THE GROWTH IMPACT OF POLITICAL REGIMES AND INSTABILITY: EMPIRICAL EVIDENCES FROM WESTERN EUROPE

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By

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ABSTRACT

The main objective of this thesis is to investigate the reciprocal direct relationship between political regimes, political instability and economic growth. However, there is a lack of fit between the political and economic science especially when it comes to political determinants of economic growth. Thus, this thesis sheds further light on the question: To what extent do political regimes and their stability affects economic performance with reference to 20 Western European countries. A panel regression analysis is employed, by adopting multiple measures of government performance. The findings suggest that political regimes have an effect on economic growth and this effect is not directly dependent upon the broader governmental structure and political environment.

This thesis further examines the puzzle of the nature between political instability and economic growth in Western Europe, by using both a more comprehensive measure of political instability than has previously been developed, and Greek growth cycles form 1919 to 2008 as a case to explore the nature of the researched issue. The findings propose that the relationship between political instability (PI) and economic growth is parabolic and fragile. Furthermore, this thesis supports the intuition that political instability can slow economic growth through increasing uncertainty in economic policies. The results illustrate that economic growth and political instability are jointly determined and that governmental changes plays no significant role on economic growth (with exceptions in the case study), especially after extended spells of political stability. It appears that what matters is the longevity of the polity itself and the specific forms of political instability. Moreover, by using Greece as a case, this thesis shows that there is a strong negative link between political instability and the volatility of the economic outcomes.

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Lastly, I should thank many individuals, family, friends and colleagues who have not been mentioned here personally in making this educational process a success. May be I could not have made it without their supports.

'It has been said that democracy is the worst form of government except all the others that have been tried.'

Sir Winston Churchill -British politician (1874 - 1965)

Western Europe

Dedicated to my Grandfather Apostolos

PREFACE

This thesis describes work done between October 2008 and August 2011 in the Economics and Finance Department in Brunel University under the supervision of Prof. Guy Liu.

Except where stated otherwise, this thesis is the result of my work and contains nothing which is the outcome of work done in collaboration. This thesis has not been submitted as a whole or in part on this or any other University.

Ourania Dimitraki

CHAPTER I

INTRODUCTION

1.1 Context and Background

> *'…A crude distinction between economics and politics would be that economics is concerned with expanding the pie while politics is about distributing it...'*
> *Alesina and Rodrick, 1994:465.*

How to earn more and live better is the people's main concern since the beginning of their existence. Therefore, their basic interest was invested in tracking economic growth. What is more interesting and important, though, is the link between the economic progress and the social attitudes through the established political institutions. 18th century's enlighten thinkers like Smith and Turgot (originator of the term and notion of *laissez faire*) placed the evolution of the economic activities at the centre of the human society which was evolving through its established political institutions. Scholars started to debate about the importance of the political structure as a society's stabilizer which would prosper the economy. However, the scholarly concern was divided into three main groups. One that supported the need for governmental security (and as a result the governmental control) over the economy as a tool for growth, another one which argue that any type of governmental control will result in a disastrous economy[1] and a third group which argue that the political regimes do not matter for economic growth. Every group provides empirical evidence towards what type of regime type should exist to accomplish the desired economic prosperity. The results, though, guide to confusion and require a more profound

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[1] E.g. Marxists, liberals, mercantilists, economic nationalists, etc.

research in the continuous search for the best possible political structure that enhances economic growth.

Some economies have grown rapidly in recent decades, while others have languished, subject to a large portion of their populations to grinding poverty. In addition, even today basic *virtues* of any society, like democracy or dictatorship, tolerance or violence, oligarchy or widespread opportunity, constantly change. These economic diversities among countries constitute a fundamental research issue; the better the understanding of the economic growth process the bigger the 'contribution to [the] human welfare' (Temple, 1999:112) and the more successful the design of policies would be (Barro and Lee, 1994). Yet, which are the forces behind this wide variance in countries' economic performance? According to Temple (1999) scholars did not show much of interest in socio-political discrepancies between countries. There are two reasons for this lack of interest: first, the lack of the data available and second, a lack of the appropriate interpretation of the theoretical literature (Temple, 1999). The result was to focus research on political and social factors only in the last few years (Alesina and Perotti, 1994; Alesina et al., 1996; Brunetti, 1997; Fedderke and Klitgaard, 1998; etc). A fundamental question that started the debate of the politics – economic growth -link was whether democracy and growth were incompatible objectives (Brunetti, 1997). As Gerschenktron put it 'even a long democratic history does not necessarily immunize a country from becoming a democracy without democrats' (1943:5).

The world constantly faces economic and political changes: it evolves. Numerous countries have undergone from poor to developing, others remained poor (e.g. in the African continent) and a few experienced economic miracles (e.g. Asian countries such as China and Taiwan). The economic changes, all over the world, were achieved through the

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welfare policies and the developmental priorities that governments set for their countries. After long research and debate it is well established and empirically suggestive that politics and economics are interrelated. Equally, Gourevitch (2008) highlighted the important, and at the same time, contradicting relationship between them. The reason is that politics affect the economic decisions in a country since economics is the base of a state's decision – making considerations and politics is a way to achieve them. Moreover, the overall economic performance of a state controls the durability of its political regime. This connection still remains in the centre of the scholarly debate since it is one of the more continuing relationships in the social sciences. Thus, to understand the way political regimes affect economic growth is fundamental for both theoretical and practical reasons. Not only is there an intrinsic value in knowing how politics affects development, but also it is crucial to understand the policy decisions under the above relationship. It is also essential to consider the degree of freedom that policymakers get when they seize power to govern (and sometimes the misuse of this power).

To date, there has been little agreement on what are the linkages between economic growth and political indicators which may have an effect on growth. Everest –Philips states that 'economic growth is a political process requiring effective political leadership, vision and sense of national purpose…' (2008: iv). Prior literature suggests three reasons for inconsistencies in the political –economic growth debate: First, the discrepancies in the modeling assumptions, second, the selection bias and third the mistakenly accepted notion (from the economists' viewpoint) that there is no well-developed theory of the genesis of democracy which resulted to differences in findings. This disagreement captivated the interest of this thesis.

Moreover, even though previous studies concluded that there is a profound connection between political regimes (and specifically democracy) and economic growth, far too little attention has been paid to local or national factors such as social structure, since economics were not dealing with national specificities (Gourevitch, 2008). It is, though, the social and the political structure which affects growth in the long –run. Thus, politics plays a fundamental role (as mentioned above), in the long run growth and institutions and regulations uphold a critical part of it. Consequently, in contemporary theory, the research of politics and in particular the regime type in relation to economic growth remains essential. Nevertheless, since the 1980s, there has been a flood of literature which deals with the growth of nations, catch-up, and technological transfers but only recently (the last 15 years) political indicators were used to emphasize the importance and to measure the effectiveness of the political regimes into the economic spectrum. Thus, this literature is less developed with smaller number of empirical papers but remains divided into the economic literature and political literature.

The research of economic growth originates mainly in three different theoretical explanations/ models. The first one is the neoclassical growth model which integrates convergence among different countries that compete for economic growth. The second one is the endogenous growth model which predicts country disparities; and the third one relates to the theory of economic development which takes a more historical perspective on the nation's struggle for economic growth. In turn, the neoclassical model is based on the diminishing returns to capital and treats long-run growth as exogenous. Endogenous growth theory examines constant or increasing returns to capital and integrates the effects of the rapid technological changes. The development theory includes a wide variety of approaches

to economic growth such as technological change [Gerschenkron (1962), Abramovitz (1986), etc.], neo-institutional economics [North (1990), Eggertsson (1990), etc.] and theories of institutional *sclerosis* [Olson (1982)]. These three theoretical explanations are not incompatible and researchers follow often more than one category. For example, Abramovitz (1986) adopts the neoclassical growth model, but due to his historical analysis fits also into the third category.

To sum up, this thesis modeling of economic growth and political regimes is a mix of all the above approaches. It explores whether the neoclassical model can explain the empirical finding in a number of developed countries. When the standard neoclassical model looks insufficient, this thesis extends it by using the notion from the developing approach, by taking into consideration the possibility of endogeneity of some regressors into the model. This work synthesizes previous approaches to give a better understanding of the effects of the political regimes and the social behavior on both the sources and the cycles of economic growth, with specific reference to Western European economies.

Finally, by describing previous principal findings and by introducing and reviewing the effect of democracy on economic growth through previous research, this thesis will indicate a more thorough understanding of regimes. The analysis, in this thesis, is through the basic regime theories and by grouping them in a rational way which indicates the past perspectives, the modern perspectives and finally the current perspectives on a governmental status. In addition there will be a reference to the 'key' theorists who debated both democratic and undemocratic theories in order to present a clear perception of the political and economic areas in a state. The empirical debate follows in the next chapters.

1.2 Research objectives

There are a number of different estimations related to the link between political regimes and their constraints and economic growth, which are divided adequately between positive, negative and no connection at all. Even though the empirical findings are contradicting and the literature devoted to the above relationship is huge, what stems out of it, is that the well defined link between the political and economic objectives.

The main objective of this thesis is to investigate the above relationship and shed light on what extend a regime's stability and the policies implement under that regime affects the economic area in the Western European context which has been integrated, mostly, into an international and more generic context in the past research (the sample has been used as a part of all the countries of the world). A question which arises at this point is why choose Western Europe as a research area. First, Western European countries are considered as both political stable and developed countries. However, the Western civilization which sprang its wisdom all around the globe had its origins in backward and chaotic societies during the middle ages. Second, in the current era Western European countries from *masters* became *peasants* since rapid economic growth is observable mostly in the Asian Tigers like China and Taiwan and countries of less importance in the developing world: that leads to a need to investigate the Western Europe. Finally, with the current economic crisis it is crucial to clarify the actual situation between these two objectives (political regimes and economic growth) related to the developed Western European countries to draw policy recommendations.

To sum up, the cultural background, the national institutions, the language and the religion varying across Western Europe. Additionally, the European countries differ widely

in their demographic and economic characteristics (e.g. Balkan countries like Greece are relatively less developed than countries like UK and France). While still not absolutely perfect, as the European countries are not identical, comparing the different areas of a region gave a much more homogeneous population to examine from the same continent (Europe) rather than a global sample of nations which made the findings more vigorous.

1.3 Methodology

This thesis provides evidences on the determinants and the channels through which political regimes affect the dynamics of economic growth. To do so a number of approaches are used to investigate the relationship between political regimes and any possible channels (i.e. political instability) and economic growth in Western Europe. Those include a political economics approach, a single equation regression which assembles the need (to correct for bias or overestimation in calculating the effects of political regimes on economic growth) for an instrumental variable model and a case study. The advantage of testing the above relationship in a single country is that historical and institutional irregularities typical of that country turn out to be useful in valuing the econometric results. However, generalizing the results which is the limitation of the single country testing are resolved by the previous chapters which investigate a group of developed countries.

Finally, sociopolitical and institutional dynamics are examined in a geographical perspective (Western Europe), explicitly accounting for the spatial interactions between different regions in the form of spillovers and network externalities.

My intention is to provide a broad range of estimates of the direct and indirect effects of the relationship between political regimes, political instability and economic growth and highlight the importance of any political factors that affect their interaction with reference to Western European countries.

To better understand the inclusion of the channel analysis (system of equations) I consider a neoclassical Cobb-Douglas production function:

$$Y = A \, K^{\alpha} \, L^{\beta} \tag{1}$$

Where Y is the output of an economy, A is the level of the technology, K is the physical capital, and L denotes the labor force. By differentiating (1) with respect to time we obtain the structural Solow model:

$$\frac{\dot{y}}{y} = \frac{\dot{A}}{A} + a \, \frac{\dot{k}}{k} + \beta \, \frac{\dot{L}}{L} \tag{2}$$

Where, the low-case letters refer to per worker quantities. We also added a list of both political and economic growth determinants to enrich the structural Solow model (e.g. macroeconomic policies) to allow for consideration of probable corresponding channels. In this thesis I estimate equation (2) in the context of controlling the political regime and stability which enable us to see if the Solow theory can still explain the growth effectively when the political impact is embedded in the growth process.

1.4 Thesis structure

This thesis consists of six chapters. The first chapter introduces the research concept. This chapter describes the main idea of the thesis by clarifying the reasons to undergo into the current investigation and its contribution to the general knowledge.

The second chapter examines theoretically the relationship between the political systems and its effects on people's economic well being. This chapter identifies the main political regimes and introduces their main characteristics and concepts. Then it acknowledges the relationship between the different political systems and economic growth. The main reason for this investigation is to establish the theoretical political ground and the importance of ideological beliefs as an underlying force of economic growth.

The third chapter examines the relationship between the political regimes and economic growth (by adopting the political perspective of the political regimes) with reference to 20 Western European and peripheral countries. The main argument in this chapter is related to the type of political regime which is 'better' or more effective in terms of wealthy creation. The findings support the fact that civilian regimes have a negative impact on the wealth creation because of the additional channel of political instability.

The fourth chapter examines the puzzling character of the relationship between political instability and economic growth in Western Europe. To do so, firstly a measurement of political instability was constructed by following the political theory of violence (Gupta, 1990) to find that the character of the above relationship is both parabolic and fragile. The findings support that political instability can slow economic growth through the channel of increased uncertainty in economic policies and those governmental changes may lead to a positive change in economic growth.

The fifth chapter investigates the influence of political instability on long-run economic cycles between 1919 and 2008 with relevance to the historical context of Greece. The need to examine Greece as a case study was necessitated by the current economic critical situation in the country which shifted the world's attention to the state of affairs that the institutional and economic regime faces. The current stability of the Euro requires us to investigate Greek institutions, governmental policies (i.e. governmental expenditure) and societal unrest as potential explanatory variables that led to the current critical socioeconomic situation. The findings show that two indicators play a key role in the current crucial situation: the excessive governmental spending on defense expenditure and the counter -cyclicality of public debt.

Finally, the sixth chapter concludes this study by discussing its limitations and integrating policy recommendations.

1.4 Main Contributions

The main reasons for undergone with the current thesis are: first, to better understand the sources of growth which is crucial since growth leads to large differences in standards of living between countries over time. Second, even though the extent of the academic interest is broad and contradicting it contains overambitious recompenses[2]. A third reason is that not all countries have the same history, the same values, ideological beliefs and culture and that is a factor that many studies do not account, therefore generalization of findings are challengeable. Fourth, the rising living standards do not lie only in the tangible

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[2] See for instance the work of Huntington, 1987; Sirowy and Inkeles, 1990; Olson, 1993; Jackman, 1993; Chan, 2002 and Feng, 2003; among others.

improvements (materials) that they bring on people's lives but how those standards shape people's socio-political character. Thus, the way people think about economic growth and as a consequence their overtaken actions, is a matter of far broader importance.

A main distinctive of this thesis is that it combines both politics and economics to research the regime-growth relationship. In short, this thesis uses the political theory to direct the empirical testing. For example, in order to create the political instability indexes (chapter 3 and 4) the usage of political theories e.g. for theory of violence and welfare of the groups, were used. Consequently, on the one hand, we have the economic theory which highlights the assumption of self utility maximization that might lead to wrong choices. On the other hand, the desire for group welfare exists which create a need to merge the economic assumptions with the people's desire for higher welfare for the group they belong. The above combination throughout this thesis creates the ground of a better understanding of the regime –growth debate by incorporating both human behavior and their reactions (e.g. conflict, demonstrations, protests, etc.).

Furthermore, this research uses not only the dichotomous variable (Polity2[3] variable) to distinguish between democratic and dictatorial institutions but also alternative measures for the regime type (e.g. civilian regimes). The main reason is to expand the minimal notion of the democratic beliefs. Most of the previous literature refers to democratic procedures rather than substantial policies or other outcomes that might be viewed as democratic (e.g. scholars account only specific characteristics of the regime and the economy to characterize

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[3] The polity2 variable from the Polity IV project provides a qualitative measure of democratic institutions, identified by the existence of the level of political participation, civil liberties and institutionalized constraints on the exercise of power by the executive. The POLITY2 variable has 21 categories, ranging from −10 (most autocratic) to +10 (most democratic), but divisions in this index is a bit unclear, especially since the POLITY2 index is a nonlinear summation of sub-indices intended to capture aspects of regime type.

it as democratic). This thesis uses the term civilian regimes to avoid stretching the definition of democracy as noted by Collier and Levitsky (1997) combining this with policies and outcomes which are generally accepted as democratic (e.g. elections or the existence of constitution and the legislative fairness). Figure 1.4.1 show the (broaden) democratic concept –or as it is known the ladder of generality[4]:
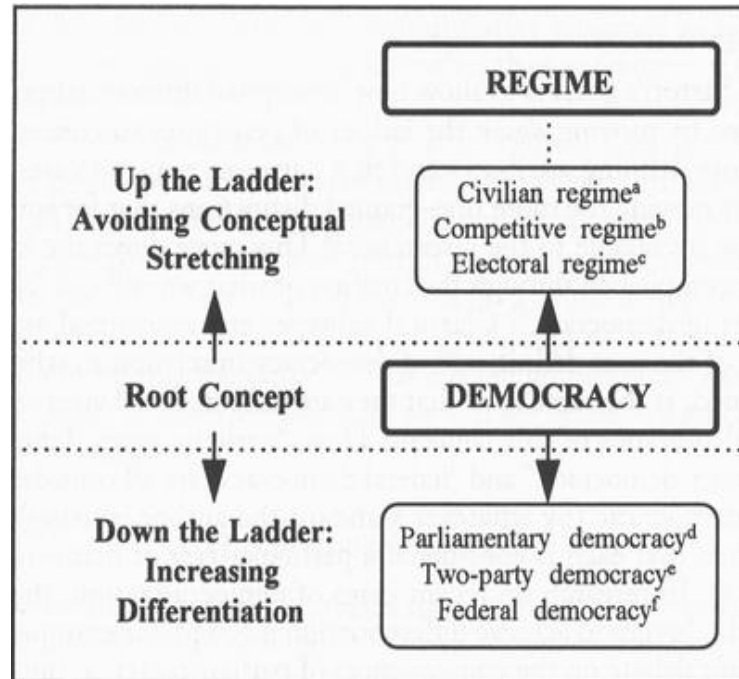
Figure 1.4.1: The ladder of Generality- adapted by Collier and Levitsky, 1997 pp 436.

