

Democracy and Economic Growth

by

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Abstract

A common theorem of political economists is that democracy and income are strongly correlated. There are conflicting views on the direction of the causality. Coups that started due to non- economic reasons are shocks to democracy. I use such coups to test the hypothesis that democracy causes high economic development. My results suggest that anti-democratic coups have a significant negative effect on economic development. On the other hand, democracy has a strong positive effect on economic development. This study focuses on how an anti-democratic change in regime influences the income level in a country.

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Table of Contents

Abstract.....	ii
Acknowledgments	iii
List of Tables	v
List of Figures.....	vi
List of Abbreviations	vii
Introduction	1
Chapter 1 The Relationship between Democracy and Economic Growth	4
1.1 Democracy and Economic Growth.....	4
1.1.1 The Concept of Democracy	5
1.1.2 The Types of Democracy.....	6
1.1.3 The Measurement of Democracy.....	7
1.1.3.1 Freedom House Democracy Index.....	7
1.1.3.2 Polity Democracy Index	10
1.1.3.3 Bollen Liberal Democracy Index.....	13
1.1.3.4 Banks Democracy Index.....	13
1.1.3.5 Vanhanen Democracy Index.....	14
1.1.3.6 Arat Democracy Index.....	14
1.1.3.7 Cutright Democracy Index.....	15
1.2 The Causal Relationship between Democracy and Economic Growth	15

1.2.1. The Effect of Democracy on Economic Growth	16
1.2.1.1. Positive effects	17
1.2.1.2. Negative effects	20
1.2.1.3. The Channels between Democracy and Economic Growth	23
1.2.1.3.1 Political Instability	24
1.2.1.3.2 Distortions.....	24
1.2.1.3.3 Government size	25
1.2.1.3.4 Human Capital	27
1.2.1.3.5 Income inequality.....	28
1.2.1.3.6 Trade openness.....	29
1.2.1.3.7 Physical Capital Accumulation.....	30
Chapter 2 Literature Review	32
2.1 Literature Review.....	32
Chapter 3 Empirical Working.....	37
3.1. Data	37
3.2. Empirical study	40
3.3. Results.....	44
3.4 Conclusions.....	48
References	50

List of Tables

Table 1 Freedom in the World 2010 and 2011 Scores for Some Countries	55
Table 2 Global Trends in Freedom	59
Table 3 Freedom House Historical Status Breakdown, 1972-2010.....	59
Table 4 Polity Democracy Scores.....	61
Table 5 Bollen Liberal Democracy Scores	62
Table 6 Regression Results, Democracy and GDP Per Capita.....	64
Table 7 Regression Results, Democracy and GDP Per Capita.....	65
Table 8 Regression Results, Democracy and GDP Per Capita.....	66
Table 9 The Reasons of Anti-Democratic Coup D'états	67
Table 10 Quantitative Studies of Democracy's Effect on Economic Growth.....	72
Table 11 Summary Statistics	81

List of Figures

Figure 1 Polity democracy index and GDP per Capita.....	83
Figure 2 Regional Data	84

List of Abbreviations

ARC	Adverse Regime Change
BC	Before Christ
BMP	Black Market Premium
DEM	Democratic Transitions
GDP	General Domestic Prices
IMF	International Monetary Fund
OLS	Ordinary Least Squares
UNDP	United Nations Development Programs
UNU	United Nations University

INTRODUCTION

In today's world, almost all wealthy countries are democratic while most of the economically developing regions of the world have not obtained the high democratic standards, such as the majority of African and South Asian countries (Acemoglu, Johnson, Robinson and Yared, 2008). However, in the literature, there is no precise explanation on why rich countries are democratic and developing countries have anti-democratic governments. Therefore, the association between economic growth and democracy is one of the most remarkable empirical issues in political economics.

Democracy and economic growth are complementary and these concepts mutually empower each other. There is a strong correlation between democracy and economic growth. Despite this correlation, there are conflicting views on causality. Some researchers argue that economic growth is followed by democratization. Barro (1999) suggests that "Increases in various measures of the standard of living forecast a gradual rise in democracy." Lipset (1959) puts forward the idea that democracies arise from the results of industrialization, urbanization and education (Lipset, 1959). Some other researchers, on the other hand, disagree with this notion. For example, Ghali (2003) states that democratic participation is necessary for successful economic strategies (Ghali 2003).

After the World War II, a popular idea among political scientists was that democracy is the result of economic growth was popular. The first study on the relationship between democracy and economic growth was published by Lipset in 1959. Lipset (1959) initiated the idea that democracy was formed and reinforced by the economic growth. While several scholars support the findings of Lipset, some other scholars, however, have still been discussing on the direction of the relationship between democracy and economic growth and these scholars are

divided into three groups. The first group suggests that democracies support economic growth. The second group argues that democracies are not prerequisites for the economic growth and also they believe autocratic regimes give more contribution to economic growth than democratic regimes. The third group suggests that the effects of regimes on economic growth cannot be observed.

The reason of these conflicting views is the difficulty in observing the counterfactual, i.e. we do not know how GDP would have been if a democratic country was anti-democratic. Another reason is that there are several mechanisms that relate the regime of a country to economic growth. However, coups d'état can be used as experiments if they are caused due to non-economic reasons.

In this study, I investigate whether democracy affects GDP per capita. Specifically, I examine the influences of anti-democratic shocks on income per capita. In order to investigate the impact of anti-democratic shocks, I use anti-democratic coups d'état which have occurred in some countries. Coups could have considerable positive or negative effects on both democracy and economic prosperity of countries. Therefore, coups can be used as the determining factors to examine the association between democracy and economic growth. Examining the issue from this perspective generates new thoughts that may help explaining the association between democracy and economic development.

Increasing economic growth and democracy level in developing countries is one of the most important developmental goals. Therefore, the studies which clarify the correlation between economic development and democracy are substantial in the literature. In this sense, the purpose of this study is both a contribution to explore the relationship between democracy and economic

growth and to take the expectations of regime changes into account which helps identifying a stronger growth effect of democracy.

The study proceeds in three principal chapters. In the first chapter, the relationship between democracy and economic growth, the concept and types of democracy, the measurement of democracy, and the evolution of democracy are discussed. The first chapter also includes the concept of coup d'état and its relations with democracies.

In the second chapter, there is relevant information about what previous researches had done pertains to the association between democracy and economic growth.

The third chapter of the study stands for empirical work on the correlation and some econometric analyses. In the third chapter, regression analysis provides statistical results on the relationship by the help of fixed effects and ordinary least squares estimation methods.

CHAPTER 1

1.1 DEMOCRACY AND ECONOMIC GROWTH

Most of the countries in the world have been exposed to dramatic economic and political changes in the last two centuries. While a number of countries have experienced economic developments and have become more solid democracies, many states, on the other hand, remain autocracies and poor. For instance, European countries have been developing economically since 1850's. South Asian and Latin American countries that are mainly less democratic countries have experienced the economic growth more recently. Similarly, most of the less democratic African countries, economic growth has not taken place widely, yet. Today's democratic countries that have completed their economic boost were not classified as democratic before their economic growth process began in 19th century.

All of these examples suggest that economic growth and political regime in a country are correlated. This correlation raises the question that "Do democracies promote economic growth or do the economic progress leads to more democratic states?" But the question does not have a precise empirical answer. This is because; there are several mechanisms that relate the regime of a country to economic growth. All of these mechanisms are hard to identify. The relationship and causal mechanisms between democracy and economic growth will be discussed in the last section of this chapter after providing information about the democracy. Further, the difficulty in observing the counterfactual is another reason of imprecise answer of above question, i. e. we do not know how GDP would have been if a democratic country as anti-democratic.

1.1.1 THE CONCEPT AND THEORETICAL DEFINITION OF DEMOCRACY

The democracy term is derived from the Greek word “Dēmokratía.” It means rule of the people and it was coined from “demos” (people) and “kratos” “power.” The term was used in the early Greek city-states like Athens to denote the political system in the middle of the 5th and 4th century BC.

Although there is no globally accepted definition of democracy, equality and freedom are the most important characteristics of democracy since prehistoric times. Following definitions for democracy are helpful to understand the term. Democracy is a form of management which all members or citizens has equal rights to shape organizations or governmental policies. According to Wertheimer’s definition of democracy, democracies must have some characteristics like government by the people, freedom of speech, majority rule, etc. (Wertheimer 1937). Schmitter and Karl (1947) define democracy as follows: “Modern political democracy is a system of governance in which rulers are held accountable for their actions in the public realm by citizens, acting indirectly through the competition and cooperation of their elected representatives.” Lipset (1963) defines democracy as “a political system which supplies regular constitutional opportunities for changing the governing officials, and a social mechanism which permits the largest possible part of the population to influence major decisions by choosing among contenders for political office.” De Schweinitz (1964) defines democracy as “one of those troublesome words which mean all things to all people. Like motherhood and patriotism, it is thought to be a noble condition and is evoked by politicians, publicists, preachers, and demagogues to prove their unsullied intentions and just claim to popular support.” Tavares and Wacziarg (2001) define democracy in purely procedural terms as “a body of rules and

procedures that regulates the transfer of political power and the free expression of disagreement at all levels of public life” (Tavares and Wacziarg, 2001).

1.1.2 THE TYPES OF DEMOCRACY

Today, numerous different types of democracy are implemented in different countries. Here, some information will be provided for the most well-known types of democracies in the world.

Liberal democracy is one of the most common types of democracy in the world. According to the freedom house organization, Australia, Canada, Iceland, Japan, Brazil, South Korea, United States, Norway, and European Union are the sample countries of liberal democracies in the world (<http://www.freedomhouse.org/>). Liberal democracy is a form of representative democracy. The main principles of liberal democracy include free and fair elections, and competitive political process. Liberal democracies also have presidential and parliamentary systems.

Direct democracy is another type of democracy. In contrast to representative democracies, direct democracies give rights the citizens in order to vote on policy initiatives directly. The most well-known forms of direct democracy are that participatory and deliberative democracies.

Representative democracy is another common type of democracy. The main principle of representative democracy is that the elected representatives represent a group of people for a certain time period. Under representative democracies, citizens are just responsible to elect their representatives who vote on policy initiatives.

1.1.3 THE MEASUREMENT OF DEMOCRACY

Measuring democracy is not an easy matter. However, several indexes have been introduced in the literature and have been used by the social scientists in their theoretical or empirical analyses to measure and compare the democracy level of the countries. The indexes were derived either by comparing the countries with respect to their democratic positions or by evaluating the existence and effectiveness of specific democratic institutions of countries such as, democratic elections and political dialogue, media, anti-corruption, decentralization and local governance and etc.

The indexes mentioned above are as follows; Polity democracy index (I, II, III, IV), Freedom House democracy index, Sussman democracy index, Bollen democracy index, Poe and Tata democracy index, Arat democracy index, Hadenius democracy index, Przeworski et al. democracy index, Banks democracy index, Inkeles democracy index, Beetham democracy index, Coppedge et al. democracy index, Vanhanen democracy index, Cutright democracy index, Gasiorowski democracy index.

1.1.3.1 FREEDOM HOUSE DEMOCRACY INDEX

Freedom House Index, which analyzes the trend of democratization in the world, is obtained from the annual report namely "Freedom in the World" published by the independent non-governmental organization Freedom House. Freedom House describes itself as "a clear voice for democracy and freedom around the world." The group states "American leadership in international affairs is essential to the cause of human rights and freedom" and this can primarily be achieved through the group's "analysis, advocacy, and action" (Freedom house). The dataset has been publishing since 1972 and it includes two types of time series variables which are

political rights and civil liberties. Political rights and Civil liberties variables are formed by some indicators as follows:

Indicators for Political Rights:

1. Chief authority recently elected by a meaningful process
2. Legislature recently elected by a meaningful process
3. Fair election laws, campaigning opportunity
4. Fair reflection of voter preference in distribution of power
5. Multiple political parties
6. Recent shifts in power through elections
7. Significant opposition vote
8. Freedom from military or foreign control
9. Major groups allowed reasonable self-determination
10. Decentralized political power
11. Informal consensus

Indicators for Civil Liberties:

1. Media/literature free of political censorship
2. Open public discussion
3. Freedom of assembly and demonstrations
4. Freedom of political organization
5. Nondiscriminatory rule of law in politically relevant cases
6. Free from unjustified political terror or imprisonment
7. Free trade unions or peasant organizations
8. Free businesses or cooperatives

9. Free professional or other private organizations

10. Free religious institutions

11. Personal social rights

In the Freedom House index, some basic criteria are considered for identification whether a political regime in a country is democratic and what the degree of democratization is in that country. According to these criteria, a competitive and multi-party system is one of the most necessary conditions for the existence of democracy in a country. Other important requirement for the existence of democracy is that the citizens must be able to choose the executives among many candidates freely and fairly. Another requirement is that the opposition parties must have a chance of obtaining the power or they must be able to participate to the power. The political systems which possess the qualifications above are classified as democratic political systems in the freedom house democracy index.

