of the loans made in 1996 were examined. Accordingly, while the dates in the report do not fall exactly within the 1988-1995 period during which I am examining the independent variable, the substance of the report reflects accurately this period, but with an earlier start (1980).

The resource-rich designation has stayed within the bounds of the 1988-1995 period while the poverty trap measure is a little more fluid. I had to use my judgment and various sources to try to group each country into each applicable poverty trap that applied during the 1988-1995 period. Some of these traps are not based on events (e.g., landlocked), which makes those designations somewhat easier.

V. RESEARCH METHODOLOGY

The research design is cross-sectional and longitudinal, enabling the study to test for correlation and conduct multivariable analysis to control for n^{th} variables. The main hypothesis will be considered separately, testing economic growth as a function of the level of democracy across 47 countries in sub-Saharan Africa. The unit of analysis will be country and the level of analysis for democracy and economic growth will be macro as this is a cross-country comparison.

To provide an overall assessment of the impact of the change in the level of democracy (measured over the period 1988-1995) on economic growth (measured

over several periods from 1996-2007 or based on election history) in SSA, I will perform the quantitative analysis using two different statistical tests: bivariate correlation and multiple regression. First, I will test whether there is a statistically significant relationship between the following variables:

Democracy in sub-Saharan Africa

- the absolute level of democracy for all sub-Saharan African countries in 1995; and
- the *change* in the level of democracy based on the Freedom House score for the year in which the first free and fair or first competitive national election is held (during the 1988-1995 period) and the Freedom House score 3 years prior to that election [FH Election – FH Score 3 YR Prior = Change in Level of Democracy]. For this part of the analysis, countries that held an election before or after this period will not be considered to have democratized during the period and will be excluded.

and;

Growth of GDP per capita

- for the absolute level of democracy at 1995, the average annual rate of growth of GDP per capita over four periods: 1996-1998, 1996-2001, 1996-2004 and 1996-2007; and
- for the change in democracy test, the average annual rate of growth of GDP per capita beginning in the first year following the election over five periods: 3-year average, 6-year average, 9-year average, 12-year average, and 12+ year average. In addition, I will also measure the 3-year period prior to the election.

I first test the bivariate relationship of democracy and growth with the control variables. Then I will test the bivariate relationship between democracy, growth and the control variables to see if any of the independent variables are highly correlated.

From there I will conduct a multiple regression using the four main additional independent variables plus the two other control variables to see if they have any effect. Multiple regression seeks to find a linear relationship between an outcome and

several explanatory (independent or predictor) variables in order to explain as much of the variability in the dependent variable as efficiently as possible. The aim of this analysis is to select from the available data those variables that best predict the dependent variable (economic growth). Based on these results I will be able to determine, from my chosen variables, whether the level of democracy or the other variables have a stronger relationship with economic growth.

Virtually all of the scores used for the good governance measures (based on the three different indicators I am using: Government Effectiveness, Rule of Law and Regulatory Quality) lie between 2.5 to -2.5, with higher scores corresponding to better outcomes. The economic liberalization measure is based on a scale from one to four with higher levels corresponding to worse compliance. These scores are further grouped into ordinal variables based on level of adherence: good, weak or poor and not applicable. The resource-rich variable, which is a categorical/nominal variable, yes or no, will be turned into a (1/0) dummy variable. Finally, the poverty trap variable is a categorical/nominal variable based on the four different traps. This will also be turned into a (1/0) dummy variable. The control for initial levels of wealth will use GNI per capita, PPP and the oil importing/ exporting will use a (1/0) dummy variable.

The first step in performing the correlation will be to run a test incorporating the different measures of democracy with the different measures of economic growth and then adding the control variables. For the multiple regression analysis I will use the time periods appropriate for the change or absolute level of democracy and then add the control variables to see how that affects the predictive value (if any) of democracy on economic growth.

Time Lags

I do not expect that an improvement in the level of democracy will result in an immediate increase in economic growth. In all likelihood, the effect is lagged as the rights, policies and institutionalization inherent in most democracies take time to take hold. Newly democratic countries might also continue to be challenged as "the previous regime tries to regain power through coups or maintain the de facto political

status quo (e.g. Argentina in the early 1970s; Bolivia in the early 1980s)."[79] There is little research done on potential lags surrounding democratization and the effect on economic growth, but one recent study, which examines the time horizon of within-country comparisons versus cross-country comparisons, by Papaioannou and Siourounis, finds evidence that democratization positively affects growth by 0.5 – 1.0%. The team compared real GDP growth to the global growth rate for the years surrounding a successful democratization and found that "in the short run, there may be non-negligible transition costs, but in the long-run growth stabilises at higher rates."[80] These democratizations were usually preceded by consistently low or a sharp drop in GDP and this is similar to what historical data show for sub-Saharan Africa. Papaioannou and Siourounis consider short-run democratization the first 3 years after the democratization event, medium-run the next 3 years and long-run 7+ years after democratization. I will employ similar time lags of 3 years, 6 years, 9 years, 12 years and 12+ years when analyzing the impact of democracy on economic growth.

Endogeneity

Several alternative economic growth explanations have been discussed in this chapter. The factors underlying these possible explanations will be analyzed further in the Descriptive Statistics and Research Findings chapters. One other potential issue, endogeneity, should be considered as well. Historically speaking, the causal arrow has generally pointed from economic growth leading to democracy, whereas this study has turned this around and looks for causality to run the other way – democracy leading to economic growth. Introducing the possibility of endogeneity between the variables results in a situation where one could say that a higher level of democracy (or liberalized economy, natural resources, good governance, etc.) is likely to be a determinant of economic growth as well as one of its outcomes (reverse causation). this endogenous relationship may potentially skew the results of the multiple regression. This study will use time-lagged variables as a way to address the possible effects of endogeneity in the study, with a recommendation that future study use more sophisticated methods to contain this issue.

Case Selection

The reliability and validity of this study are enhanced by the number of cases (47, which is all of SSA except for Somalia) that I will examine. However, this might also

[79] Elias Papaioannou and Gregorios Siourounis, "Democracy and Growth," VOX EU (October 25, 2008) . http://www.voxeu.org/index.php?q=node/2480 (accessed on July 20, 2010).
[80] Ibid.

open the study up for criticism that the conclusions are not broadly applicable given the diversity of the countries in the sample. Whether or not there is a positive or negative correlation between the level of democracy and economic growth, I believe that this study will provide a good indication of the relationship within an African context, which is important for this study and future studies. The data I have collected are largely complete for the sample of countries and will be noted when unavailable. I will also remove any variables that are clearly outliers, as this may unnecessarily skew the results.

Data Set

The data set that I constructed is derived from several different sources. For the dependent variable I accessed Penn World Table 6.3 for the annual growth rate of real GDP per capita.

For the independent variables, I accessed Freedom House's *Freedom in the World* ratings for the years 1985-2007 to measure level of freedom, which is used as a proxy for the level of democracy. To measure good governance I used data from Kaufman *et al* 2009 that measures Government Effectiveness, Rule of Law and Regulatory Quality on a scale from 2.5 to -2.5. For economic liberalization, I used a 1997 study prepared by the World Bank called *Adjustment Lending in Sub-Saharan Africa: An Update*. The study reviews the level of compliance with adjustment lending from 1980-1996. To measure resource-rich countries I used a report by Collier & O'Connell 2006 that indicated when a country became resource-rich according to certain criteria. To determine whether countries have fallen into one of the 4 poverty traps identified by Collier, I used various sources (CIA World Fact Book and Collier and O'Connell 2006, among others) to determine the traps into which each of the countries on Collier's list falls. For GNI per capita, PPP I accessed the World Bank's Africa Development Indicator database and for Oil Importing/Exporting status I used IMF Regional Economic Outlook reports for sub-Saharan Africa.

VI. EXPECTATIONS

Overall, I expect to find a statistically significant, but fragile, relationship between democracy and economic growth. I expect to find that higher levels of democracy correlate with higher levels of economic growth and lower levels of democracy

correlate to lower levels of economic growth. Based on theories and empirical evidence from prior studies over earlier periods there should at least be a weak relationship for this period, particularly for sub-Saharan Africa. Because economic growth is affected by many different variables, I do also expect to find some relationship between the control variables and economic growth when I run the regression but I still expect democracy to provide a statistically significant predictive power.

CHAPTER THREE: DESCRIPTIVE STATISTICS

Before testing for any relationship between democracy and economic growth, I will first describe the independent and dependent variables in terms of their levels and trends over the period of study. I will begin with the level of democracy and growth of GDP per capita for all sub-Saharan countries.

For democracy, the independent variable, I will discuss both the absolute level at 1995 and the degree of change (relative to the first free and fair or first competitive national election) over the period and provide charts and graphs depicting these different measures. For the dependent variable, economic growth, I will examine the average level of growth over the period using charts and graphs to help depict the economic performance of sub-Saharan Africa.

Lastly, I will describe each of the most likely confounding "third" variables that might better explain the link between growth: 1) initial levels of wealth; 2) levels of good governance; 3) implementation of economic reforms; 4) levels of resource dependence in an economy; 5) presence or absence of poverty traps; as well as 6) whether the economy is oil importing/exporting.

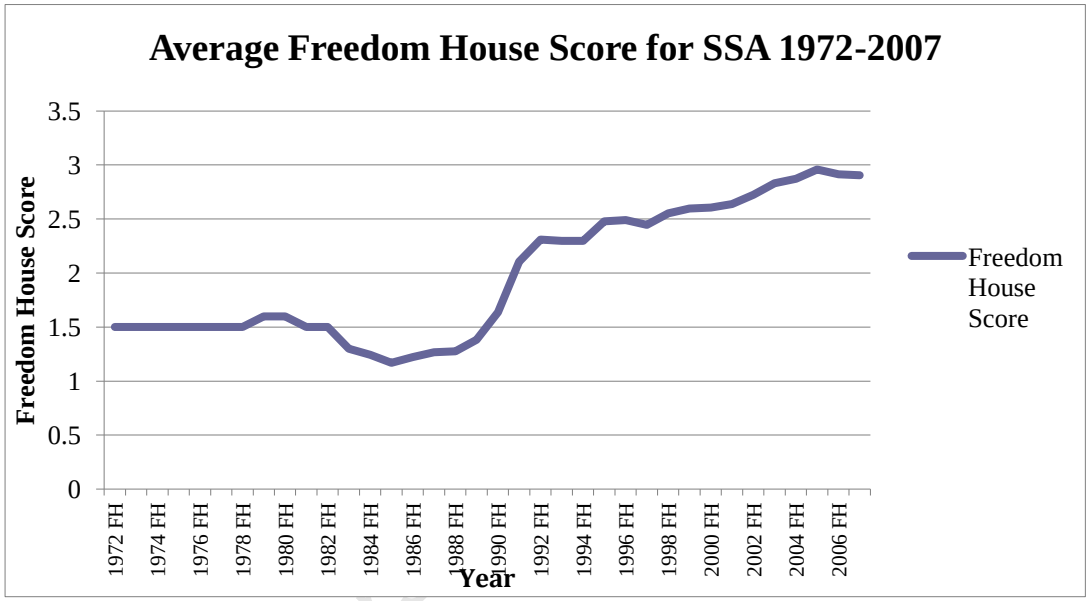
I. LEVEL OF DEMOCRACY

I will measure the level of democracy in sub-Saharan Africa from 1988 to 1995 in two ways. First, I will use the absolute level of democracy in 1995, the year before I start to look for a relationship with economic growth. Second, I will calculate the change in Freedom House score for countries that democratized during the 1988 to 1995 period. These scores will be calculated based on the difference between the level of democracy during the year in which a country holds its first free and fair election during the period 1988 to 1995 and the level of democracy three years prior to that election. If a free and fair election was not held during the period under study, I will then use the first competitive national election (defined as where opposition political parties actually win legislative seats) that occurred during the period under study. Countries that held neither a first free and fair nor a first competitive national election will be considered for this portion of the study.

Overview - Average

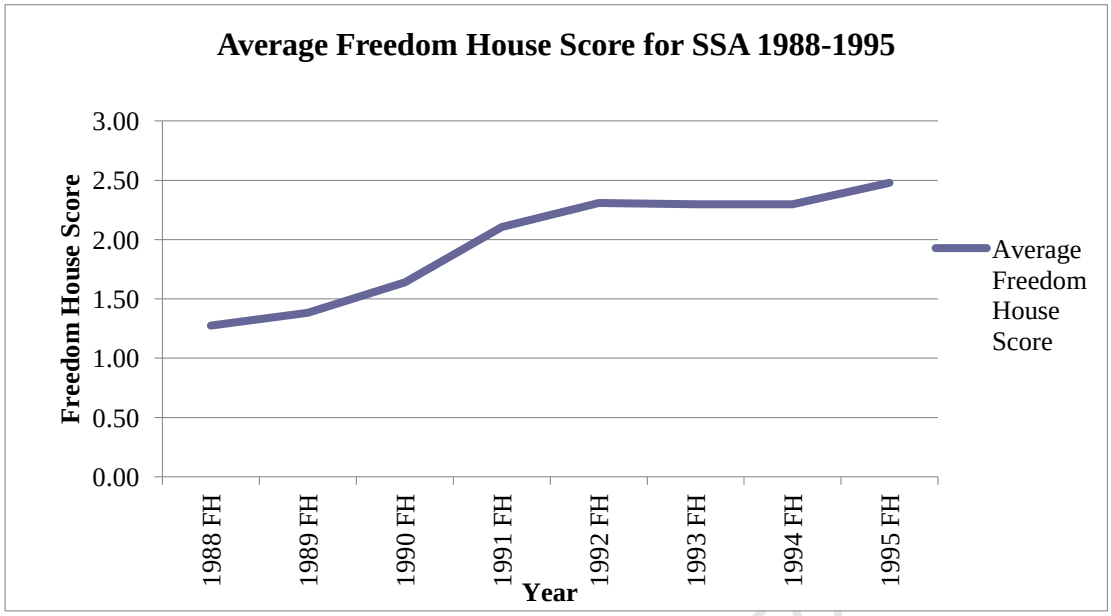
For descriptive purposes an average provides a good snapshot of the levels of democracy in the region over time. The graph below provides a broad overview, showing the average Freedom House score for SSA from the index's inception (1972) through 2007. The level of democracy has clearly improved over the past 35 years but what is most notable is the dip democracy took during the 1980s. This is likely due to the economic and political fallout from oil price shocks and Cold War politics.

Figure 3.1: Average Freedom House Score for SSA 1972-2007



A look at the average Freedom House score during the period under study (1988 to 1995) illustrates a positive trend over this time, from 1.28 (on an inverted scale of 0 to 6, with 6 the highest level of democracy) in 1988 to 2.11 in 1991 and ultimately to 2.48 by 1995 (see graph below).

Figure 3.2: Average Freedom House Score for SSA 1988-1995

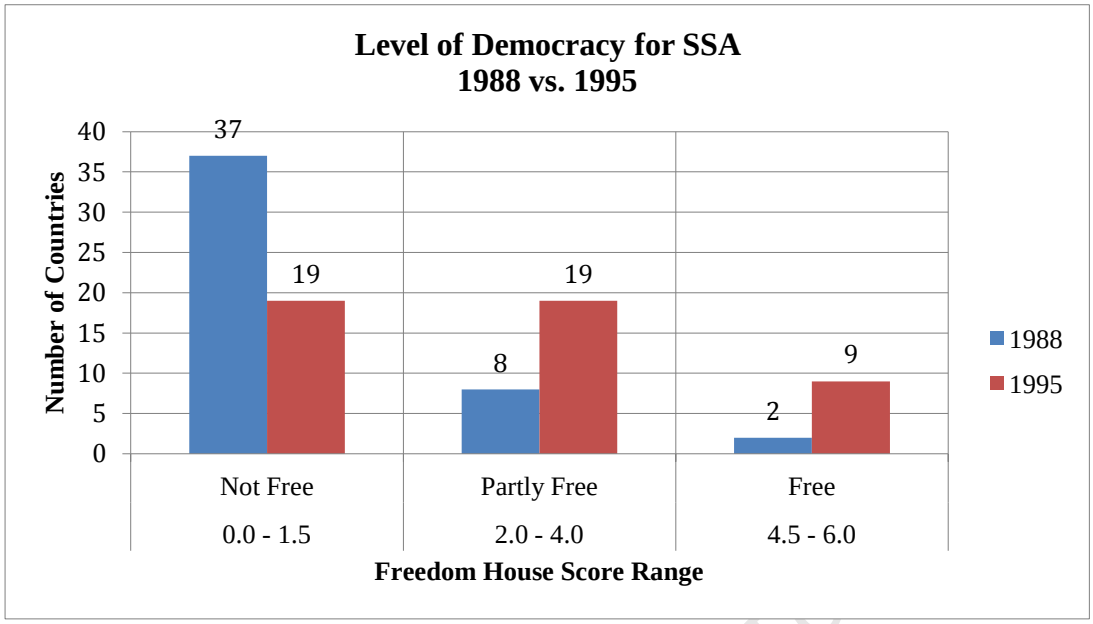


Although interesting for descriptive purposes, the average Freedom House score over this period is not the most useful measure for this analysis because it does not easily identify which countries democratized (e.g., measuring an absolute change based on an event such as an election and the corresponding change in the level of democracy). For example, the vast difference between the level of democracy for Equatorial Guinea and Mauritius, which have essentially stayed at the same level of democracy (whether high or low) throughout the period, is seen as equivalent when measuring the absolute change (they would both have close to a 0 change value). Because of this, I want to pay particular attention to the countries that went through some form of democratization during the period.