Furthermore, democracy, as a political system has been researched more than other political regimes and the reason is that a democratic regime guards freedoms like individual and political rights, property rights, social prospects and transparency, it secures and protects people's security, thus by its definition democracy must lead to growth (there are, thought, contradicting opinions about this issue which will be analyzed in the chapters below). Chan (2002) argues that scholars and politicians a priori conclude that the

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[4] The Ladder of Generality (a, b, c, d, e and f denote accordingly the scholars that used the particular types of democracy: Booth, 1989; Collier and Collier, 1991; Petras and Leiva, 1994; Linz, 1994; Gasiorowski, 1990; Gastil, 1990).

democratic systems are better in promoting economic outcomes. On the other hand, scholars such as Remmer (1978) and Gandhi (2008), among others note that authoritarian regimes produce better economic growth since they are more stable and they follow political order. Furthermore, Islam (1999) argues that a democratic system is not a precondition to economic growth, since authoritarian systems may as well promote and boost growth in nations. Examples are countries such as China, Chile, Greece, and Spain which achieved outstanding economic performance under authoritarian and bureaucratic-authoritarian regimes[5].

Additionally, political indicators that capture governmental stability like political violence, and governmental changes, in the framework of a democratic regime, are used (in order to combine them with economic indicators) and to test findings from the previous literature when the sample is broken down to a specific region (as against of the whole globe). The above combination will give a clearer explanation of the impact and the effects that the political regimes and the policy making area have on the economic growth since there is still much to elaborate in the regime –growth debate (e.g. the resolution of the societal conflict).

Thus, this thesis contributes to the regime-growth debate by taking into account first that there should be a much more careful research in the political arena and the regimes' type and their effects on growth with respect to significant institutional concepts such as effective political parties and a country's constitutional structure. The clarification of the

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[5] 'Bureaucratic authoritarianism' is a totally different type of regime (different of authoritarianism) and it might be considered as a result of transformation of other types of authoritarianism. 'The bureaucratic authoritarian state is, to a large extent,… a reaction to extended political activation of the popular sector' with a significant increase in the technocratic role (O'Donnell, 1978:6). In other words, O'Donnell named the military regimes in Argentina as 'bureaucratic-authoritarian' to differentiate them from oligarchic and populist forms of authoritarian rule found in less developed countries.

above debate might contribute significantly to improving policies mainly in the developed Western European countries. The reason is principally historical since there are differences between the genesis of democracy and the free market (that happened almost simultaneously in the Western world) and their applicability in that region. Second, the need to clarify matters such as the academic contradicting results, the division between the economic and political perspective and the selection bias, in a systematic way by focusing on both the institutional concepts and policy outcomes by depending upon the European regional context. The importance this clarification lies to the policy implications of resolving political constraints such as societal conflict. To prevent conflict entails the interaction of both political theory and economic empirics by integrating also the political decisions. The essence of the above interaction is to offer warnings in Western European countries which even though they are relatively stable the need to be prepared to face possible distinct violence in a normative way is vital.

CHAPTER II

AN INVESTIGATION OF THE EFFECTS OF THE POLITICAL REGIMES ON ECONOMIC GROWTH: A POLITICAL ECONOMIC GROWTH APPROACH

2.1 Introduction

This chapter will be introduced by its conclusions: the current existing political regimes belong somewhere in the *in -between* of a political continuum as it is described by Congleton (2001). Both democratic and dictatorial regimes, do not exist in their extreme format (figure 2.6.1), with the pure political meaning (e.g. an unrestricted leviathan executive) but rather systems like semi-democratic, parliament-democratic etc. or one party dictatorships exist. In those regimes the decision making process and governmental liability is divided to a branch of government headed by one person and another branch headed by a committee. That format is the neglected so called 'king and council' constitutional template (Congleton, 2001).

In the 20th century issues such as dictatorship and authoritarianism came into the scene since the Western world lived under the veil of the above regimes. It was that historical moment that the scholarly debate initiates, regarding the countries' well being under specific political regimes, such as democracy and dictatorship, and any links between them. Researchers, politicians and a series of papers documented the fact that there is a close relationship between a country's political regime and its development. However, some parameters were left out of the debate, such as the political culture of a country, the political learning of a country's people and specifically the country's history. All the above in combination with a regime's stability, determine a government's ability to perform through collective actions. Additionally, some countries have attracted scholars' interest

more than other e.g. the developing countries are always in the centre of the scholarly concern whilst the developed world is scarcely under research.

Economic growth is a topic with many ups and downs in the history of economics. The debate of the relationship between political regimes and economic development goes back to the 1950s. Intellectuals and scholars all around the world tried to analyze and explain whether the economic development leads to a democratic regime or whether democratic countries have higher growth levels. Conventionally, many scholars such as Diamond, Lipset and Linz (1995), and Rustow (1970) among others, concluded that democracy is either a precondition to development or that a democratic regime follows the economic development. However, since the debate concerning the connection between development and political regimes circulated the last 50 years, many patterns and empirical investigation of the above connection has been established.

This chapter addresses the above relationship in a different way by discussing what is politically theoretical important for a regime type to enhance or retard the economic growth by using the political economics approach. Thus, the core investigation of this chapter is to examine the relationship between the political systems and its effects on the economic well being from the political perspective. To do so, firstly the different regime types need to be identified. Then the relationship between the different political systems and economic growth will be acknowledged. The purpose of this classification is to develop qualitative expectations of how economic growth should be related to political systems. The analysis of the theoretical expectation will help us to clarify important variables that might affect the regime type / economic growth relationship (Britt, 1997). At this point some questions arise (even though it is beyond the scope of this chapter to review the existing extensive

literature). What is democracy? What are non-democratic regimes? What is development and where does it come from? What is the meaning of political and economic development and what is their relationship?

2.2 Democracy

Democracy is a common and popular word. People talk about democracy without sometimes to have a very clear idea about what exactly means. In fact, few words have been mistreated, during the last century, as the word democracy, (in particular from different perspectives and theoretical backgrounds). Terchek and Conte noted that democracy has a long history and 'has undergone a series of critical reinterpretations … [which] have produced serious disagreements… and continue to fuel contentious debates' (2001: xiv). Therefore, intellectuals all around the world have tried for many decades, to understand, define and analyze democracy. Furthermore, the debate has circulated among politicians who have tried to attach it to their actions, decisions and political agendas. Moreover, what is democracy? 'The word democracy, or *demokratia* as the Greeks call it, stems from the Greeks and literally means 'rule by the people' (Birch, 1993:45). Literally it stems from the combination of two Greek words 'demos' which means people and *kratos* which means rule: a state ruled by its people.

The notion of democracy was revived in 1100 C.E by the Italian city –states in the middle Ages and the Renaissance and then disappeared to reappear in the 18th century. Since then it has been characterized by a series of struggles (for instance the French Revolution in 1789) and has provided the strength to express the peoples' will. Democracy

is often what reverberates in people's minds as they struggle for freedom and a better way of life.

Today people talk about democracy and its applicability in a state's sovereignty. According to Fotopoulos (2005) the meaning and the concepts of democracy have been distorted: liberal academics, theoreticians and politicians confused the modern concepts of democracy with its real meaning, which is the 'rule by the people'. The concepts of democracy have been confused with the oligarchic representative system whereby the rulers are a small minority of individuals and democracy has barely any relation to the classical conception (Fotopoulos, 2005).

Nevertheless, for many decades scholars and theorists have made attempts to define democracy as a form of governance by adding quite a few adjectives at its meaning such as parliamentary, liberal, economic, industrial etc. perspectives which in turn creates the feeling that a number of different types of democracy exist (Fotopoulos, 2005). Thus, 'liberal theorists referred to 'liberal' or 'representative' democracy, social theorists referred to 'economic' or 'industrial' democracy and Leninists referred to 'people's democracies'' (Fotopoulos, 2005:176).

From Aristotle to the Oxford English Dictionary (1933) and Przeworski (1986) and Bauer (1957) among others, democracy has been described as the form of governance of a state ruled by its people and in which the sovereign power exists in the people and is not shifted in favour of any interest group or class. Thus, the concept of democracy has a meaning: the direct exercise of power by the people themselves excluding any form of ruling by minorities and institutionalising the equal involvement of all citizens in the political area. In addition, the word 'people' denotes all the citizens in a state without

exception and the word 'rule' means the public policies established by the process of voting whereby the rulers and representatives of the people are determined.

Democracy is for that reason the freedom to express peoples' will and to create laws to govern their own countries with their elected members. In ancient Athens, for instance, people used to gather in a place (agora) and express their will in front of an assembly by voting on every subject they had to decide about (even if it had to do with the legislation system). However, democracy is something beyond the aforementioned. A government enacts laws and most countries have a constitution –the ultimate law– so as to establish and sustain balance and order in the state. Hence, democracy is not only a constitutional process of a legitimated system. Government consists only of the elected members of a nation. Apart from this, in a democratic system other essential groups participate, such as political and social parties and organizations and laws and the constitution and the parliaments and above all the people's power to express their will.

Schmitter and Karl (1996) argue that democracy is the ideal which its meaning should be distinguished carefully in the political systems analysis. They also denoted that the ideal of democracy was what motivated people to transform the political systems all over Europe from non -democratic to democratic. Schmitter and Karl (1996) further argue that there are many types of democracy and their effects and practices vary. However, 'the specific form [of] democracy takes is contingent upon a country's socioeconomic conditions as well as its entrenched state structures and policy practices' (Schmitter and Karl, 1996:50).

Schmitter and Karl (1996) further researched the democratic notion from the institutional perspective that is they distinct democracy from the political actors behaviour and the methods they develop to access the principal public offices and institutions. The

main differences they present between democracy and other regime types are the way that the rulers come to power, the accountability for their actions and the people actions-*demos*. In other words, people –demos (*–δήμος*) is the key constituent to every democratic system.

Furthermore, Dahl (1974) argues that there is not only one theory of democracy but many times scholars' efforts to describe and define the world were insufficient. Democracy has been analysed from different points of view and 'there are so many possible approaches to any social theory and in dealing with democracy a good case can be made … of these [different aspects or] possibilities' (Dahl, 1974:1). It has been called a universal language or a set of values that people feel its importance (Amartya, 1999). However, beyond the pledge to rule by the majority or minorities, democracy is engaged in a controversial debate concerning initial purposes and scopes such as power, equality, liberty, justice and private interests. George F. Kenan (1978) (a key academic figure during the cold war) notices that democracy includes values and ideals that the Western countries carried in other parts of the world where they appeared as settlers. What democracy did for Western countries? Keane (2009) argues that many questions remained unanswered of the validity of democratic values in terms of enhancing development in the Western world. This thesis, investigates democracy in the Western states to test whether its values and ideals favoured the states that settled the grounds of democracy in the whole world.

2.3 Totalitarian –Authoritarian regimes: Theories of forms of Government

During the 20th century the world has faced a series of extraordinary events with non-democratic regimes to predominate it (throughout the world): from North America to Europe and Africa, totalitarian regimes existed, and democratic forces have challenged

authoritarian regimes on the left and on the right. The key role in the political spectrum has been played by military forces (Acemoglu, Ticchi and Vindigni, 2008). In some cases this trend led to the establishment of democratic governments (Acemoglu, Ticchi and Vindigni, 2008). In other cases the weakening of authoritarian regimes has promoted economic growth (O'Donnell and Schmitter, 1986; Stepan, 1988; Scott, 1995) and political influences of ultra-nationalists or religious -fundamentalist movements tried to enforce their own kind of authoritarianism (Mann, 2004).

The term totalitarianism was, first, used in Italy in the 1920s by the Italian philosopher Gentile. The research which defines and documents totalitarianism is *The Doctrine of Fascism* written by Gentile in account of Mussolini in 1935. Totalitarianism was used to describe Fascism as a 'total conception of life' and it was used as '*ad libitum'* by Mussolini in order to describe his modern system of Fascist government, which he termed as '*lo stato totalitario':* 'Fascism is totalitarian, and the Fascist State—a synthesis and a unit inclusive of all values—interprets, develops, and potentiates the whole life of a people' (Mussolini, 1935:14). Furthermore, 'the totalitarian movements have been called secret societies established in the daylight' (Arendt, 1958:376).

Nevertheless, it did not take long for opponents of Fascism and especially Mussolini, such as Turati and Kulischov, particularly those of a liberal persuasion, to adopt the term in their critiques of dictatorial political states (Di Scala, 1980). Yet it was not just a label that was applied to the Fascist regimes of Germany and Italy; the Communist Soviet Union was also given the name 'totalitarian'. Additionally, the post –Mao era in China was described as communist totalitarianism (Guo, 2000). This has led to prolonged debate regarding

whether such a direct comparison between these Fascist and Communist regimes can be considered justifiable since they were significantly different.

According to Brzezisnki (1956), there is a difference between old or traditional dictatorships and modern totalitarian dictatorships. The latter case, suits Hitler's Germany, Mussolini's Italy and Stalin's Soviet Union; that is, the 'total' states of Soviet Union, Germany and Italy during the 1930s and 1940s were cases of modern dictatorships.

Moreover, according to Johnson (1976) the Western society's first totalitarian civilization began with medieval Christianity. For the first time, such a broad ideology appeared and was forcibly compelled to everyone. Around the same time, most urban centres collapsed or drastically de-populated, leaving the overwhelming majority of the population as serfs, tied to the land for life.

That medieval Christian totalitarian system was somehow unusual. Firstly, the Christian ideology did not focus on explaining the economic system; it was accepted as a given that most people would be serfs, rather than argued for as the most advantageous economic system. The totalitarianism of medieval Christian society therefore existed only partially on moral grounds (intellectual, cultural, and personal issues), and partially from absolute inactivity (in the economic area) (Johnson, 1976). Nevertheless, the individual freedom was practically non- existent, and the denial of his freedom was in large part an essential doctrine of the reigning ideology (Johnson, 1976). Secondly, the Christian totalitarianism co-existed with remarkable division of powers. The Church co-existed with the state, sharing power with it. Additionally, the absence of individual freedom together with a complete and compulsory ideology, may exemplify the medieval Christian society as totalitarian.

Many scholars involved to the totalitarian research and generated many diverse concepts (von Beyme, 1998). However, the main contribution to the totalitarian debate has been made by two German scholars, who are Arendt and Friedrich (von Beyme, 1998) (and a few years later Brzezinski). Arendt; 1951, Friedrich; 1954 and Friedrich and Brzezinski; 1965 (who developed the classical totalitarian theories) have explained the birth of totalitarianism as something relatively new, a product of the modern age – and also as a direct result of the World War I. According to the above scholars, it became obvious that for a nation to be completely effective in the modern world it would have to organize all its resources towards the same uniting goals. Simultaneously, any technological advances (in relation to mass-communication etc.) used as the necessary tools to control the masses and they were available to be used by states that were looking for total control (Arendt, 1958).

Arendt's book which published in 1951 was influenced by the overwhelming events during and after the World War II: mostly the rise of Nazi Germany and the terrible destiny of the Jews at its hands. Hence, there was the rise of Soviet Stalinism and its total destruction of millions of peasants. According to Arendt (1958), the above events were the total evil, and after those the Western civilization was broken down. The reason is that the world can no longer turn back to the traditional way of life, and 'though we are saturated with experience and more competent at interpreting it than any century before, we cannot use any of it' (1958: 434). Arendt (1958) noted that even the value of history of the Western civilization was in a total rejection from people since no traditional values were existed at that time. Moreover, she argued that these demonstrations of political evil could not be understood as expansions of Hitler's or Stalin's personal interests or as they followed already existing outlines (i.e. the racist theory that was talking about the

extinction of Jews). The above systems symbolized a completely 'novel form of government', one built upon terror and ideological propaganda (Arendt, 1958). As believed by Arendt, older dictatorships had used terror as a tool for reaching power.

However, those modern totalitarian regimes showed little strategic rationality in their use of terror (Arendt, 1958). Therefore, as she described it, terror was an ending point for the people and especially the Jews. Furthermore, the Germans were based their ideology into older laws and historical theories so that to justify their terror and their beliefs such as the unavoidability of a war between the Arians and other 'degenerate' races (this was referred by philosophers such as Chamberlain and De Gobineau).