The freedom house democracy index seeks to assess the current states of civil and political rights on a scale from 1 to 7. In the index, while “1” denotes the most democratic states, “7”, on the other hand, denotes the least democratic countries. Depending on the ratings, the nations are classified as free, partly free or not free. Each pair of political rights and civil liberties ratings is averaged to determine an overall status of “Free” (1.0-2.5), “Partly Free” (3.0-5.0), or “Not Free” (5.5-7.0) (Freedom in the World 2010: Methodology). In 2011 Freedom in the World report, for example, United States (judged as fully free and democratic), Canada, Czech Republic, Germany, etc. got a perfect score of a “1” in civil liberties and a “1” in political rights, earning it the designation of “free.” Turkey and Bolivia got a score of “3” in political rights and a “3” in civil liberties, earning it the designation of “partly free.” China and Cuba got a “7” in political rights and a “6” in civil liberties, earning it the designation of “not free”. North

Korea and Libya scored the lowest rank of “7” and “7” and were thus dubbed “not free.” As mentioned above, nations are scored from 0 to 7 on several questions in a special survey and the sum determines the ranking. Several example questions in the survey are provided below: Is the head of government or other chief national authority elected through free and fair elections? Is the government accountable to the electorate between elections, and does it operate with openness and transparency? Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favor of another group? Are there free and independent media and other forms of cultural expression? (Note: In cases where the media are state-controlled but offer pluralistic points of view, the survey gives the system credit.) Are religious institutions and communities free to practice their faith and express themselves in public and private? Is there an independent judiciary? Do laws, policies, and practices guarantee equal treatment of various segments of the population? Do citizens enjoy freedom of travel or choice of residence, employment, or institution of higher education? (See Freedom in the world report; checklist questions)

Table 1 shows freedom house democracy scores of a number of countries in 2010 and 2011. The rankings in the table are from the Freedom in the world 2010 and the Freedom in the World 2011 surveys and reflect the events in 2009 and 2010, respectively. Table 2 also indicates the global trends in freedom. Figure 2 shows the percentage of countries and the percentage of population in different categories on a regional basis in 2011. Table 3 shows historical status breakdown according to the Freedom in the World reports for the time period between 1972 and 2010.

1.1.3.2 POLITY DEMOCRACY INDEX

Polity is a core data project in the state failure task force global analysis project. The well-known and highly respected Polity project and data series are the most widely used resources in the area of regime continuity and change studies over the years. The databases are more specifically utilized for the studies which examine regime change and the effects of regime authority (Center for Systematic Peace).

Polity I, Polity II, Polity III and Polity IV databases are the phases of Polity scheme of coding the authority characteristics of the states around globe for purposes of comparative and quantitative analysis. Polity project has two types of formats. One of them is country-year format which is named state continuity and change. The other is polity-case format namely regime persistence and change as the unit of analysis. Polity IV is the fourth phase of the polity project and it combines the information from state continuity and change, and regime persistence and change in a single data resource base (Center for Systematic Peace).

The Polity IV dataset includes all independent countries around the globe over the period 1800 and 2010. Annual Polity IV reports indicate the characteristics of the political system in the report year. Polity IV project continuously scrutinizes the regime changes in the countries, also assesses regime authority characteristics and regime changes annually (Center for Systematic Peace).

Polity scores are given to a country based on the key qualities of executive recruitment, constraint on executive authority, institutionalized qualities of governing authority, and political competition. In the Polity IV dataset, there are annual measures of institutionalized democracy (DEMOC) and autocracy (AUTOC) and mixed qualities of these distinct authority patterns in order to simplify the empirical analyses. The Institutionalized Democracy score (DEMOC) in the

polity IV dataset ranges from 0 to 10. 10 denote the consolidated democracies and 0 shows the deprivation of the democratic institutions. The operational democracy score is derived from coding of the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive. The institutionalized autocracy score also ranges from 0 (no autocracy) to 10 (full autocracy). Operational autocracy score is also derived from the competitiveness of political participation, the regulation of participation, the openness and competitiveness of executive recruitment and constraints on the chief executive.

As mentioned previously, Polity IV dataset also includes the combination of democracy and autocracy scores to be applied in quantitative researches. Combined Polity Score (POLITY) is the one which has a common usage in most of the studies. POLITY is computed by subtracting the institutionalized autocracy score from the democracy score. Therefore, the unified Polity score ranges from +10 to -10. While +10 shows consolidated democratic states, -10 stands for strong autocracies. Revised Combined Polity Score (POLITY2) is another combined variable of Polity IV dataset. POLITY2 is a modified version of the POLITY variable in order to use in time-series analyses. POLITY score cannot be used in time series analyses because it has some instances of standardized authority score such as -66(Cases of foreign interruption are treated as system missing.), -77(Cases of interregnum or anarchy.), -88(Cases of transition are prorated across the span of the transition.)

(See <http://www.systemicpeace.org/inscr/p4manualv2010.pdf> for more details.). Therefore, POLITY variable is converted to conventional polity scores within the range, -10 to + 10 as POLITY2 variable (Center for Systemic Peace; Polity IV Project User's Manual). POLITY2

variable of Polity IV dataset is one of the main democracy indexes in this study. Table 4 shows the polity scores for selected countries.

1.1.3.3 BOLLEN LIBERAL DEMOCRACY INDEX

Bollen (1993) defines liberal democracy as the degree to which a regime allows democratic rule and political liberties and he generated his democracy index based on the political liberties and democratic rules. He has four measures of political liberties: freedom of broadcast media, freedom of print media, civil liberties, and freedom of group opposition. He also has four measures of democratic rule: political rights, competitiveness of nomination process, chief executive elected, and effectiveness and elective legislative body. He linearly transformed each variable in order to range from zero (weak liberal democracy) to 10 (Strong liberal Democracy). The index is scored to range from zero to 100 in which zero is for autocratic states and 100 shows democratic countries. Bollen Liberal Democracy Index covers the time period between 1960 and 1980. Table 5 provides Bollen Liberal Democracy scores for elected countries for 1980.

1.1.3.4 BANKS DEMOCRACY INDEX

Arthur Banks have performed excellent worldwide and annual coverage of time-series measures of democracy for the time period 1815 and 1999 (Banks, 1979) (<http://www.databanksinternational.com/>). Banks's index of democracy awards points on the basis of seven variables: type of regime (civil, military, etc.), type of executive, executive selection (elected or not), parliamentary responsibility, legislative selection (elected or not), competitiveness of nominating process for legislature, and party legitimacy (party formation) (Munck, 2003). Banks measures institutional variation by scoring these components of

democracy and sums the scores of each component in order to get a scale that ranges from 1 (Non-free states) to 17 (Free states), which awards a country for the presence of democratic institutions (Landman, 1999).

1.1.3.5 VANHANEN DEMOCRACY INDEX

Vanhanen (2000) democracy index measure the degree of democratization and democracy for 187 countries for the period 1810-1998. According to Vanhanen (2000) the distribution of power depends on the distribution of sanctions. Vanhanen democracy index includes two variables to measure the distribution of power. The first variable is the percentage share of votes for the smaller parties and independents in parliamentary elections. The second variable is the percentage of the adult population that voted in elections (Vanhanen, 1979). Vanhanen democracy index is derived from multiplying the two variables and dividing the product by 100 (Vanhanen, 1971). The index ranges from zero (no democracy) to 50 (Full democracy).

1.1.3.6 ARAT DEMOCRACY INDEX

Arat democracy index can be identified as participation, inclusiveness, competitiveness and civil liberties (Arat, 1991). According to Arat (1991), these four components of the democracy index reinforce each other and for a measurement of democracy, most sensitive part of the index is civil liberties in other words public control of government.

After assigning the annual scores to the sample of countries for the years between 1948 and 1982, Arat (1991) introduced the new equation for the democracy score as follows;

$$\text{Score of Democraticness} = [(\text{Participation} (1 + \text{Inclusiveness})) + \text{Competitiveness}] - \text{Coerciveness}$$

The annual scores of years, between 1948 and 1982, range from 29 through 109 for the groups of independent countries. The countries with low scores have lower democracy level than the countries with high scores (Arat, 1991).

1.1.3.7 CUTRIGHT DEMOCRACY INDEX

Cutright (1963) has developed some of the possible applications of an index of political development for 77 independent states in the world. The time period covered by the data is from 1940 through 1960. Cutright's (1963) index of political development focuses on the basis of four variables: presence or absence of a parliament, the composition of parliament, recruitment of the president, and presidential support base (Bogaards, 2007). There is a possibility for every country to acquire one, a half or zero point depending on how chief executive is selected. The combined index according to the variables mentioned above has a range of zero to 3 points per year. Over the 21 year period of Cutright's study, his democracy index has possible ranges from zero to 63 for every nation (Cutright, 1963).

1.2 THE CAUSAL RELATIONSHIP BETWEEN DEMOCRACY AND ECONOMIC GROWTH

There is a huge body of research on the relationship between economic growth and democracy. Researchers are divided into two groups with respect to the direction of the causal association between economic growth and democracy. One of them suggests that democracy causes economic growth, and the other group argue that economic growth causes democracies. Two of the most frequently cited sources of the factors giving rise to widespread desire for democracy are Lipset (1959) and Huntington (1991). Both argue that economic development

generates increased demand for democracy. On the other hand, the literature includes some other scholars who support the idea that democracy also causes to economic growth (Goodin 1979, Goodell and Powelson 1982).

Some other scholars, on the other hand, exhibit a different approach to the issue. Since 1970s, a number of researchers, such as (Hewlett 1979, Huntington and Nelson 1976), have begun to adopt the idea that the nations must prioritize one goal among several development goals such as economic growth, political democracy, and so on. For example, democratization can be a luxury for the developing countries. Therefore, according to the proponents of this opinion, the developing nations in today's world cannot achieve rapid economic growth through a democratic framework. In other words, developing countries cannot pursue both economic growth and democratic developments simultaneously (Sirowy and Inkeles, 1990).

1.2.1 THE EFFECTS OF DEMOCRACY ON ECONOMIC GROWTH

In spite of the long and affluent dialogue on the correlation between democracy and economic growth, many of the central questions on the subject of the developmental consequences of political democracy remain, by and large, unresolved. According to the popular view, democracy has positive impact on economic developments but the relevant quantitative and cross-national researches are still disturbed by the conflicting findings. Together these theoretical and research associated issues have contributed to a good deal of confusion with respect to theories of how political democracies might affect economic development and with respect to the empirical position of testable claims implied by such theories (Sirowy and Inkeles, 1990). There are two terminological convention of labeling these theoretical positions as the "Compatibility" and "Conflict" perspectives (Huntington, 1987). Below, these perspectives are

elaborated with respect to their implications for the effect of political democracy on economic growth. Later, some more channels showing how democracy influences economic growth will be provided.

1.2.1.1 POSITIVE EFFECTS

Today, democratic governance is built by more countries than ever before because they aspire to develop democratic institutions and forms that are more sensitive for the needs of ordinary citizens, including the poor, and that promote development (UNDP: Democratic governance).

Although, in the literature, there is no agreement on the notion that mentioned in previous sentence, many cases from real world strongly show that democracy has a positive effect on economic growth, for example, the most democratic countries of the world are the richest countries. Below, some studies which consistent with these real world evidences will be summarized.

Many social scientists and economists agree with democratization is essential for economic growth. Claude (1976) argues that the consolidation and extension of fundamental freedoms and civil liberties are necessary in order to motivate citizens for prudential investments and to continue their business life.

North (1990) follows the proponents of democratic view which says state autonomy is potential danger for economic performance and he argues that the state tend generally to put pressure on the society and only democratic institutions can force that type of states to act in the requisition of majority. According to his perspective, we can conclude that democracies are essential for efficient economic growth.

According to Goodin (1979) and Goodell and Powelson (1982) the social conditions that lead to economic development, such as economic pluralism, are generated by the implementation and existence of political rights and civil liberties and democratic forms. They argue that the concept of the economic pluralism which is critical for economic growth. Underlying the idea of economic pluralism is the notion that citizens can act freely to sell and buy products or distribute them within the marketplace in order to create most innovative and competitive technologies. In other words, economic pluralism composes of open competition and predictability. These two components of economic pluralism exist in a marketplace only when the form of government is organized based on democratic rules and institutions and the citizens have the security of expectations for the future.