Absolute Level of Democracy – Freedom House Score at 1995

The first measure of democracy will simply take the level at 1995, which my study assumes to be the high water mark for democracy in SSA during the 1990s. The chart below provides a comparison between the level of democracy (based on Freedom House categories) in 1988 versus 1995. Based on inverted levels of freedom defined by Freedom House (free, partly free, not free), there is a noticeable shift in the number of countries that were *Not Free* in 1988 compared with the number that were *Not Free* in 1995 (37 versus 19), with this trend of improvement evident at all levels.

Figure 3.3: Level of Democracy for SSA 1988 vs. 1995



The table below presents the countries in each group based on the level of democracy for 1995. As mentioned above, many countries transitioned into higher levels of democracy from 1988, but a few also became less democratic. The countries at the highest level, *Free*, have remained, with the exception of Malawi, which has dropped slightly, and addition of Ghana, strong democracies to present. Interestingly, the countries categorized as *Free* represent a mix of strong and weaker economies, which, on the surface, refutes the argument that democracies are, by definition, wealthy. Countries categorized in the *Partly Free* level of democracy encompass a wide range of regimes and true to the label 'partly', some of the countries have adopted different aspects of democracy to different degrees. There is strong potential for many of the countries listed as *Partly Free* to transition to the level of *Free*. Many of the countries found at the *Not Free* level have transitioned to *Partly Free* since 1995, but a few countries (e.g., Congo, Dem. Rep., Chad, Equatorial Guinea, and Sudan) have consistently remained *Not Free* over the years.

Table 3.1: Level of Democracy for SSA at 1995

Level Of Democracy at 1995	Countries		
Free (6.0 to 4.5)	Benin	Malawi	Namibia
	Botswana	Mali	São Tomé & Príncipe
	Cape Verde	Mauritius	South Africa
Partly Free (4.0-2.0)	Burkina Faso	Ghana	Senegal
	Central African Rep.	Guinea-Bissau	Seychelles
	Comoros	Lesotho	Tanzania
	Congo Rep.	Madagascar	Uganda
	Eritrea	Mozambique	Zambia
	Ethiopia	Niger	Zimbabwe
	Gabon		
Not Free (1.5 to 0.0)	Angola	Equatorial Guinea	Nigeria
	Burundi	Gambia	Rwanda
	Cameroon	Guinea	Sierra Leone
	Chad	Kenya	Sudan
	Congo Dem. Rep.	Liberia	Swaziland
	Côte d'Ivoire	Mauritania	Togo
	Djibouti		

Change in Freedom House Score from 1988 to 1995

The second way I have measured the level of democracy is by calculating the change in democracy for each country during the period 1988 to 1995. To calculate this variable I started with the level of democracy as measured during the year that the country held its first free and fair national election. If this did not occur during the period under study I then looked to see if the country held a first competitive national election during the period. I then subtracted the level of democracy as measured 3 years prior to that point. Looking back 3 years sufficiently captures the effects of democratic shift as reflected by the Freedom House score. Although I would expect the large majority of these calculations to be positive, it is possible that a country could have reversed course (e.g., a flawed election or some other political disruption that set the country back in level of democracy). Accordingly, a negative number would indicate a drop in the level of democracy (backsliders) while a positive number would indicate an improvement or increase in the level of democracy. A calculation of zero (Standpatters) would indicate stagnation.[81]

In a few instances, the country's first election was held between 1988 and 1990 (Comoros, Côte d'Ivoire and Namibia), forcing me to go outside the range of 1988 to

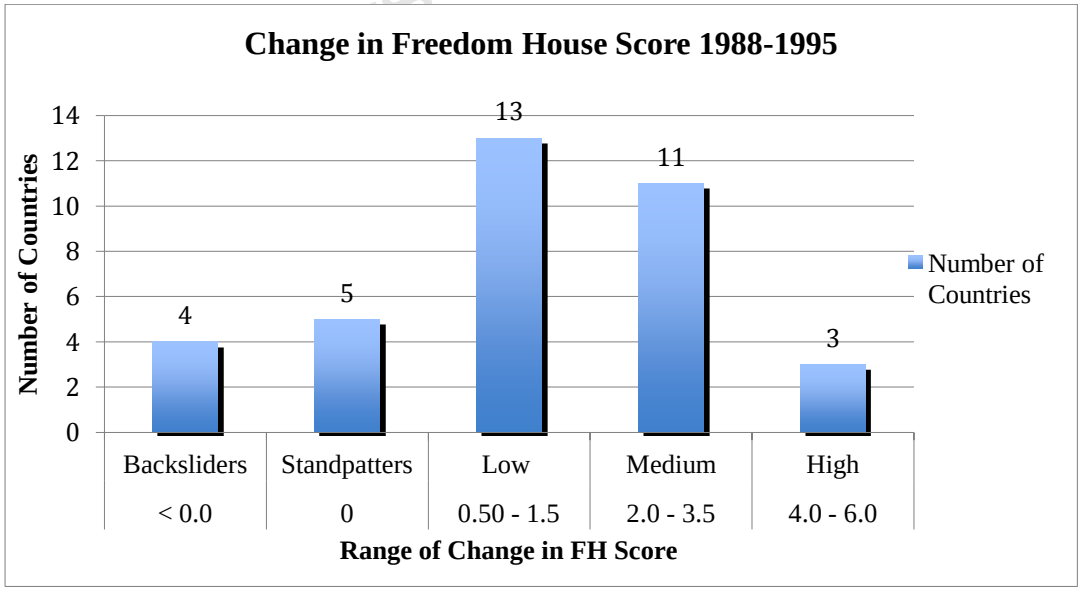
[81] Standpatter, a term used by Samuel Huntington in his work *The Third Wave*, refers to people in government, military and party bureaucracies that work to stop or slow down the process of democratic change.

1995 in order to calculate the change variable. In these few instances, however, the country's score did not substantially change. Fully 36 of 47 countries in SSA held a first free and fair or first national competitive election during this period.

Finally, countries that did not hold either a first free and fair or a first national competitive election from 1988 to 1995 were not included in this portion of the analysis. The reason being is that these countries, although they may be consolidated democracies or authoritarian regimes, did not democratize (according to my methodology) during the period under study. Eleven countries fall into this category.

The chart below depicts the countries according to the degree of democratic change. I have categorized them as High (6.0 – 4.0), Medium (3.50-2.0), Low (1.50 – 0.50), Standpatters (0.0), and Backsliders (< 0.0). Even though a change of 1.50 points is considered Low, for a country that began at zero, this is a substantial improvement in the level of democracy over this period. The greater the score, the more drastic the change witnessed from the first free and fair or first competitive national election. The Standpatters, per definition, remained stagnant throughout all of this, neither advancing nor declining. The average Freedom House score for this group was a low 1.0.

Figure 3.4: Change in Freedom House Score 1988-1995



The following table presents the composition of each group based on the change in the level of democracy from 1988 to 1995. The minimum score was -1.0 (Nigeria and

Senegal) and the maximum was 4.5 (Benin) and the sample had a mean and standard deviation of 1.31 and 1.47, respectively (see the Appendix for more detail).

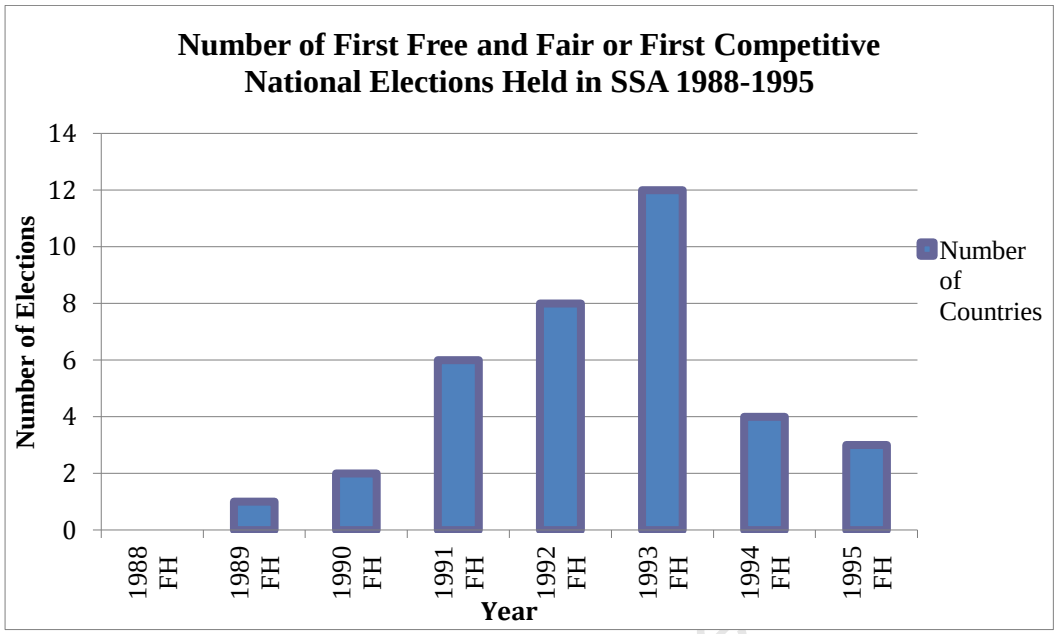
Table 3.2: Change in Level of Democracy 1988-1995

Change in Level Of Democracy 1988-1995	Countries		
High (6.0 – 4.0)	Benin, Malawi	São Tomé & Príncipe	
Medium (3.5- 2.0)	Cape Verde, Central African Rep. Congo Rep. Guinea-Bissau	Lesotho Mali Namibia Niger	South Africa Seychelles Zambia
Low (1.5- 0.50)	Angola Burkina Faso Cameroon Comoros Côte d'Ivoire	Equatorial Guinea Ethiopia Gambia Ghana Kenya	Madagascar Mozambique Tanzania
Standpatters (0.0)	Burundi Guinea	Mauritania Swaziland	Togo
Backsliders (< 0.0)	Djibouti Gabon	Nigeria Senegal	
Not Applicable	Botswana Chad Congo Dem. Rep. Eritrea	Liberia Mauritius Rwanda Sierra Leone	Sudan Uganda Zimbabwe

The graph below, with data taken from Mattes & Bratton 2009, shows the number of first free and fair or first competitive national elections held in SSA from 1988 to 1995.82 The substantial number of first elections, particularly during the 1991-1993 period, clearly reflects the *second independence* or *third wave* of democratization of which Huntington spoke.

82 Mattes and Bratton, "The Future of Democratization in Sub-Saharan Africa," 5.

Figure 3.5: First Free and Fair or First Competitive National Elections Held in SSA 1988-1995

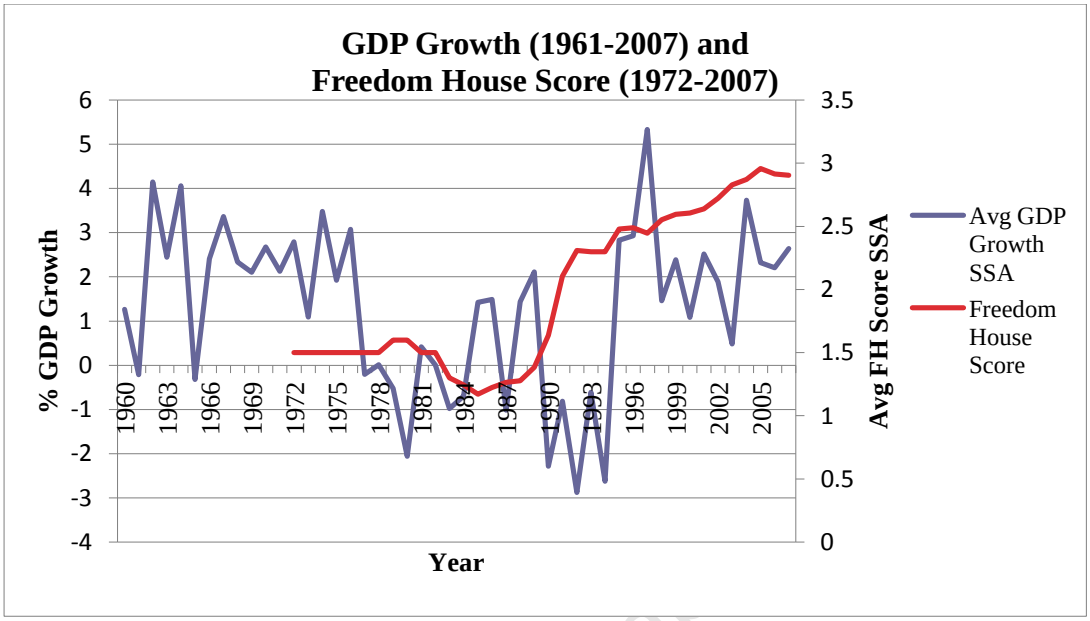


II. ECONOMIC GROWTH

Economic growth is measured by the annual growth rate of real GDP per capita. Using data from the Penn World Table I have calculated the average growth rate over the period of study (1996-2007), broken down into four sub-periods for the level of democracy at 1995 and six sub-periods for the change in the level of democracy analysis. Please note that any reference to economic growth, growth or GDP refers to real Gross Domestic Product per capita levels as defined in the Key Concepts section.

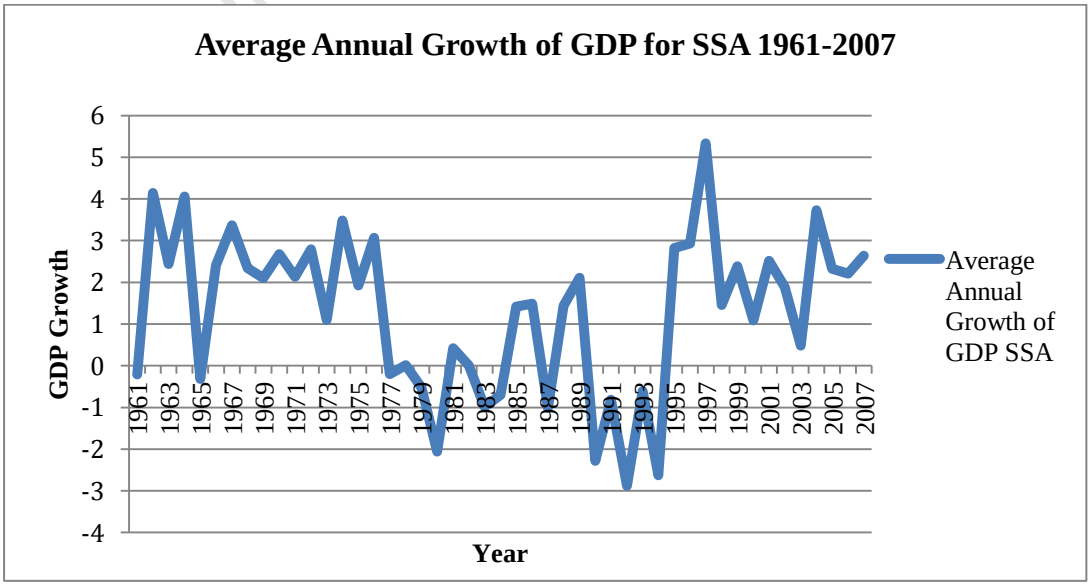
Before I present the data associated with the period under study I think it is important to first look at GDP growth and level of democracy together over the past few decades. Getting a broad perspective of sub-Saharan Africa's economic performance and level of democracy over the years will make it clear why I chose to focus on this specific period.[vi]

Figure 3.6: GDP Growth (1961-2007) and Freedom House Score (1972-2007)



The graph above shows that there has been a steady rise in democracy in SSA since Freedom House started scoring countries in 1972. The pronounced dip in the average Freedom House score in SSA from the early 1980s through the late 1980s co-occurred with poor governance, deteriorating economic conditions, civil strife and drought, among other events.

Figure 3.7: Average Annual Growth of GDP in SSA 1961-2007



Looking at economic growth alone in the graph above, one can see the fairly strong and stable growth that SSA experienced in the 1960s (these were the years following independence for most nations) when the average annual growth rate was 2.16%. This fell to 1.65% in the 1970s and then to 0.21% in the 1980s following the global oil shocks in the mid to late 1970s and introduction of structural adjustment programs (SAPs) in many sub-Saharan countries in the 1980s and early 1990s. Growth reached its nadir at (1.84%) during the 1989 to 1994 period (the average for the entire 1990s was 0.57%) and then improved in the second half of the 1990s and through to 2007 with an average annual growth of GDP around 2.42% (growth from 2000-2007 was 2.11%). Since these numbers are averages, they do mask some rather large disparities in growth rates among the 47 countries in the sample. Some countries experienced growth of over 100% in some years while others experienced negative growth of 10-20%. In spite of this, the simple average gives a good indication of overall trends for the past 45+ years.