Arendt tried to investigate the roots of modern totalitarianism. According to Arendt (1958), the totalitarianism's success rested upon the destruction of the ordered and stable environment in which people once lived. Thus, the totalitarian leaders rallied populations to do their will. The World War I, the Great Depression and the revolutionary conflicts in Europe, left people open to the spread of the totalitarian ideology: it was presented as an idea that would assign peoples' misery, and indicate security against future dangers such as another war (Arendt, 1958).

Totalitarian ideologies were presented as the answers to people's problems and miseries. Moreover, those ideologies claimed that they discovered the way that past and present events (e.g. conflicts, wars, etc.) can be explained so as to secure any future threats (Arendt, 1958). Accordingly, the appeal that the totalitarian ideas had on European populations was enormous: people started believing on those 'evil' ideas in order to secure their liberty and any future war. Furthermore, the acceptance and the establishment of the totalitarian state were used by the bourgeoisie as an instrument by which to further its own

sectional interests (Arendt, 1958). This in turn led to legitimize political institutions for personal interests, and to degenerate values such as citizenship and deliberative consensus that had been the core values of democratic politics (Arendt, 1958). Thus, the rise of totalitarianism was to be implied in terms of personal interests that had damaged the conditions or a possibility for a feasible public life that could unite citizens, while simultaneously protecting their liberty and uniqueness (a condition that Arendt referred to as *plurality*) (Arendt, 1958). Arendt wanted to give a sense of the unique reality of totalitarianism, as a horrifying and utterly new form of government. In the centre of totalitarianism's ideology rests the concept of the individual becoming an objective: 'Totalitarianism is never content to rule by external means, namely, through the state and a machinery of violence; thanks to its peculiar ideology and the role assigned to it in this apparatus of coercion, totalitarianism has discovered a means of dominating and terrorizing human beings from within' (Arendt, 1958: 325).

Another classical theory of totalitarianism was developed by Friedrich. In his book *The Unique Character in Totalitarian Society* in 1954 (with a modification in 1956 with Brzeniski). They developed their totalitarian theory during the Cold War and described the totalitarian states as 'more inimical to human dignity than autocracies of the past' (Friedrich and Brzeniski, 1956:303). Friedrich set out a series of characteristics of totalitarianism which are known as 'the six-point syndrome'. He claimed that totalitarianism was a new phenomenon and also that its characteristics could be applied both to the right wing and left wing types of political rule. The characteristics or the six-point syndrome are the following: a) An official ideology, focused on a 'perfect final state of mankind'; b) A single, hierarchically organised mass party – usually led by one man; c)

A monopoly of control by the party of all military weapons; d) A monopoly of control over all means of mass communication; e) A system of enforced police control using both physical and psychological powers; f) Central control and direction of the entire economy (Friedrich and Brzeniski, 1956:9f). According to the 'six –point syndrome' the totalitarian states of Hitler's Germay, Mussolini's Italy and Stalin's Soviet Union were alike and 'thus different categorically not only from liberal constitutional states but also from traditional dictatorships' (Siegel, 1998:13).

There is, though, another school of thought (scholars such as Karl Popper, 1943) that traced the history of totalitarianism back to Plato's totalitarian *Republic*. Most totalitarian theories described totalitarianism as a new phenomenon which was the result of mass terror and modern technology i.e. Arendt, 1958. Popper argued that totalitarianism was an old concept and he traced it back to the thought of Plato and Aristotle and the Ancient Greek poleis-states. However, Popper (1943) was right about the origins of totalitarianism, even though he did not analyze his theory comprehensively: he did not know Greeks, he despised Hegel, and he was not well informed about the Marxist theory. Nevertheless, he concluded that 'Plato's totalitarianism may not have directly inspired modern fascists, but it influenced Hegel, the modern totalitarianism's prophet' (Hacohen, 2002: 393).

Part of totalitarianism is authoritarianism. An uncontaminated type of political system is the authoritarian political system. It stems from the French word *authorite* which means power or right to force obedience. According to Linz an authoritarian regime is a political system with 'limited, not responsible, political pluralism, without elaborate and guiding ideology, but with distinctive mentalities, without extensive nor intensive political mobilization except at some points in their development, and in which a leader or occasionally a small

group exercises power within formally ill-defined limits but actually quite predictable ones' (1964: 255). Authoritarianism is a *closed system* (measured by the political rights and the participation of the citizens of a country, in changing the system), with authoritative political positions open to either an individual or a few (elites) by virtue of birth or other qualified status, and based on customary law. Authoritarianism is an ideology which highlights the right to the government to rule without the citizenry's content. Although, is a milder form of governance than totalitarianism, still it is opposed to any form of democratic liberalism. Groups are so long independent that they do not try or want to change the traditional position, and the elite's goals are concerned to preserve traditional positions. Furthermore, the centre in the authoritarian ideology are values like patriotism, nationalism, economic development, social justice among others without having any actual ideological content (like totalitarian regimes) except the ruler's mentality (e.g. military elites, bureaucrats, technocrats, etc.). Authoritarian regimes lack in terms of ideology and in turn this lack limits their capacity to organize and control the people within the state (Linz, 1975). The above lack directs to imitate dominant ideologies like dictatorship and democracy creating a heterogeneous character in regime's ideology. The lack in terms of ideology the mimic character of those regimes and individual mentalities that are expressed through those regimes limited the scholarly interest (Linz, 1975).

To sum up, totalitarian regimes is more brutal than authoritarian regimes: they create mass terror, genocide of entire people especially people they consider threat (e.g. Nazism Germany). Totalitarian regimes seek a total control in every societal system, economic, political etc. with regards to an ideology which is somehow like religion. Authoritarian regimes governed by one ruler or elite group with no utopian ideas and they seek people's

loyalty based on moral grounds (ideological). They do use police force when they face rebellion oppositions but not as brutal as totalitarian regimes (e.g. ban strikes and protests). The main objective in authoritarian regimes is to secure power not to follow any ideology (e.g. authoritarian regimes exist both in left wing and right wing ideologies).

2.4 Development and Regimes

Development, along with the economic well being, has become an important objective for many nations. Some economies have grown rapidly in recent decades, while others have languished, subjecting a large portion of their populations to grinding poverty. However, despite many attempts to achieve harmony between development and economic welfare, in reality, the economics and political regime cannot be so easily compartmentalised. As Malatesta noted, 'every economic question of some importance automatically becomes a political question' (1977:130-1). What explains this wide variance in economic performance between nations? Economists have as yet only explained part of the variance of the above relationship[6]. Having recognized that half of the variance, research began to centre on political factors that affect the economic area in a country.

At this point, a narrow definition of development is essential to be given. Ray noted that development 'is surely the most important and perhaps the most complex of all economic issues' (1998:3). For states and people, the development refers to progress or according to Ray to minimize the 'economic inequality throughout the world' (1998:3). It is the general

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[6] i.e., Lipset (1959) describes as linear the form of the relationship between development and economic performance with Cutright (1963) to justify that form by testing it in an empirical way.

economic, social and cultural progress of a state. It is the development of the country and nation and furthermore the individual development. It includes economic, social and cultural development and also includes civilizations of various countries and nations.

Therefore, for the developing countries, it is a vital responsibility to *develop* the economy, society and culture, to improve the living standard of people, to eliminate the hunger, poverty, and illnesses and to resolve the individual needs such as concerns for food, shelter, employment, education and medical treatment. However, development in a country has to be accounted in the international context because 'inequality or wealth plays a central role in many development problems' (Ray, 1998:5). Hence, 'economic development [cannot] be identified, in a definitional sense, with the level or growth of per capita income… development is not just about income… is also the removal of poverty and under nutrition' (Ray, 1998:8); therefore, it is a multidimensional issue.

Mill (1869), Lipset (1959), Diamond, Lipset and Linz (1995), and Rustow (1970) among others, argue that without parallel construction of democratic politics it is impossible to develop efficiently a nation's economy, society or even culture. Even if the economic, social and cultural development is succeeded, it can neither be merged, nor guarantee an economic wellbeing, or even the society and its culture to continuously develop. Meanwhile a nation's main concern is to develop a democratic polity and promote the construction of democratic politics. However, there are historical evidences that democratic regimes not always promote economic growth (e.g., in Greece during the 1967 military regime the economic well –being was outstanding, Franco's Spain which had the highest economic growth in the world during his rule. Pinochet's Chile which was economically dead under socialism had extremely developed later on. All the three

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countries had economic freedoms and stability of property. They were politically authoritarian governments, but they were not keen to raise state deficits). Therefore, an interim conclusion is that democratic politics do not always promote economic development; not at least in every country of the world. The result would be citizens to revolve and their discontent is usually channeled through mass protest and violent unrest rather than through electoral endorsement, even if elections do formally take place. Governments tend to respond with a mix of violent oppression in an effort to restrain conflict. Nevertheless, there are some factors such as the national characteristics and needs of every country and sometimes the visions that the political leaders set which determine the economic, social and cultural well –being of the state.

2.5 Power: The common bond

Up until here, a short introduction of the underlying theory related to different types of regimes was presented. However, there is one concept which needs to be included and that is the common link between different types of regimes and their agendas regarding their citizenry. Different political regimes are determined by different ideologies, ideas and tactics. The common linkage between the political actors in any regime is their struggle for power.

Every government under any regime type has to have the ability to perform either in a collective way (democracy) or individual way (autocracy, totalitarianism) and set rules, agendas and policies concerning the development or the future of the state. This ability to decide, perform, act and change is known as power. Power is another puzzle among

political scientists since there is not one definition to describe it. It means different things to different occasions. According to Wagner (1968), power is the ability to act either through individual decision for individual or collective acts (i.e. under totalitarian or authoritarian regimes) or collective decisions for individual or collective acts (under democratic regimes). Power can be determined also by the control of resources (i.e. wealth) which determines the ability of an individual or a group to influence the decision making area. The power of decision relates to the choices people have among a range or set of similes of a future we think is possible (Boulding, 1989).

Simon (1968) describes power as an asymmetric relation between actors. Political regimes incorporate behavior expectations from one group to the other or from the group (i.e. citizenry) to the individual (governor of any type). According to the ideology formed under each regime, a political regime prescribes appropriate behavior roles to its participants (Simon, 1968). These behavioral roles include appropriate actions to restrict also any particular participant who absconds from the predetermined roles. However, one precondition is that the rest of the actors to behave according to their roles. If a large number of actors decide to constrain from the roles then the sanctions of the regime disappear (Simon, 1968). The political regime is stable when all the actors behave according to their expected roles and they support that. The regime becomes unstable when constrains happen and actors behave beyond their roles by creating disorder. Thus, the use of power is associated also with conflict and responsibility to solve it; power can balance actions or distort them by creating instability in the political environment.

Power was unequally distributed since the beginning of civilization. The human societies had a tendency to be divided into a small group (i.e. the governors) of dominant

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and influential people who were taking the decisions and a large group of relatively needy and powerless (i.e. the citizenry). As societies were developing, political institution were established to solve the inequality of distribution of power. Boulding (1989) states that a characteristic of power is conflict since, beyond the above, in social systems (political systems). A variety of option restrictions exist in some groups of people which are built on some decisions made of other people. Conflict arises when some groups shift those restrictions and reduce the power of other people or groups (Boulding, 1989). Resolution occurs with the establishment of agreed property lines between people or groups so that no group will reduce or increase levels of power by pushing or overlapping possibility borders in any extend (Boulding, 1989).

Power is one of the key concerns in the Western beliefs about political phenomena. For political systems and its institutions the main idea is to 'get things done' in an effective way which sometimes that might cause oppositions and discontent. To solve such oppositions usage of force needed. Force, as a solution, creates instability and that destabilizes the balance of the political system bringing both economical and political constraints.

2.6 Further discussion

Ideology plays a fundamental role in the classification of different regime types. Ideology includes a society's perception of the world and the goals they set. A society has both a government and an economy. Thus, the ideas and ideals of how society should be, are related to its freedoms and controls which further classify a country's both political and

economic environment. A summary of the main regime types that analysed above can be

seen in table 2.6.1:

Table 2.6.1 REGIME TYPES			
	Authoritarian	**Totalitarian**	**Democratic**
Limitation on command structure	NONE	NONE	YES-MANY
Effective responsibility	NONE	SOME, party determined	CONSIDERABLE
Organization of command **State** **Bureaucracy/military** **Individual leader**	YES	YES PARTY CONTROLLED YES COLLECTIVE	STATE AND STATE AGENCIES SUBORDINATE ELECTIVE
Penetration of society of political organs	YES	EXTENSIVE	LIMITED
Mobilization for supports	YES	STRONG	VARIABLE
Official Ideology	WEAK	STRONG	WEAK
Parties	WEAK	SINGLE	MANY
Police, force, intimidation	YES	YES	VARIES
Individual rights (protection) **in form** **in substance**	MAYBE QUESTIONABLE	YES NONE	YES YES, GENERALLY

Source: adapted by Professor's Brown-Foster's webpage available at:
http://www.polisci.ccsu.edu/brown/ps104.htm

Furthermore, part of a society's ideology is freedom (political, individual etc.) and the level

of a government's control. The diagram below represents the different regimes in a scale

with the extreme opposites at the ends of the continuum (ideals). Systems which their basic

ideology is freedom are called democratic, and systems based on governmental control are

called dictatorships. In today's world most of the political systems lie in between this scale.

Below are the scales recommended by Congleton (2001).

POLITICAL FREEDOM
(DEMOCRACY)

POLITICAL CONTROL
(DICTATORSHIP)

Figure 2.6.2: Political Scale

Furthermore, part of a society's existence is its economic system which classifies countries as developing and developed. Below is another scale, the economic one, which classifies governmental systems according to economic freedoms and controls.

STATE CONTROL   CAPITAL CONTROL
(PUBLIC ENTERPRISE)   (PRIVATE ENTERPRISE)
SOCIALISM   CAPITALISM

Figure 2.6.2: Economic Scale

By adapting the above two scales together we get a framework of combinations between political and economic systems and its extremes. That is represented in the matrix below:

Figure 2.6.3: Matrix of Systems

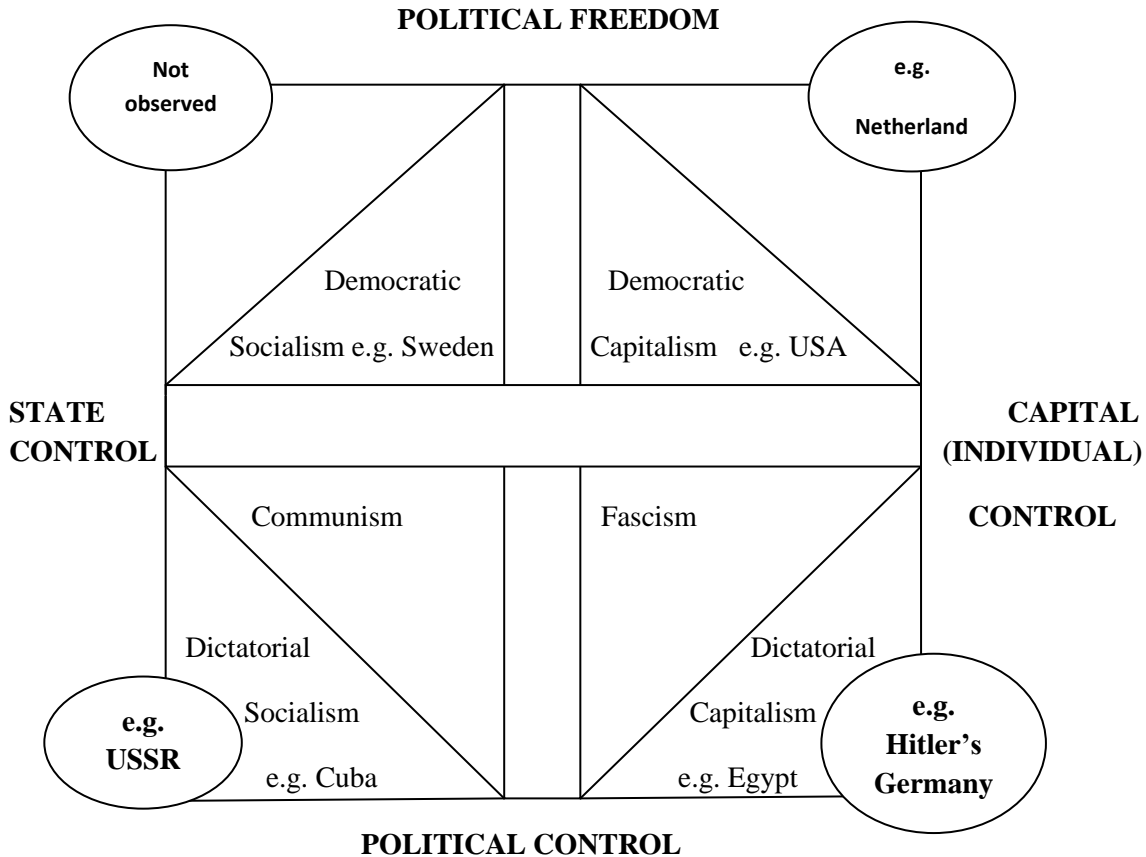What is interesting from figure 2.6.3 is that we have not observed until now the extreme form between state control and political freedom. Maybe there lies the answer to the problematic economic situation that the world lives nowadays.