Sirowy and Inkeles (1990) argue that the privilege and vested interests of minority is broken by the popular political participation. Moreover, political participation causes to existence of the participative mentality in the marketplace and also causes an increase in the flow of information which is critical to government. Consequently, it can be argued that the conditions conducive to change, entrepreneurial risk, and economic growth are created by the political participation.

According to the proponents of compatibility perspective, authoritarian forms of governments may cause a more rapid economic growth in the short run, democratic forms of governments, however, are well suited for a sustained, balanced, and equitable growth in the long run (Sirowy and Inkeles, 1990).

Barro (1996) argue that democratic institutions work like a control mechanism on the power of government and they prevent the society from unpopular policies and the corruption among the public officials. In this view, more political rights tend to be growth enhancing.

Przeworski and Limongi (1993) seek a simple answer to the question whether democracy fosters or hinders economic development. First of all, they suggest that the effect of political participation is difficult to assess without considering a good economic model of the growth. In addition, they also suggest that scholars must consider political regimes affect growth via policies. Lindauer and Velencik (1992) give an example of these types of policies in their paper as the size of government is negatively related to growth, but the increase of government expenditure has a positive effect on economic development. Przeworski and Limongi (1993) specifically focus on the issue whether democracies or authoritarian government structure better secure the property rights because today, the popular view seems to agree that these rights foster the growth. According to the result of the study of Przeworski and Limongi (1993), political institutions, in other words, policies are positively related to economic growth, but political regimes do not capture relevant differences.

Olson (1991) approaches to the subject from a different perspective. In his study, he shows that democracies are more reliable than autocracies with respect to future investments and returns. He argues that “the autocrat has the problem that he cannot easily and straightforwardly make credible commitment. If he runs the society, there is no one who can force him to keep his commitments. The autocrat can promise that he will not impose any future taxes or confiscations that would make current investments unprofitable, but given his incentive to make that promise even if he intends to break it, the promise may not be credible.”

The representative models for the mechanisms which specify how democratic governments promote economic growth have been introduced in the literature by the social scientist and economists. Although these models are seemingly different, they generate the same conclusion. The fundamental assumption behind these models is that some productive role of

democratic governments is optimal for maximizing efficiency, growth, and welfare. According to the models of Przeworski (1990), Barro (1990) and Olson (1990), perpetuating a framework for individual operation and supplying inputs directly which are not efficiently supplied by the market are two ways that the states can participate in activities that support private production. In the marketplace, for instance, law and order are provided by government and keeping the contracts valid is under responsibility of the governments. In addition to the examples of the appropriate framework for private activities, governments defend private parties from the external threats (Przeworski and Limongi, 1993).

Helliwell (1994) assesses the effect of several measures of democracy and personal freedoms on economic development in a comparative framework. According to Helliwell's discussion, democracies tend to assist to establish the essential atmosphere that encourages higher levels of schooling and investment, and thereby economic growth is affected positively by these indirect mechanisms. Although Helliwell (1994) estimated the partial effect of democracy on subsequent economic growth is negative but statistically non-significant, this statistically insignificant negative effect is counterbalanced by the indirect positive effect such as investment and education. Consequently, the overall result of Helliwell's research is that democracy promotes economic growth by means of education and investment.

1.2.1.2 NEGATIVE EFFECTS

The main idea of the conflict perspective is the claim that democratic institutions cause a decrease in economic growth (De Schweinitz 1964, Andreski 1968, Chirot 1977, and Rao 1985). In this view, an authoritarian regime is required in a country for successful and rapid economic growth (or national development projects) because the characteristic of an authoritarian regime

stifles or postpones the extension of civil liberties and political rights and the development of democratic forms and institutions. There are several reasons that have been offered in support of such a claim in the literature. Below, three of these reasons will be discussed in turn.

The first reason is that the premature democratic movements cause non-functional consequences such as slow growth. Many studies have drawn the conclusion that supports the idea which economic development is a prerequisite of democracy (Lipset, 1959). In other words, previous researches about democracy have shown that the relationship between economic growth and democracy is sequential that is first growth came, then democracy. A democratic regime that was established without ensuring the appropriate thresholds such as resource availability, appropriate class structure, and psychological and institutional modernity will tend to generate non-functional consequences. These consequences threaten both future economic growth and democratic development. Political instability is one of the most crucial non-functional consequences. In developing countries, political institutions are weak and fragile to begin with because there is huge pressure on government by the democratic participation and source of instability (Huntington, 1968). For example, such impatient groups as workers and the poor can demand a lot of impatient requests from the government. The other parties or organizations can support these groups in order to win elections. Therefore, democratic regimes in developing countries will economically and politically be weakened by the internal disorder. Another example of non-functional consequences of premature democratic movements can be electoral politics. Electoral politics in developing countries may distort the economic growth and may endanger the democratic regime because politicians may prefer short-run politic expediency, rather than long-term economic policies which oriented toward national economic growth

(Sirowy and Inkeles, 1990). After all, according to this view, coerciveness is best way for change before a certain level of economic welfare has been achieved (Apter, 1965).

The second reason is that the essential policies to facilitate successful economic growth cannot be implemented by the democratic regimes effectively. Authoritarian forms of regimes are better able to implement the policies which have critical importance for successful economic development and these kinds of regimes can easily create the social and economic conditions that are necessary to support the economic growth. Some examples of the conditions mentioned above are social and economic stability, insulation from outside influence, and single-minded strength for the development target. Authoritarian regimes, on the other hand, can directly facilitate rapid economic development through several mechanisms such as firmer controlling over labor markets and labor, allocating the resources efficiently, their capacity to use coercion to break traditional routines, organizing and directing economic policies collectively, and the most frequently noted mechanism which is their ability to affect consumption and saving. The idea behind the last mechanism is that economic growth is mainly the result of investments. Moreover, the investments cannot be attained without accumulation of capital, which depends on the rate of savings. Authoritarian forms of regimes fosters the accumulation of needed capital because they have relative freedom to act coercively which pursue policies that beneficial for majority and also they are relatively free to extort surplus from some domestic groups to finance economic growth (Sirowy and Inkeles, 1990).

The third reason is that unique internal and international conditions make difficult to understand the worldwide situation (De Schweinitz, 1964, Chirot, 1977, and Cohen, 1985). Today's late developers have to perform distinct strategies in their development paths in contrast to the development experience of most European nations in the nineteenth century because of

differences in demographics, transnational linkages, such as the multinational corporation, structure of finance, rural and urban dynamics, level of technological development, and class structures. Under these different circumstances, authoritarian regimes can easily adopt the appropriate national strategies because of the direct role of the state and they are better able to resist the influences of other nations (Sirowy and Inkeles, 1990).

1.2.1.3 THE CHANNELS BETWEEN DEMOCRACY AND ECONOMIC GROWTH

As shown in section previous sections, the empirical literature on the relationship between democracy and economic growth is largely inconclusive. In this section, the channels of the influence from democracy to economic growth will be examined by following the study of Tavares and Wacziarg (2001). Examining the mechanism between democracy and economic growth will help us to understand deeply how democracy affects economic growth and will also allow us to understand what re the economic costs and benefits of democracy.

In the study of Tavares and Wacziarg (2001), they collected the variables, from the political science and the economic literature, which have an influence from democracy and also identify economic growth such as government consumption. They used a methodology which allows them to distinguish the total effect of democracy on economic growth and thereby they are able to diagnose whether and how democracy affects economic growth through each of possible channels of influence. Consequently, they find democracy is positively related to economic growth by improving the accumulation of capital and by lowering income inequality. On the other hand, democracy is also negatively related to economic growth by decreasing the rate f physical capital accumulation and by increasing government consumption. In the

conclusion of their study, the overall effect of democracy on economic growth is negative but limited (Tavares and Wacziarg, 2001).

According to Tavares and Wacziarg (2001), seven channels between democracy and economic growth are as follows; political instability, distortions, government size, human capital, income inequality, trade openness, and physical capital accumulation.

1.2.1.3.1 POLITICAL INSTABILITY

The most important characteristic of political systems is the stability of governance. There will be uncertainty about future policies in an atmosphere which is politically instable. Political instability causes an increase in predatory behavior among the rulers and this behavior can be negatively related to the private resources of the economy. The provision of transparent is one of the important characteristic of democratic systems because the transparency leads to the alternation of political forces in power. Moreover, extremism and overthrowing the government by illegal means can be discouraged by arguable choices of policies and policy makers. Therefore, while peaceful and predictable transfers of political power can be occurred in democracies more widely, autocracies more likely experience violent and erratic changes. To sum up, the lower level of uncertainty by lower level of political instability encourages investment and economic growth (Tavares and Wacziarg, 2001).

1.2.1.3.2 DISTORTIONS

The quality of governance may also be influenced by democracy. Distortionary policies which are beneficial for minority at the expense of the general population exist in a country if the politicians have discretionary power. Democracies tend to keep these types of power in check.

These types of power and the quality of policy making are easily kept in check in democracies because politicians can be regularly submitted to public enquiry such as elections and also there are feasible alternatives in democracies such as opposition parties. In other words, autocratic regimes which do not have public scrutiny of politicians potentially have more discretionary power (Tavares and Wacziarg, 2001).

Tavares and Wacziarg (2001) used black market premium of the exchange rate (BMP) as a measurement of government induced distortions. Black market premium of the exchange rates is calculated as follows;

$$\text{BMP} = \frac{\text{Official Currency} - \text{Black Market Exchange Rates}}{\text{Official Currency}}$$

Consequently, they found that black market premium of the exchange rates is negatively related to capital accumulation and economic growth in per capita GDP.

1.2.1.3.3 GOVERNMENT SIZE

Tavares and Wacziarg (2001), provide several theoretical studies and models to examine the causal relationship between political institutions and the size of government. First of all, they study on the linkage between taxes and economic activity by means of the model of Meltzer and Richard (1981). According to this model, taxes cause a decrease in economic activities and an increase in the number of negative vote for more government intervention financed by higher level of taxation. Secondly, there is a consensus among the economist about the government consumption has a negative effect on economic growth. Therefore, Tavares and Wacziarg (2001), summarize theoretically the issue whether democratic governments spend less or more than autocratic governments. Autocratic governments tend to increase the governmental activities to maximize their constraint over the economy. Niskanen (1971) emphasizes this

notion and he says that because politicians obtain their power directly from the resources which are under their control, the main purpose of politicians is to increase the size of their bureau. However, these politicians may use the power to act in the interest of majority of society. Moreover, if politicians in autocratic systems have a disproportionately high share of capital of economy, they tend to follow the growth maximizing size of government. If politicians, on the other hand, are poor, they can lead the economy to more distortions and lower growth (Niskanen, 1971). As a result, it is theoretically unclear whether democracies spend more or less than autocracies (Tavares and Wacziarg, 2001).

According to the Mancur Olson (1982), some interest groups can easily put pressure on policy-making in democracies for the purpose of having larger size of government. However, these types of groups also can easily kept under control in such a political system like democracies in which the majority has a right to say.

In general, autocratic governments need more military spending compared to democracies. That's mean autocracies need more taxation in order to finance the military spending and this causes a decrease in economic activities. Democracies spend relatively less money for military and thereby tax rates are lower than autocracies. Hence, democracies can have faster economic growth than autocracies.

Tavares and Wacziarg (2001), suppose that “the effects of governmental activity on growth involve a trade-off between the cost of distortionary taxation required to finance it and the benefits it provides.” Growth maximizing tax rates must exist in political systems and only if the median voter own capital, the growth maximizing rate of taxation can be chosen in an economy. To sum up, Tavares and Wacziarg (2001), reach the same conclusion with Barro (1991) which is the size of government is negatively related to economic growth.

1.2.1.3.4 HUMAN CAPITAL

Tavares and Wacziarg (2001), argue that democracies tend to choose the policies that support human capital accumulation because democratic governments are more sensitive to the basic needs of the society than autocratic systems. They also suggest that higher level of human capital is both a determinant of democracy and an outcome of democracy. Moreover, they assert that education is one of the most important components of human capital and it increases both demand for democracy and economic growth.

An increase in both physical and human capitals primarily gives rise to economic development. On the other hand, there is a strong causal relationship between the accumulation of capital and the choice of public policies that depend on the political institutions in place (Hernandez and Martinek, 2008). These policies for capital accumulation are implemented in democracies relatively easier because democratic institutions are better able to keep government power under control and limit politicians' ability to accumulate assets and to act in the interest of minority. These control and limiting mechanisms cause an increase in economic development (Barro, 1996). In epitome, the adoption of political institutions which put some constraints on government power in democracies helps improve investment in physical and human capital, and, thereby, economic growth (Hernandez and Martinek, 2008). Investment will increase under predictable economic atmospheres such as, liberty, free flowing information and property rights protected from the arbitrary power of the government (Kurzman, Werum and Burkhart, 2002). From this point of view, economic growth will increase in democracies because investment increases.