Collier and O'Connell find that the simple average of GDP does not provide the best description of how the *average* African fared in terms of economic growth. While the simple average is perfectly fine for an analysis, the authors believe that a population-weighted GDP calculation provides a better description of how the *region* fared. SSA has many small countries with small populations that can wield substantial influence when included in a simple average. While GDP-weighted calculations will reflect the performance of the economic "whale" in this category, South Africa, which accounts for around half of GDP in SSA, a population-weighted average will better reflect the effect of economic growth of a more populous country like Nigeria, which as the home of 1 in 5 Africans, is the demographic "whale" on the continent.[83]

Based on Collier and O'Connell's calculations, sub-Saharan Africa performed far worse over the decades from 1960 to 2000 than the simple average indicates (see the table below for a comparison). Average annual GDP growth was 1.04% in the 1960s, 0.86% in the 1970s, -0.79% in the 1980s and -0.46% in the 1990s. Furthermore, neither the simple average nor the GDP/population-weighted averages take into account the dispersion of economic growth among a population. Growth may be high but it might also go directly to the business and political elite in a society, creating

[83] Collier and O'Connell, "Opportunities and Choices," 1.

high inequality at the micro level. This sort of analysis, while very interesting, is beyond the scope of this dissertation.

Table 3.3: GDP Growth Simple Average versus Population Weighted Average

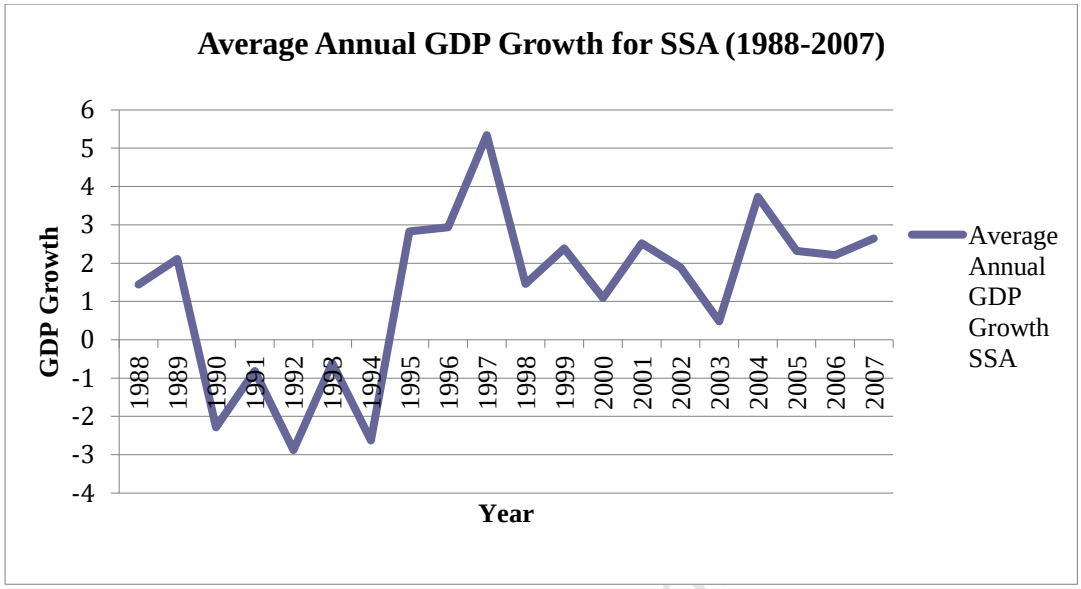
Years	GDP Growth Simple Average	GDP Growth Population Weighted Average
1960s	2.16%	1.04%
1970s	1.65%	0.86%
1980s	0.21%	-0.79%
1990s	0.57%	-0.46%

Since it is highly unlikely that changes in the level of democracy are quickly matched by a corresponding change in economic growth I will present the average growth for sub-Saharan Africa in two ways, focusing on periods:

- In accordance with the absolute level of democracy at 1995, I will break the subsequent 12-year period into four different sub-periods: one short-term (1996-1998), two medium-terms (1996-2001) & (1996-2004) and one long-term (1996-2007).
- In accordance with the change in level of democracy calculation following the first free and fair or first competitive national election year, I will calculate GDP growth beginning the year after the election for 5 sub-periods: a 3-year average, a 6-year average, a 9-year average, a 12-year average, and a 12+ year average (since the election years are different for many countries, this period will measure the longest term for each. Although this duration will vary in length from country to country, it is at least 12 years). To get a glimpse of what was occurring economically for a country in the lead up to its election, I will also calculate the 3-year average for the period prior to the election.

The graph below gives a snapshot of the annual economic growth during the entire period under study (1988-2007) and provides a dramatic look at the tumultuous years of economic contraction leading up to and during the *third wave* of democratization. Focusing specifically on the years from 1996 to 2007 shows that average growth was not only entirely positive during this time period, but it was also more stable than in previous years (particularly the late 1980s and early 1990s), with some of the highest average growth rates (over 5% in 1997) during the past 50 years.

Figure 3.8: Average Annual GDP Growth for SSA (1998-2007)



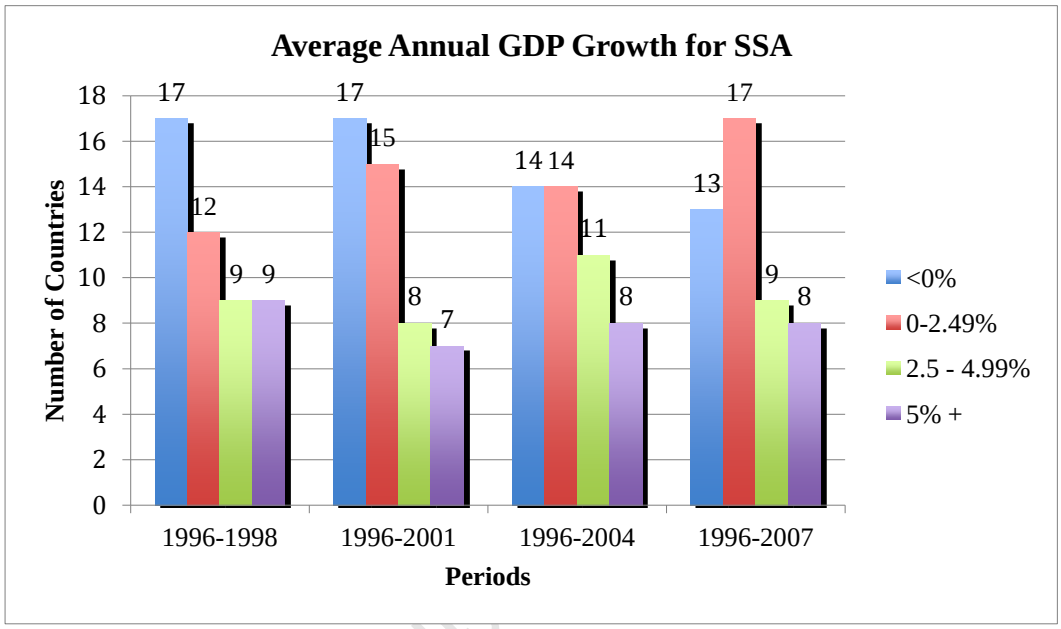
Average Annual Growth – 1996-2007

Testing for a relationship between democracy and growth using the level of democracy at 1995 allows for an analysis of all countries following the same base year. To restate my original premise, I do not believe that an increase in the level of democracy will have an immediate effect (e.g., within 12 months) on economic growth, but rather provide a more stable, steady and positive growth trajectory once the democratization process begins. On the other hand, decreases in the level of democracy might indeed have more immediate effects because of disastrous economic policies and bureaucracies, military action or civil unrest. Either way, I will begin to measure the change in economic growth in 1996 (the year after the high-water mark for the level of democracy during the period) in order to see how democracy affects economic growth over the short, medium and long-terms.

The graph below provides a breakdown of the four periods by country based on four different levels of economic growth that I have established: > 5.0%, 4.99-2.50%, 2.49-0.0% and < 0.0% (see the Appendix for more detail). The longer time periods tended to slightly smooth out the averages to higher levels. The 1996-2001 period appears to have marginally lower economic growth rates compared to the other

periods and this could be because of the tech bubble bursting (and ensuing recession) in Western economies. The highest level of growth category (> 5.0%) has remained consistent across the four periods with between 7-9 countries falling into that range. Overall, the long-term period has more countries leaning towards the higher GDP growth rates, which could be due to the high growth in the global economy or an increase in the level of democracy over that time.

Figure 3.9: Average Annual GDP Growth for SSA



The table below presents a range of descriptive statistics for the four different periods. The highest mean (3.24%) and standard deviation (12.07) were recorded during the shortest period (1996-1998). This period also recorded the widest range between the average maximum and minimum GDP growth of over 80%. Over time the means, minimum and maximum scores tended to smooth out somewhat (see the Appendix for more detail) but the extreme range of these results were mostly driven by a few outlier countries (Equatorial Guinea, Liberia, Sudan, Sierra Leone and Congo, Dem. Rep.) that will be discussed later in the analysis.

Table 3.4: Average Annual GDP Growth in SSA 1996-2001

Average Annual GDP Growth in SSA – 1996-2001				
Period	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
1996-1998	-16.22%	70.09%	3.24	12.07
1996-2001	-7.34%	49.73%	2.62	8.31
1996-2004	-7.44%	40.14%	2.42	6.58

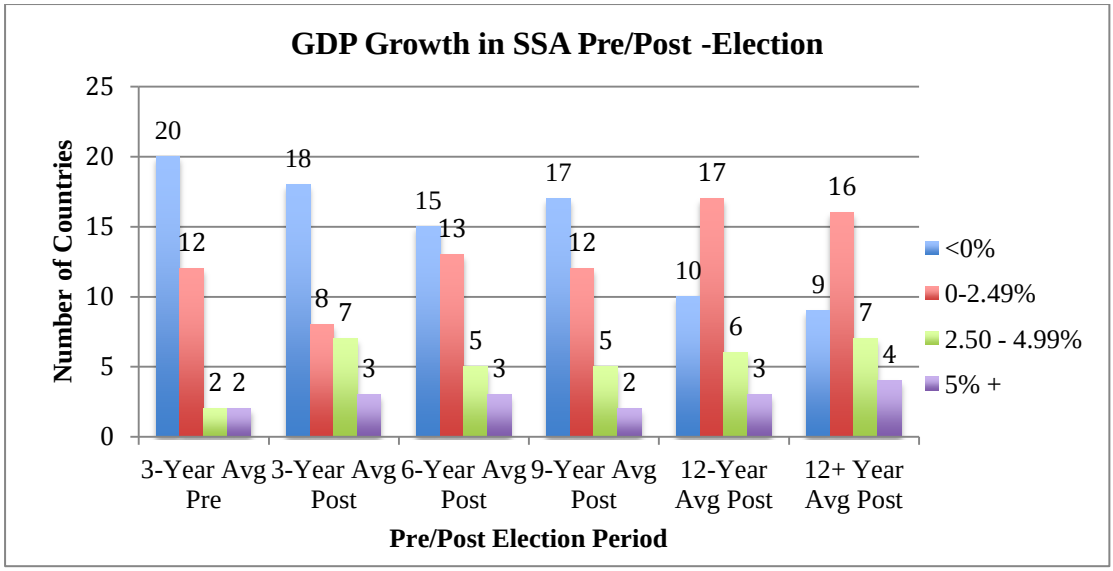
1996-2007	-6.36%	30.56%	2.42	5.19

Change in Annual Growth – From First Free and Fair or First Competitive National Election (1988-1995) Through 2007

For the analysis based on the first election held during the 1988 to 1995 period, the goal is to measure economic growth beginning in the year after the election (in six sub-periods) through the end of the period (2007). From a timing perspective, this will put all of the countries that experienced one of the defining characteristics of democracy (an election) in the same group. As previously mentioned, I will look back three years from the first free and fair or first competitive national election to measure the change in the level of democracy. For economic growth I will look at five subsequent periods (a 3-year, a 6-year, a 9-year, a 12-year, and a 12+ year period) beginning in the year following the election. I will also calculate the 3-year average GDP growth for the period prior to election to see what the general trend was there.

The chart below reflects a shift from lower growth averages in the years immediately following an election to somewhat higher growth averages over the longer (9, 12 and 12+ year averages). However, when taking into account the 3-year period prior to the election year, which had lower growth rates across the board, one can see (at least on the surface) that growth does appear to improve slightly following an election. I will explore this relationship further during the correlation analysis, but this gives a good visual description of the general trends, which is consistent with the trend in the graph depicting the annual GDP growth in SSA.

Figure 3.10: GDP Growth in SSA Pre/Post-Election



The table below presents a range of descriptive statistics for the six different periods. The highest mean (2.02%) was recorded during the longest period (12+ Year Avg) and this period also had the lowest standard deviation of all the periods measured following the election year. Interestingly, the 3-year period prior to the election had the lowest mean (-0.49%) and standard deviation (3.35). Over time, the means steadily improved and the minimum and maximum scores tended to smooth out somewhat as well (see the Appendix for more detail).

Table 3.5: Average Annual GDP Growth – Six Periods Pre/Post-Election

Average Annual GDP Growth – Six Periods Pre/Post Election				
Period Pre/Post Election	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
3-Yr Avg Pre	-8.31%	10.90%	-0.49	3.35
3-Yr Avg Post	-4.59%	21.15%	0.76	4.52
6-Yr Avg Post	-4.45%	36.66%	1.62	6.40
9-Yr Avg Post	-3.52%	35.25%	1.66	6.11
12-Yr Avg Post	-2.96%	29.71%	1.90	5.12
12+ Yr Avg Post	-2.54%	25.40%	2.02	4.50

III. CONTROL VARIABLES

Good Governance

The three different good governance indicators that I will use (Government Effectiveness, Rule of Law and Regulatory Quality) from the World Bank study by Kaufman *et al* were presented in a 1996 report. While this is not ideal because my period of study for the independent variable runs from 1988 to 1995, it is the best

indicator available and the first year that this report was produced. I believe that this source will provide the best proxy for a good governance effect for the period under study.

The components of the governance indicators are gathered from a number of different sources: from non-governmental organizations (NGOs) and think tanks to universities and other research databases. The authors then sorted the data by type (survey, public sector org, etc.) and created a weighting for each indicator based on the level of information provided by each of the sources.

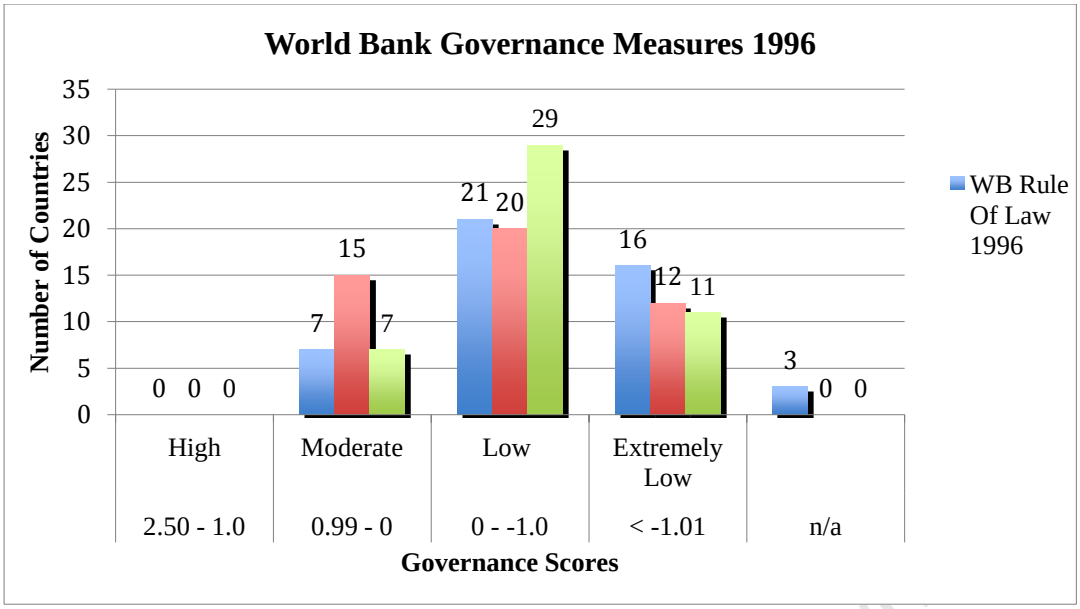
The table below provides an overview of the descriptive statistics. Scores should normally fall within the range of 2.5 to -2.5 (higher scores corresponding to better outcomes), with scores outside these levels considered outliers. The scores of two countries (Liberia and Democratic Republic of Congo) fell outside this range for the Regulatory Quality indicator and three scores (Comoros, São Tomé & Príncipe and Seychelles) were unavailable for the Rule of Law indicator. Generally, the scores and means are quite low, with only one indicator reaching 1.00. This reflects a generally poor level of governance in SSA.