However, the above types of systems, their ideology, and the organized society gave birth to one medium to converse. That medium is power.
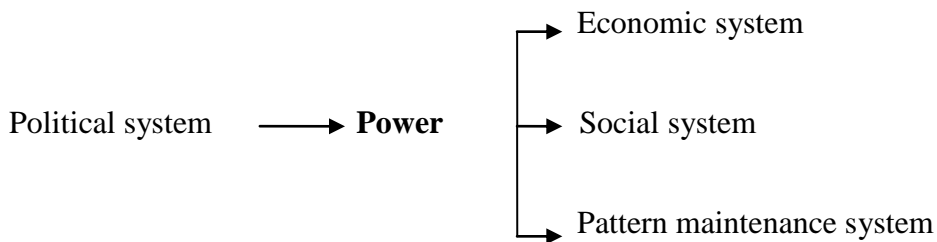
Figure 2.6.4: Power

Conclusively, what stems from figure 2.6.4 is that power is what gives the strength in a political system or in a political regime to produce wealth and stabilize it. The capability to cause wealth is totally different from the wealth itself. If for example a person is wealthy in terms of monetary units but have no power to produce goods more valuable than he consumes then he eventually becomes poorer. If a person is poor but possesses the power to produce goods which are valuable then he becomes rich (Rynn, 2003). The above is also applicable to nations. The underlying force to create wealth is power which institutes both the capability to create wealth and to change or even to destroy a political system.

2.7 Theoretical Identification

There is a growing literature which follows the public choice approach of decision making in different regimes. This chapter will use the same approach to test the behavior of governments and the differences between democracies and dictatorships. However, the focus of this analysis is not to investigate the promotion of freedoms but rather to test if those regimes promote economic growth in their extreme form.

To begin with, the different characteristics of the two extreme forms of government (democracy and dictatorship) will be summarized. Democracy can be defined according to Huber et al. (1993) by three essential features: a) freedom for the citizenry and fair elections, b) responsibility of the state apparatus to the elected representatives, c) guarantee of freedom of firm expansion and association. According to Friedrich and Brzezinski (1965) a totalitarian dictatorship is defined by six features: a) dominance of the official ideology, b) a single party led by one individual, c) police force and terrorism, d) monopoly

of the mass communication, e) monopoly of armaments and f) state control of the economy.

As can be seen from the previous subchapter, the major difference between a democratic and dictatorial system is that dictatorships use repression as the main tool to stay in power and to secure the loyalty of their followers. Dictators impose restrictions on the rights of citizens, on the freedom of the press, restrictions on the rights of parties to exist or oppose discontent against the rulers, and citizens to demonstrate against the government. To achieve loyalty of their followers or to avoid problems caused by people difficult to repress, dictators, buy them off (the solution to the disorder). On the other hand in a democratic regime, governments use clientistic policies to stay in power or to gain votes: that is known as pork barrel politics. Democratic regimes, though, set no restrictions to the people (at least not similar to dictators). However, restrictions create problems to rulers (in both the dictatorial and democratic systems) and that is the essence of the Dictator's Dilemma (Wintrobe, 1990). The dictator's dilemma is the problem that rulers face when they do not know how much support they have from the citizenry and any elite groups that exist in the society (they have information problems). This chapter considers that democratic rulers face the same dilemma as the benevolent dictators. Thus, the model applies to both extremes in the political continuum (figure 2.6.1). Both regimes (democracy −dictatorship) can be assumed that represent different solutions in terms of policy making in the same model. Thus, rulers have the same utility function, where the components are consumption (C) and power (π). By following Wintrobe (1990):

$$U = U\left(\pi, C\right) \qquad\qquad (1)$$

Power is the desired bond (see above) either for personal interest (from the rulers perspective) or to promote development to the society as a whole (to promote the people's interests). Combining (1) with constrains like money (especially money's usage as a mean to gain power) enlightens the limits of a ruler's power. One of the most common issues which relates to power, are the economic policies and misusage of governmental resources by the rulers so as to increase governmental revenues especially through high levels of taxation. Thus, constrains of power are both the cost of accumulative power and the ruler's capacity to use their power to increase revenues. If the ruler finds ways to increase the governmental revenues without increasing the levels of taxation then people are happy because the state will increase the levels of economic growth and the people will remain loyal to the government. Thus, there is no limit for the ruler to remain in power. On line to Wintrobe's (1990) recommendations, the above is represented as:

$$B(\pi) = P_\pi \, \pi \, (B\text{-}C) + C \qquad\qquad (2)$$

Where B (π) represents the governmental budget as a function of power (π) where this power can be used through taxation, legislation, production of public goods and keeping the citizenry happy so as to gain their loyalty. The budget is spent thought governmental consumption, accumulative power, and some money is spent to gain power π (B-C); and P_π is the price paid by rulers to gain power in monetary units (e.g. election campaigns). The solution to the above constrains, according to Wintrobe (1990), might be obtained by choosing π and C to maximize (1) subject to (2).

That can be done by:

$$\frac{U_C}{U_\pi} = \frac{1}{P_\pi \left(1 - \frac{1}{\varepsilon^\pi}\right) - B_\pi}$$

$$(3)$$

Where U_c/U_π, represents the rulers preferences for power vs. consumption. $P_\pi (1-1/\varepsilon^\pi)$ represents the marginal cost of accumulative power and $\varepsilon^\pi = (\partial\pi/\partial P_\pi) (P_\pi/\pi) >0$ is the elasticity of π with respect to its price (Wintrobe, 1990). B_π shows the effects of the political power to the budgetary revenues. Sometimes the exercise of state power will increase revenues $B_\pi >0$ (if power is used to provide public goods or raise/implement taxation) and other times $B_\pi <0$ decrease revenues (e.g. suppressing regulations for businesses) (Windrobe, 1990). If B_π is positive the ruler will tend to be oriented more towards power than consumption and vice versa (whether the total effect is positive or negative). Therefore, 'what turns to be crucial …[are] the effects of … marginal intervention on economic growth' (Wildrobe, 1990:8).

However, accumulative power can be expressed though the voting selection (especially in democratic regimes): it is the power to rule and the support (loyalty) that people show to the rulers. Thus, in line with Maggi and Rodríguez-Clare (2000), the marginal cost of accumulative power can be replaced with the voting power.

$$P_\pi (1-1/\varepsilon^\pi) = \omega^v V_\pi \qquad\qquad (4)$$

Where ω^v represents the total voters power (power that voters give to rulers to rule by voting them-selecting them and supporting them) and V_π represents the voters support. Furthermore, the voters support is given by:

$$V_\pi = W (\pi) - b^\pi \alpha\pi \qquad\qquad (5)$$

Where $W (\pi)$ is the total voters power and $b^\pi \alpha\pi$ measures the total transaction costs related to power; α measures the institutional environment; and b^π represents the average transaction costs[7]. The above confronts the difficulty and implications from the ruler's

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[7] For more see: Coase, 1960, 1989; North, 1990.

perspective to gather support from the citizenry and analogous information so as to increase their utility (Maggi and Rodríguez-Clare, 2000).

All the above can be feasible if in each regime exist only one ruler (a single individual – e.g. a dictator) or an unrestricted parliament. The reality, though, shows that there is never one body that rules alone (neither in democratic regimes nor in dictatorial regimes). What exists is a bipolar method of governance where an individual (president, dictator, chief, king, president, etc.) and a parliament (or party, cabinet, or an elite group) rules. That is the ignored, from the previous literature, 'king and council' form of governance into which separation and division of the power is made with their policy making choices. The King and council form of governance is common in Europe since the medieval ages and especially in the 19th century either when new nations gained their independence or when old nations reformed their old political assortment, e.g. Norway (1814), France (1814), Denmark (1849), Greece (1864), Italy (1861), Germany (1871) (Congleton, 2001). According to Congleton (2001), this bipolar template of collective choice is more common mainly to non-political organizations like firms, military and church. However, very few rulers (either dictators or democratic leaders) throughout the history lacked either advisory council or an elected body like the parliament to either influence the ruler's decisions or collectively decide. Furthermore, an advantage that the king[8] and council format encompasses is that the council is well informed and that will reduce the transaction costs. The ruler will be therefore, well and unbiased informed and that will lead to relative merits in terms of chosen policies. That ruler will not make errors and he will make decisions which will maximize his utility.

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[8] For an extensive discussion related to the 'king and council' format see Congleton (2001).

However, in some cases the ruler can be manipulated by the council especially in areas in which he has no appropriate information and that ignorance will lead to systematic mistakes in policy choices. Much of the information that is publicly available is intentionally biased because individuals, especially those within government, often benefit from overstating their loyalty and performance. The problem can be solved by sharing and transferring the policy making power: a ruler might depend on his council's advice in areas in which they are more expert than he but reducing their full authority to make decisions, or he may also transfer some policymaking power to the council as a method of motivating greater competition for positions on the advisory council by keeping always the veto power to himself as an alternative of misusing the given authority (e.g. barrel pork politics). Thus, a fundamental objective to the king and council form of governance is the policy interests between the ruler and the council not to differ since both bodies might have power over public policies. That sharing power and responsibilities reduce in the long run the cost of intra-polity conflicts in the society since it provides the institutional underlying forces to avoid such conflicts among the different groups. To sum up, the king and council model allows a large number of government types, from dictatorships to democracies, to be represented within a single conceptual framework. The king and council outline leads to reforms of governance which are results of collective decisions made by both rulers and parliaments. Thus, the information problem can be solved in an efficient way and the transaction costs will be diminished leading to maximization of the ruler's utility. Furthermore, the king and council template can be easily adjusted through time, which allows it to be subject to changes, modifications, and improvement. That is to say, either any possible limitations or modifications allow it to be gradually perfected as a template for

government in the long run. These same limitations also allow it to serve as a very useful analytical framework for studying the evolution of the governmental systems.

2.8 Existing arguments- A Survey

The relationship between political regimes and economic growth was initially established by Lipset (1959) who examined how economic development might affect the political regimes (even though the debate goes back to Aristotle's and Socrates time). The general conclusion was that economic growth and a nation's prosperity and wealth stem from the combination of its productive power and the actions of its government. Since then, related research has flourished and outlined that the political environment/system plays an important role in economic growth (Kormendi and Meguire, 1985; Scully, 1988; Grier and Tullock, 1989; Lensink, Bo and Sterken, 1999; Lensink, 2001; Glaeser et al., 2004; Papaioannou and Siourounis, 2008a; Acemoglu et al., 2008). The interaction between political and economic variables which affect people (with an affect from external actors) is illustrated in figure 2.8.1 originated in Frey and Eichenberger (1992):
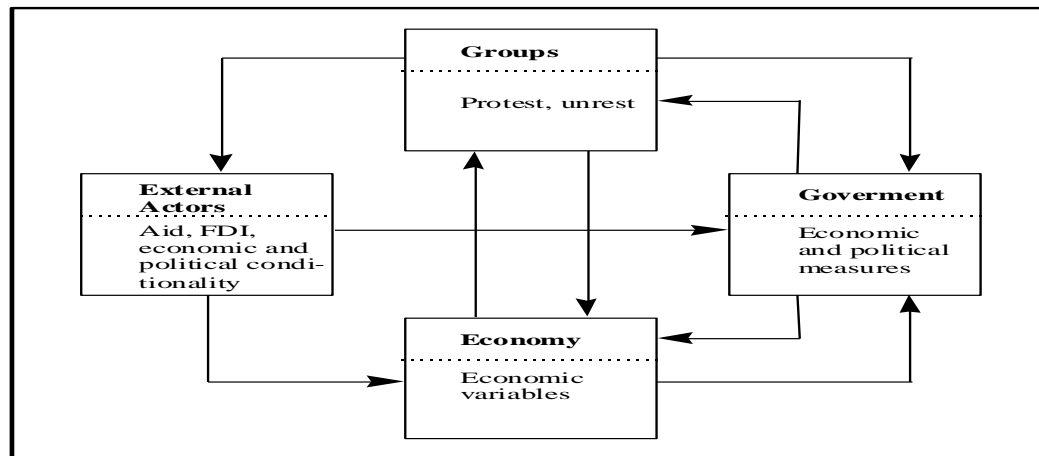
Figure 2.8.1: Politico –Economic Relations.

Furthermore, a political system is a 'self-contained entity' which exists separate of the rest of the social life in a nation (Easton, 1957). That entity depends on inputs of various kinds which converted by the system into outputs and these outputs have costs both to the system and the environment that this system exists (Easton, 1957). The outputs are any important consequences that political regimes have on society and inputs are the demands and support that that interest groups and the citizens in general of a nation have shown to any political system[9] (Easton, 1957).

ENVIRONMENT
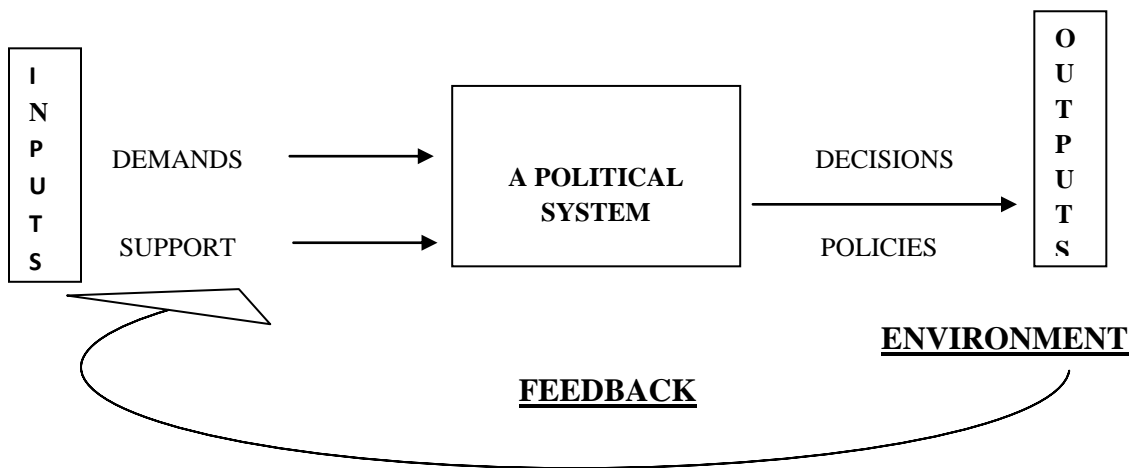
Figure 2.8.2: Primitive model of Political Systems- adapted from Easton (1957) pp 384.

From the figure 2.8.2 above, ensues that the decisions and policies of a government depends on the demands of the people and their support to that government and that vary across countries according to the regional political system. Thus, a preliminary result which stems from the above is that the differences in the economies between countries may be partially associated with the differences of their political systems.

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[9] The theory of systems was first developed by biologist Ludwig von Bertalanffy in the 1930s to simplify complex phenomena and make it more understandable for people. According to Bertalanffy a system is defined as a complex of elements in interaction in a meaningful way to accomplish an overall goal.

Economic growth is one of the most important characteristics in the modern world: the level of wealth is changing which in turn changes communities and societies as a whole. For example the world GDP per capita has increased six times from 1820 to 1992, from $695 to $5,145 (Maddison 1995). However, according to Temple (1998) the study of economic growth is a *backwater* in economics since a theory of capital has never been sufficiently developed and the most broadly accepted theory of economic growth is actually a non-theory of sustained growth and is based on the idea of diminishing returns.

Two themes in the growth literature have got extensively attention: democracy or the regime type and political stability or the steadiness of the regime. Finding links between political regimes and economic growth among countries has been revived as a research topic in the last three decades. Few research issues in comparative politics and economic development studies have produced that much debate and scholarly concern. The result of this debate is the 'broad and rather dispersed [existing] literature' (Brunetti, 1997:163) and its contradictory results. However, a state's economic growth is not a new concern in economic thought, since it goes back to the ancient Greek philosopher Aristotle. Aristotle points out the importance of wealth as a factor which distinguishes the classification of regime types: 'it is clear that the admixture of the two elements [wealth and virtue], that is to say, of the rich and poor, is to be called a polity or constitutional government' (Aristotle, book four, Part VIII).

Nevertheless, a characteristic that caught special attention, throughout the previous literature, was the stability of the political environment. At the most basic form, a political unstable environment, would increase uncertainty, by discouraging investment and in turn will hinder economic growth. Moreover, unlike dictatorships, democracies limit sovereign

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prudence and political control and thereby more effectively promote economic growth. Thus, in the empirical spectrum variables such as political instability, political freedom and civil rights were included, as for a measure for political regimes, most of the empirical literature, uses democracy (a binary variable) or the level of a country's democratization.