Baum and Lake (2003) argue that there are significant indirect effects of democracy on economic growth through its impact on education attainment level and public health. Both

education and public health -or life expectancy- are two well-known determinants of human capital. Consequently, they found an increase in democracy improves the life expectancy of women in developing countries and increasing democracy in developed countries positively affects secondary education enrollment of women. Although Baum and Lake (2003) cannot find any direct effect from democracy to economic growth, they discover the both life expectancy and secondary education enrollment that are two components of human capital have positive effects on gross domestic price per capita growth.

If everyone agrees with the notion that human capital improves economic growth, then it can be said that democracies improve economic growth because human capital has relatively faster development in democratic atmosphere. The reports from United Nations Development Programs (UNDP) also support the notion asserted above. According to these reports, democratic governments are positively related to human capital. In addition, “political freedom empowers people to claim their economic and social rights, while education increases their ability to demand economic and social policies that respond to their priorities” (UNDP, 2002: 53).

1.2.1.3.5 INCOME INEQUALITY

Tavares and Wacziarg (2001) suggest that the degree of income inequality is one of the outcomes of societal choices which are influenced by the political decision makers. According to their study, if there is a shift from autocratic regimes to democratic regimes, the preferences of the poor will be considered more in collective decision making. Hence, these privileged poor members of the population can use the political rights to their benefit and can affect the policy makers in order to be implemented inequality reducing income redistribution.

Lenski (1966) argues that if a democratic political structure is in the saddle, then it can be expected that a great deal of poorer members of the society are better able to organize into unions, social democratic left parties and other interest groups. Under democratic systems, they can participate in the governance over time by developing a solid electoral base and by winning seats in legislature. Therefore, democracies treat as facilitative of gradual decrease of economic inequality.

Moreover, democratic political systems are relatively more efficient than autocratic political systems for the distribution of societal resources because of electoral mechanisms and political rights to opposition and participation (Lipset. 1959). These institutional mechanisms and social and political rights cause a change in governmental power from few rich minorities toward the middle classes and the poorer members of the society and thereby democratic settlement in the regimes are more sensitive to the demands from the latter sectors (Sirowy and Inkeles, 1990).

1.2.1.3.6 TRADE OPENNESS

Increasing democratic institutions can also influence the degree of trade openness but the causal effect of democracy on trade systems remains an open empirical question. The protectionist policies which protect the domestic producers of a product by imposing tariffs, quotas or other barriers to imported products can be imposed in autocracies in order to benefit a few producers at the expense of a numerous consumers. Democracies tend to have less protectionist policies because the preferences of the minor groups will be weighted more heavily in democracies. In short, democratic political structure helps improve international trade and thereby, causes an increase in economic growth because there is a consensus among economists

about international trade positively affects the level of economic growth. Trade openness positively influences the internal degree of product market competition, fosters technological transfers, enables access to greater economies, and causes to greater policy discipline by means of regional or global arrangements (Tavares and Wacziarg, 2001).

Numerous studies have shown that there is statistically strong linkage between trade openness and economic growth. Rigobon and Rodrik (2005) found that while openness affects income positively it has a negative influence on democracy. Their findings are also large and statistically significant. They defend this concept as follows; “Countries that are more open tend to acquire better economic institutions, perhaps because this is required to better compete internationally. However, openness in general tends to weaken democratic institutions, perhaps because openness exacerbates distributional conflicts.”

1.2.1.3.7 PHYSICAL CAPITAL ACCUMULATION

Tavares and Wacziarg (2001) investigate the physical capital accumulation as a last channel between democracy and economic growth. They believe that there is a possibility that democratic institutions influence the degree of physical capital accumulation in positive and negative ways. Policy makers must distribute the national income between capital and labor. The latter has an advantage in democracies because democracies give a greater voice to unions and labor interests. In other words, democracies pay higher wages for labor and this causes that a decrease in the returns to capital and also a decrease in the incentive for private investment in democracies. Because of these properties of democratic systems, lower level of economic growth will be experienced in democratic atmosphere.

On the other hand, democratic political structure is better able to secure property rights and restrain contracts and thus democracies may increase the returns to investments. In addition, there will be lower level of political, social, and economic uncertainty in democratic atmosphere. For all these reasons, it can be expected that economic developments will be observed under democratic systems (Tavares and Wacziarg, 2001).

CHAPTER II

2.1 LITERATURE REVIEW

The linkage between democracy and economic development has been studied among social and political scientist since the 17th century. In this chapter, the scholarly articles examining democracy's effect on economic growth will be summarized.

In order to conceive the causal association between democracy and economic growth, Kurzman, Werum and Burkhart (2002) summarize the finding of 47 quantitative researches have studied for the time range from 1963 to 1997. They found that 19 scholarly articles found a positive relationship between democracy and economic growth, 6 articles suggested a negative relationship, and 10 reported no statistically significant relationship. Seven articles argued a combination of positive and statistically no significant outcomes with respect to the model and the cases used. Two studies reported a combination of negative and statistically insignificant results. Two suggested mixed positive and negative outcomes and finally one article reported an inverted U effect (Kurzman, Werum and Burkhart, 2002). The conclusions and the articles are undertaken in Table 10.

Kurzman, Werum and Burkhart (2002) also empirically analyzed short and long term direct and indirect impacts of democracy on economic growth by using pooled annual time series data for the time range between 1951 and 1980 for 106 countries, including 88 noncore countries. They search for answer to basic questions on the linkage between democracy and economic growth such as, "Do poor countries face a cruel trade of between democracy and growth?", and "Do democracy and growth go together as a 'win-win' proposition?" or "Is democracy irrelevant to growth?" According to the results of Kurzman, Werum and Burkhart (2002), there is little or no direct impact from democracy to economic growth. However, they

report two mechanisms which causes to democracy's indirect positive effect on economic growth. First mechanism is that democracy affects economic growth significantly by means of investment and government expenditure. Second mechanism is democracy's non-linear effect on economic growth via social unrest, inhibiting growth under non-democratic regimes and furthering it in highly democratic ones. The final conclusion of Kurzman, Werum and Burkhart (2002) is that democracy's effect on economic growth is not significantly negative, and for numerous circumstances democracy slightly increases the growth (Kurzman, Werum and Burkhart, 2002).

Moreover, Sirowy and Inkeles (1990) also provided a review that the quantitative and cross national tests of the influences of democracy after taking three theoretical possible models into consideration: democracy as expediting economic development, democracy as an obstacle to economic development, and democracy as bearing no independent relationship to economic development outcomes. They present the outcomes, design characteristics, period coverage, and the forms of the relationship of dozen studies with respect to the theoretical models. They believe that although this presentation does not give any definitive support for the theoretical models, it is important to assist in interpreting the past and future research (Sirowy and Inkeles, 1990).

Robert J. Barro analyzed the relationship between economic growth and democracy for a panel of about 100 countries observed from 1960 to 1990 (Barro, 1996). He suggested that there are encouraging impacts from democracy to economic growth include maintenance of the rule of law, free markets, small government consumption, and high human capital. As a result, Barro (1996) found that the overall effect of democracy on economic growth is weakly negative after the variables mentioned above and the initial level of real per capita GDP are held constant. According to the results of Barro (1996), democracy increases economic growth for the countries

which have low levels of political freedom because of the benefit from restrictions on the power of government, on the other hand, democracy decreases economic growth in the countries they already have moderate level of political freedom because of the strengthened concern with income redistribution. Barro (1996) also discussed the effect of economic growth on democracy in his study. He argued that “Increases in various measures of the standard of living tend to generate a gradual rise in democracy. In contrast, democracies that arise without prior economic development -sometimes because they are imposed from outside- tend not to last” (Barro, 1996).

Tavares and Wacziarg (2001) investigated the empirical relationship between democracy and economic growth for the time range between 1970 and 1989 for 65 industrial and developing countries. They assumed democracy has indirect impacts on economic growth via numerous channels such as, political instability, government size, and income inequality etc. Their results report that democracy supports economic growth indirectly by increasing the accumulation of human capital and by decreasing income inequality. However, democracy affects economic growth negatively by reducing the rate of physical capital accumulation and by raising the ratio of government consumption to GDP. After taking the indirect effects consideration, the overall effect of democracy on economic growth is negative to a certain degree (Tavares and Wacziarg, 2001).

John F. Helliwell (1994) investigated the two way association between democracy and economic growth by using cross sectional and pooled data for a sample of 125 countries over the time range between 1960 and 1985. He found a positive and robust effect from economic growth to democracy. He assesses the impacts of democratic institutions on economic growth in a comparative growth framework. In that article, he reported the identical results as convergence hypothesis such as; the growth of GDP per capita depends on initial wealth negatively, or

depends positively on rates of investment in physical and human capital. According to his conclusions, the estimated partial and direct effects of democracy on subsequent economic growth are negative but insignificant. Moreover, democracy has a positive indirect effect on economic growth via education and investment. He suggested that this insignificant negative direct effect is in any case counterbalanced by the positive indirect effect and therefore, his overall conclusion on the linkage between democracy and economic growth is that there is no possibility to identify any systematic net influence of democracy on current and subsequent economic growth performance (Helliwell, 1994).

Persson and Tabellini (2006) argued whether democracy promote economic growth for a sample of 150 countries over the period 1960 to 2000. Depends on the details of democratic reforms, they found a positive effect from democracy to economic growth. Democratization can positively affect economic growth if countries liberalize their economies before giving more political rights. According to their results, different forms of democratic governments (presidential vs. parliamentary) and election systems (majoritarian vs. proportional) have also different systematic influences on economic accelerations, for example, presidential democracies lead to faster economic development than parliamentary governments because of different policy changes such as, government consumption and protectionist trade policies. The results of Persson and Tabellini (2006) also suggest that expected and actual regime changes have also an independent effect on economic growth because of the investment impact of expectations (Persson and Tabellini, 2006).

Baum and Lake (2003) argued the direct and indirect effects of democratization on economic growth for a 30 year panel dataset of 120 independent countries. They specifically concentrate on the indirect effects of democracy on economic growth through public health and

education. Their results suggest that there is no statistically significant direct influence from democracy to economic growth. In addition, they determine that “the effect of democracy is largely indirect via increased life expectancy in poor countries and increased secondary education in non-poor countries” (Baum and Lake, 2003). They showed that a rise in democracy will cause to acceleration in economic growth by means of increased life expectancy by .68 percentages per year in developing countries. In developed countries, this increase in democracy will positively affect economic growth by .26 percentages via increased secondary education (Baum and Lake, 2003).

CHAPTER III EMPIRICAL WORKING

3.1 DATA

The Polity Democracy Index is the main measurement for democracy levels of the countries in this study. The Polity IV dataset presents information about democracy and is available for all independent countries since 1800. The dataset includes several measurement types for the democracy levels of the countries. The composite polity index which is utilized in this study is one of them. The composite polity index ranges from +10 to -10 (+10 refer to a country that is strongly democratic, while -10 refers to a strongly autocratic country.) (See the measurement of democracy section above for the details). Polity democracy index is available in the database of The Center for Systematic Peace.

An alternative measure of democracy is the Freedom House Index. If political rights are at an ideal level in a country, people can partake freely in the political process (<http://www.freedomhouse.org/>). The freedom house political rights index ranges from 1 (most free) to 7 (least free) (See the measurement of democracy section above for the details). In this study, the range of the freedom house index is reversed due to convenience. Therefore, in this study “1” stands for the least democratic countries, while “7” stands for the most democratic countries.

The combination of the freedom house and polity democracy indexes is also used as another alternative measure of democracy. This combined democracy index is derived by transforming the freedom house and polity democracy indexes to a scale of 0-10. Then, these two democracy measurements are averaged in the new combined democracy index. The combined democracy index has imputed values for some countries which have missing values of polity democracy index. In order to impute the missing values, the average polity values are

regressed on the average freedom house values (Quality of Government: Dataset/Codebook). According to Hadenius and Teorell (2005), this new combined democracy index is more valid and reliable than its constituent parts.