Table 3.6: Good Governance Measures 1996

Good Governance Measures 1996				
Measure	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
Rule of Law	-2.00	1.00	-0.73	0.73
Regulatory Quality	-3.13	0.74	-0.60	0.83
Government Effectiveness	-1.78	0.60	-0.66	0.56

To see the distribution of the governance scores among the entire sample I have prepared the chart below, which groups the countries into four broad categories: 2.5 to 1.0, 1.0 to 0, 0 to -1.0 and <-1.0.

Figure 3.11: World Bank Governance Measures 1996



Economic Liberalization

The World Bank's assessment of sub-Saharan Africa's compliance with its structural adjustment programs (SAPs) is grouped into three categories as defined by the bank: good, weak, and poor. I have added a fourth category of countries that did not have a program or where data were unavailable. A total of 10 countries (comprising 29% of the countries reviewed in the study) were deemed as good compliers, 11 (comprising 32%) were deemed weak compliers, 13 (comprising 38%) were poor compliers (Somalia was a poor complier but has been excluded from the study for lack of information) and another 13 countries either did not have programs with the World Bank or data were unavailable.

In its review, the Bank notes that poor compliance by a majority of the countries (and weak performance by even the best compliers) was due to several factors, both exogenous and endogenous, some of which were in the Bank's control like lack of selectivity and poor project design.[84]

Table 3.7: Compliance with World Bank SAPs 1997

[84] World Bank, "Adjustment Lending in Sub-Saharan Africa: An Update," 4.

Compliance With World Bank Structural Adjustment Programs 1997			
Good Compliance	**Weak Compliance**	**Poor Compliance**	**N/A**
Benin	Burkina Faso	Burundi	Angola
Gambia	Côte d'Ivoire	Cameroon	Botswana
Ghana	Guinea	Central African Rep.	Cape Verde
Malawi	Guinea-Bissau	Chad	Comoros
Mali	Madagascar	Congo Brazzaville	Djibouti
Mauritania	Niger	Congo Kinshasa	Eritrea
Mauritius	Senegal	Equatorial Guinea	Ethiopia
Mozambique	Togo	Gabon	Lesotho
Sierra Leone	Uganda	Kenya	Liberia
Tanzania	Zambia	Nigeria	Namibia
	Zimbabwe	Rwanda	Seychelles
		São Tomé & Príncipe	South Africa
		Sudan	Swaziland

These broad categories were based upon an underlying score that ranges from one (complete compliance) to four (total lack of compliance). Based on the 34 countries examined, the minimum score was 1.1 and the maximum score was 4.0. The mean and standard deviation were 2.67 and 0.73, respectively. Overall, both the report and the scores indicate that compliance, as measured by the World Bank, with requirements under SAPs was generally weak to poor.

Resource-Rich Economies

Collier and O'Connell define a country as resource-rich if: current rents from energy, minerals and forests exceed 5% of GNI; a forward moving average of these rents exceeds 10% of GNI; and the share of primary commodities in exports exceeds 20% for at least a 5-year period following this initial year. The authors use these criteria to identify countries in which natural resource wealth is large enough to play a central role in economic (both at the macro and micro level) management and in the interface of the country with global markets.[85] The following table illustrates the breakdown of the status of SSA countries in 1995 within the two broad categories of resource-rich and not resource-rich:

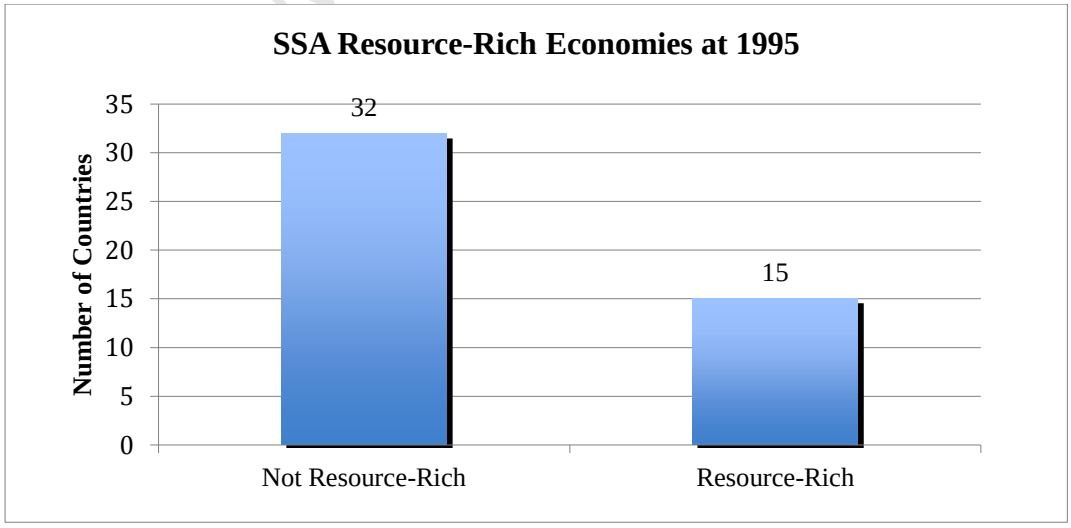
Table 3.8: Level of Resource Wealth in SSA 1995

[85] Collier and O'Connell, "Opportunities and Choices," 4.

Level of Resource Wealth in SSA 1995		
Resource-Rich	**Not Resource-Rich**	
Angola	Benin	Madagascar
Botswana	Burkina Faso	Malawi
Cameroon	Burundi	Mali
Congo Rep.	Cape Verde	Mauritius
Ethiopia	Central Africa Republic	Mozambique
Gabon	Chad	Niger
Guinea	Comoros	Rwanda
Liberia	Congo Dem. Rep.	São Tomé & Príncipe
Mauritania	Côte d'Ivoire	Senegal
Namibia	Equatorial Guinea	Seychelles
Nigeria	Djibouti	South Africa
Sierra Leone	Eritrea	Sudan
Swaziland	Gambia	Tanzania
Zambia	Ghana	Togo
	Guinea-Bissau	Uganda
	Kenya	Zimbabwe
	Lesotho	

Approximately 32% (15) of countries in sub-Saharan Africa were considered resource-rich at 1995. A majority of 68% (32) countries were not considered resource-rich based on the parameters set out by the authors. This does not mean that these countries were not endowed with resources or that they did not receive a portion of their GDP by exploiting these resources, it only means that the country did not produce resources at a level high enough to fit within the parameters laid out by Collier and his colleagues.

Figure 3.12: SSA Resource-Rich Economies at 1995



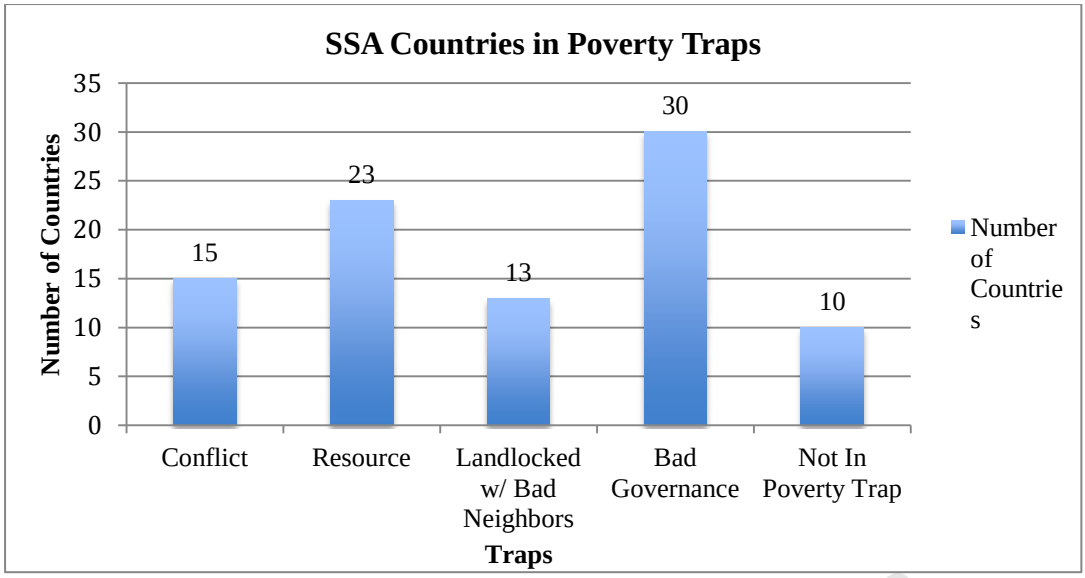
Countries Caught in Poverty Traps

The *poverty trap* variable adds an interesting angle to the study of the relationship between democracy and economic growth. While the problems that lead to or from these traps are grounded in many of the same economic, political, social and geographical dynamics that the literature highlights, identifying the traps and all that they encompass is more like diagnosing a syndrome with inter-related effects. Paul Collier, the economist that diagnosed the *poverty traps* of the bottom billion, reluctantly released a list of countries that fall into one or more of the traps in his book *Wars, Guns and Votes: Democracy in Dangerous Places*. With good reason, Collier decided not to take the next step and delineate which countries fall into which traps. Therefore, the challenge for me here was to decide, independently, which countries fall into which traps. I used a variety of sources such as the CIA World Factbook, World Bank reports and various other literature, including some from Collier himself.

Some of the traps, such as landlocked with bad neighbors, are obvious to determine but others, like bad governance in a small country and the resource trap are a bit more subjective. I tried to stay within the bounds of the period of the study (1988-1995) as much as possible but the decisions were not always clear-cut and the events that may dictate whether or not a country falls into a trap did not always stay neatly within this time frame.

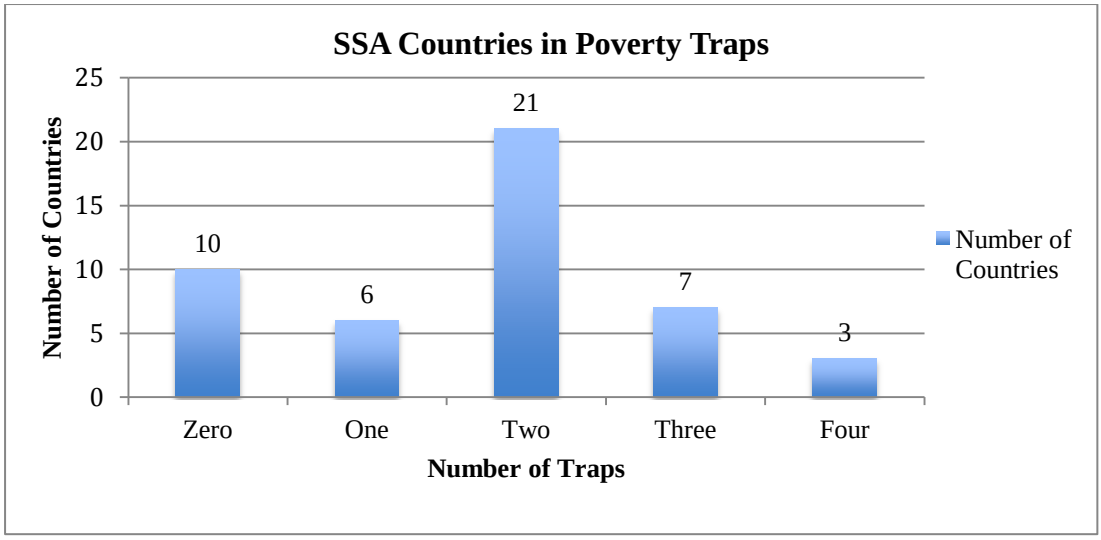
There were 10 countries in sub-Saharan Africa that did not make it on Collier's list; the other 37 fell within one to four traps (see the Appendix for more detail). The chart below gives a breakdown of the number of countries in each trap.

Figure 3.13: SSA Countries in Poverty Traps



It is clear that governance is an issue among many SSA countries – and the independent results of the previously mentioned World Bank study seem to confirm this. Mismanagement of resources is not far behind. Resources can often be a curse to a developing country that does not have the institutions or economic development to manage the extraction, sale and export of oil, minerals and other commodities in a proper way. The chart below depicts the number of countries that fall into the different number of traps (this is cumulative)

Figure 3.14: SSA Countries in Poverty Traps



Initial Levels of Wealth

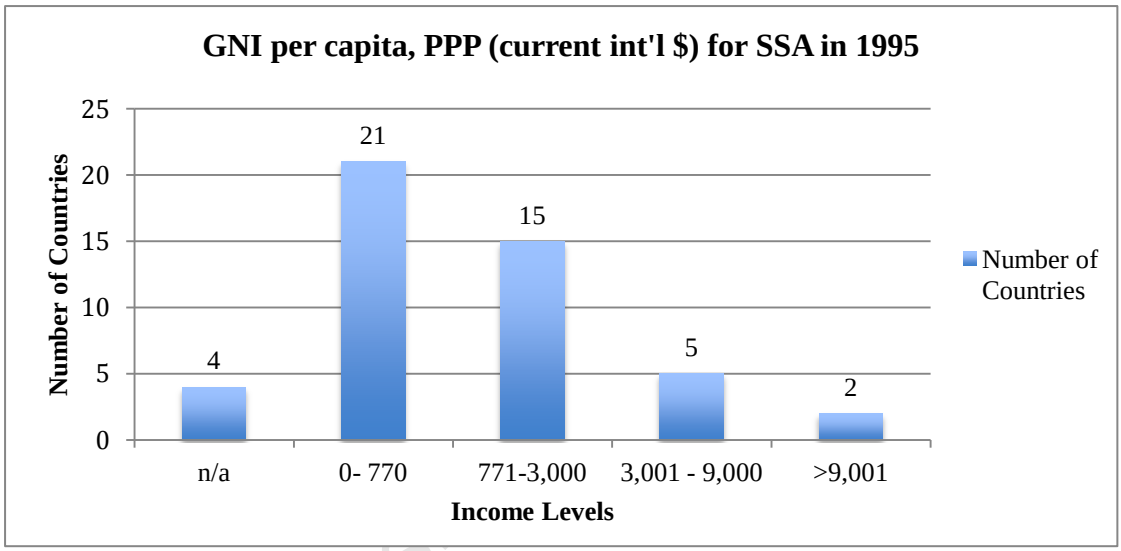
Before I delve into the empirical analysis between democracy and growth, it is important to note the potential impact of two last *third* variables, the first being initial levels of wealth and the second being a country's oil importing or exporting status. If I do find a relationship between the level of democracy and economic growth, some critics may contend that this relationship is simply based on prior levels of wealth (and thus, democracy is a result, not a cause of economic change). As mentioned in the State of Knowledge, many scholars believe that democracies are by definition wealthy countries and that wealthy countries are more apt to democratize and have higher rates of growth. However, wealthier countries themselves are very likely to have higher levels of growth. Controlling for initial levels of wealth will allow me to test this theory and refute any suggestion that the only reason that countries with higher levels of democracy attained higher levels of growth was due to initial levels of wealth.

I will use GNI per capita, purchasing power parity (PPP) (in current international $) from 1995 to control for initial wealth.[vii] The purchasing power parity (PPP) method "provides a better measure of the standard of living of residents of an economy because it takes into account differences in the relative prices of goods and services—particularly non-tradables."[86]

[86] World Bank Data Catalog – Africa Development Indicators,(http://data.worldbank.org/data-catalog/africa-development-indicators) (accessed on July 18, 2010).

The chart below shows the breakdown of GNI into the various income levels. Broadly speaking, the World Bank would consider countries in the 0-770 range low income, 771-3,000 in the lower middle-income range, 3,001-9,000 in the upper middle-income range and > 9,000 in the high-income range, but the World Bank uses the Atlas method of GNI per capita to make these designations. GNI per capita, PPP produces a slightly higher value than the Atlas method, but I think GNI PPP, for the aforementioned reasons, is a better measure to control for initial wealth. The breakdown by these income levels is for illustrative purposes only.

Figure 3.15: GNI per capita, PPP (current int'l $) for SSA in 1995



The table below provides the composition of GNI per capita, PPP by country at each income level.