To begin with, one must first define the concept of a political regime. Regime analysts (Jaguaribe, 1973; Linz, 1975; Anglade and Fortin, 1985; Calvert, 1987; Fishman, 1990; Munck, 1996; among others) define political regimes as the rules, whether formal or informal, which establish the number and type of actors who are authorized to get access at governmental positions and the methods to achieve it. In addition, the rules that are followed in the decision making area (by the government), the acceptance of these rules from the rest of political actors and the lack of refusal of these rules by any actor or interest group. Furthermore, a political regime has been analysed as a two dimensional concept – a procedural and a behavioural followed by secondary concepts –transitions and consolidations of regimes which serve to differentiate between problems of regime change and regime type (Munck, 1996).

Both political scientists and economists have explored the link between political regimes and economic growth. However, they have often disagreed in their comparative findings. De Haan and Siermann (1995) noted that an explanation to the above issue lies on the relationship between a state's political regime and its stage of economic growth. On the one hand, political scientists have been interested in whether there are benefits of democracy or whether economic growth promotes democracy. Mixed results were the outcome of that research; Galenson, 1959; Huntington, 1968; Rao, 1984-5; argued that dictatorships are better promoters of economic growth through higher investment rates.

Haggard (1990) argue that dictatorships are better in terms of imports and trade in general, Hewlett (1980) argue that political stability can be obtained only under strict authoritarian regime (i.e. Brazil in 1960s) which stabilizes the economy.

Furthermore, according to Feng (1996) three schools of thought exist in the study of democracy and growth. First, the conflict school which supports that democracy hinders economic growth, particularly in less developed countries (e.g., Johnson, 1964; Moore, 1966; Gerschenkron, 1973; Huntington, 1987). Second the compatibility school of thought which argues that democracy enhances economic growth, (e.g., Smith, 1937; Hayek, 1944; Lipset, 1959; Friedman, 1961; Mises, 1981; Riker and Weimer, 1995). Finally, the skeptical school of thought exist which supports that there is no systematic relationship between democracy and economic development (e.g., Pye, 1966; McKinlay and Cohan, 1975).

Przeworski et al.'s (2000) understanding of economic well-being was in terms of economic growth rates, investment, productivity, population growth, birth and death rates and per capita income. They treated the relationship between economic growth and political regimes as a tricky one with no concrete links. Przeworski et al (2000) argue that the actual relation, between the regime type and growth, relies on the duration or the survival or the regime. According to Przeworski et al (2000), democracy is not a precondition to economic growth but growth helps democracies to survive for a longer period. The best predictor, -whether a democratic regime will survive or not- is per capita income but even high per capita income does not guarantee that democracy will emerge in a country.

Furthermore, Gerring et al (2005) noted that rich countries became rich under authoritarian regimes. Their findings show that the regime type and its effects on growth

depend on a country's political historical experience: the political stock helps the regime type's effects.

Contrary to the above results, another group of researchers argue that democracy is a better promoter of growth since protection of civil and property rights can be obtained only under democracy. North (1990) and Olson (1999) argue that only a democratic government can achieve policies in the interest of the whole population. Furthermore, democracy enables the election of politicians since there is the possibility of voting thus politicians are accountable for their actions and policies.

On the other hand, economists investigated whether democracy promotes economic growth. A number of empirical papers produced also mixed results (i.e. previous quantitative studies that were reviewed by Kurzman et al (2002) nineteen found positive relationship between democracy and growth, six found a negative one and ten stated no significant relationship).

Scholars such as Friedman (1961), and Scully (1988), argue that democracies better promote growth since they provide political and civil freedoms and rights. In contrast, Kormedi and Meguire (1985), found a negative relationship between political freedom and growth and Barro (1994) note that more political freedom provides a greater role for interest groups in the legislative process thus hinders growth. Furthermore, Barro and Sala-i-Martin (1995) give an overview of the evidence that democratic nations provide the necessary encouragements for economic improvement; Plumper and Martin (2003) discuss under a theoretical basis the relationship between the level of democracy and economic performance. Lensink, Hermes and Murinde (2000) find robust evidence that political risk may direct developing countries to capital fight which negatively affects economic growth

by removing essential capital from the national economy. Developing countries suffer particularly from poor governance and social and political instability; under these conditions the prospects for improved economic performance are relatively bleak.

Nevertheless, most of the past studies (i.e Pourgerami (1988), London and Williams (1990), McMillan et al (1993), Bhalla (1994), Leblang (1997), among others) document the fact that a state's political regime should be democratic in order to establish a strong economic performance (i.e. to be promoted through democratic institutions). However, the debate arrived at a dead end during the last two decades and a contradictory fact arose even though many countries are democratic: the democratic regimes 'fail[ed] to support economic growth' (Brunetti, 1997: 164). Maybe, a stronger *veil* would be better suited than the democratic one to manage and confront the rapid industrialization and economic growth.

2.9 The end of Democracy?

> *"A democracy is always temporary in nature; it simply cannot exist as a permanent form of government. A democracy will continue to exist up until the time that voters discover that they can vote themselves generous gifts from the public treasury. From that moment on, the majority always votes for the candidates who promise the most benefits from the public treasury, with the result that every democracy will finally collapse over loose fiscal policy, (which is) always followed by a dictatorship."*
>
> *"...The average age of the world's greatest civilizations from the beginning of history, has been about 200 years. During those 200 years, these nations always progressed through the following sequence:*
>
> *From bondage to spiritual faith; from spiritual faith to great courage; from courage to liberty; from liberty to abundance; from abundance to complacency; from complacency to apathy; from apathy to dependence; from dependence back into bondage..."*
>
> *'Why Democracies Fail? December 9, 1951, page 12A, The Daily Oklahoman'*

Almost 250 years ago Alexander Tytler predicted the fall of democracy. Through the above sequence which is known as the 'Tytler's cycle', he predicted the end of the democratic ideas. According to Tytler democracies cannot survive beyond 200 years. Two of the major reasons that explain the democratic failure are: first, democracies generally progress through an initial period from repression to spiritual faith increasing to the point where the citizenry is completely reliant to the government to where they relapse back to repression. Second, once the democracy achieves prosperity, citizens vote their representatives according to the expected payback of generous rewards from the civic funds. Thus, the society lives in a vicious cycle starting with no freedoms and repression and ending up to where they started. Below is the Tytler cycle:
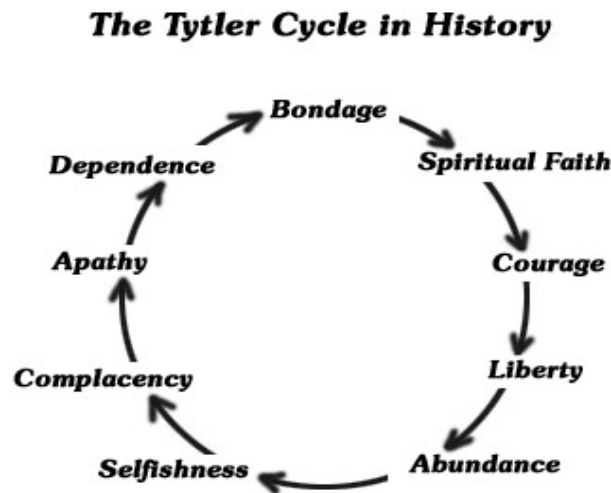
Figure 2.9.1: The Tytler Cycle

Since the time of Adam Smith peoples demands for redistribution of wealth were easier to cope in democratic nations. However, redistribution reduces wealth with a result of democratic nations to have slower growth rates than non-democratic ones (e.g. the example

of the Asian Tigers). According to previous research (Alessina and Rodric, 1994; Persson and Tabelini, 1994 among others) inequality hampers economic growth because a democratic government will relocate its resources from investment to consumption to hinder inequality and that will slow down growth. Olson (1982) metaphorically speaking, describes democracies as regimes with *sclerosis* since eventually interest groups will misuse political activities to gain rents and that will reduce growth. Nordhaus (1975) highlights that the democratic competition among politicians leads to manipulation of growth rates to size power which eventually destroys the economy and sometimes the effects are irreversible. In short, many scholars developed explanations to clarify the destructive effects of democracy on economic growth.

Furthermore, Popper described democracy as the political system which 'comes and go in the course of history' (1945: 12). The above illustration highlights the fact that the democratic systems are not able to be permanent. Popper (1945) argues, in order to explain the reason behind the temporary format of democracy, that the main reason is that democracy is forced to copy the totalitarian methods so as to fight it and eventually becomes totalitarian itself.

However, the entire above arguments look like prophecies with black future predictions. The truth is that prophecies are entirely beyond the scope of a scientific method. People's attitude and the development of the civilization is based on the need to either follow a leader or become the leader with a passive attitude sometimes to forces, personal or anonymous that rules the society (Popper, 1945). The stability and the resolution of conflicts can happen peacefully only under the democratic rule. Democracies provide the institutional framework that permits to reform without violence and deals with

political affairs in a reasonable way. Democracy does not exist and never existed is the general conclusion by the previous philosophical debates. A lot of debate and so much research though, for something that does not exist. Democracy, as a form of government was judged by many and as stems from above the evidences is always ambiguous. However, the democratic institutional format is not what someone needs to investigate and analyze but rather the 'tyranny of the petty officials' as Popper (1945) put it. The main topic which many times remain out of the research is not what democracy is but how a state is been governed and what is the behavior of the state's rulers.

2.10 Concluding Remarks

In the 1980s, the public choice theory expanded thematically to other issues such as the conditions under which a state promotes growth. The analysis of the institutional formation and the growth theory became of great importance resulting to the birth of political economics or new political economics (Grochová and Kouba, 2010). Whether the political regime type plays any role on economic growth has been an interesting research topic for many years. That topic was not only discussed within the new political economics research but it debated among economists as well. The importance of the above relationship was particularly topical because of the geopolitical changes that were connected with the break-up of the former Soviet Union and the Berlin Wall and with follow-up in political and socio-economic transformation of Eastern European countries.

However, the previous literature showed serious bottlenecks as to whether there are positive, negative or no effects of political regimes on economic growth and vice versa.

Beyond the methodological problems, which were highlighted above, in the previous literature the inconclusiveness of the above relationship might lie also to the restriction of the research within contemporary economics. This chapter analysed the political features of the above debate by following the political economics approach.

A well documented finding that beyond any possible explanation that has been given in the past, concerning economic growth, is that the differences in the wealth of nations may also lie on the variation and the quality of the governmental economic policies. Even though a lot have been written about democracy, its notion, and its effects, the problem with it does not stem from the democratic ideology or the ideals that represents but rather the misusage of the democratic institutions from its followers for personal interests or their desire for power. Historically, that was always the problem: it is not about the symbol of democracy as a form of government but rather how democratic representatives used its concepts to promote individual interests and strain responsibilities. Thus, the ambiguous concept is that of misruling and exploitation of democracy and not democracy per se. A solution to the problem might be given by the neglected public choice models, the king and council format of government which divides the policymaking authority between a king (chief, president, dictator, etc.) with a council (council of wise men, cabinet, parliament, etc.). As for the black prophecies related to the end of democracy that is for the future to prove whether they are true.

CHAPTER III

THE EFFECTS OF POLITICAL REGIMES ON ECONOMIC GROWTH

A LONGITUDINAL EMPIRICAL ANALYSIS

3.1 Introduction

What is the effect of political regime type on economic growth in a country? Few questions in the post Cold War era have engaged politicians, policy makers and economists with such intensity except the empirical evidence appear to be ambivalent. In particular, which regime better promotes economic well-being is still ambiguous. Some scholars[10] argue that authoritarian rule is more conducive to economic development than democracy. The example of East Asia is often mentioned, with tight control of the labor force, prioritization of long term savings and investment over current consumption, and resistance to the strains and pressures of different interest groups. Others argue[11], instead, that democratic rule is a prerequisite for economic growth because it secures property, political and individual rights, enhances civil participation, redistributes economic resources and fosters governmental transparency. The differing opinions might well reflect the fact that there are different kinds of democracy, and that the impact of political regimes on economic growth is different in the long run than in the short run. With the multitude of findings in a continuous debate, the median findings are null results.[12] Consequently, the question about the relationship between political regimes and economic growth remains a

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[10] See for example Dick, 1974; Olson, 1982; Bueno de Mesquita and Downs, 2005; Yang, 2006; (among others).

[11] See for example Barkhart and Beck, 1994; Rodric, 2000; among others.

[12] The relevant literature has been reviewed by Przeworski and Limongi, 1993; Kurzman et al, 2002; etc. The above reviews conclude in their findings that there is almost the same amount of studies which either favours democratic or authoritarian regimes as promoter of economic growth.

riddle; does regime type matter for growth and if it does, which regime type better promotes economic growth? The result of the above debate is the wide existing literature and its contradictory outcomes. What is the actual relationship between political regimes and economic growth with regards to the countries in this study? The answer forms the main objective of the current chapter. Furthermore too little attention was paid to national factors such as social structure and the implementing governmental policies[13], since economics were not dealing with national specificities (Gourevitch, 2008). It is, though, the social and the political structure which affects growth in the long –run. Consequently, in contemporary theory, the research of politics and in particular the regime type *per se* in comparison to economic growth is essential.

This thesis adopts the political perspective of a political regime (analysed in the introduction chapter). Thus, political regimes are the rules, whether formal or informal, which establish the number and type of actors who are authorized to get access at governmental positions and the methods to achieve it. In addition, the rules that are followed in the decision making area (by the government), the acceptance of these rules from the rest of political actors and the lack of refusal of these rules by any actor or interest group. A political regime has been analysed as a two dimensional concept – a procedural and a behavioural – followed by secondary concepts such as transitions and consolidations of regimes which serve to differentiate between problems of regime change and regime type (Munck, 1996). Here, it is the procedural type perspective (i.e. stable or unstable, legislative or not, etc.) that it will be followed to investigate its impact on economic

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[13] When a government is on power they get the opportunity to change or establish the social and economic policies. According to Miljkovic and Rimal (2008), the above policies are compatible with the government's interests, views and values and in turn that strategy influences the social welfare.

growth. On line with the previous research, the current one sheds further light on the existing debate of regime/growth analysis, dealing especially with the effects of the political regimes *per se* on economic growth in 20 Western European countries[14]. Additionally, insights will be given, on the way that the above impact is structured by making an argument of what type of political regime is 'better' (since it is still an ongoing debate concerning the regime effect on growth[15]). What distinguishes this chapter from previous studies in the area, are the variables employed (especially the regime type), the notion of the political system (regimes *per se*), the sample used (European and peripheral countries) and the methodology applied (fixed effects estimation). In particular, the above relationship will be examined by adopting, firstly, multiple measures of government performance[16]. Secondly, alternative measures of regime types will be used, in addition to the variable that most researchers used in the past, the Polity2[17] index. The structure of the rest of the chapter is organized as follows: the following part discusses the existing studies and arguments, following by the methodology employed and finally, the findings and conclusions.

3.2 Existing Arguments

A numerous studies exist, concerning political regimes and economic growth which support either positive, negative or no relationship at all between the above. Both political

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[14] The countries that included in this chapter are: Austria, Belgium, Denmark, Finland, France, Germany (West Germany before the 1990), Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and United Kingdom.

[15] Przeworski and Limongi state that 'all we can offer at this moment are some educated guesses' (1993: 64).

[16] E.g. Gerring et al. (2005) examined the regime type but used democracy as a stock variable which according to the same authors it measures the time that a country is autonomous.

[17] The Polity2 variable from the Polity IV project-Polity IV data set - is the most common measure of a country's political regime.

scientists and economists have been interested in whether there are benefits of democracy or whether economic growth promotes democracy and not the other way round. Mixed results were the outcome of that research.

Huntington (1968) and Rao (1984) argue that dictatorships promote economic growth through higher investment rates. Haggard (1990) argues that dictatorships are better in terms of imports and trade in general. Hewlett (1980) suggests that political stability can be obtained only under strict authoritarian regime (i.e. Brazil in 1960s) which in turn stabilizes the economy. De Haan and Siermann (1995) note that further explanations to the above issue lie on the relationship between a state's political regime and its stage of economic growth. It is better for one to concentrate on specific policies and the institutional activities that govern both the private and the public decision making areas. Subsequently, they conducted a sensitivity analysis and conclude that irrespective of a significant relationship between two variables the link between democracy and economic growth is not robust.

Przeworski et al. (2000) measures the economic well being by means of economic growth rates, investment, productivity, population growth, birth and death rates and per capita income. They argue that a mutual relationship exists, between the regime type and growth, and that relationship depends on the duration or the survival of the regime. According to Przeworski et al (2000), democracy is not a precondition for economic growth but, rather, growth might help democracies to survive for a longer period. The best indicator to predict a democracy's survival is per capita income but even high per capita income does not guarantee that democracy will emerge in a country. Furthermore, Gerring et al (2005) note that rich countries became rich under authoritarian regimes. Their findings show that the regime type and its effects to growth depend on a country's political

historical experience: the political stock helps the regime type's effects. Contrary to the above results, another group of researchers argues that democracy fosters growth since the protection of civil and property rights can be ensured only under democracy. North (1990) and Olson (2000) thus argue that only a democratic government would implement policies in the interest of the whole population. Friedman (1962), and Scully (1988), similarly, argue that democracies better promote growth since they provide political and civil freedoms and rights.