Coups data are obtained from the center for systematic peace (<http://www.systemicpeace.org/inscr/inscr.htm>). The dataset for coups provides some information about the countries which have had a coup in the last 50 years and it also provides information about date, leaders and the period of the coups. The data comprises four types of coup events: successful coups, attempted (but failed) coups, coup plots and alleged plots. The dataset also provides information about the degree of change in the country's polity democracy score that resulted from a coup. Specifically, Marshall and Marshall (2011) data set identifies Adverse Regime Changes (ARC). ARC is defined as coups that resulted in a negative change in polity score of six points or more, which is considered an adverse regime change resulting in the failure of the state. In addition, the data provides information about Democratic Transitions (DEM) which are defined as coup events that happened by using force to alter the regime but voluntarily transfers executive authority to an elected civilian government (Marshall and Marshall, 2011).

The database for average schooling years in the total population aged 15 and over from Barro and Lee (2010) is the major indicator for the education attainment level of a country. This dataset is available in five year intervals between 1950 and 2010. After interpolating the data, I arranged the data with respect to the median and generated a dummy variable which shows whether the average year of schooling in each year is greater or smaller than the median. This dummy variable helps reveal the effect of education on income by observing the change in average years of schooling with respect to the general trend. I also employ the interpolated gini

index which is a measure of income inequality for the countries. This index is available in the United Nations University (UNU) (<http://www.wider.unu.edu/>) and Quality of Government databases.

The World Bank database and Penn World Tables database (<http://data.worldbank.org/> <http://pwt.econ.upenn.edu/>) are the sources for real GDP per capita. Unemployment rates are also acquired from the World Bank and International Monetary Funding (IMF) databases (<http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/weose1gr.aspx>). In this study, I used the unemployment rate that is the combination of these two databases. The openness to trade variable and rule of law variable are also obtained from World Bank databases. The rule of law variable has a scale ranging from -2.5 to 2.5 in which higher scores correspond to better outcomes. The openness to trade variable is the sum of exports and imports of goods as a percentage of GDP per capita.

Having a female leader in a country is employed as a dummy variable in this study. This variable indicates whether a country has had a female leader as the president, prime minister or any other decision maker in its past 50 years of history. The data for female leaders of the countries can be obtained from the quality of government databases. Ethnolinguistic fractionalization, latitude, and the colonial origin of the countries (Spanish and British) are other control variables in this study and were obtained also from the quality of government databases. The latitude variable shows the absolute value of the latitude of the countries' capital cities. In order to get a scale ranging from 0 to 1, these absolute values are divided by 90 (1 represents a latitude of 90 degrees while 0 represents that of 0 degrees). The colonial origins of the countries are inserted into the regression as dummy variables (1 for former colony, 0 for non-colony). These variables and the variables mentioned in the previous two paragraphs are utilized as

control variables in this study because they can be strongly correlated to economic growth and democratization. Another reason why these control variables are employed is their popularity and commonality in the literature on the correlation between democracy and economic growth.

The dataset covers the period 1960 to 2010 annually. GDP per capita, unemployment rate, gini index, rule of law, and democracy indexes are inserted into the regression analysis as logarithmic values. The variables are summarized on summary statistics table. (See Table 11)

3.2 EMPIRICAL STUDY

I conducted Hausman test to determine whether a fixed effect model is appropriate. Briefly, Hausman test is a statistical hypothesis test. The test checks the significance of an estimator versus an alternative estimator. In other words, the test evaluates a more efficient model against the less efficient (Hausman J. A., 1978). Unobservable time invariant country specific and historical factors that affect political conditions and economic growth simultaneously may bias my estimator. Therefore, I include country fixed effects in the regressions. I also include year dummies in my regressions to eliminate the influence of factors that cause global year to year changes in countries' income.

Take into consideration the following simple econometric model which will be the base of my work:

$$GDP_{c,t} = \pi C_{c,t} + \gamma D_{c,t-1} + \beta X_{c,t} + \alpha_c + \tau_t + \epsilon_{c,t} \quad (1)$$

where $GDP_{c,t}$ stands for log real GDP per capita for country c in year t . C is for ARC (adverse regime change) which shows anti-democratic coups. $D_{c,t-1}$ stands for the lagged value of democracy variables for country c in year $t-1$. X symbolizes a vector of country characteristics that are likely to impact both GDP per capita and democracy level of countries. α_c and τ_t stands

for country and year dummy variables respectively. β , π and γ are the parameters to be estimated. ε is idiosyncratic error term.

C denotes the vector of indicator variable ARC (adverse regime change) which identifies anti-democratic coups. ARC is the key interest variable in this study. The coups generally start due to non-economic reasons (see table 9 for the details). For instance, the main reason of coups in Africa is because of the problems between tribes. Another reason of coups for some other countries is that an opposition political party or other groups and organizations overthrow the government by the help of military force due to unsatisfied domestic or foreign policies (Fisher, 1969, Lewis, 1972). The other reason of coups is that military forces seize power to protect the state from other countries or civil terrorism (Brown, 1999). Therefore, it can be concluded that economic problems have no impact on coups. In other words, GDP per capita should not influence coups significantly in the econometric model.

I expect that there should be a negative effect from anti-democratic coups to income. This idea is supported by Figure 1 which has the polity democracy index on its horizontal line and GDP mean on its vertical line. Figure 1 represents more democratic countries predominantly have more income than the countries which have a lower democracy level with respect to polity index. The econometric model described above also quantifies this relationship. The study brings out the effect of anti-democratic shocks (coups) on the income level of a country.

D symbolizes the lagged value of democracy variables for country c. Both Polity Democracy Index and Freedom House Democracy Index are the main measure for democracy level of a country. Moreover, the combination of freedom house and polity democracy indexes is also used as an alternative measure.

X stands for a vector of country characteristics that are likely to impact both GDP per capita and democracy level of countries such as openness to trade, education, rule of law, ethnic fragmentation, etc. The vector of X includes a control for education. This is because high level of educational attainment is a prior condition for democracy and political development (Lipset, 1959). In addition, education affects democracy because it enables a culture of democracy and it causes greater prosperity and political development (Acemoglu et al., 2005). Furthermore, Helliwell (1994) argues that education plays an important role in explaining GDP per capita.

Another variable in X is the rate of trade openness of the countries. Numerous studies argue that openness to trade influences democracy and economic activities (e. g., Whitehead, 1996; Held et al., 1999; Drake, 1998). There is a consensus among economists that international trade positively affects the level of economic growth. Trade openness positively influences the internal degree of product market competition, fosters technological transfers, enables access to greater economies, and causes greater policy discipline by means of regional or global arrangements (Tavares and Wacziarg, 2001). Democracies tend to have less protectionist policies because the preferences of the minor groups will be weighted more heavily in democracies. Briefly, democratic political structure helps improve international trade (openness) and thereby, causes an increase in economic growth (Tavares and Wacziarg, 2001).

Rule of law is another control variable in the vector X. Rule of law is the supreme of the law over the acts of government and the people. Rule of law, GDP and democracy mutually affect one another. According to Carothers (1998), “the rule of law makes possible individual rights, which are at the core of democracy.” In general, the system of rule of law can be fully applied under democratic governance. The rule of law secures and enforces the basic conditions of a market economy such as property rights and the contracts which are the main indicators for

the investment atmosphere of a country (Carothers, 1998, Kurzman, Werum and Burkhart, 2002).

The countries which have more ethnic fragmentation are generally poor in the world. Hence, ethnolinguistic fractionalization is also included as a control variable. Ethnic fractionalization reports the combination of racial and linguistic characteristics. In other words, Ethnic fractionalization indicates the probability that two randomly selected people in a given country do not belong to same ethnolinguistic groups (Alesina et al, 2003). Many scholars suggest that the degree of homogeneity in a society, which is largely determined by language and ethnicity, may have an influence on democracy and income. This is because, ethnic fragmentation causes the political instability, poor quality of institutions, badly designed of economic policy and disappointing economic performance (Alesina et al, 2003, Easterly and Levine, 1997, Canning and Fay, 1993, Mauro, 1995, La Porta et al, 1999).

Latitude is another control variable in this study in order to show whether distance from the equator affects democracy and GDP per capita. The countries which are far from the equator are more democratic and richer in the world (Sachs, 2001). This is because, the less developing production technology in two critical areas of agriculture and health. Another reason is that the difficulty of mobilizing energy sources in tropical economies (Sachs, 2001). These two reasons are likely to open a substantial income gap between climate zones.

Similar to ethnolinguistic fractionalization and latitude, the colonial origin of the countries may also have an important influence on their democratization. There is a strong possibility that colonies ruled by democratic countries tend to become more democratic. For example, Lipset et al. (1993) suggested that former British colonies are likely to have democracies today.

To eliminate possible bias by omitting income inequality, the vector of X includes the gini index. Other control variables are the unemployment rate and a dummy variable that indicates whether a country has had a female leader in its past 50 years of history.

3.3 RESULTS

Table 6 displays the results obtained from the model depicted in equation (1), where GDP per capita is explained by anti-democratic coups, lagged Polity Democracy Index and other explanatory variables. Each specification reported in this table and standard errors are reported in parentheses under the coefficients. The regressions apply to a panel of roughly 80 countries for the period of 1960 to 2010. The estimation uses fixed effects and OLS estimation techniques. The regression shown in column 1 includes the direct effect of coups on GDP per capita by using OLS estimation method. There is a statistically strong negative effect (-1.088) from coups to income level of countries as expected. Second column of table 6 adds the lagged polity democracy variable to the first column. The direct effect of lagged polity democracy level to income per capita is positive and statistically significant (1.232). In the third and fourth column, I replicate the first two columns by using fixed effects estimation method. The direct effects of both coup and democracy variables on GDP per capita decreased, but they still have statistically significant effects, -0.28 and 0.20 respectively. The fifth and sixth columns include some time variant and time invariant country characteristics such as income inequality, education attainment level, rule of law, openness to trade, latitude etc. The difference between fifth and sixth columns is that fifth column does not include the effect of the democracy variable. The main interest variables, coup and democracy index, and almost all controls have a significant effect on income per capita with respect to OLS estimation. As expected, while coups

significantly decrease the GDP level of countries by around 50 percent, democracy levels of countries cause a significant increase in GDP per capita by around 50 percent. Education attainment level also has a statistically strong positive influence on income per capita by 82 percent. This result suggests that increasing education and income levels cause an increase in people's demand for democratic systems. The effect of education on democracy level is strongly positive and on coups is strongly negative. According to the regression results, the unemployment rate is negatively correlated with GDP per capita and significantly decreases income by 6 percent. Income inequality (gini index) also has a negative effect on GDP by 3 percent but not significantly. Column five and six also include a dummy variable for colonial status. The results suggest that there is a significant positive influence of former British or Spanish colonial status on GDP per capita. For example, former British and Spanish colonies significantly increase income per capita by 0.28 and 0.31 percent respectively. Another dummy variable in the regression stands for female leaders (1 for having a female leader in the history of the country, 0 for no female leaders). The results suggest that female leaders cause 33 percent decrease in GDP per capita. According to the results, the effect of ethnic fragmentation on income is negative (-0.13) and significant. The latitude of the countries is positively correlated with GDP in our results. The distance from equator significantly increases GDP per capita by 37 percent. Rule of law and openness are another two control variables and significantly increase income level by 12 and .07 percent respectively.

Column seven, eight and nine uses fixed effect estimation method with the same time-variant variables of column 5 and 6. Column 7 does not include democracy variable and column 9 puts the year and country fixed effects into the consideration. After fixed effect restrictions, there is an important decrease in the coefficients of the control variables and the main interest

variables, coup and democracy. According to the results of column 6 and 8, the effect of coups and democracy on GDP level decreases from 55 percent to 16 and from 54 percent to 5 percent respectively. However, the decrease in the coefficients affects neither signs nor significances.

Moreover, table 7 principally replicates table 6 but, in this case, uses the freedom house democracy index as the democracy variable. The direct effect of coups and democracy variables are quite similar in both table 6 and 7. After adding the control variables to the OLS estimation in column 6, the effect of coups are still negative but insignificant (-0.37). However, the fixed effect estimation solves this insignificance problem in the column 8 of table 7. According to the fixed effect technique, the effects of coups on GDP per capita are almost the same with respect to both polity and freedom house democracy indexes in column 8 of table 6 and 7. On the other hand, the freedom house index causes an increase in the effect of the lagged democracy variable on GDP per capita. That is to say, that while lagged polity democracy index increases GDP by 5 percent in 8 column of table 6, freedom house democracy index increases income level by 17 percent in 8 column of table 7. According to the fixed effect regression in column 8, female leaders still cause a significant decrease (10 percent) in income levels of the countries. The unemployment rate also decreases income level by .03 percent but this is not significant. The gini index is another negative factor on income and significantly decreases it by 10 percent. Finally, the rule of law unexpectedly decreases the GDP per capita by 6 percent. On the other hand, the effects of openness to trade and education attainment level on GDP per capita are positive and significant (0.006 and 0.17 respectively). The ninth column of table 7 puts the year and country fixed effects into the consideration like the same column of table 6.