Table 3.9: GNI per capita PPP for SSA Countries in 1995

GNI per capita, PPP 1995	SSA Countries		
> 9,001	Gabon	Seychelles	
3,001 – 9,000	Botswana	Namibia	Swaziland
	Mauritius	South Africa	
771 – 3,000	Angola	Congo, Rep.	Kenya
	Benin	Côte d'Ivoire	Lesotho
	Cameroon	Djibouti	Mauritania
	Cape Verde	Equatorial Guinea	Nigeria
	Comoros	Gambia	Sudan
0 - 770	Burkina Faso	Ghana	Niger
	Burundi	Guinea	Rwanda
	Chad	Guinea-Bissau	Sierra Leone
	Central African Rep.	Madagascar	Tanzania
	Congo, Dem. Rep.	Malawi	Togo
	Eritrea	Mali	Uganda
	Ethiopia	Mozambique	Zambia
Not Applicable	Liberia	Senegal	Zimbabwe
	São Tomé & Príncipe		

Oil Importer or Exporter

The last control variable that I have included simply categorizes each country as either an oil importer or exporter, based on annual regional outlook reports for sub-Saharan Africa from the International Monetary Fund. This classification could affect a country's economic growth in a variety of ways: exporters have the opportunity to increase (and just as easily decrease) GDP during commodity booms or busts. For importers, oil affects the profitability and development of many industries (e.g., energy, manufacturing, infrastructure and food production, to name a few) that are often engines of growth for developing countries. Not that an exporter is immune to all of the effects that an importer might have. Oil exporters often have their own set of challenges managing wide-ranging cash flows during boom and bust markets and corruption. For my study, oil producers will include Angola, Cameroon, Congo, Rep., Equatorial Guinea, Gabon, and Nigeria. Remaining countries in SSA are considered oil importers.[87]

[87]International Monetary Fund, "Regional Economic Outlook: Sub-Saharan Africa." *World Economic and Financial Surveys* (2003-2009) (http://www.imf.org/external/pubs/ft/reo/reorepts.aspx?ddlYear=-1&ddlRegions=11) (accessed on July 18, 2010.

CHAPTER FOUR: RESEARCH FINDINGS

To restate, my main research question seeks to understand better the effect of democracy on economic growth in SSA during the period from 1988 to 2007. My hypothesis will test whether countries with higher levels of democracy at 1995 or that increased their level of democracy between 1988 and 1995, attained higher levels of subsequent economic growth than countries that backtracked, stayed at the same levels or had a relatively lower level.

The first part of my analysis will determine whether there is a bivariate correlation between the level of democracy and subsequent economic growth. I will also test to see if there is any correlation between the six control variables and the dependent variable of growth.

The second part of the analysis will involve a multiple regression. The multiple regression will test to see: 1) whether the initial observed relationship of democracy and growth remains once the other variables are taken into account; and 2) whether any of the six control variables better explains the relationship with economic growth than the level of democracy.

Please note that any reference to economic growth, growth or GDP refers to real Gross Domestic Product per capita levels as defined in the Key Concepts section. Any reference to GNI refers to Gross National Income per capita as defined in the Initial Levels of Wealth section of the Descriptive Statistics chapter.

Main Hypothesis

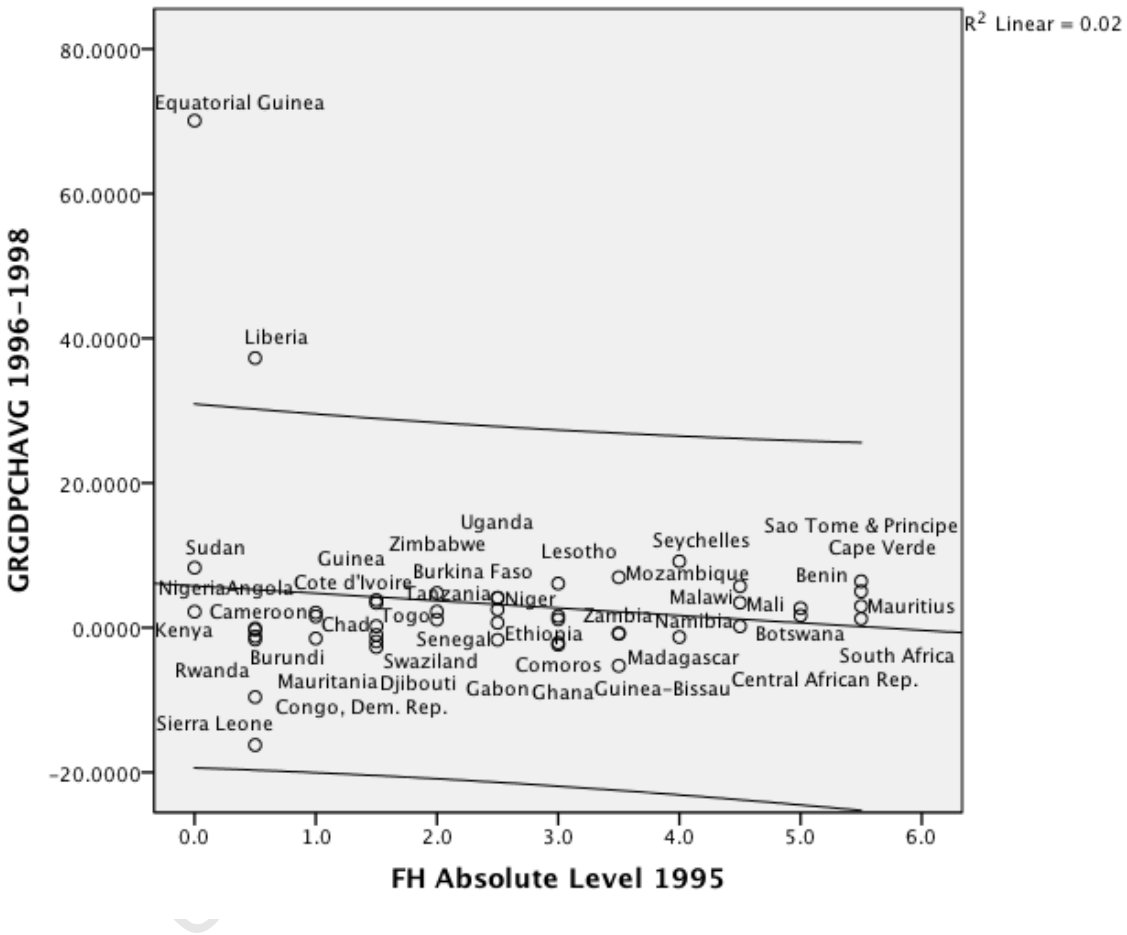
Democracy and economic growth will be measured in two ways: 1) the absolute level of democracy at 1995 with economic growth measured in: three, six, nine, and 12-year averages beginning in 1996; and 2) the change in the level of democracy during 1988-1995 for countries that held a first free and fair or first competitive national election. Economic growth will be measured in: 3, 6, 9, 12 and 12+ year averages following the first free and fair or first competitive national election year. I will also measure the average economic growth for the 3-year period prior to the election.

Before delving into the analysis I will first examine the data through scatterplot graphs. Scatterplots provide a great visual feel for the data and allow the user to see how it is distributed, noting the strength and direction of the relationship between variables.

After looking at four different scatterplots for part a) of the main hypothesis above (level of democracy at 1995) it became clear that Equatorial Guinea (and depending on the year, Liberia, Sudan, Sierra Leone and Congo, Dem. Rep. as well) was an outlier mainly due to extraordinary (>100% in one year) levels of economic growth in the mid-1990s. Outliers are atypical, infrequent observations and there is not a standardized way to treat them or a certain level at which they must be removed, but I have determined that Equatorial Guinea is enough of an outlier, for each of the periods of study, to significantly skew the results and potentially mask a relationship between democracy and economic growth.

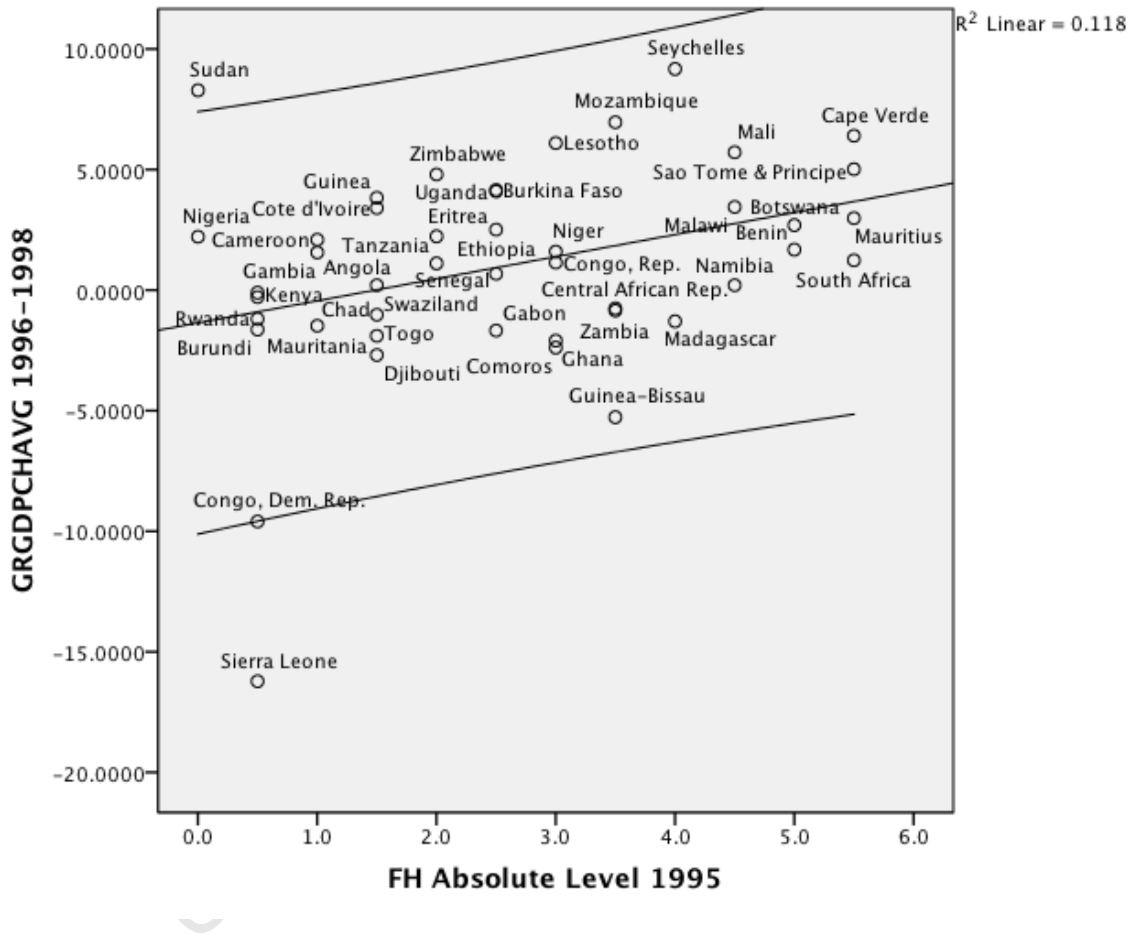
The graph below illustrates the position of Equatorial Guinea and Liberia in relation to the rest of the sample. The *fit* line in the middle shows that the relationship between the variables is negative in this graph.

Figure 4.1: Scatterplot Democracy at 1995 vs. Growth 1996-1998 with Outliers



The scatterplot below shows the same period (1996-1998) but with a positive fit line once the outliers Equatorial Guinea and Liberia were removed.

Figure 4.2: Scatterplot Democracy at 1995 vs. Growth 1996-1998 without Outliers

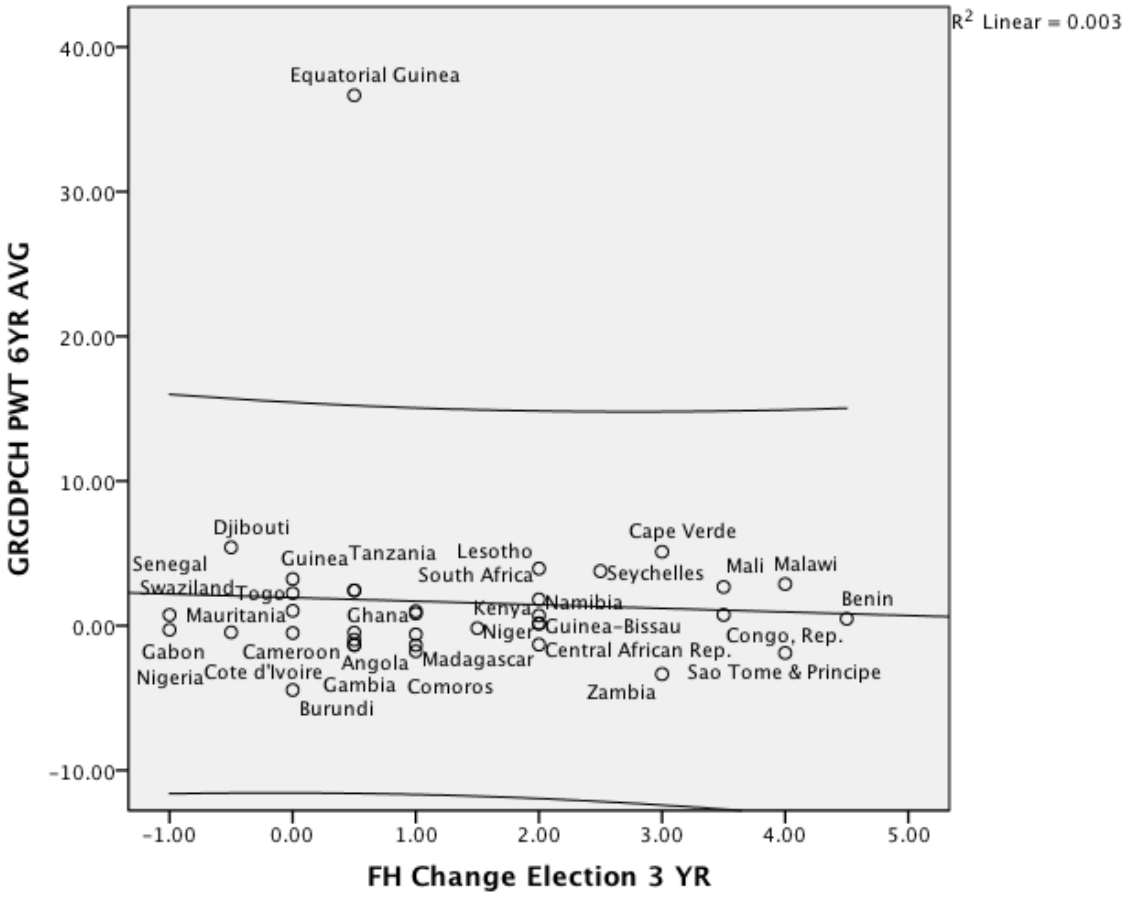


After looking at five different scatter plots for part b) of the main hypothesis above (level of democracy – change from election) it became clear that Equatorial Guinea was an outlier for these periods of study as well.

The scatterplots below depict the change in the level of democracy from three years prior to the first free and fair or first competitive national election versus the average growth rate of GDP per capita for a 6-year period following the election. It is clear to see that Equatorial Guinea is an outlier for this series as well. The curved lines represent the 95% confidence interval (a confidence interval gives a range of values,

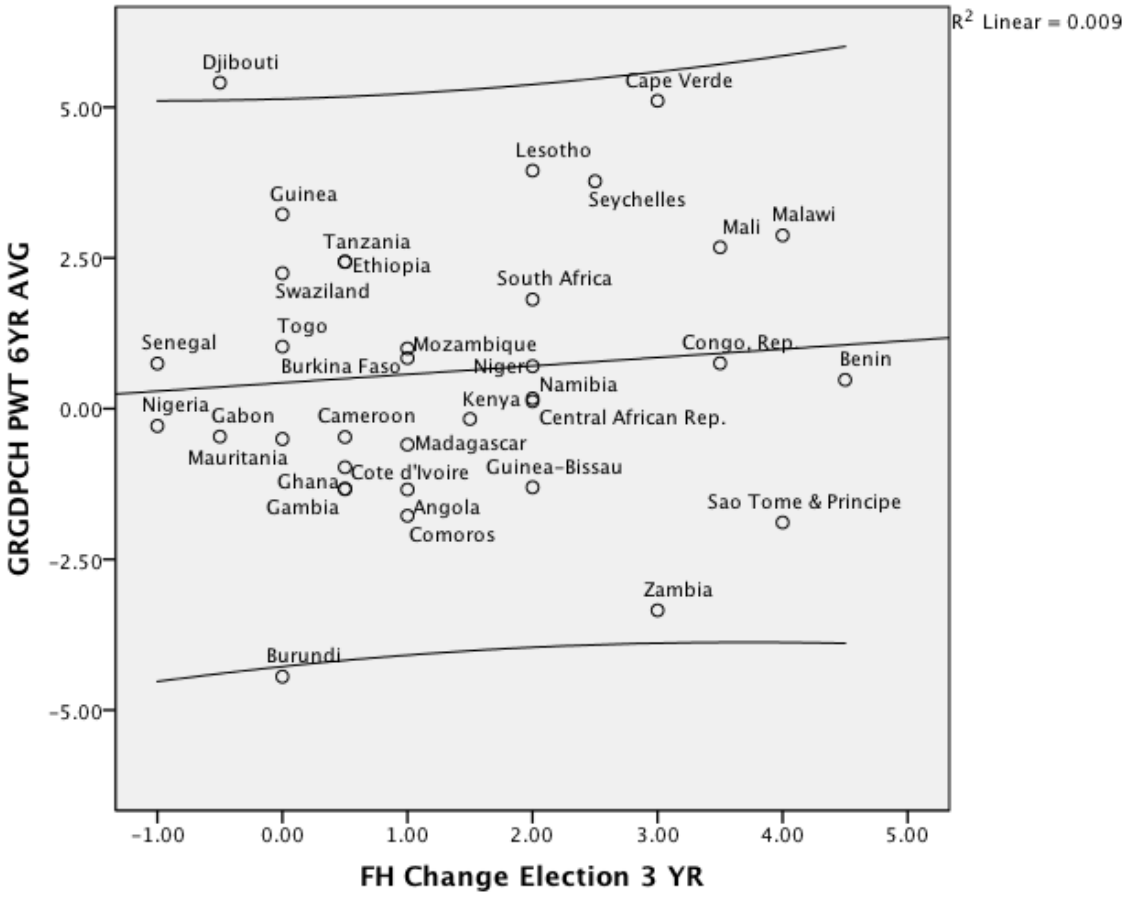
calculated from a given set of sample data, which is likely to include an unknown population parameter) for this group of data.