The empirical evidence, on the relationship between democracy and growth, is mixed: in a review study made by Kurzman et al (2002), nineteen studies found a positive relationship, six found a negative one and ten stated no significant relationship). Kormendi and Meguire (1985), find a negative relationship between political freedom and growth. Barro (1994) notes that when political freedom exists in the political system and that freedom is promoted through the legislative process then the levels of growth are increased. Furthermore, Barro and Sala-i-Martin (1995) give an overview of the evidence that democratic nations provide the necessary encouragements for economic improvement. Lensink et al. (2000) suggest that political risk may cause capital fight in developing countries which negatively affects economic growth by removing essential capital from the national economy. Developing countries suffering particularly from poor governance and socio-political instability; under these conditions the prospects for improved economic performance are relatively bleak. Observing the mixture of the past empirical results, Sloan and Tedin (1987) note that the divergences stem from weaknesses in methodology. Those weaknesses, according to Sloan and Tedin, are related to the investigation 'at only a narrow range of policies' (1987, p.99). Person and Tabellini (1992) state that growth can be

understood through governmental policies; in other words, economic growth is the outcome of the governmental policies and governmental intervention across countries and time. Przeworski and Limongi (1993) argue that political regimes affect growth through their stances on property rights, pressures for immediate consumption and the autonomy of dictators. Moreover, Brunetti (1997) surveyed the existing literature of the above relationship and highlights the importance of governmental stability, political violence and policy volatility (beyond democracy as a unique parameter to measure regimes) in order to measure the impact and the stability of political regimes on economic growth. Nevertheless, despite the continuous debate and the mixture of the existing findings, it is now generally recognised, that political and governance structures can play a leading role in economic performance.

3.3 Data and Methodology

3.3.1 Model specification

The relationship between political regimes and economic growth can be tested in many ways. As a starting point of analysis, this chapter will use the panel regression framework. An important advantage of using panel data is that it allows controlling for individual (unobserved) effects (Hausman and Taylor, 1981).

A panel has the form: X_{it},   i=1,2,3..., N ;   t=1,2,3...T

Where i denote entities (e.g. countries, companies, etc.) and t denotes time (e.g. months, years, etc). A general panel data regression model can be:

$$y_{it} = \alpha + \beta' X_{it} + u_{it} \qquad\qquad (1)$$

For (1) and its exact structure different assumptions can be made. Two important models though are the fixed effects (FE) model and the random effects (RE) model. The fixed effect model represented, according to Hsiao (2003), as:

$$y_{it} = \alpha + \beta' X_{it} + u_{it} \qquad (2)$$

$$u_{it} = \mu_i + v_{it} \qquad (3)$$

Where a is the intercept vector and it capture any combination of time-invariant variables that have been omitted (known or unknown); X_{it} contains K regressors for unit i at time t; vector β contains K regression coefficients to be estimated; μ_i indicate the individual – specific, time –invariant effects (for example in a panel of countries this could include climate). The basic assumption[18] of the FE model according to Green (1992) is:

$$E(\varepsilon_{it}) = 0, \quad Cov(\varepsilon_{it}, \varepsilon_{jt}) = 0, \quad Var(\varepsilon_{it}) = E(\varepsilon^2_{it}) = \sigma^2_e$$

The RE model is represented according to Green (1992), as:

$$Y_{it} = \alpha + \beta' X_{it} + u_i + \varepsilon_{it} \qquad (4)$$

With assumptions
$E(u_i) = 0$ and $Var(u_i) = \sigma_u^2$
$Cov(\varepsilon_{it}, u_i) = 0$
$Var(\varepsilon_{it} + u_i) = \sigma_\varepsilon^2 + \sigma_u^2 = \sigma^2$
$Corr(\varepsilon_{it} + u_i, \varepsilon_{is} + u_i) = \rho = \sigma_u^2/(\sigma_\varepsilon^2 + \sigma_u^2)$
That is:

$\mu_i \sim$ i.i.d. $N(0, \sigma^2_\mu)$ and $v_{it} \sim$ i.i.d. $N(0, \sigma^2_v)$ which denotes that the two error components are independent from each other.

To choose the appropriate model (FE vs RE) the Hausman Test should be contacted where the null hypothesis is that the chosen model is random effects vs. the alternative the fixed

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[18] Under that assumption the OLS estimator can be used to obtain BLUE parameter estimates.

effects (Greene, 2008). It essentially tests whether the errors (*ui*) are correlated with the regressors, and the null hypothesis is they are not.

In the current chapter, the Hausman Test rejects the null hypothesis of random effects, therefore, the FE model is the appropriate model to use in the current chapter' s empirical analysis (table 3.4.1).

A country's political institutions may affect almost all factors that contribute to growth (determinants of growth i.e. investment, regulation, technology etc.) through their policies, which limits the theoretical field of vision. In fact, there has been a shift over the last two decades from an exclusive focus on physical capital, towards factors such as human capital, social capital, and institutions, the last of which might be referred to as political capital which reinforces this conclusion (Grier and Munger, 2006). Since government policy directly affects the above factors, it stands to reason that regime type might have important effects on aggregate growth. The methodology integrated here measures the marginal impact of political regime, by estimating panel regressions with the regime type variables[19]. Alongside other explanatory variables included, through fixed effects[20] estimations. Biased results in previous literature regressions stem mostly from country specific effects and historical factors and that seems to influence both economic and political development (Pinho and Madaleno, 2009).   The main variables used in the empirical analysis are: GDP growth rates (annual data[21]) as the dependent variable, considering it as an objective measurement for a country's economic performance. The set of the independent variables

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[19] Polity2 as level for democracy will be used for robustness check.
[20] Fixed effects will remove any bias in results if there is such a case in the sample chosen.
[21] Previous research used both annual data and averages. This chapter uses annual data by following the recommendations made by Attanasio et al. (2000) who state that conventional averaging lead to a loss of observation among other reasons.

(also in annual data) includes: school enrolment[22] as a proxy for the underlying human capital (we use the average years of schooling of population as has been suggested by Cohen and Soto, 2007), population growth rate, openness to trade (as a proxy for the importance of international factors to economic activities), inflation rate, governmental expenditures (general government expenditure as a percentage of gross domestic product), and investment rates. Finally, into the analysis the initial level of GDP is included as a measure of economic development. The above variable is used to capture the convergence effect. In addition, by following Gupta's (1990) classification, two indexes which capture the two main categories of political instability[23] (similar indexes have been used by Alessina and Perroti, 1994; Brunetti, 1997; and Fedderke, 1998), will be included. Firstly, riots, political demonstrations, and general strikes, assassinations governmental crises, guerrilla warfare, coup d'états and purges, will be used, to capture the violent form of political instability. Secondly, governmental crisis, constitutional changes, cabinet changes and elections, will be used, to capture the nonviolent governmental turnover (durability and stability of a political regime). The type of political regime is been measured as a scale variable with 1 for the civilian regimes, 2 for military-civilian regimes and 3 for military regimes; the data are been taken from Banks International. In short, both economic and political indicators, which were found to be significant determinants of economic growth in previous studies, will be combined so as to examine the link between political regime and economic growth in Western Europe. Furthermore, the economic data are from the Penn World Tables, the data for inflation are from the World Development Indicators, the

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[22] i.e. Bils and Klenow, 1996; Barro, 1996; Mankiw, Romer and Weil, 1992; Person and Tabelini, 1991b; Cohen and Soto, 2007; etc.

[23] This research follows both the social unrest view of political stability and the legitimacy of the political system view. For more see Sanders (1981).

average years of Schooling are from Cohen and Soto (2001) and the political indicators are from Banks International (2008). To examine the effect of the different political regimes on economic growth the estimation model can be expressed as follows[24]:

$$g_{it}=a+ \beta g_{i(t-1)}+\gamma p_{it}+\theta s_{it}+\kappa gi_{it}+ \lambda t_{it}+\xi r_{it}+\pi z_{it}+\varphi b_{it}+\psi h_{it}+\omega m_{it}+\epsilon_{it} \tag{5}$$

Where i indexes countries and t years; a is the constant term; g_{it} denotes the growth rate in real GDP per capita of a country i at time t; g_{t-1} denotes the logarithm of GDP_{t-1}, p_{it} denotes the logarithm of population, s_{it} denotes the logarithm of governmental expenditures, gi_{it} indicates the logarithm of governmental investment, t_{it} indicates the logarithm of trade openness, r_{it} stands for the inflation rates, z_{it} denotes the average years of schooling, b_{it} denotes the index for Political instability and h_{it} stands for Governmental changes (constructed by PCA: assassinations, general strikes, constitutional changes and legislative elections were used alternatively for robustness check in models II and III); m_{it} indicates the Regime type variable which is a dummy with values of 1 for civilian regimes and 0 otherwise (and polity2 used in regressions III and IV for robustness test); ε_{it} is the error term that captures random shocks on growth over the years; and β, γ, θ, κ, λ, ξ, π, φ, ψ, ω, are the coefficients. The above specification combines major neoclassical determinants of growth with political variables. Furthermore, in the data set, there are 20 countries[25] over the period of 1950-2004.

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[24] De Haan (2007) notices that economic theory does not provide any standard guidance in order to choose the appropriate empirical growth model. This means that growth theories are *unlimited* which means that the validity of one theoretical model does not mean the falsity of another.

[25] This chapter will limit the research to 20 European countries which will help firstly with the missing data problem (i.e oil-exported countries have only available data referred to 1980 prices which does not reflect the prices in earlier years, post communistic countries only have date since 1990) and secondly, to control the

3.3.2 Construction of the series

The series were constructed based on the Hall and Jones (1999) approach which is based on the Cobb-Douglas approach for the decomposition of output. According to Hall and Jones (1999) the production of Y output is been given by:

$$Y_i = K_i^{\alpha} (A_i H_i)^{1-\alpha} \qquad (6)$$

Where K denotes the stock of physical capital, A is a labour −augmenting measure for productivity, and H is the amount of human capital-augmented labor used in production. Finally, the factor share α is assumed to be constant across countries.

The series of the stock of physical capital K, are constructed based on Aisen and Veiga (2010) and is given by:

$$K_t = I_t + (1-\delta) K_{t-1} \qquad (7)$$

Where I_t is real aggregate investment in at time t, and δ is the depreciation rate.

The amount of human capital-augmented labor used in production, H_i, is given by:

$$H_i = e^{\varphi(s_i)} L_i \qquad (8)$$

Where s_i : the average years of schooling in the population over 25 years old (which was taken from Cohen and Soto, 2006). L_i is the number of workers (labor force in use). φ (.) is the returns to schooling. These returns to schooling are based on microeconomic evidence reported in Hall and Jones (1999) and assumed equal across countries. The above equation (1) can be rewritten as:

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discrepancies in economic growth levels that exist between countries (and continents). Thus, the focus on Western countries is being based mostly on a homogeneous sample (i.e. a group of relatively rich countries with almost generally similar levels of income per capita) but still heterogeneous sample, in terms of culture and history. The observations/countries should be drawn from a single population otherwise the statistical basis upon which researchers draw inferences may be in doubt (Levine and Zervos, 1993). Eventually, Western Europe considered being a democratic and political stable area which motivated this research to check the robustness of those claims.

$$y_i = (K_i/Y_i)^{\alpha/1-\alpha} h_i A_i \qquad (9)$$

where h = H/L is human capital per worker.

Equation (4) further can be expressed as:

$$y = k^{\alpha} (Ah)^{1-\alpha} \qquad (10)$$

Where *y* is real GDP per capita, *k* denotes the stock of physical capital per capita, *A* is TFP, and *h* is the amount of human capital per capita. (5) can be expressed further in growth rates as: $\Delta yi = \alpha\Delta k_i + (1-\alpha)\Delta A_i + (1-\alpha)\Delta h_i$ (11)

3.3.3 Panel Unit root Tests

Before continue into the results, a last test[26] should be done concerning the presence of unit roots in the data (non-stationarity).

Pesaran (2007) recommends a method to eliminate the influence of cross-sectional dependence, which involves augmenting standard ADF regressions with the cross-section averages of lagged levels and first-differences of the individual series which enables us to account for heterogeneous cross section dependence in a novel way.

By following Pesaran (2007), we run a pesaran test which presumes that all series are non-stationary under the null hypothesis against the alternative that only a fraction of the series in the panel is stationary. Pesaran's test for cross –section dependence performed shown that p=0.000 which rejects the null hypothesis (Ho: cross-section independence).

Other panel unit root tests like The Fisher test, developed by Maddala and Wu (1999) as an improvement of the Im, Pesaran and Shin (2003) test, runs individual tests but

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[26] The panel unit root test was conducted also for the data in chapter IV and the results can be found in appendix VI.

then combines their significance with a Fisher test. Hence, it does not require a balanced data. The Fisher test of Maddala and Wu (1999) and the IPS test of Im, Pesaran and Shin (2003) are directly comparable. Furthermore, Banerjee et al. (2005), note that in the presence of cross-section dependence, first-generation tests tend to have serious size distortions and therefore perform poorly. The above often directs to the over-rejection of the null hypothesis (unit root) when the sources of non-stationarity are common across individuals. Some cross-sectional dependence tests include Pesaran (2004) and a Breusch-Pagan LM statistic (for $T>N$) (second generation tests). The Pesaran (2007) test fails to reject the null hypothesis in 11 indicators in the following two chapters which might be due to using linear unit root tests[27]. That is true since by using the Maddala and Wu's (1999) Fisher test the variables are stationary[28].

Furthermore, the *t*-bar statistic (CIPS) can only be computed for balanced panels. For unbalanced panels, the modified Z test can be reported. In our case, we always reject[29] the null hypothesis of unit root. Therefore we conclude that there is no unit root in our panel[30]. Results are shown in appendix VI.

Finally, a few other tests were proposed for panel data (e.g. by Maddala and Wu (1999) Levin, Lin and Chu (2002) and Im, Pesaran and Shin (2003) known as first generation tests). However, the above tests fit only balanced data with the same number of observations per unit (with the exception of Maddala and Wu (1999)) which does not apply in the case of these chapters.

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[27] In general, the evidence from panel unit root tests with cross dependence are inconclusive.

[28] Another possibility might be the presence of structural breaks in some of the series which might lead to misinterpreat the mean stationarity with structural breaks, as a unit root. The above should be taken into account in future research and panel unit root tests should be incorporated.

[29] In the case where we cannot reject the null hypothesis of the panel unit roots in the levels of the variables, then cointegration panel tests need to be preformed. This is a pre-condition for panel cointegration test.

[30] The same conclusion applies in chapter IV.

3.4 Estimation of the model

The political variables included in the current analysis reflect both the violent and the non violent changes in a political environment (Alesina and Perotti, 1994; Brunetti, 1997; Fedderke, 1998; Campos and Karanasos, 2008). To avoid the presence of multicollinearity principal [31] components analysis was contacted which is a statistical technique that linearly transforms a broad set of variables correlated with each other into a smaller set of uncorrelated and linearly independent variables[32]. The components that stem from PCA were selected so that to satisfy two conditions: firstly, the components are orthogonal (uncorrelated) and secondly, the first component absorbs and accounts for the maximum possible amount of the total variation in the set of the variables the second component absorbs the maximum of the remaining variation, and so on[33].The new[34] variable (we denote it political instability -regime threatening political instability) includes indicators that capture violent forms of political protest and social aggression. However, a significant disadvantage of PCA components is that the interpretation of the analysis (especially the explanation of the coefficients of the PCA components) might be more difficult since we are no longer working with the original variables and there might be an effect by their 'scaling'. A simple way to avoid the above problem and at the same time to carry out a sensitivity test is to check some of the original variables (we have chosen assassinations, legislative elections, general strikes, constitutional changes for the current tests) and their

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[31] The indicators used for constructing the indexes of political instability are one of the characteristics that make this chapter differ from the rest of the previous literature.
[32] PCA analysis is shown in Appendix II.
[33] According to Jackson (1991) a 'rule of thumb' based on correlations is to observe the screeplot after conducting PCA, and accept the components with eigenvalues bigger than 1 (which are worth interpreting)
[34] Sensitivity analysis has been obtained in order to check if the original variables (the ones that have been used in constructing the indexes of political instability) change the results or not and the results were the same.

effects on economic growth. The selection of the above variables follows the recommendations done by Campos and Karanasos (2008). The analysis is carried out as fixed-effects panel regression, based on the outcome of the Hausman Test. A significant result which appears is that both regime type 1 (=civilian regimes) and polity2 variable have negative coefficients, once fixed effects are considered, and the level of GDP per capita is included into the analysis. Therefore, the results point out that there is a causal relationship between political regimes and economic growth. The results are presented in Table 3.4.1.