In the sixth column of table 7, the effects of time variant and time invariant control variables on GDP per capita are observed with respect to OLS estimation method. The results are

quite similar to the result of table 6 and suggest that education, gini index, rule of law, openness to trade, and all time invariant variables (colonial origin, ethnic fragmentation, and latitude) have significant positive effect on GDP per capita.

Furthermore, table 8 is an application of table 6 and 7 with respect to the combined democracy index, which is the combination of polity and freedom house indexes. Similar to table 6 and 7, the first four columns of table 8 reports the direct effect of coups and democracy on GDP per capita with respect to OLS and fixed effect estimation methods. The sixth column reports the results of OLS estimation with control variables. According to the OLS results, coups significantly decrease the GDP level by 86 percent as expected. The lagged combined democracy variable causes a 38 percent significant increase in GDP per capita. All the time invariant control variables (colonial origin, ethnic fragmentation, and latitude) cause a positive increase in GDP level. Female leaders still cause 28 percent significant decrease in income levels of the countries. While education significantly increases GDP by around 50 percent, unemployment rate significantly decreases GDP by 20 percent.

The eight column of table 8 reports the results of fixed effect estimation with time variant control variables. According to the fixed effect estimation results, the main interest variables, coups and democracy, significantly affect GDP level. Whereas coups cause a 21 percent decrease in GDP per capita, the lagged combined democracy variable has a 10 percent positive effect on GDP per capita. Education and openness to trade have positive effect on GDP level by 3 percent and .03 percent respectively. The ninth column replicates the previous one by putting the year and country fixed effects into the consideration.

3.4 CONCLUSIONS

The statistical correlation between political and economic changes can be accounted for by the historical sources of fluctuation in development process of the countries (Acemoglu et al., 2008). In this study, I argue that the countries which have had a shock (coup d'état) to democracy level in their history will be economically less developed in their future.

The cross-country analysis that includes OLS and fixed effects estimation techniques gives strong evidence of negative effects of coups d'état on income per capita over the past 50 year. Moreover, the effect of coups on GDP per capita is also statistically analyzed with respect to different democracy indexes and the results still indicate that the effect is significantly negative for all indexes. In addition, regressions suggest that the previous years' democracy levels have significant positive effect on the current economic position of people for all the types of democracy indexes.

The control variables of this analysis help bring to light the effect of coups and democracy on GDP. For instance, the regression results suggest that education, openness to trade, latitude, ethnolinguistic fractionalization, and former British and Spanish colonies have strong positive effects on GDP per capita. On the other hand, female leaders and unemployment rates are negatively correlated with GDP per capita in this analysis.

Once the control variables and coups are held constant, the overall effect of democracy on economic growth is strongly positive. Rodrik and Wacziarg (2005), Cutright and Wiley (1969), Cutright (1963), Leblang (1997), McMillan, Rauser and Johnson (1993), and Papaioannou and Siourounis (2004) also show that democracies promote economic growth.

These results shed light on the prevalent ambiguity in the literature about how democracy affects income per capita and how an explicit increase in democracy will cause improvements in income per capita.

This study can be furthered by considering the data for democratic shocks, such as democratic coups and movements, on the democracy level of a country.

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Table 1: Freedom in the World 2010 and 2011 Scores for Some Countries.

Country	Political Rights 2010	Civil Liberties 2010	Status 2010	Political Rights 2011	Civil Liberties 2011	Status 2011
Sub-Saharan Africa						
Angola	6	5	Not Free	6	5	Not Free
C. African	5	5	Partly Free	5	5	Partly Free

Republic						
Ethiopia	5	5	Partly Free	6	6	Not Free
Ghana	1	2	Free	1	2	Free
Kenya	4	4	Partly Free	4	3	Partly Free
Namibia	2	2	Free	2	2	Free
Nigeria	5	4	Partly Free	4	4	Partly Free
Somali	7	7	Not Free	7	7	Not Free
South Africa	2	2	Free	2	2	Free
Americas						
Argentina	2	2	Free	3	2	Free
Bolivia	3	3	Partly Free	3	3	Partly Free
Brazil	2	2	Free	2	2	Free
Canada	2	2	Free	2	2	Free
Chile	2	2	Free	2	2	Free
Cuba	7	6	Not Free	7	6	Not Free
Dominica	1	1	Free	1	1	Free
Ecuador	3	4	Partly Free	3	4	Partly Free
Jamaica	2	3	Free	2	3	Free
Mexico	2	3	Free	3	3	Partly Free
Peru	2	3	Free	2	3	Free
United States	1	1	Free	1	1	Free
Uruguay	1	1	Free	1	1	Free
Venezuela	5	4	Partly Free	5	4	Partly Free

Asia-Pacific						
Afghanistan	6	6	Not Free	6	6	Not Free
Australia	1	1	Free	1	1	Free
China	7	6	Not Free	7	6	Not Free
India	2	3	Free	2	3	Free
Japan	1	2	Free	1	2	Free
Malaysia	4	4	Partly Free	4	4	Partly Free
Nepal	4	4	Partly Free	4	4	Partly Free
New Zealand	1	1	Free	1	1	Free
North Korea	7	7	Not Free	7	7	Not Free
South Korea	1	2	Free	1	2	Free
Thailand	5	4	Partly Free	5	4	Partly Free
Vietnam	7	5	Not Free	7	5	Not Free
Europe (Including Countries of Former Soviet Union)						
Bulgaria	2	2	Free	2	2	Free
Czech Republic	1	1	Free	1	1	Free
Georgia	4	4	Partly Free	4	4	Partly Free
Hungary	1	1	Free	1	1	Free
Kyrgyzstan	6	5	Not Free	5	5	Partly Free
Macedonia	3	3	Partly Free	3	3	Partly Free
Poland	1	1	Free	1	1	Free
Romania	2	2	Free	2	2	Free

Russia	6	5	Not Free	6	5	Not Free
Austria	1	1	Free	1	1	Free
Belgium	1	1	Free	1	1	Free
Denmark	1	1	Free	1	1	Free
France	1	1	Free	1	1	Free
Germany	1	1	Free	1	1	Free
Italy	1	2	Free	1	2	Free
Netherlands	1	1	Free	1	1	Free
Norway	1	1	Free	1	1	Free
Portugal	1	1	Free	1	1	Free
Spain	1	1	Free	1	1	Free
Turkey	3	3	Partly Free	3	3	Partly Free
United Kingdom	1	1	Free	1	1	Free
Middle East and North Africa						
Bahrain	6	5	Not Free	6	5	Not Free
Egypt	6	6	Not Free	6	6	Not Free
Iran	6	6	Not Free	6	5	Not Free
Iraq	5	6	Not Free	6	5	Not Free
Israel	1	2	Free	1	2	Free
Libya	7	7	Not Free	7	7	Not Free
Saudi Arabia	7	6	Not Free	7	6	Not Free
Un. Arab	6	5	Not Free	6	5	Not Free

Emirates						
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Table 2: Global Trends in Freedom.

Year under Review	Free Countries		Partly Free Countries		Not Free Countries	
	Number	Percentage	Number	Percentage	Number	Percentage
2010	87	45	60	31	47	24
2000	86	45	58	30	48	25
1990	65	40	50	30	50	30
1980	51	31	51	31	60	37

Table 3: Freedom House Historical Status Breakdown, 1972-2010.

Year Under Review	Total # of states	Free Countries		Partly Free Countries		Not Free Countries	
		Number	%	Number	%	Number	%
2010	194	87	45	60	31	47	24
2009	194	89	46	58	30	47	24
2008	193	89	46	62	32	42	22
2007	193	90	47	60	31	43	22
2006	193	90	47	58	30	45	23
2005	192	89	46	58	30	45	24
2004	192	89	46	54	28	49	26

2003	192	88	46	55	29	49	25
2002	192	89	46	55	29	48	59
2001	192	85	44	59	31	48	25
2000	192	86	45	58	30	48	25
1999	192	85	44	60	31	47	25
1998	191	88	46	53	28	50	26
1997	191	81	42	57	30	53	28
1996	191	79	41	59	31	53	28
1995	191	76	40	62	32	53	28
1994	191	76	40	61	32	54	28
1993	190	72	38	63	33	55	29
1992	186	75	40	73	39	38	21
1991	183	76	42	65	35	42	23
1990	165	65	40	50	30	50	30
1989	167	61	37	44	26	62	37
1988	167	60	36	39	23	68	41
1987	167	5	35	58	35	51	30
1986	167	57	34	57	34	53	32
1985	167	56	34	56	34	55	33
1984	167	53	32	59	35	55	33
1982– 1983	166	52	31	56	34	58	35
1981-	165	54	33	47	28	64	39

1982							
1980	162	51	31	51	31	60	37
1979	161	51	32	54	33	56	35
1978	158	47	30	56	35	55	35
1977	155	43	28	48	31	64	41
1976	159	42	26	49	31	68	43
1975	158	40	25	53	34	65	41
1974	152	41	27	48	32	63	41
1973	151	44	29	42	28	65	43
1972	151	44	29	38	25	69	46

Table 4: Polity Democracy Scores.

Country/Year	1960	1970	1980	1990	2000	2008
Afghanistan	-10	-7		-8	-7	
Argentina	-1	-9	-9	7	8	8
Australia	10	10	10	10	10	10
Austria	10	10	10	10	10	10
Belgium	10	10	10	10	10	8
Brazil	6	-9	-4	8	8	8
Canada	10	10	10	10	10	10
China	-8	-8	-7	-7	-7	-7
Cuba	-4	-7	-7	-7	-7	-7
Egypt	-7	-7	-6	-6	-6	-3

France	5	8	8	9	9	9
Germany				10	10	10
India	9	9	8	8	9	9
Italy	10	10	10	10	10	10
Japan	10	10	10	10	10	10
Norway	10	10	10	10	10	10
Russia					6	4
Saudi Arabia	10	10	10	10	10	10
Spain	-7	-7	9	10	10	10
Turkey	7	8	-5	9	7	7
United Kingdom	10	10	10	10	10	10
United States	10	10	10	10	10	10

Table 5: Bollen Liberal Democracy Scores.

Country Name	Bollen Liberal Democracy Scores for 1980
Australia	100
Canada	100
France	100
Germany (WEST)	89
Germany (EAST)	11
United Kingdom	100
United States	100

Romania	11
Egypt	33
Iran	33
Libya	17
Turkey	11
South Africa	56
Afghanistan	0
N. Korea	11
S. Korea	33
China	17

Table 6: Regression Results, Democracy and GDP per capita.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	OLS	OLS	F.E.	F.E.	OLS	OLS	F.E.	F.E.	F.E.
Antidemocratic									
Coups	-1.088*** (0.372)	-0.864*** (0.271)	-0.285*** (0.085)	-0.294*** (0.083)	-0.504** (0.241)	-0.548*** (0.164)	-0.087 (0.086)	-0.160** (0.075)	-0.021 (0.023)
Lag. Democra.		1.232*** (0.054)		0.208*** (0.027)		0.545*** (0.039)		0.053** (0.026)	-0.018 (0.011)
Female Leader					-0.206** (0.085)	-0.332*** (0.058)	-0.084** (0.035)	-0.032 (0.031)	0.032*** (0.011)
Education					0.755*** (0.041)	0.821*** (0.041)	0.096*** (0.033)	0.178*** (0.037)	-0.047*** (0.015)
Unemp. Rate					-0.177*** (0.016)	-0.067*** (0.015)	-0.014* (0.008)	0.012 (0.009)	-0.035*** (0.004)
Gini Index					0.237*** (0.086)	-0.031 (0.073)	-0.075* (0.045)	0.011 (0.044)	-0.045*** (0.017)
Rule Of Law					0.048*** (0.015)	0.125*** (0.014)	-0.081*** (0.008)	-0.067*** (0.011)	0.005 (0.007)
Openness					0.004*** (0.0003)	0.0007* (0.0003)	0.006*** (0.0003)	0.0061*** (0.0004)	0.002*** (0.0002)
Spanish					0.401*** (0.086)	0.315*** (0.113)			
British					0.302*** (0.077)	0.288*** (0.108)			
Ethno. Lang.					0.286*** (0.076)	-0.139** (0.064)			
Latitude					1.695*** (0.144)	0.377*** (0.122)			
Observations	1,772	1,208	1,208	1,208	1,772	1,208	1,772	1,208	1,208