Figure 4.3: Scatterplot Change in Democracy vs. Growth 6-year Period with Outliers



Here is the same graph but with Equatorial Guinea removed.

Figure 4.4: Scatterplot Change in Democracy vs. Growth 6-year Period without Outliers



As illustrated, outliers can have a strong influence on the slope of the regression line and as a result on the value of the correlation coefficient. For this reason, I will remove outliers (and will note this) at various points throughout the analysis.

Further visual inspection of the data through histograms showed that some of the GDP data were not normally distributed, but after removing the outliers, the data all fell within a much more normal distribution.

I. CORRELATION ANALYSIS

Correlations with Average GDP Growth

The Pearson *r* correlation is used to measure the degree of the relationship between at least two continuous, linear-related variables. Values closer to +/-1.0 indicate a stronger correlation (with values of exactly +/-1.0 perfectly correlated) while values closer to zero indicate a weaker correlation. For the Pearson *r* correlation, both variables should be normally distributed. Testing for correlation will help me determine which measures of democracy and GDP growth have the strongest relationship and warrant further examination.

The following table presents the correlations for the level of democracy (based on the level at 1995) and economic growth along with the control variables. The first number corresponds to a sample size of 43 countries and the second number (followed by the /) corresponds to the full sample of 47 countries, the difference being outliers.

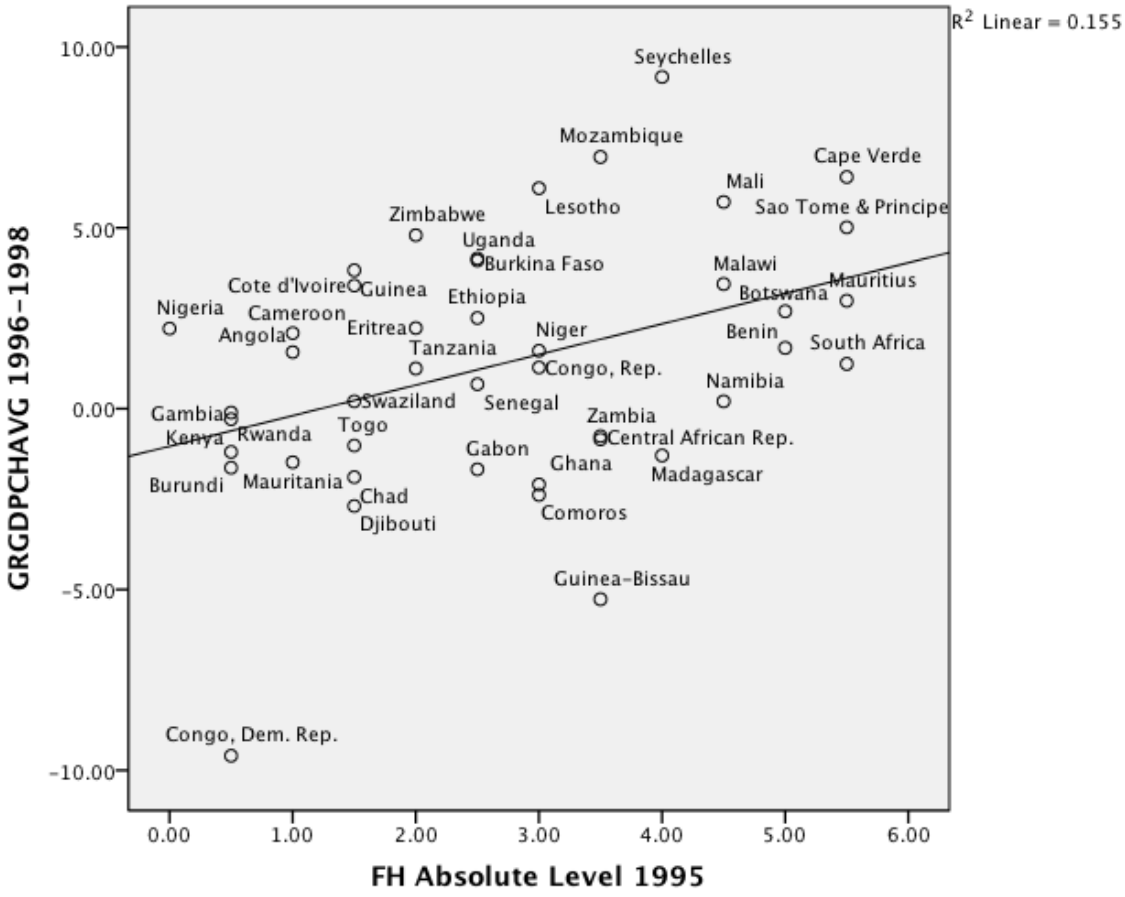
Table 4.1: Correlations Between Growth, Democracy (at 1995) and Control Variables

Correlations Between Growth, Democracy (at 1995) and Control Variables Over Four Periods				
Period	**GDP 1996-1998**	**GDP 1996-2001**	**GDP 1996-2004**	**GDP 1996-2007**
Outliers	Equatorial Guinea, Liberia, Sudan, and Sierra Leone	Equatorial Guinea, Liberia, Sudan , and Congo, Dem. Rep.	Equatorial Guinea and Liberia	Equatorial Guinea and Liberia
Sample Size	N=43/N=47	N=43/N=47	N=45/N=47	N=45/N=47
Democracy at 1995	**.393*****/-.142	**.380****/-.152	.219/-.141	.142/-.151
GNI PPP 1995	.150/-.080	.160/-.053	.057/-.015	-.022/-.005
WB Rule of Law	**.342****/-.148	**.386****/-.112	.229/-.084	.157/-.093
WB Reg. Quality	.138/-.238	.008/-.221	.114/-.143	-.020/-.189
WB Govt Effect	**.307****/-.248	.153/**-.244***	.084/-.228	.042/-.229
Oil Import or Export	-.018/**.299****	-.125/**.275***	.006/**.319****	.099/**.347****
Resource Rich	-.034/-.046	-.182/-.035	.067/.006	.165/.065
PTrap Conflict	**-.340****/-.103	-.185/-.060	-.147/-.094	-.153/-.106
PTrap Resource	-.201/.120	-.136/.144	.082/.205	.115/.221
PTrap Land Locked	.051/-.090	.007/-.157	.007/-.100	-.039/-.118
PTrap Bad Gov	-.228/.066	**-.307****/.046	**-.325****/-.019	**-.348****/-.064
PTrap Sum	**-.429*****/.003	-.205/-.003	-.160/.005	-.136/-.020
Econ Lib Scale	**-.310****/.023	**-.388*****/-.033	-.163/.041	-.241/-.019
*significant at the .10 level ** significant at the .05 level *** significant at the .01 level				

The two earlier periods (1996-1998 and 1996-2001), each had four countries that were considered outliers due to levels of economic growth that fell beyond the 95% confidence level. At first glance, these results present more interesting opportunities to explore. First, there is a statistically significant relationship between democracy and economic growth at the .01 level for the period 1996 to 1998 and at the .05 level for the period 1996 to 2001. Yet there are also statistically significant relationships between other control variables such as the good governance indicators (World Bank Rule of Law and World Bank Government Effectiveness), the poverty traps (the conflict trap individually and the sum of the four traps) and the economic liberalization variable. There was no correlation found between the initial level of wealth (GNI per capita PPP 1995) and economic growth during any of the periods. The oil importing/exporting variable became significant at the .05 level when the entire sample (with outliers) was tested. This is likely because Equatorial Guinea has an oil-dominant economy.

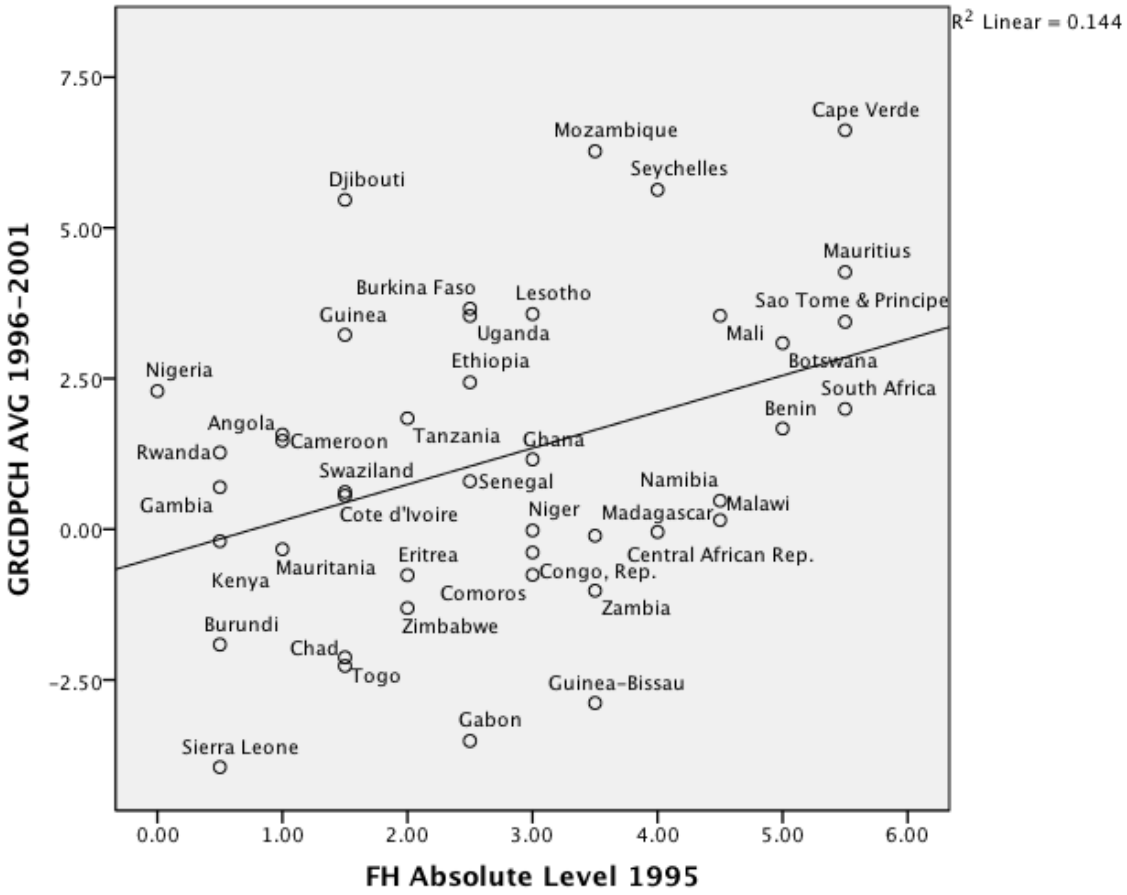
The scatter plot below provides a good visual of the relationship between democracy and economic growth for the 1996-1998 period. The x-axis shows the level of democracy, represented by the Freedom House score. The y-axis shows economic growth represented by the annual growth rate of GDP per capita. The R^2 of the linear fit line equals 0.155, which means that almost 16% of the dependent variable (economic growth) for this period is explained by the level of democracy in 1995. Values of R^2 over .10 generally denote high levels of explanatory value.

Figure 4.5: Scatterplot Democracy at 1995 vs. Growth 1996-1998 without Outliers



The scatter plot below depicts the relationship between democracy and economic growth for the period 1996-2001. The R^2 of the linear fit line equals 0.144, which means that approximately 14% of the dependent variable (economic growth) for this period is explained by the level of democracy in 1995.

Figure 4.6: Scatterplot Democracy at 1995 vs. Growth 1996-2001 without Outliers



To summarize, the correlation analysis has highlighted that there is a statistically significant relationship between democracy and economic growth (on a bivariate basis) for the 1996 to 1998 and 1996 to 2001 periods using the level of democracy at 1995.

The following table presents the correlations for the level of democracy (based on election) and economic growth along with the control variables. I have presented both

the data for the sample size of 35[88] (the top number) and sample size of 36 (the bottom number) which includes Equatorial Guinea – level of significance is denoted with asterisks.

Table 4.2: Correlations Between Growth, Change in Democracy (First Election) and Control Variables

Correlations Between Growth, Change in Democracy (First Election) and Control Variables Over 6 Periods						
Period	**GDP 3-YR**	**GDP 6-YR**	**GDP 9-YR**	**GDP 12-YR**	**GDP 12-YR+**	**GDP 3-YR Prior**
Outliers	Equatorial Guinea	Equatorial Guinea	Equatorial Guinea	Equatorial Guinea	Equatorial Guinea	Equatorial Guinea
Sample Size	N=35 N=36	N=35 N=36	N=35 N=36	N=35 N=36	N=35 N=36	N=35 N=36
Change in Democracy	.079 -.023	.093 -.057	.071 -.065	.048 -.070	.092 -.042	.060 .054
GNI PPP 1995	-.032 .019	.190 .063	.010 .004	-.100 .027	-.100 -.047	.199 .199
WB Rule of Law	.030 -.106	**.328*** -.047	**.333*** -.045	.269 -.054	.179 -.065	-.059 -.069
WB Reg. Quality	.216 .020	.132 -.096	-.016 -.146	-.025 -.148	-.130 -.192	-.009 -.018
WB Govt Effect	.148 .128	.109 -.228	.181 -.207	.115 -.222	.068 -.221	.249 .221
Oil Import or Export	-.257 .141	-.181 **.297***	-.115 **.321***	.047 **.368****	.058 **.361****	-.186 -.148
Resource Rich	-.077 -.135	-.123 -.147	-.091 -.136	.007 -.102	.168 -.024	-.064 -.070
PTrap Conflict	-.077 -.118	.008 -.082	.001 -.085	-.123 -.129	-.208 -.175	-.032 -.037
PTrap Resource	.139 .217	-.008 .156	.101 .142	.027 .167	.127 .207	.145 .153
PTrap Landlocked	.157 .029	.196 -.018	.135 -.040	.107 -.045	.193 .007	-.112 -.117
PTrap Bad Gov	.127 .144	.055 .145	.066 .102	-.105 .039	-.076 -.006	-.152 -.142
PTrap Sum	-.115 .136	-.035 .103	-.070 .090	-.171 .029	-.141 .030	-.059 -.055
Econ Lib Scale	-.219 .040	**-.512*** .041	**-.472*** .060	**-.435*** .056	**-.460*** -.002	-.180 -.162
*significant at the .10 level ** significant at the .05 level *** significant at the .01 level						

[88] 47 countries in the sample, less 11 that did not hold an election less Equatorial Guinea, which is an outlier.

Even after taking into account outliers in the data, the results do not show a strong correlation between democracy and economic growth. The only independent variables that show statistically significant relationships with economic growth are the economic liberalization variable and the oil importing/exporting variable, but only if the outlier is included. For the six, 9, 12 and 12+ -year average GDP growth, there is a statistically significant relationship between economic liberalization and economic growth at the .01 level. Since there is not even a minor relationship between democracy and economic growth for these measures, I will now move on to the next part of the analysis, multiple regression.

II. MULTIPLE REGRESSION

In the next step of the analysis, I will explore the relationship between democracy at 1995 and economic growth during 1996-1998 and 1996-2001 using multiple linear regression. The multiple regression will also take into account each of the control variables. This will allow me to determine whether the strength of the relationships found in the correlation provide more or less explanatory power than the control variables.

My approach with the multiple regression will first involve a run where all the variables are included at the same time. From there, I will add each group of variables one at a time to see how that influences the relationship with democracy. I will first examine the period from 1996 to 1998, where there was a strong correlation between democracy and economic growth as well as a few other control variables.

Average GDP Growth 1996-1998

The initial positive, bivariate correlation that I found between democracy and economic growth was .393 at the .01 level of significance. To investigate this correlation further, I performed a linear regression with all six of the control variables (good governance indicators, poverty traps, resource wealth, economic liberalization, oil importing/exporting, and GNI PPP).