To begin with, government expenditures (i.e. on production of public goods such as public infrastructure, education etc.) are contributing positive to economic growth. This positive effect is in line with the previous literature[35]. The positive significant effect of governmental expenditure denotes the quality and productive activities that governments formulate through their policies. Investment has also a positive effect on growth and that makes the results consistent with the previous literature[36] . However, in the current case, the above effect is insignificant. Openness to trade[37] positively and strongly affects growth. Finally, there is a positive and insignificant correlation between the population growth rates and economic growth when the human capita proxy is not included into the regression, although this effect is at best marginally significant. The human capital proxy, average years of schooling, has an insignificant and positive impact on economic growth (consistent with Cohen and Soto, 2001, and Psacharopoulos, 2001). Most of the past literature reports positive effects of the average years of schooling on economic growth. However, the above

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[35] See Folster, and Henrekson, 2001; Barro, 1994; Barro and Sala-i-Martin, 1995; Gwardney et al, 1998.
[36] See Ghali, 1998; Afonso and Furseri, 2008 among others.
[37] Exports plus imports divided by GDP denotes the impact of globalization.

effects are insignificant. That means that the effects of democratization are not been obtained through human capital. Moreover, the initial level of GDP per capita is used in accordance with the b-convergence hypothesis[38]. The negative and significant coefficient of GDP per capita supports the income convergence hypothesis among the sample countries[39]. In addition to straight usage of proxies there also have been employed principal components as a mean to discover unobserved common factors in the analysis such as instability. Political instability indicators such as riots, strikes, assassinations and antigovernment demonstrations were reported by previous researchers and the current one, that have a negative effect on growth (Alesina and Perotti, 1994; Brunetti, 1997; Campos and Karanasos, 2008). The Political instability disrupts economic activities in less productive actions by relocating resources to military or other non economic productive sources. However, the impacts of both violent and non violent political instability indicators remain insignificant for the current sample. The main reason for the insignificant effect of political instability is that the investigating countries had sound macroeconomic policies and invigorating institutions that withstood the impact of instability. The fact that the non violent political instability remains significant and negative is consistent with the negative effect of civilian regime on growth. The possible explanation lies to the fact non-violent instability may be rooted mainly in government corruption or dissatisfaction over the impact of economic reforms and market-based modernization, remuneration and productivity.

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[38] See Solow 1956; Barro, 1991, Barro and Sala-i-Martin, 1995; among others.
[39] Actually the conditional convergence hypothesis is satisfied in this chapter, in which countries with lower starting initial GDP relative to the long run or the steady state position, have faster levels of economic well being.

Dependent variable g_i	1 (civilian regime)	2 (civilian regime)	3 (polity2)	4 (polity2)
Table 3.4.1 **Estimation Results -Western Europe 1950-2004**				
g_{t-1}	-5.12 (-4.43)*	-4.95 (-4.36)*	-4.89 (-4.35)*	-5.05 (-4.38)*
p_{it}	0.14 (1.01)	0.15 (1.03)	0.18 (1.23)	0.18 (1.25)
s_{it}	0.15 (2.27)*	0.15 (2.26)*	0.09 (1.35)	0.09 (1.38)
gi_{it}	0.03 (0.70)	0.032 (0.76)	0.03 (0.61)	0.026 (0.62)
t_{it}	2.1 (2.38)*	2.15 (2.44)*	0.23 (2.44)*	2.20 (2.43)*
r_{it}	-0.73 (-5.13)*	-0.71 (-5.04)*	-0.72 (-5.20)*	-0.72 (-5.19)*
z_{it}	1.70 (0.71)	1.40 (0.61)	1.68 (0.78)	1.87 (0.83)
b_{it}	-0.12 (-1.06)			-0.13 (-1.15)
h_{it}	-0.15 (-1.39)			-0.16 (-1.47)
AS		-0.07 (-0.64)	-0.04 (-0.36)	
GST		-0.14 (-0.93)	-0.14 (-0.93)	
CC		-2.02 (-2.00)*	-2.01 (-1.98)*	
LE		-0.34 (-1.48)	-0.30 (-1.31)	
m_{it}	-0.32 (-2.35)*	-2.67 (-2.86)*		
POLITY2			-0.15 (-3.64)*	-0.14 (-3.52)*
R^2	0.22	0.24	0.24	0.23
Hausman Test	0.0000	0.0000	0.0017	0.0000
N	614	614	535	614

*=5% significant   **= 1% significant ; z-values shown in parenthesis
Economic variables are in natural logs. $\Delta=log_t-log_{t-1}$
$y_{it} = \alpha + \beta X_{it} + u_{it};$ - E$u = 0$ and var$u = \sigma^2$ ($u_{it} = \mu_i + \nu_{it}$) **($i = 1….20; t = 1…… 55$) with** all μ_i are fixed unknown values

As far as the impact that the regime type has on economic growth (direct effect of institutions), it is worth noticing, that the impact of the civilian regimes, on growth, is significant at 5% level and negative. This contrast with the previous literature which finds (especially Feng, 1995, who researched a sample of Latin American countries) that civilian regime tends to achieve higher economic growth rates. According to Feng (1995), a civilian government is in a better position to promote economic growth (i.e. by protecting property rights and civil liberties) than a military government. Remmer (1990) finds that growth rates under democracy were higher than under autocracy, though the relationship is not statistically significant. Results show (tables 1) that once we control for fixed effects, democracy (civilian regimes and polity2) are negative to economic growth or else, democratic regimes slow economic growth. In models III and IV, the regime type 1 which captures civilian regime types was replaced by 'polity2', which is a combined variable[40] (ranging from -10 for fully autocratic to +10 fully democratic regimes). Table 1[41] shows the results. Polity2's coefficient is statistically significant and has a negative effect on economic growth which supports the previous results on civilian regimes. As has been stated above, the reason may be that governments subject to the electoral constraint are more likely to follow inefficient policies such as inadequate tax system, higher government

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[40] We cannot describe polity2 better that the codebook so we quote from it: '[polity2]… modifies the combined annual POLITY score by applying a simple treatment, or ''fix,'' to convert instances of ''standardized authority scores'' (i.e.,266, 277, and 288) to conventional polity scores (i.e., within the range, 210 to 110). The values have been converted according to the following rule set: 266 Cases of foreign ''interruption'' are treated as ''system missing.'' 277 Cases of ''interregnum'' or anarchy, are converted to a ''neutral'' Polity score of ''0.'' 288 Cases of ''transition'' are prorated across the span of the transition. (. . .) Ongoing (288) transitions in the most recent year (. . .) are converted to system missing values. Transitions (288) following a year of independence, interruption (266), or interregnum (277) are prorated from the value 0 (Polity IV 2007, p.16).

[41] Results have been obtained by considering dictatorial and military regimes and those show that actually non democratic regimes favour economic growth. Those results are available upon request.

consumption and accumulation of external depts. The above policies in turn affect adversely the long –run economic growth.

The coefficient estimated for investment (sum of private and governmental), openness to trade, governmental expenditure, inflation and average years of schooling, indicators remain similar to and consistent with the previous results. The difference is that the effect of the governmental expenditure becomes insignificant. The indicators assassinations, general strikes, and elections are also negative and statistically insignificant which means that any attempt to revolt or show dissatisfaction against the governmental policies do not influence the economic performance. The only indicator which affects economic growth on the long run is '*constitutional changes*' which denotes that the adoption of inefficient changes in the constitutional setting hampers economic growth.

Conclusively, political regimes' functioning (stable/unstable) affects economic growth, especially if measures of social instability (general strikes -non-violent) are taken into consideration. The non –violent political instability determines the functioning of the regime a great deal as has been mentioned above. Firstly, the lower the growth rate in a country the less possible it is to face irregular governmental changes since in most of these countries the legal system and socio-economic institutions are not well established (Miljokovic and Rimal, 2008). Secondly, the dissatisfaction of the citizens can be shown with non violent ways of demonstration and this in turn will lead to deteriorate growth. Since, a part of people's constitutional/civil rights are the demonstration of any dissatisfaction against their government and their policies that leads to the exercise of these rights which decline the growth rates. Surprisingly, though, the functioning of the regime plays no role in Western Europe.

3.5 Concluding Remarks

The role regime type plays in shaping economic growth has been an important research topic for the last five decades. However, there is little consensus in the literature as to whether there are positive, negative or no effects at all. This chapter sheds some light on this debate by re-examining the direct effect of the political regime type on economic growth by taking into consideration the stability of those regimes. Beyond any possible explanation given in the past, the differences in the wealth of nations may also lie in the variation of socio-political instability among nations or the quality of the institutions that exist. Such socio-political instability generates uncertainties in a governmental system which in turn destabilizes its effectiveness.

Since the empirical model controls for fixed effects, the trend in European countries show that democratic regimes decrease the national income per capita. Moreover, when the initial GDP per capita is integrated into the analysis, the results show that there is a causal relationship between democracy and income. The above is consistent with the previous literature (Rodrik, 1997; Gerring et al., 2005, among others). However, the causality runs one way, from economic growth to the regime type (that has been found after conducting the Granger causality test[42]). Even though, the causality issues have been addressed and lags have been included in the model, the results[43] remained the same as above (table 1). Moreover, the empirical results corroborate the significance of regime type *per se* in explaining economic growth as the regime type affects negatively economic growth and that effect has no connection with the citizens' discontent. It is generally accepted that political instability slows down economic growth which in a democratic state implies that

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[42] The results for the granger test are available upon request.
[43] The results are available upon request.

in order for governments to preserve their positions (duration) they should first develop the socio-economic interests of their citizens. Governments should adopt institutions which will initiate resolutions for any kind of civilian dissatisfaction.

Furthermore, in the long run, a nation in order to improve its economic growth prospects should reduce any political uncertainty, construct policy consensus and reduce the government consumption. Political instability, violent or not, imposes limits on economic progress in general. Hence, governments which remain in office for a long period of time face pressures by interest groups which lead to adoption of policies that do not maximize social welfare (Olson, 1982). Thus, governmental changes increase the probability to establish constructive economic policies (i.e. long term governmental investment plans, reduction of taxation etc). Given the fact that the sample includes only European countries, which are considered politically stable and with high levels of income, the explanation buttresses the fact that in such a political environment it might take longer for democratic regimes to influence economic growth, since political institutions change very slowly. Democracy is a comfort to be enjoyed only by countries rich enough to afford it. Western European countries are rich enough and democratic at the same time. The issue that still remains puzzling is whether the democratic institutions survive in this region because of the high levels of income or not. Future research is required to that direction.

CHAPTER IV

POLITICAL INSTABILITY AND ECONOMIC GROWTH: SOME FURTHER EVIDENCE FROM WESTERN EUROPE

> *'…Poor performance of the economy would lead to a focus on distributional issues and political instability; political instability would generate poor economic performance…'*
>
> (Dennis C. Mueller, 1982: 159)

4.1 Introduction

What is the nature of the relationship between political instability and economic growth? This question has been the topic of continuous debate among economists, political scientists and politicians. It is widely accepted that there is a strong relationship between a country's growth scheme and its political system since an economy is one of the subsystems (substitutes/ instances or levels) that combine the political system[44]. Both authoritarianism and democracy have a dependable influence on the speed of development in any country with politicians to dominate the fate of nations in many ways (i.e., the political decisions politicians adopt especially when they are in power). The economic growth scheme is the outcome of its political system[45], which, in turn also determines its success or failure.

Economic growth and its public improvement signify the welfare and success of a country's economy and the political stability indicates the wellbeing of its political system. By looking at a country's economy and politics a question which occurs is in relation to the role of its political institutions (in this chapter the political system substantiates a country's

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[44] More in the analysis of political system see: Poulanzas, 1974; Easton 1979; Easton, 1981.
[45] That is the 'destabilizing growth hypothesis' (Peldam, 1996:171).

institutions) in the country's economic well being. The essence of the above question lies to the type of the political institutions (democracy or dictatorship) which will determine its economic growth. Thus, a generic view is that political stability of any form of government has to engage the stable understanding of the political essence of that form of government. Political instability (PI) is described by economists as a serious strife harmful to economic performance by limiting policymakers' outlook which might lead to short term macroeconomic policies. Therefore, the political stability of a government does not mean, necessarily, the stability of the power of any civilian elected to rule any way he wants.

The findings of previous studies suggest that economic growth and political instability are profoundly interrelated. On the one hand, the uncertainty associated with an unstable political environment may reduce investment (*e.g.*, Schneider and Frey, 1985; Rodrik, 1989; Barro, 1991a, b) or cause high levels of inflation (e. g. Cukierman, Edwards and Tabellini, 1992) and as a result, decrease growth. On the other hand, poor economic performance may cause the government to fail (especially if the government is incompetent or corrupt) which in turn leads to political unrest.This chapter examines the relationship between political instability and economic growth in Western Europe[46]. It considers a number of controversial questions in the existing studies, such as the direction of causality and the measurement of political instability. On the direction of causality, this chapter considers two hypotheses, firstly, whether political instability affects economic growth negatively and secondly, whether the relationship between political instability and economic growth is in fact bidirectional. The data are from 20 countries across Western

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[46] The sample of countries chosen are: Austria, Belgium, Denmark, Finland, France, Germany (West Germany before the 1990), Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and United Kingdom.

Europe[47] from 1950-2004. As for the measurement of political instability, this chapter provides an index[48] of PI by combining multiple indicators that can be used to study the above relationship. In figure 4.1.1, the different violent dimensions of political instability are presented.
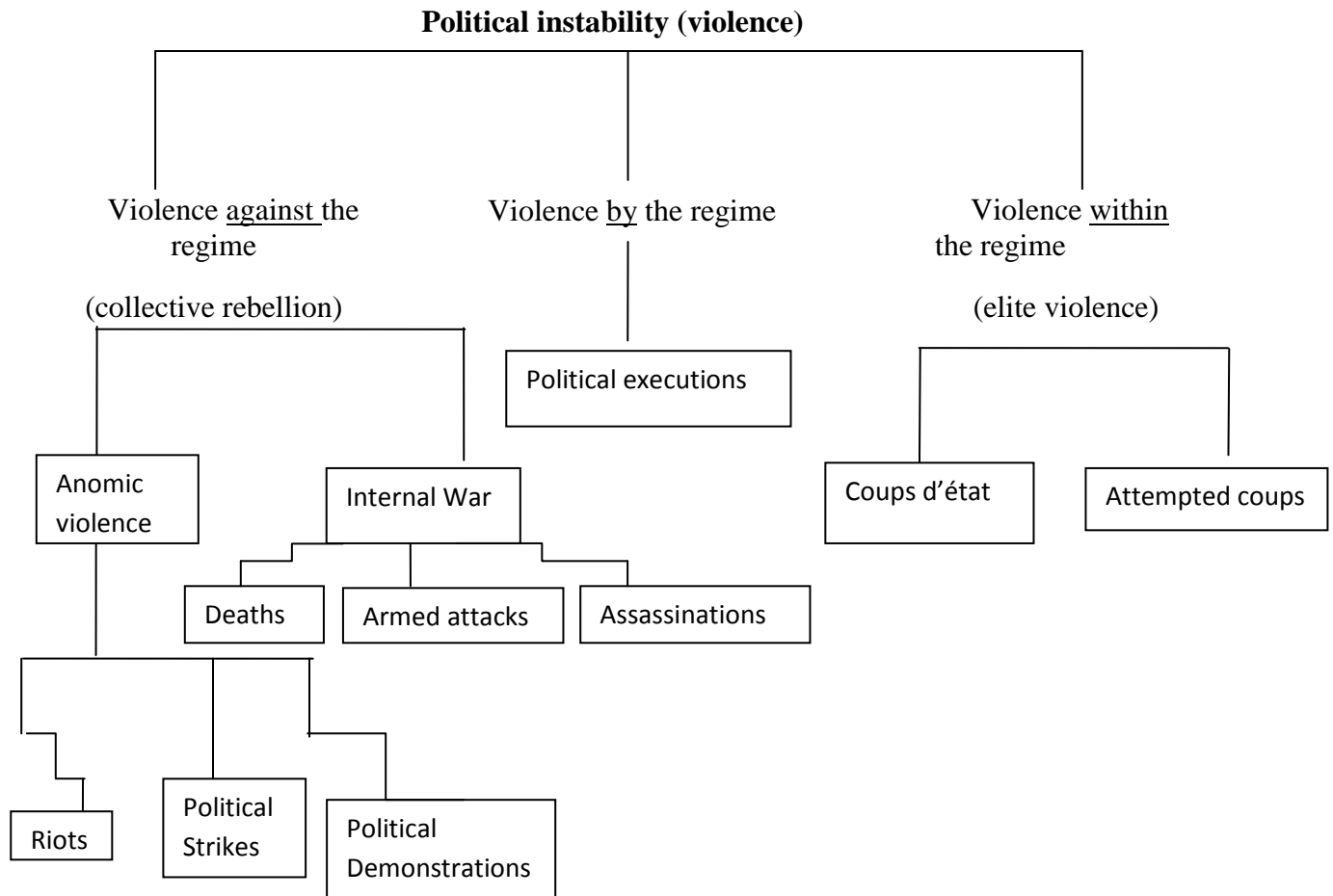
Figure 4.1.1: Dimensions of Political Instability- adapted from Gupta (1990) pp 194.

The indicators which used to create the index are measuring political instability along a number of different violent dimensions. Hence, principal components analysis is applied to

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[47] The previous relevant literature deals only with developed countries which is a drawback in terms of generalizing any results to the whole world.

[48] The index will explain more than a pattern of political instability by covering the whole field of violent PI and non violent or else governmental changes as they are proposed in the current chapter.

build a measure of political instability that can be used as an alternative to the measures used in previous research.