Note: Dependent variable is GDP per capita. Lagged democracy variable stands for “POLITY” democracy index. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Regression Results, Democracy and GDP per capita.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	OLS	OLS	F.E.	F.E.	OLS	OLS	F.E.	F.E.	F.E.
Antidemocratic									
Coups	-1.088*** (0.372)	-0.684* (0.349)	-0.245** (0.107)	-0.295*** (0.103)	-0.504** (0.241)	-0.379 (0.256)	-0.087 (0.086)	-0.171* (0.093)	0.029 (0.033)
Lag. Democ.		1.159*** (0.042)		0.246*** (0.022)		0.574*** (0.039)		0.179*** (0.021)	-0.033*** (0.010)
Female Leader					-0.206** (0.085)	-0.343*** (0.079)	-0.084** (0.035)	-0.104*** (0.033)	0.009 (0.013)
Education					0.755*** (0.041)	0.498*** (0.043)	0.096*** (0.033)	0.080** (0.033)	-0.025* (0.013)
Unemp. Rate					-0.177*** (0.016)	-0.197*** (0.015)	-0.013* (0.008)	-0.003 (0.008)	-0.023*** (0.003)
Gini Index					0.237*** (0.086)	0.249*** (0.082)	-0.075* (0.045)	-0.107** (0.044)	-0.063*** (0.019)
Rule Of Law					0.048*** (0.015)	0.081*** (0.014)	-0.082*** (0.008)	-0.062*** (0.008)	0.012** (0.006)
Openness					0.004*** (0.0003)	0.003*** (0.0003)	0.006*** (0.0003)	0.005*** (0.0003)	0.001*** (0.0001)
Spanish					0.401*** (0.086)	0.403*** (0.082)			
British					0.302*** (0.077)	0.240*** (0.073)			
Ethno. Lang.					0.286*** (0.076)	0.211*** (0.071)			
Latitude					1.695*** (0.144)	1.437*** (0.136)			
Observations	1,772	1,684	1,684	1,684	1,772	1,684	1,772	1,684	1,684

Note: Dependent variable is GDP per capita. Lagged democracy variable stands for “FREEDOM HOUSE” democracy index. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Regression Results, Democracy and GDP per capita.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	OLS	OLS	F.E.	F.E.	OLS	OLS	F.E.	F.E.	F.E.
Antidemocratic									
Coups	-1.088*** (0.372)	-1.423*** (0.387)	-0.262*** (0.102)	-0.326*** (0.099)	-0.504** (0.241)	-0.866*** (0.284)	-0.087 (0.086)	-0.213** (0.094)	0.0383 (0.034)
Lag. Democ.		0.805*** (0.032)		0.138*** (0.016)		0.387*** (0.030)		0.104*** (0.016)	-0.020** (0.008)
Female Leader					-0.206** (0.085)	-0.283*** (0.085)	-0.084** (0.035)	-0.088*** (0.032)	0.005 (0.013)
Education					0.755*** (0.041)	0.494*** (0.046)	0.096*** (0.033)	0.034 (0.032)	-0.027** (0.013)
Unemp. Rate					-0.177*** (0.016)	-0.206*** (0.016)	-0.013* (0.008)	-0.020** (0.008)	-0.033*** (0.003)
Gini Index					0.237*** (0.086)	0.278*** (0.086)	-0.075* (0.045)	-0.064 (0.042)	-0.042** (0.018)
Rule Of Law					0.048*** (0.015)	0.134*** (0.015)	-0.081*** (0.008)	-0.047*** (0.008)	-0.0006 (0.005)
Openness					0.0034*** (0.0003)	0.003*** (0.0003)	0.006*** (0.0003)	0.003*** (0.0003)	0.0005*** (0.0001)
Spanish					0.401*** (0.086)	0.176** (0.088)			
British					0.302*** (0.077)	0.089 (0.079)			
Ethno. Lang.					0.286*** (0.076)	0.196** (0.076)			
Latitude					1.695*** (0.144)	1.585*** (0.142)			
Observations	1,772	1,555	1,555	1,555	1,772	1,555	1,772	1,555	1,555

Note: Dependent variable is GDP per capita. Lagged democracy variable stands for “COMBINED FREEDOM HOUSE/POLITY” democracy index. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 9: The Reasons of Anti-Democratic Coups D'état.

COUNTR Y	YEA R	REASO NS	SOURCES
Nepal	1960	Non-eco	Background notes south Asia. US department of state. May 2011.
South Korea	1961	Eco-pol	Chong-Sik Lee, 1963 "In Search of Stability" <i>Asian Survey</i> , 4(1):656-665.
Burma	1962	Non-eco	Catherine Brown, 1999 "The Political Economy of Violence" <i>London School of Economics and Political Science</i> , 23(3): 234-256.
Benin	1963	Non-eco	John R. Heilbrunn 1997 "Commerce, Politics, and Business Associations in Benin and Togo" <i>Comparative Politics</i> , 29(4):473-492.
Ecuador	1963	Non-eco	William Thayer, 2009 "Maintaining the Empire: Diplomacy and Education in U.S.-Ecuadorian Relations, 1933-1963" <i>The University of Texas at Austin</i>
Brazil	1964	Non-eco	Bryant Wedge, 1969 "The Case Study of Student Political Violence: Brazil, 1964, and Dominican Republic, 1965" <i>World Politics</i> , 21(2):183-206
Benin	1965	Non-eco	www.britannicacom/EBchecked/topic/60879/Benin/55091/Decolonization-and-independence
Congo	1965	Non-eco	Thomas P. Odom, 1988 "Dragon operations: hostage rescues in the Congo, 1964-1965" <i>Combat Studies Institute</i>

Argentine	1966	Non-eco	Guillermo O'Donnell, 1982 "Reply to Remmer and Merckx" <i>Latin American Research Review</i> , 17(2):41-50
Nigeria	1966	Non-eco	Julius O. Ihonvbere, 1991 "A Critical Evaluation of the Failed 1990 Coup in Nigeria" <i>The Journal of Modern African Studies</i> , 29(4):601-626.
Greece	1967	Non-eco	Constantine P. Danopoulos, 1983 "Military Professionalism and Regime Legitimacy in Greece, 1967-1974" <i>Political Science Quarterly</i> , 98(3):485-506.
Sierra Leone	1967	Non-eco	Humphrey J. Fisher, 1969 "Elections and Coups in Sierra Leone" <i>The Journal of Modern African Studies</i> , 7(4):611-636.
Panama	1968	Non-eco	William L. Furlong, 1993 "The Difficult Transition towards Democracy" <i>Journal of Inter American Studies and World Affairs</i> , 35(3):19-64.
Peru	1968	Non-eco	James M. Malloy, 1973 "Dissecting the Peruvian Military" <i>Journal of Inter American Studies and World Affairs</i> , 15(3):375-382.
Somalia	1969	Non-eco	I. M. Lewis, 1972 "The Politics of the 1969 Somali Coup" <i>The Journal of Modern African Studies</i> , 10(3):383-408.
Sudan	1969	Non-eco	Complicity Gary D. Payton, 1980 "The Somali Coup of 1969: The Case for Soviet" <i>The Journal of Modern African Studies</i> , 18(3):493-508.
Lesotho	1970	Non-eco	Leslie Gumbi, 1995 "Instability in Lesotho: A Search for

			Alternatives” <i>African Security Review</i> , 14(4)
Thailand	1971	Non-eco	Michael L. Mezey, 1973 “The 1971 Coup in Thailand: Understanding Why the Legislature Fails” <i>Asian Survey</i> , 13(3):306-317.
Turkey	1971	Non-eco	Fiona B. Adamson, 2001 “Democratization and the Domestic Sources of Foreign Policy: Turkey in the 1974 Cyprus Crisis” <i>Political Science Quarterly</i> , 116(2):277-303.
Ecuador	1972	Non-eco	David Corkill, 1985 “Democratic Politics in Ecuador, 1979-1984” <i>Bulletin of Latin American Research</i> , 4(2):63-74.
Ghana	1972	Non-eco	Maxwell Owusu, 1986 “Custom and Coups: A Juridical Interpretation of Civil Order and Disorder in Ghana” <i>The Journal of Modern African Studies</i> , 24(1):69-99.
Chile	1973	Non-eco	Kyle Steenland, 1974 “The Coup in Chile: Blood on the Peaceful Road” <i>Latin American Perspectives</i> , 1(2):9-29.
Bangladesh	1975	Non-eco	Talukder Maniruzzaman, 1976 “Bangladesh in 1975: The Fall of the Mujib Regime and Its Aftermath” <i>Asian Survey</i> , 16(2):119-129.
Comoros	1975	Non-eco	Simon Massey and Bruce Bakerjuly, 2009 “Comoros: External Involvement in a Small Island State” <i>Chatham House Program Pape</i> .
Argentina	1976	Non-eco	Pablo A. Pozzi, 1988 “Argentina 1976-1982: Labor Leadership and Military Government” <i>Journal of Latin American Studies</i> , 20(1):111-138.

Thailand	1976	Non-eco	Frank C. Darling, 1977 “Thailand in 1976: Another Defeat for Constitutional Democracy” <i>Asian Survey</i> , 17(2):116-132
Pakistan	1977	Non-eco	Pakistan under Zia, 1977-1988 Shahid Javed Burki <i>Asian Survey</i> , Vol. 28, No. 10 (Oct., 1988), pp. 1082-1100
Burkina faso	1980	Non-eco	Mike Speirs, 1991 “Agrarian Change and the Revolution in Burkina Faso” <i>African Affairs</i> , 90(358):89-110.
Turkey	1980	Pol-eco	N Momayezi, 1998 “Civil Military Relations in Turkey” <i>International Journal on World Peace</i> , 15(3):3-28.
Ghana	1981	Non-eco	Maxwell Owusu, 1986 “Custom and Coups: A Juridical Interpretation of Civil Order and Disorder in Ghana” <i>The Journal of Modern African Studies</i> , 24(1):69-99.
Nigeria	1983	Non-eco	Olajide Aluko, 1985 “The Expulsion of Illegal Aliens from Nigeria: A Study in Nigeria's Decision-Making” <i>African Affairs</i> , 84(337):539-560.
Fiji	1987	Non-eco	Andrew Scobell, 1994 “Politics, Professionalism, and Peacekeeping: An Analysis of the 1987 Military Coup in Fiji” <i>Comparative Politics</i> , 26(2):187-201.
Sudan	1989	Non-eco	Mustafa A. Abdelwahid, 2008 “The Rise Of The Islamic Movement In Sudan 1945-1989” Doctoral thesis of Philosophy, May 10, 2008.
Peru	1992	Non-eco	Maxwell A. Cameron, 1998 “Self-Coups: Peru, Guatemala, and Russia” <i>Journal of Democracy</i> , 9(1):25-139 .

Gambia	1994	Non-eco	Saine, Abdoulaye S. M., 1996 “The Coup D’état in Gambia 1994: The End of the First Republic” <i>Armed Forces and Society</i> , 23(1):97-111.
Niger	1996	Non-eco	Franklin Charles Graham IV, 2010 “What the Nigerien Coup D’état Means to the World?” <i>Review of African Political Economy</i> , 37(126):527-532.
Cambodia	1997	Non-eco	Long Kosal, 2009 “Sino-Cambodia relations” <i>Cambodian Institute for Cooperation and Peace</i> , No:28
Congo	1997	Non-eco	Filip Reyntjens, 1999 “The Second Congo War: More than a Remake” <i>African Affairs</i> , 98(391):241-250.
Comoros	1999	Non-eco	Arthur A. Goldsmith, 2001 “Risk, Rule And Reason: Leadership In Africa” <i>Public Administration and Development</i> , 21(2):77
Pakistan	1999	Non-eco	Hasan-Askari Rizvi, 2000 “Pakistan in 1999: Back to Square One” <i>Asian Survey</i> , 40(1):208-218.
Nepal	2002	Non-eco	Christine Fair, Kerem Levitas, and Colette Rausch, 2005 “Nepal: Rule of Law and Human Rights Challenges” <i>United States Institute of Peace</i> .
Central African Republic	2003	Non-eco	Giroux, Jennifer, David Lanz and Damiano Sguaitamatti, 2009 “The tormented triangle: the regionalization of conflict in Sudan, Chad, and the Central African Republic”. <i>Center for Security Studies</i> , 2(47).