Adding all of the variables into the regression yielded some interesting results, which I have presented in Table 4.4 below. As it turns out, democracy does not retain its level of significance for this analysis. The variable with the highest level of

significance and predictive power in the analysis was oil importing/exporting status at .01 level of significance. Two other variables, the World Bank's Government Effectiveness indicator and the poverty trap – landlocked with bad neighbors, each registered a weaker .10 level of significance. These results seem to lean more towards the argument that oil wealth provides a bigger boost to economic growth than do democracy, economic liberalization and good governance. The positive relationship between poverty trap - landlocked with bad neighbors and growth seems spurious as being landlocked in SSA and having high economic growth is counterintuitive. At first glance, these results refute the poverty trap argument and that resource-rich economies drive economic growth in SSA.

Table 4.4: Multiple Regression: Democracy (at 1995) and Growth 1996-1998 with Control Variables

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-1998 with Control Variables		
Run	**All Variables**	
Dependent Variable	**Avg. GDP Growth 1996-1998**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Sierra Leone	
N	**43**	
R^2/Adj. R^2	**.492/.216**	
Independent Variables	**B (Standard Error)**	**Beta**
Democracy	.211 (.432)	.105
WB Rule of Law	1.200 (1.167)	.261
WB Reg. Quality	.546 (.807)	.129
WB Gov't Effect	**2.795 (1.500)**	**.478***
Resource Rich	-1.141 (1.451)	-.164
PTrap Conflict	-.636 (1.168)	-.089
PTrap Resource	.519 (1.240)	.081
PTrap Land Locked	**2.641 (1.339)**	**.381***
PTrap Bad Gov	-1.092 (1.247)	-.166
PTrap Sum	removed	removed
Economic Lib	-.745 (.644)	-.264
Oil Import or Export	**7.612 (2.534)**	**.798*****
GNI per capita PPP, 1995	-.001 (.000)	-.539
Constant	4.672 (2.291)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**		

The relationship between democracy and economic growth found in this regression run was not commensurate with the strength of the relationship found in the bivariate correlation. I will now look at the different groups of control variables one at a time to see how they each affect the relationship between democracy and economic growth.

For example, I will first run a regression with economic growth as the dependent variable with democracy and the poverty trap variables as the independent variables; in the next run I will add oil importing/exporting status. Introducing the control variables one by one will allow me to see which variable, if any, causes democracy to lose its explanatory power and significance. This method may also provide some clarity to the analysis in case the inclusion of many different variables causes some "static" in the analysis. This systematic regression is presented in two parts below. The first part shows runs with variable groups one through three and the second part shows runs with variable groups four though six. For a brief explanation of the different statistical terms presented in the regression results, please see the Endnotes.[viii]

Before I discuss the regression results below, I want to highlight the fact that democracy does maintain a statistically significant (at various levels) relationship with growth and each of the groups of control variables (World Bank good governance excluded) independently. In other words, taking the control variables and running a regression with each of them (one by one or group by group) democracy still provides stronger explanatory value than any one of the control variables. The exception is the World Bank good governance indicators, and in this case, none of the variables provides a statistically significant level of explanatory power. I will not present these results here because I am more interested in the group effect, but this does highlight the explanatory power of democracy at a basic level.

The multiple regression results below show that democracy maintains a statistically significant (at the .10 or .05 level) level of explanatory power through the first four control groups (poverty traps, oil import/export, resource rich, and GNI PPP per capita). In the fifth run, the economic liberalization variable usurps democracy at the .05 level of significance rendering democracy to a status outside a level of significance. The last run, with the addition of the World Bank good governance indicators, also displaces democracy and economic liberalization to levels that are not significant. Interestingly, in that run, the poverty trap – land locked, oil importing/exporting and the government effectiveness variable all provide the highest level of explanatory power, with the oil importing/exporting variable having the highest level of significance. These results indicate that the oil importing/exporting

status of a country in SSA provides the most explanatory power for the level of economic growth attained.

Although it would have more convenient for my hypothesis had democracy remained significant throughout all of the regressions, these analyses prove that democracy is important at some level and in some scenarios. I also want to note that the order in which I added the control variables likely affected the results as well. This may be an area of further study where a step-wise regression could be used. While the results do indicate that democracy is important to economic growth, they also indicate that there might be a sequential or multi-stage effect with the variables under consideration.

Table 4.5: Multiple Regression: Democracy (at 1995) and Growth 1996-1998 with Control Variables Part I

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-1998 with Control Variables Group by Group Part I						
Dependent Variable	**Avg. GDP Growth 1996-1998**		**Avg. GDP Growth 1996-1998**		**Avg. GDP Growth 1996-1998**	
Number of Control Variable Groups	**1**		**2**		**3**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Sierra Leone		Equatorial Guinea, Liberia, Sudan, and Sierra Leone		Equatorial Guinea, Liberia, Sudan, and Sierra Leone	
N	**43**		**43**		**43**	
R^2/Adj. R^2	**.246/.144**		**.252/.128**		**.257/.108**	
	B (Standard Error)	**Beta**	**B (Standard Error)**	**Beta**	**B (Standard Error)**	**Beta**
Democracy at 1995	**.676 (.336)**	**.315***	**.737 (.357)**	**.343****	**.709 (.365)**	**.330***
PTrap Conflict	-1.344 (1.730)	-.176	-1.839 (1.170)	-.242	-1.935 (1.200)	-.254
PTrap Resource	.085 (.733)	.023	-.539 (1.040)	-.078	-.443 (1.071)	-.064
PTrap Land Locked	1.288 (1.495)	.173	.884 (1.135)	.119	.885 (1.147)	.119
PTrap Bad Gov	.065 (1.572)	.009	-.461 (1.129)	-.066	-.646 (1.207)	-.093
PTrap Sum	-.558 (1.029)	-.187	removed	removed	removed	removed
Oil Import/Export			.911 (1.669)	.085	1.441 (2.026)	.135
Resource Rich					-.701 (1.482)	-.092
GNI per capita PPP, 1995						
Economic						

Liberalization						
WB Rule of Law						
WB Reg. Quality						
WB Gov't Effect						
Constant	.270 (1.481)		-.090 (1.635)		.215 (1.774)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**						

Table 4.6: Multiple Regression: Democracy (at 1995) and Growth 1996-1998 with Control Variables Part II

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-1998 with Control Variables Group by Group Part II						
Dependent Variable	**Avg. GDP Growth 1996-1998**		**Avg. GDP Growth 1996-1998**		**Avg. GDP Growth 1996-1998**	
Number of Control Variable Groups	**4**		**5**		**6**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Sierra Leone		Equatorial Guinea, Liberia, Sudan, and Sierra Leone		Equatorial Guinea, Liberia, Sudan, and Sierra Leone	
N	**43**		**43**		**43**	
R^2/Adj. R^2	**.235/.038**		**.345/.148**		**.492/.248**	
	B (Standard Error)	**Beta**	**B (Standard Error)**	**Beta**	**B (Standard Error)**	**Beta**
Democracy at 1995	**.704 (.407)**	**.324***	.326 (.419)	.150	.211 (.432)	.105
PTrap Conflict	-1.821 (1.275)	-.243	-1.934 (1.201)	-.258	-.636 (1.168)	-.089
PTrap Resource	-.291 (1.212)	-.042	1.016 (1.282)	.148	.519 (1.240)	.081
PTrap Land Locked	.671 (1.278)	.089	2.170 (1.378)	.289	**2.641 (1.339)**	**.381***
PTrap Bad Gov	-.636 (1.349)	-.091	-.320 (1.277)	-.046	-1.092 (1.247)	-.166
PTrap Sum	removed	removed	removed	removed	removed	removed
Oil Import/Export	1.376 (2.160)	.132	3.850 (2.315)	.370	**7.612 (2.534)**	**.798*****
Resource Rich	-.603 (1.564)	-.080	-1.684 (1.550)	-.224	-1.141 (1.451)	-.164
GNI per capita PPP, 1995	1.569 (.000)	.012	.000 (.000)	.092	-.001 (.000)	-.539
Economic Liberalization			**-1.479 (.662)**	**-.499****	-.745 (.644)	-.264
WB Rule of Law					1.200	.261

					(1.167)	
WB Reg. Quality					.546 (.807)	.129
WB Gov't Effect					**2.795 (1.500)**	**.478***
Constant	.050 (2.001)		1.745 (2.030)		4.672 (2.291)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**						

Average GDP Growth 1996-2001

For the 1996 to 2001 period, the correlation that I found between democracy and economic growth through the bivariate correlation analysis was .380 at the .05 level of significance. This was slightly less significant than the 1996-1998 period but still a positive result. Similar to the 1996 to 1998 period I first performed a linear regression with all six of the control variables (good governance indicators, poverty traps, resource wealth, economic liberalization, oil importing/exporting, and GNI PPP). The results of this regression showed that only economic liberalization and oil importing/exporting status were statistically significant (at the lowest level of .10) explanatory variables for economic growth – democracy was not. While this result lends to the argument of some of the critics I will now run a series of regressions group by group to see if democracy has any significance at all.

Table 4.7: Multiple Regression: Democracy (at 1995) and Growth 1996-2001 with Control Variables

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-2001 with Control Variables		
Run	**All Variables**	
Dependent Variable	**Avg. GDP Growth 1996-2001**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.	
N	**43**	
R^2/Adj. R^2	**.457/.191**	
	B (Standard Error)	**Beta**
Democracy	.105 (.360)	.068
WB Rule of Law	1.419 (.977)	.381
WB Reg. Quality	-.008 (.759)	-.002
WB Gov't Effect	-.113 (1.297)	-.023
Resource Rich	-1.679 (1.158)	-.318
PTrap Conflict	-.284 (.964)	-.051
PTrap Resource	.691 (1.049)	.138
PTrap Land Locked	1.313(1.123)	.238
PTrap Bad Gov	-.907 (1.054)	-.177
PTrap Sum	removed	removed

Economic Lib	**-.994 (.541)**	**-.444***
Oil Import or Export	**3.726 (2.148)**	**.503***
GNI per capita PPP, 1995	.000(.000)	-.275
Constant	3.608 (2.037)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**		

This systematic regression is presented in two parts below. The first part shows runs with variables one through three and the second part shows runs with variables four though six. Similar to the earlier period, democracy does maintain a statistically significant (at various levels) relationship with growth and each of the groups of control variables (World Bank good governance excluded) independently. In other words, taking the control variables and running a regression with each of them (one by one) democracy still provides stronger explanatory value than any one of the control variables alone. The exception is World Bank good governance, and in this case, only the Rule of Law indicator provides a statistically significant level of explanatory power. Future study could involve the creation of a series of interaction effect variables to see if democracy and Rule of Law together provide more explanatory power than each alone.

The multiple regression results below show that democracy maintains a statistically significant (at the .10 level) level of explanatory power only through the addition of the first control group (poverty traps). After that, no control variable becomes significant until the fifth run when resource-rich and economic liberalization both provide explanatory power at a significant level. The last run, with the addition of the World Bank good governance variables, causes economic liberalization and oil importing/exporting status to provide a statistically significant level of explanatory power. These results may also have been affected by the order in which I added the variables and this may be an area of further study where a step-wise regression could be used. The results do indicate that democracy is important to economic growth in some circumstances, but they also indicate that there might be a sequential or multi-stage effect with the variables under consideration.

Table 4.8: Multiple Regression: Democracy (at 1995) and Growth 1996-2001 with Control Variables Part I

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-1998 with Control Variables Group by Group Part I						
Dependent Variable	**Avg. GDP Growth 1996-2001**		**Avg. GDP Growth 1996-2001**		**Avg. GDP Growth 1996-2001**	
Number of Control Variable Groups	**1**		**2**		**3**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.		Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.		Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.	
N	**43**		**43**		**43**	
R^2/Adj. R^2	**.187/.077**		**.190/.055**		**.213/.056**	
	B (Standard Error)	**Beta**	**B (Standard Error)**	**Beta**	**B (Standard Error)**	**Beta**
Democracy at 1995	**.458 (.258)**	**.288***	.430 (.274)	.271	.367 (.280)	.231
PTrap Conflict	-.225 (1.326)	-.040	-.500 (.901)	-.089	-.585 (.904)	-.104
PTrap Resource	removed	removed	-.252 (.800)	-.050	-.072 (.818)	-.014
PTrap Land Locked	.428 (1.141)	.076	.121 (.886)	.021	.101 (.886)	.018
PTrap Bad Gov	-.689 (1.209)	-.134	-.946 (.868)	-.184	-1.230 (.910)	-.239
PTrap Sum	-.240 (.789)	-.105	removed	removed	removed	removed
Oil Import/Export			-.431 (1.275)	-.055	.342 (1.479)	.043
Resource Rich					-1.095 (1.065)	-.200
GNI per capita PPP, 1995						
Economic						

Liberalization						
WB Rule of Law						
WB Reg. Quality						
WB Gov't Effect						
Constant	.673 (1.133)		.840 (1.249)		1.373 (1.351)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**						

Table 4.9: Multiple Regression: Democracy (at 1995) and Growth 1996-2001 with Control Variables Part II

Multiple Regression: Democracy (at 1995) and Average Economic Growth 1996-1998 with Control Variables Group by Group Part II						
Dependent Variable	**Avg. GDP Growth 1996-2001**		**Avg. GDP Growth 1996-2001**		**Avg. GDP Growth 1996-2001**	
Number of Control Variable Groups	**4**		**5**		**6**	
Outliers	Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.		Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.		Equatorial Guinea, Liberia, Sudan, and Congo, Dem. Rep.	
N	**43**		**43**		**43**	
R^2/Adj. R^2	**.205/.000**		**.363/.173**		**.411/.129**	
	B (Standard Error)	**Beta**	**B (Standard Error)**	**Beta**	**B (Standard Error)**	**Beta**
Democracy at 1995	.374 (.314)	.231	.040 (.311)	.024	.105 (.360)	.068
PTrap Conflict	-.710 (.960)	-.127	-.836 (.875)	-.150	-.284 (.964)	-.051
PTrap Resource	-.290 (.930)	-.057	.879 (.948)	.172	.691 (1.049)	.138
PTrap Land Locked	.182 (1.000)	.032	1.548 (1.038)	.270	1.313 (1.123)	.238
PTrap Bad Gov	-1.239 (1.011)	-.237	.981 (.925)	-.188	-.907 (1.054)	-.177
PTrap Sum	removed	removed	removed	removed	removed	removed
Oil Import/Export	.393 (1.571)	.051	2.677 (1.655)	.346	**3.726 (2.148)**	**.503***
Resource Rich	-1.117 (1.122)	-.204	**-2.148 (1.088)**	**-.393***	-1.679 (1.158)	-.318
GNI per capita PPP, 1995	-7.053 (.000)	-.070	2.620 (.000)	.026	.000 (.000)	-.275
Economic Liberalization			**-1.323 (.484)**	**-.586*****	**-.994 (.541)**	**-.444***

WB Rule of Law					1.419 (.977)	.381
WB Reg. Quality					-.008 (.759)	-.002
WB Gov't Effect					-.113 (1.297)	-.023
Constant	1.669 (1.516)		3.197 (1.488)		3.608 (2.037)	
***significant at the .10 level **significant at the .05 level *** significant at the .01 level**						

CHAPTER FIVE: CONCLUSION

Was a period of positive economic growth that followed a period of increased democratization a coincidence or was it a causal relationship? Did countries with higher or increased levels of democracy have subsequent higher economic growth? This dissertation set out to improve the understanding of these questions surrounding the relationship between democracy and economic growth in sub-Saharan Africa from 1988 to 2007.

Through both qualitative and quantitative methods, I have examined these questions and established several conclusions based upon my research question and hypothesis. Based on bivariate correlation analyses, the level of democracy does have a statistically significant and positive relationship with economic growth in SSA, over two periods in particular (1996-1998 and 1996-2001). This indicates that democracy is related to economic growth in the short-term based on the level of democracy at 1995, but this relationship did not extend over the longer (9 and 12-year) periods. The bivariate correlation between the change in democracy (based on the first free and fair or first competitive national election) and economic growth did not show any statistically significant relationship. This is interesting because the descriptive statistics showed that economic growth decreased for the three-year period prior to an election and then increased most of the periods subsequent to an election. It could be that the democracy measure from Freedom House lagged the election such that a likely increase in the level of democracy did not match the periods of measurement.

Results from the multiple linear regression analyses, which test the relationship between democracy and economic growth along with control variables, have shown mixed results. Democracy had the strongest, positive and significant relationship with growth in the shorter periods of three years and six years versus the longer periods of nine years and 12 years. Although I did not expect an immediate (within a year or less) increase in economic growth following a democratization, I did expect the relationship between democracy and growth to be stronger over the long-term. The regressions also showed that democracy maintains a statistically significant and positive relationship with growth when some combinations of control variables are included, in other combinations it does not. For the 1996-1998 period, democracy

maintains a statistically significant level of explanatory power for economic growth with the addition of four different groups of control variables. The addition of the economic liberalization and then the World Bank good governance variables caused this relationship to dissipate, but it does show that democracy is relevant and part of the process leading to higher levels of economic growth.

At various points in the regressions the control variables World Bank Government Effectiveness, economic liberalization, resource-rich and oil importing/exporting status all had statistically significant relationships with growth, but no one control variable dominated throughout the analysis. The oil importing/exporting variable had a significant and positive relationship with growth and although the relationship was significant and negative with economic liberalization, it is actually positive because the scale of economic growth and economic liberalization are inverted. These results lend to the argument of some scholars that believe oil/resource wealth is the most important factor leading to increased economic growth. Likewise, the positive relationship between countries that effectively implemented economic reform policies satisfies critics that believe that economic growth is most dependent on countries with open markets and liberal economic policies.

The statistical results can also be used to refute the resource-rich argument that many critics cite; increased economic growth in SSA cannot simply be explained by the countries that export large quantities of energy, minerals and forests. Likewise, initial wealth (GNI PPP) and the poverty traps failed to provide a substantial explanation for economic growth in SSA.

The multiple regression also revealed that there might be a sequence effect for increased growth. Testing this would require a more detailed, multi-stage statistical analysis. There are many factors that play into economic growth (timing being one of them) but it has also been shown in this study that democracy does not negatively affect economic growth. The study did not support a causal relationship between democracy and economic growth. However, taking all of the results into account and the fact that democracy alone is not necessary for economic growth, nor is it a sufficient condition to achieve growth, suggests that there is a more complex picture to explore.

What does this all mean and what can we take away from this study? Democracy does have a positive relationship with economic growth some of the time and some popular explanations of the relationship between democracy and economic growth have been falsified. The increase in the number of democratic states in sub-Saharan Africa can only benefit the region. For bilateral donors, stable, transparent regimes that respect the rights of its citizens are of paramount importance and the emergence of more democratic states validates the recent work promoting democracy, governance and economic development. SAA's authoritarian regimes with economies based on resources are not likely to be dislodged anytime soon as there is too much money and power to be had, but supporting and promoting democratic change in the region can only help improve political, economic and social conditions.

APPENDIX

Country	First Free & Fair Election	First Competitive National Election	FH Change Election 3 YR	FH Absolute Level 1995	GNI PPP 1995	GRGDPCH PWT PRIOR 3YR AVG	GRGDPCH PWT 3YR AVG	GRGDPCH PWT 6YR AVG	GRGDPCH PWT 9YR AVG	GRGDPCH PWT 12YR AVG	GRGDPCH PWT 12+YR AVG	GRGDPCHAVG 1996-1998	GRGDPCHAVG 1996-2001	GRGDPCHAVG 1996-2004	GRGDPCHAVG 1996-2007	WB Rule of Law 1996	WB Regulatory Quality 1996	WB Govt Eff 1996	Oil Import (=0) or Export (=1)	Poverty Trap - Conflict (1=Y, N=0)	Poverty Trap - Resource (1=Y, 0=N)	Poverty Trap - Landlocked (1=Y, 0=N)	Poverty Trap - Bad Governance (1=Y, 0=N)	Poverty Trap - Sum	Econ Liberalization Scale (N/A=0, Good=1, Weak=2, Poor=3)
Angola	1992	1992	1.00	1.00	1280.00	0.38	-4.25	-1.34	-0.37	1.42	4.76	1.56	1.57	3.31	7.01	-1.51	-1.42	-1.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Benin	1991	1991	4.50	5.00	910.00	0.01	-2.87	0.48	0.70	0.93	0.75	1.68	1.67	1.29	1.10	-0.30	0.17	-0.01	0.00	0.00	0.00	0.00	1.00	1.00	1.00
Botswana	n/a	n/a	n/a	5.00	5960.00	n/a	n/a	n/a	n/a	n/a	n/a	2.69	3.09	2.68	3.42	0.63	0.74	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burkina Faso	2002	1991	1.00	2.50	610.00	-0.99	-1.01	1.00	1.57	1.95	2.21	4.15	3.66	3.19	3.10	-0.31	-0.08	-0.73	0.00	0.00	0.00	1.00	1.00	2.00	2.00
Burundi	1991	1991	0.00	0.50	320.00	1.16	-2.11	-4.45	-3.52	-2.96	-2.54	-1.63	-1.91	-1.73	-1.78	-0.89	-1.55	-0.97	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Cameroon	n/a	1992	0.50	1.00	1250.00	-6.68	-3.03	-0.47	-0.03	0.42	0.41	2.09	1.47	1.57	1.27	-1.42	-0.79	-1.10	1.00	0.00	0.00	0.00	1.00	1.00	3.00
Cape Verde	1991	1991	3.00	5.50	1570.00	0.47	2.95	5.11	6.25	5.60	5.27	6.40	6.62	5.46	5.48	0.52	-0.75	-0.14	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Central African Rep.	1993	1992	2.00	3.50	590.00	-4.57	-1.74	0.17	-0.14	-0.75	-0.33	-0.85	-0.11	-1.17	-0.55	-0.28	-0.27	-0.91	0.00	1.00	1.00	1.00	1.00	4.00	3.00
Chad	n/a	n/a	n/a	1.50	740.00	n/a	n/a	n/a	n/a	n/a	n/a	-1.89	-2.27	5.07	4.17	-0.89	-0.86	-0.65	0.00	1.00	1.00	1.00	1.00	4.00	3.00
Comoros	1996	1990	1.00	3.00	920.00	-0.41	-3.30	-1.78	-1.73	-1.15	-1.34	-2.38	-0.76	-0.91	-1.11	n/a	-0.82	-0.71	0.00	1.00	0.00	0.00	1.00	2.00	0.00
Congo, Dem. Rep.	n/a	n/a	n/a	0.50	250.00	n/a	n/a	n/a	n/a	n/a	n/a	-9.60	-7.34	-5.20	-3.08	-2.02	-2.56	-1.76	0.00	1.00	1.00	1.00	1.00	4.00	3.00
Congo, Rep.	1992	1992	3.50	3.00	1460.00	-3.45	0.37	0.75	-0.13	-0.32	-0.66	1.14	-0.39	-0.55	-0.91	-1.41	-0.90	-1.41	1.00	1.00	1.00	0.00	1.00	3.00	3.00
Cote d'Ivoire	1990	1990	0.50	1.50	1270.00	2.53	-4.59	-1.34	-0.24	-1.18	-1.46	3.41	0.56	-0.33	-0.85	-0.70	-0.04	0.01	0.00	1.00	1.00	0.00	1.00	3.00	2.00
Djibouti	1997	1993	-0.50	1.50	1780.00	-8.31	-1.46	5.41	3.41	2.31	1.24	-2.69	5.46	2.76	1.37	-0.25	0.17	-0.97	0.00	1.00	0.00	0.00	1.00	2.00	0.00
Equatorial Guinea	n/a	1993	0.50	0.00	1760.00	0.71	21.15	36.66	35.25	29.71	25.40	70.09	49.73	40.14	30.56	-1.23	-1.04	-1.47	1.00	0.00	1.00	0.00	1.00	2.00	3.00
Eritrea	n/a	n/a	n/a	2.00	620.00	n/a	n/a	n/a	n/a	n/a	n/a	2.23	-0.76	-1.86	-1.34	-0.28	0.00	-0.39	0.00	1.00	0.00	0.00	1.00	2.00	0.00
Ethiopia	n/a	1995	0.50	2.50	390.00	-1.74	2.51	2.44	1.51	3.03	3.03	2.51	2.44	1.51	3.03	-0.93	-1.82	-0.94	0.00	1.00	1.00	0.00	0.00	2.00	0.00
Gabon	1993	1990	-0.50	2.50	10510.00	-0.19	-0.30	-0.46	-2.07	1.83	-1.69	-1.68	-3.51	-2.46	-2.06	-1.01	0.04	-0.78	1.00	0.00	0.00	0.00	0.00	0.00	3.00
Gambia	1992	1982	0.50	0.50	840.00	1.49	-2.55	-1.33	-0.38	0.29	0.61	-0.11	0.70	1.24	1.40	0.41	-1.77	-0.38	0.00	0.00	0.00	0.00	1.00	1.00	1.00
Ghana	1996	1992	0.50	3.00	770.00	1.02	0.15	-0.97	0.82	1.50	1.86	-2.09	1.16	1.95	2.29	-0.43	0.11	-0.43	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Guinea	1995	1993	0.00	1.50	720.00	1.71	3.83	3.23	2.80	1.93	1.93	3.83	3.23	2.80	1.93	-1.39	0.19	-1.08	0.00	0.00	1.00	1.00	1.00	3.00	2.00
Guinea-Bissau	1994	1994	2.00	3.50	550.00	10.90	6.18	-1.31	-1.58	-1.46	-1.00	-5.27	-2.88	-2.34	-1.52	-1.69	0.13	-0.68	0.00	1.00	1.00	0.00	1.00	3.00	2.00
Kenya	2002	1992	1.50	0.50	1040.00	0.54	-0.05	-0.17	-0.15	0.18	0.30	-0.29	-0.20	0.25	0.39	-1.01	-0.36	-0.41	0.00	0.00	1.00	0.00	1.00	2.00	3.00
Lesotho	1993	1993	2.00	3.00	1240.00	-2.40	4.07	3.95	3.13	3.55	3.93	6.10	3.57	3.51	4.07	-0.30	-0.62	0.12	0.00	0.00	0.00	1.00	1.00	2.00	0.00
Liberia	n/a	n/a	n/a	0.50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37.28	24.45	13.26	10.67	-2.28	-3.13	-1.78	0.00	1.00	1.00	0.00	1.00	3.00	0.00
Madagascar	1993	1993	1.00	4.00	680.00	-3.79	-1.34	-0.60	-1.86	-1.12	-1.01	-1.29	-0.05	-1.80	-1.00	-0.96	-0.52	-0.99	0.00	0.00	1.00	0.00	1.00	2.00	2.00
Malawi	1994	1994	4.00	4.50	530.00	-0.01	7.56	2.88	2.27	3.21	2.90	3.45	0.15	1.94	2.31	-0.64	-0.21	-0.62	0.00	0.00	0.00	1.00	1.00	2.00	1.00
Mali	1992	1992	3.50	4.50	610.00	1.82	-0.36	2.68	2.24	2.64	2.15	5.72	3.54	3.64	2.78	-0.59	-0.01	-0.81	0.00	0.00	1.00	1.00	0.00	2.00	1.00
Mauritania	2001	1992	0.00	1.00	1280.00	0.36	0.47	-0.50	-0.06	-0.30	0.86	-1.48	-0.33	-0.56	0.96	-0.89	-0.86	0.18	0.00	0.00	1.00	0.00	1.00	2.00	1.00
Mauritius	n/a	n/a	n/a	5.50	5630.00	n/a	n/a	n/a	n/a	n/a	n/a	2.98	4.27	3.62	3.84	0.72	0.12	0.27	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Mozambique	1994	1994	1.00	3.50	300.00	-0.76	0.22	0.84	4.50	5.00	5.06	6.96	6.27	7.06	6.67	-1.02	-1.00	-0.35	0.00	1.00	1.00	0.00	0.00	2.00	1.00
Namibia	1989	1989	2.00	4.50	3680.00	3.43	0.75	0.12	0.15	0.30	1.13	0.20	0.47	1.77	1.64	0.35	0.06	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Niger	1993	1993	2.00	3.00	470.00	-2.22	-0.03	0.71	-0.03	0.23	0.27	1.60	-0.02	0.36	0.38	-0.88	-1.19	-1.08	0.00	0.00	0.00	1.00	1.00	2.00	2.00
Nigeria	n/a	1993	-1.00	0.00	1080.00	-0.31	-0.93	-0.29	3.23	3.27	5.40	2.21	2.29	5.12	6.63	-1.42	-1.13	-1.35	1.00	0.00	1.00	0.00	1.00	2.00	3.00
Rwanda	n/a	n/a	n/a	0.50	480.00	n/a	n/a	n/a	n/a	n/a	n/a	-1.20	1.27	1.28	1.41	-1.49	-1.79	-1.23	0.00	1.00	0.00	1.00	0.00	2.00	3.00
Sao Tome & Principe	1991	1991	4.00	5.50	n/a	-5.29	-1.52	-1.89	-0.83	0.68	0.17	5.01	3.44	3.98	2.06	n/a	-0.27	-0.65	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Senegal	1993	1978	-1.00	2.50	n/a	-2.06	0.63	0.75	0.65	0.98	0.96	0.68	0.80	1.08	1.03	-0.45	-0.36	-0.21	0.00	0.00	0.00	0.00	1.00	1.00	2.00
Seychelles	1993	1993	2.50	4.00	11380.00	5.38	0.73	3.77	2.32	0.95	1.74	9.17	5.63	1.55	2.42	n/a	-1.36	-0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sierra Leone	n/a	n/a	n/a	0.50	400.00	n/a	n/a	n/a	n/a	n/a	n/a	-16.22	-3.95	-1.97	-0.28	-1.31	-0.92	-0.72	0.00	1.00	1.00	0.00	1.00	3.00	1.00
South Africa	1994	1994	2.00	5.50	5870.00	-1.59	1.68	1.81	1.81	2.32	2.54	1.24	2.00	2.02	2.64	0.16	0.04	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	n/a	n/a	n/a	0.00	840.00	n/a	n/a	n/a	n/a	n/a	n/a	8.29	6.56	6.38	6.60	-1.64	-1.88	-1.50	0.00	1.00	1.00	0.00	1.00	3.00	3.00
Swaziland	n/a	1993	0.00	1.50	3050.00	0.30	3.26	2.25	1.88	1.80	1.75	0.20	0.62	1.24	1.35	0.79	0.14	-0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tanzania	2000	1995	0.50	2.00	640.00	-0.48	2.51	2.44	1.51	3.03	3.03	1.11	1.84	2.92	3.21	-0.38	-0.06	-0.98	0.00	0.00	1.00	0.00	1.00	2.00	1.00
Togo	n/a	1993	0.00	1.50	600.00	-1.67	4.10	1.03	-1.01	-0.36	-0.47	-1.02	-2.13	-1.62	-1.32	-1.35	0.58	-0.73	0.00	0.00	1.00	0.00	1.00	2.00	2.00
Uganda	n/a	n/a	n/a	2.50	540.00	n/a	n/a	n/a	n/a	n/a	n/a	4.10	3.54	2.81	2.19	-0.70	0.28	-0.62	0.00	0.00	0.00	1.00	1.00	2.00	2.00
Zambia	1991	1991	3.00	3.50	760.00	-3.09	-4.30	-3.35	-2.24	-0.96	3.55	-0.76	-1.02	7.10	6.32	-0.60	0.34	-0.70	0.00	0.00	1.00	1.00	0.00	2.00	2.00
Zimbabwe	n/a	n/a	n/a	2.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.80	-1.31	-7.44	-6.36	-0.67	-0.81	-0.34	0.00	0.00	0.00	1.00	1.00	2.00	2.00

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ENDNOTES

[i] While Lipset's endogenous explanation (an economic term meaning that democracy will only develop and be sustained once a certain level of economic development is attained) of democracy has been called into question over the years, it was at one point an integral part of U.S. foreign policy in the 1960s, casting doubt on whether democracy was necessary at all given the economic growth of the communist countries; perhaps order and discipline were the only necessary ingredients for growth?

[ii] World Bank website, available at:

http://www.worldbank.org/depweb/english/beyond/global/glossary.html.

[iii] United Nations website, available at:

http://www.un.org/en/documents/udhr/index.shtml.

[iv] Freedom House website, available at: www.freedomhouse.org.

[v] United Nations Development Programme website available at:

http://mirror.undp.org/magnet/policy/chapter2.htm.

[vi] Data were unavailable for Angola, Djibouti, Liberia, São Tomé & Príncipe, Sudan, and Swaziland from 1960-1970, Eritrea from 1960-1992, and Sierra Leone for 1960 and 1961.

[vii] According to the World Bank Web Site, "purchasing power parity (PPP) conversion factors take into account differences in the relative prices of goods and services—particularly non-tradables—and therefore provide a better overall measure of the real value of output produced by an economy compared to other economies. PPP GNI is measured in current international dollars which, in principal, have the same purchasing power as a dollar spent on GNI in the U.S. economy. Because PPPs provide a better measure of the standard of living of residents of an economy, they are the basis for the World Bank's calculations of poverty rates at $1 and $2 a day. The GNI of developing countries measured in PPP terms generally exceeds their GNI measured using the Atlas method or using market exchange rates."

[viii] **R-squared** measures the proportion of variance in the dependent variable (growth) that can be explained by the independent variables (democracy and control variables). This is an overall measure of the strength of association and does not reflect the extent to which any particular independent variable is associated with the dependent variable.

Adjusted R-squared is a measurement that penalizes the addition of extraneous predictors to the model.

B is the unstandardized value (based on the for the regression equation for predicting the dependent variable from the independent variable.

Beta - These are the standardized coefficients that you would obtain if you standardized all of the variables in the regression, including the dependent and all of the independent variables, and ran the regression. By standardizing the variables before running the regression, you have put all of the variables on the same scale, and you can compare the magnitude of the coefficients to see which one has more of an effect. You will also notice that the larger betas are associated with the larger t-values and lower p-values.

Source: http://www.ats.ucla.edu/stat/spss/output/reg_spss.htm [accessed on January 23, 2011]