Guinea-Bissau	2003	Economic-politic	Stewart Firth, Jon Fraenkel and Brij V. Lal, 2004 “
Fiji	2006	Non-economic	“The 2006 military takeover in Fiji: a coup to end all coups?” <i>The Australian National University.</i>
Thailand	2006	Non-economic	James Ockey, 2007 “Thailand in 2006: Retreat to Military Rule” <i>Asian Survey</i> , 47(1):133-140.
Bangladesh	2007	Non-economic	Muhammad Ala Uddin, 2008 “Political Disasters in Bangladesh and Affairs of the State of Emergency” <i>Canadian social science</i> , 4(1)
Mauritania	2008	Non-economic	Boubacar N'Diaye, 2009 “To ‘midwife’ – and abort – a democracy: Mauritania's transition from military rule, 2005–2008” <i>The Journal of Modern African Studies</i> , 47(1):129-152.

Table 10: Quantitative Studies of Democracy’s Effect on Economic Growth.

Study	Categories	Periods	Years in Period	Years Covered	Growth Measure	Cases	Relationship
Adelma	4	1	5	1957-	Change in GNP per	74 less	Positive

n & Morris 1967				62	capita, 1950/51-63/64	developed countries	
Alesina et al.1996	3	1	33	1950-82	Mean annual change in real GDP per capita,1950-82	113 countries	Not Significant
Alesina & Rodrik 1994	2	1	?	?	Mean annual change in real GDP per capita,1950-85	41 countries	Not Significant
Banks 1970	4	13	7	1868-1963	Railways, telegraphs per square mile, etc.,	36 American and Western European countries	Positive
Barro 1996, 1997	100	3	6-15	1960-75,1975-85,1985-90	Mean annual change in real GDP per capita,	114 countries	Inverted-U
Berg-Schlosser 1984	4	1	?	?	Change in GNP per capita.	38 African countries	Positive Or Not Significant
Bhalla,	13	1	20	1973-	Mean change in real	90 countries	Positive

1994				92	GDP per capita and total factor productivity.		
Chatterji et al. 1993	85	2	1	1978, 1985	Log RGDP, 1985, controlling for RGDP and RGDP squared, 1960	85 less-developed countries	Positive
Cohen 1985	2	Various	Various	Various	Change in GDP per capita, 1945-76	3 South American countries	Negative
Cutright 1963	60	1	21	1940-60	Various economic indicators, 1957-60	77 countries	Positive
Cutright & Wiley, 1969	60	4	10	1927-66	Socio-economic development scale, 10 year-periods.	40 countries	Positive
Dasgupta, 1990 & 1993	7	1	1	1973-9	Change in real GNI per capita, 1970-80	51 poor countries	Positive Though Table Reports Incorrect Sign
De Haan & Sierma	4-13	1	15-32	1973-88 1961-	Average annual change in real GDP per capita, 1960-88	96 countries	Not Significant

nn, 1995 A				92	and 1973-88		
De Haan & sierman 1995 A	4	1	32	1961- 92	Average annual change in real GDP per capita,1961-92	110 countries	Positive Indirect Effect Via Investment
De Long & Schleif er, 1993	2	5	Vari ous	1050- 1800	Number and population of large cities,5 periods,1050- 1800	9 Western European countries	Positive
Dick 1974	3	1	?	?	Change in real GDP per capita,1959-68	59 countries	Positive
Feierab end & Feierab end, 1972	6	1	13	1948- 62	Rate of change index national income, radios, etc.,	76 countries	Negative, Insignificant
Feng, 1997	11- 100	1	21	1960- 80	Change in real GDP per capita,	96 countries	Mixed
Grier & Tullock ,	2	1	5	1973- 7	Change in real GDP,5-year periods,1961-80	113 OECD and other countries	Positive Or Not Significant

1989							
Helliwell, 1994	7-100	2	1	1960, 1976	Change in real GDP per capita, 1960-85	90 OECD and other countries	Not Significant
Kormendi & Meguire, 1985	2	1	6	1973-8	Average annual log difference in real GDP per capita. 1948-77	47 countries	Positive Or Insignificant
Landau, 1986	2	1	?	?	Change in GDP per capita, 1-, 4-, and 7-year periods, 1960-80	65 less developed countries	Negative
Leblang 1997	11	3	10	1960-9 1970-9 1980-9	Change in real GDP per capita.	70 countries	Positive
Lindenberg & Deverajam, 1993	2	1	7-9	1973-81, 1982-8	Change in several GDP, foreign Exchange, and other Measures.	92 developing countries	Mixed
London & Williams,	100	1	6	1960-5	PQLI, 1970; Index of Net Social progress, circa 1970	110 core and noncore countries	Positive

1990							
Marsh, 1979	12- 100	4	1- 6	1957-9 1962-6 1960,5	Change in energy consumption per capita, 1960-70	93 less developed countries	Negative
Marsh, 1988	7	1	7	1973-9	Mean annual change in real GNP per capita, 1970-78 and 1965-84	55 less developed countries	Not Significant
Mbuka, 1994	100	1	6	1960-5	Change in GDP ,1970-89,change in Human Developed Index,1970- 90,change in PQLI,1970-85	117 countries	Positive Or Not Significant
McMill an, Rauser & Johnso n, 1993	3	17	1	1972- 88	Mean annual log difference of GDP per capita.	125 countries	Positive
Meyer et al., 1979	4- 100?	3	6-16	1950- 55,195 7-	Log of GNP and of energy consumption per capita,1972-88	125 countries	Positive

				65,195 5-70			
Moon & Dixon, 1985	100	1	6	1960-5	PQLI,1970	116 countries	Positive
Perotti, 1996	2	1	26	1960- 85	Mean annual change in real GDP per capita	67 countries	Not Significant
Persson & Tabelli ni, 1994	2	1	26	1960- 85	Mean annual change in real GDP per capita	49 countries	Negative
Pourger ami, 1988	5	1	3	1984-6	Mean annual change in real GNP per capita,1965-84	92 countries	Positive
Pourger ami, 1991	Vari ous	1	?	?	PQLI, 1985, change in economic equality, GDP per capita.	106 developing countries	Positive
Pourger ami,	Vari ous	1	?	?	Change in GDP per capita and reduction	104 developing	Positive Or Insignificant

1992					in economic inequality, dates unclear	countries	
Przeworski & Limongi, 2000	2	40	1	1950-90	Annual change in GDP per capita, 1950-90	141 countries	Insignificant Or Positive
Przeworski & Limongi, 1997	2	40	1	1950-90	Annual change in GDP per capita, consumption per capita, 1950-90	139 countries	Insignificant Or Positive
Remmer 1990	2	1	7	1982-8	Change in GDP, 1982-88	11 Latin Amer. countries	Insignificant
Russett & Monsen, 1975	3	1	?	?	Change in GNP and GNP per capita, 1950-65 and 1960-65	86 countries	Insignificant
Sala-i Martin, 1997	7	1	?	?	Not reported	Not reported	Positive
Scully 1988	2	1	8	1973-92, 196	Compound growth of real GDP per capita	115 countries	Positive

&1992				1-92	,1960-80		
Sierma nn, 1998	2-7	1	20- 32	1973- 92, 1961- 92	Change in GDP per capita,1973-88 or 1961-92	96 countries and a sub- sample of 72 less- developed countries	Positive Indirect Effect Via Investment
Sloan & Tedin, 1987	5	21	1	1960- 80	Change in GDP per capita,1960-79	20 Latin American countries	Negative
Weede, 1983	100	2	1	1960,1 965	Change in GNP per capita and GDP, 1960-79	94 countries and a sub- sample of 74 less- developed countries	Negative
Weede, 1993	13	1	7	1980- 88	Change in GNP per capita, 1980-87	93 non- communist and non-oil countries	Not Significant
World Bank	13	1	15	1973- 87	Average change GDP per capita.	68 developing	Not Significant

1991:5 0						countries	
Present Study	21	30	1	1951- 80	Annual log difference in GDP per capita, 1951-80	106 countries.	Mixed

Table 11: Summary Statistics.

Variable Name	Mean	Standard deviation	Sources
GDP per capita	8.302	1.289	http://pwt.econ.upenn.edu/ http://data.worldbank.org/
Antidemocratic Coups	0.004	0.065	http://www.systemicpeace.org/inscr/inscr.htm
Lag. Democracy (Polity)	1.962	0.483	http://www.systemicpeace.org/inscr/inscr.htm
Lag. Democracy (Free. H.)	1.230	0.676	http://www.freedomhouse.org/
Lag. Democracy (Combined)	1.377	0.955	http://www.qog.pol.gu.se/data/qogstandarddataset/
Education	0.498	0.500	http://www.barrolee.com/data/dataexp.htm

Gini Index	3.709	0.430	http://data.worldbank.org/ http://www.qog.pol.gu.se/data/qogstandarddataset/
Rule Of Law	0.084	1.210	http://www.qog.pol.gu.se/data/qogstandarddataset/
Openness	74.981	46.943	http://www.worldbank.org/governance/wgi/index
Spanish	0.101	0.302	http://www.qog.pol.gu.se/data/qogstandarddataset/
British	0.294	0.455	http://www.qog.pol.gu.se/data/qogstandarddataset/
Ethno. Frag.	0.459	0.268	http://www.qog.pol.gu.se/data/qogstandarddataset/
Latitude	0.284	0.188	http://www.qog.pol.gu.se/data/qogstandarddataset/
Female Leader	0.021	0.145	http://www.qog.pol.gu.se/data/qogstandarddataset/
Unemployment Rate	2.073	1.211	http://data.worldbank.org/ http://www.imf.org/external/data.htm

Figure 1: Polity democracy index and GDP per Capita.

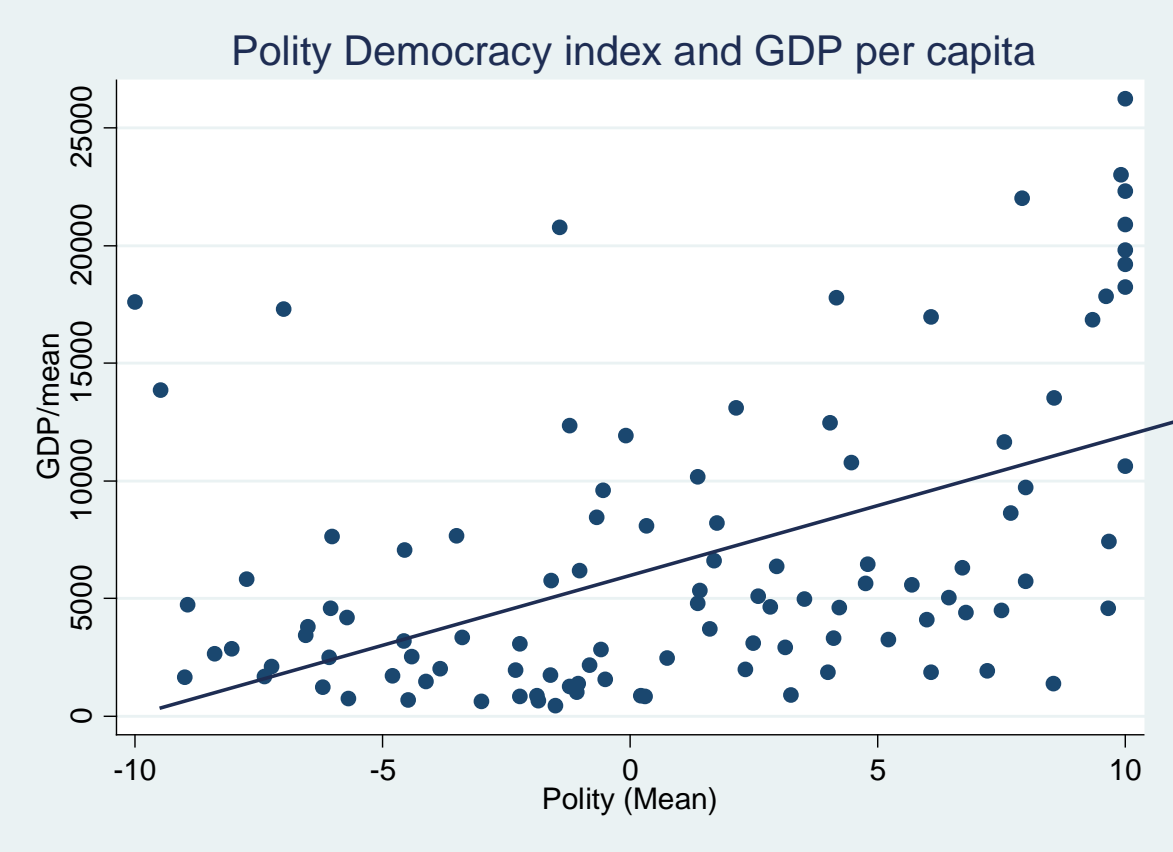


Figure 2: Regional Data.