Political instability is a multidimensional concept that is difficult to be precisely captured with one variable. For instance, Zureiqat (2005) used only the polity2 /democratization level indicator as a proxy for political instability. Furthermore, other research focused on examining the impact of political instability on economic growth in a heterogeneous group of countries. In contrast, this chapter extends the previous literature by developing a more advantageous index of political instability and investigates its application in the Western Europe[49]. Western Europe is an interesting region to study since it is considered to be both stable and wealthy (thus no unusually continual problems with instability). In addition, focusing on a small sample[50] helps avoid potential problems with pooling data from a large set of very different countries[51].

The majority of the empirical literature related with the interactions between the political instability and economic growth is relatively recent, mainly because of an earlier lack of data on political instability. However, it is worth mentioning that this relationship attracted some attention already quite a few decades ago. Kuznets (1966), for instance, notes that low levels of economic growth can be expected under conditions of political disorder and especially in the wake of regime changes. Some of the studies which

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[49] This chapter uses what Przeworski and Teyne(1970) describe as 'most similar systems design' or what Narol (1968) calls 'concomitant variation'. This type of design opt the sample with as many similarities and as many features as possible (i.e. Western Europe with common values, ideas and history). That sample then constitute the best sample for comparative investigation.

[50] Following the recommendations made by Alptekin (2009: 24) '…research is necessary to investigate homogenous samples at regional or country level'. Additionally, the sample has been chosen according to the level of GDP in the sample countries. The research investigates the effects of political instability in Western European countries which considered been both political stable and developed.

[51] Grier and Tullock (1989) and Block (2001) explain the importance of testing small number of countries into the same equation.

examined the relationship between the political instability and economic growth suggest a dual effect of political instability on the economic growth: a direct (e.g., Barro, 1991a, b; Levine and Renelt, 1992) and indirect one, with the later occurring through the adverse effect of political instability on the determinants of growth such as saving or investment (e.g., Barro, 1991a, b; Schneider and Frey, 1985), or through the so called 'brain drain'[52] (e.g., Adebayo, 1985; Kwasi, 1992 etc). Another basic concern of this chapter is the direction of causality: whether a stable political environment leads to economic success or whether economic development forms the foundations of political stability.

The primary result of this chapter is in support of the bi-directional causal argument, concerning the relationship between economic growth and political instability. Both a change tendency in a government and the political regime type reduce growth and in turn a low growth rate increases the tendency of a government change.

This chapter is divided into five sections. Section 2 discusses what political instability implies in the context of economic development. Section 3 reviews the theoretical framework and the previous literature on the relationship between political instability and economic growth. Section 4 discusses the theoretical models underlying this relationship and gives a description of the data used in this study. Section 5 presents the empirical results, and, finally, section 5 concludes this study and provides recommendations for further research.

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[52] 'Brain drain' is the phenomenon of the 'dramatic migration… of specialized human capital from developing [unstable] countries to the technological advanced [and more stable politically] countries' (Adebayo, 1985: 37).

4.2 The puzzle of Political Instability

The research of the relationship between political instability and economic growth deals with two major issues. The first one relates with how to define political instability. Robock (1971) argues that PI is a phenomenon which depends on how it is defined. The second issue relates with the relationship between economic growth and political instability. Does economic growth lead to political stability or vice versa or the two phenomena happen simultaneously? To answer the above, research highlights two contradictory reacts. The first one notes that a boom in the economy generates high income for citizens which lead them to approve the government and that results to a stable political environment (good growth hypothesis) (Paldam, 1996). A second retort was that economic growth formulates a series of constrains such as complex changes in society and in turn changes and dissatisfaction of the political environment which leads to political instability (destabilizing growth hypothesis) (Paldam, 1996).

This chapter attempts to define the situation under which political instability result in increased political uncertainty in terms of constraints on economic growth and as extend in economic development. Political instability is a major source of constrains, changes and violence and as a result political uncertainty increases, which can handicap governmental ability in introducing economic policy for growth promotion.

Kobrin (1977) asserts the significance of the condition under which political events result in constrains and destabilization of the political environment. However, not all political events or irregular changes in government result in constrains. Both Ake (1974) and Drew (1974) argue that PI relates to the behavior of the political actors in terms of realization, recognition and non violation of their interactional limits in a political

environment: PI is the notion of role expectations (Kobrin, 1977). Furthermore, some violent political events might have different significance in different countries. For example, a coup d'état in one country might mean violent transfer of power and destabilization of the political environment whilst in another country it is a way of change the flow of events (i.e. military regimes in Greece). The above is a result of the political culture and history of a country.

Any kind of destabilization or violent establishment of role expectations creates uncertainty in the political and socio-economic environment. Uncertainty, in turn, creates a situation that the economic outcomes cannot be predicted because of novelties. Modernization involves a complex pattern of socio-economic and political novelties. It involves the breakdown of traditional structures and changes in the society. According to Kobrin (1977) political modernization include the rationalization or centralization of power, the expansion of political perception to new social groups and the development of new political institutions. Modernization conveys changes which result on socio-economic and political novelties that increase uncertainty. Sometimes those novelties not even the government cannot affect or stop i.e. riots or antigovernment demonstrations which can disrupt the government itself. The government needs to limit violence and novelties but then again the problem of who governs turns up. If the governor is not subject to restrictions then it impounds the property of individuals. The above creates more dissatisfaction leading to political disorder and uncertainty which might change the regime in an unexpected way.

To sum up, political instability should not be considered a homogenous[53] entity. Its form of expression matters a great deal especially in terms of uncertainty in the political and socio-economic environment.

4.3 Existing Arguments

Whilst researchers have from long documented the fact that there is a clear relationship between political instability and economic growth, the empirical understanding of this relationship remains inadequate. The previous literature is divided along many dimensions (the most prominent is reviewed below). Furthermore, there is a little agreement on the definitional and conceptual explanation of political instability and the empirical examination (e.g., direction of causality and the type of the data that can be used) over the past years. Another caution which needs to be taken is not to explicate political instability as an incident on its own but as a concept which determines the durability of a political system. So the question which still is debatable is whether political instability affects economic growth. In order to give a clear answer to the above question, we need first to integrate into our research one variable which captures all the dimensions of the governmental change (see figure 4.1.1 above).Secondly, we need to define political instability with its multidimentionality[54]. By following Alesina et al.'s (1992) study, this chapter identifies political instability[55] as the tendency of the change in the executive (head

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[53] That is the reason that PCA was chosen instead of factor analysis.
[54] This chapter introduces an index of PI that captures a degree of uncertainty by including factors which imply the probability of regime change in an unexpected way.
[55] Basic assumption is the internal novelties that lead to disruption and probable uncertainty.

of a state) either with constitutional or unconstitutional ways[56]. Political instability affects growth but that effect depends on the dimensions of it and those dimensions vary between the empirical literature (i.e. Pin (2009) reports 4 dimensions of PI; Morrison and Stevenson (1971) report 3 dimensions of PI, Sanders (1981) reports 2 dimensions of PI, etc.)

The empirical research, in turn, is divided into many dimensions. The first fraction, in the previous literature, argues that political instability affects economic growth (either by causing slower or faster rates) (Campos and Nugent (2000)). The second one argues that economic growth causes political instability (Zablotsky (1996)), while a third one states that causality runs both ways (Alesina et al. (1992),). In addition, the empirical research is also been divided according to different measurements of political instability that researchers have used. The previous research, also, varies with respect to the samples/ countries that different researchers study: i.e. Alesina, et al. (1992) looked at a panel of 113 countries, while Campos, Nugent and Robinson (1999) looked at countries in the Middle East and North Africa[57]. Both Alesina, et al. (1992) and de Haan and Siermann (1996), state that political instability causes slower economic development. Hence, both papers use GDP per capita (growth rates) as the dependent variable and government changes (one essential dimension) to measure political instability. The main difference between the two papers is in the way they count government changes. On the one hand, Alesina et al. (1992) average the government changes for each country over several years. Alesina et al.'s (1992) findings show that when there is a high rate of government changes then economic growth is significantly slow and vice versa. On the other hand, De Haan

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[56] In other words, PI (Political Instability) is the unsteadiness in governments, regime changes and the insecurity that the society receives out of these changes, in a nation or in a region.
[57] An advantage of a region-specific research is that it permits to use measures of political instability which fit in every region.

and Sierman (1996) use a dummy variable that takes the value 0 if the number of government changes shifts exceeds seven and 1 otherwise (for the years 1963-1988 and a set of 97 countries). Their findings, thought, are questionable. The usage of a dual variable which determines differences in political instability within a large group of countries is inadequate. The above, is the results from different political ideals and cultural discrepancies among different continents, and that is possibly why De Haan and Sierman (1996) found an insignificant relationship between political instability and economic growth (with the exception of Africa). Into the first school of thought, Campos and Nugent (2000) and Goldsmith (1987) test political instability against the economic well being (the growth rates of gross domestic product). Campos and Nugent (2000) constructed their own measures of political instability (by using indices to distinguish between *mild* and *severe* instability), whilst, Goldsmith (1987) uses a similar methodology with the difference that he included changes in stability between two different time periods. Moreover, Goldsmith (1987) divided his chosen sample into four groups firstly, the Constantly Stable (countries that were stable in all time periods), Chronically Unstable (countries that were unstable in all time periods), Stabilizing (countries that became more stable in the later time period), and Destabilizing (countries that became less stable in the later time period, compared to earlier one). Both Campos and Nugent (2000) and Goldsmith (1987) found no statistically significant relationship between political instability and economic growth in the sample of countries they were investigated. Though, Campos and Nugent (2000) found a significant negative relationship between political instability and economic growth only in the African continent.

The second school of thought reports that economic growth causes political stability or instability according to its rates. Zablotsky (1996) proposed that slow economic growth causes political instability. He measured PI as the probability of occurrence of military coup d'états. His findings were consistent with his research question.

The third dimension of the previous literature (as mentioned above), argues that causality in the relationship between political instability and economic growth runs both ways. Alesina et al. (1992) used a simultaneous equation model to address the issue of endogeneity. They also use the dimension of changes in the government to measure PI and tested it against GDP per capita, cabinet changes and a dummy variable to measure the democratic and nondemocratic countries. Alesina et al. (1992) concluded that economic growth and political instability are not only related but they are both endogenous, which means that neither of them can be taken as predetermined. Conclusively, they support the fact that the relationship runs both ways between PI and economic growth.

On line to the last fraction in the previous literature, Gyinmah –Brempong and Traynor (1999) explore the relationship between political instability and economic growth in Least Developed Countries (LDC). They use the technique addressed by Alesina et al. (1992) but a broader measure of political instability than them, by including the channel of investment, to investigate the above relationship in Sub –Saharan African nations. Their findings support the fact that there is a bidirectional causal relationship between political instability and economic growth. Beyond schools of thought into the literature, Kirmanoglu (2003) investigate the causality issue between political instability and economic growth (by using Granger -causality tests). Kirmanoglu (2003) includes an index of political freedom as his main measurement. In his findings there was no empirical significant relationship between

political instability and economic growth in 14 out of the 19 countries that he examined. Only in two countries Kirmanoglou (2003) reports that political stability actually increases economic growth whilst for the other countries (remaining 3), he reports that the causality runs in the opposite way (economic growth brings stability in a country.

Additionally, Blanco and Grier (2009) investigate the essential sources of political instability in 18 Latin American countries from 1971-2000. They examine whether regime type, regime durability, factionalism, income inequality, ethnic diversity, ethnic discrimination, regional overflow effects, urban growth and other macroeconomic variables matter for instability. Their findings can be summarized as follows: firstly, democracy has a significant negative effect on instability that is robust to several alternative specifications; secondly, factionalized political systems experience higher instability; then, income inequality, ethnic fractionalization, and urban growth have important nonlinear effects on instability; and finally, among the macroeconomic variables they investigate, only openness to trade has a significant negative effect on instability. With the assumption of the one directional causality, Jong −A −Ping (2009) investigates the effects of political instability (by dividing it into 4 dimensions) on the long run economic growth, in 98 countries from 1984-2003. His findings show that the different dimensions of political instability have different effects on economic growth. In addition, he examines the extent to which the different dimensions of political instability have on economic growth. He notes that political instability differs regionally. This study highlights the fact that political instability is a multidimensional phenomenon and that is how it should be treated by the researchers.

To sum up, in the previous research, beyond differences in models, methodology, variations in the direction of causality and the measurement of political instability, one

expectation is apparent: there is a relationship between political instability and economic growth although this expectation has not been clear by empirical evidences in the context of the interrelation between the aforementioned variables. This failure motivates this study to further quantitatively investigate the issue.

4.4 Method to approach the research

When political instability and economic growth variables are interrelated with each other it is likely that estimation with the OLS will be biased. The problem of the endogeneity will be attempted to be solved by following Newey (1987). With the aforementioned problem in mind an instrumental variable is constructed to replace the actual measure (index) of political instability in estimation in order to control of the effect of endogeneity. Furthermore, we use a set of instruments for the instrumental variable of political instability (equation 4), primarily on the basis on considerations advanced by Alesina and Perotti (1996), and Easterly (2007), and related to concepts brought forward in Acemoglu, Johnson, and Robinson (2001) and by following Peldam's (1996) recommendations of the four dimensions of political instability (PI). Then, the predicted values from this regression are used as an instrumental variable in our regressions (referred as $\bar{P}$).

Moreover, most empirical literature, on the effects of political instability on economic variables has used cross-sections of country-level data. Using a cross-section of countries, Alesina and Perotti (1996), and Venieris and Gupta (1986), note that political instability has a negative effect on investment and savings. Also by using a cross-section of countries, Alesina et al. (1996), Barro (1991), and Mauro (1995) argue that political instability has a

negative effect on economic growth. Furthermore, Alesina et al. (1992) highlights the possibility of joint endogeneity between political instability and economic growth and state that any researcher, who studies the above relationship, should take this into consideration. A question which arises at this point is whether political instability and economic growth have a reverse causation since political instability is not only a cause but also a result of economic variations, including growth, (Abadie and Gardeazabal, 2001). Here, by following the general recommendations of Alesina et al. (1992), Gyimah –Brempong and Traynor (1999) and Blanco and Grier (2009), among others, an IV model estimation technique will be applied to test our expectation that political instability impacts economic growth at the presence of possible endogenous interaction between the two variables. Our estimation model is set as follows

$$g_{it} = a + \theta s_{it} + \kappa i_{it} + \lambda t_{it} + \xi r_{it} + \gamma l_{it} + \varphi b_{it} + \psi h_{it} + \omega m_{it} + \epsilon_{it} \tag{1}$$

Where i indexes countries and t years; a is the constant term; g_{it} denotes the growth rate in real GDP per capita of a country i at time t;, s_{it} denotes governmental expenditures, i_{it} indicates the governmental investment; t_{it} indicates the trade openness; r_{it} stands for the inflation rates; l_{it} indicates the employement rates; b_{it} denotes the index for Political instability by following Gupta (1990); and h_{it} stands for Governmental changes (constructed by PCA: assassinations, general strikes, constitutional changes and legislative elections were used alternatively for robustness check in models II and III); m_{it} indicates the Regime type (polity2 indicator); ε_{it} is the error term that captures random shocks on growth over the years; and θ, κ, λ, ξ, φ, ψ, ω, are the coefficients.

In estimation b_{it} (Political Instability) is replaced by its instrumental variable of $\hat{P}_{it}$ in order to avoid endogenous effect on regression. The $\hat{P}_{it}$ is constructed on the basis of following instruments that are exogenous related to PI, which are defense, the party fractionalization index, head of state, effective executive, ethnic fractionalization index and effective legislature (the definitions of those variables are in Appendix I).

4.5 Data

This chapter measures political instability from its predicted values ($\hat{P}_{it}$) and a more complete measure (index) of governmental changes, in order to capture its different forms throughout different political events (as aforementioned above). Thus, it constructs indexes of governmental changes by using data from the Cross National Time Series Data (Banks (2008)), the Quality of Government Dataset (2009), and the Social Policy Dataset (2008). Moreover, according to Badiou (2005) a political event is an episode that describes, fixes, shapes, breaks and transforms a state's situation and power. Here, it is essential to mention that political events are indeed highly correlated to each other in that, firstly, they belong to the same causal *chain* of the fundamental origins that describe a political system in a country. Secondly, according to Marchart (2007) the correlation between the political events is the kind of relation which refers to multidimensional and multidirectional connections between the elements/events in the political system. Conclusively, the relationship between economic growth and political instability is both puzzling and complex and empirical findings vary a lot among different regions. Since there are many different types of instability, this chapter begins by constructing one measure of PI out of

three categories/indexes of instability by following Gupta (1991) and Blanco and Grier (2007) analysis for the measurement of political instability (see Appendix II for Principal Components Analysis-PCA analysis). The predicted values of PI (equation 4) constructed by following by following Peldam (1996) revealing both citizens' dissatisfaction from the political system and its representatives; the governmental changes index includes non – violent political events. Then the principal components analysis[58] is used, to construct the index. The above allows all the different measures of the instability to be embodied in one variable (Jollife, 2002). Moreover, the different components (which capture different political events) are highly unstable political measures resulting to highly correlation among them. Thus the above variables are being standardized[59] after constructing one variable out of many (out of an index of variables which has been described above[60]) through PCA (principal components analysis[61]). The idea behind PCA is to construct a more comprehensive and weighting representative measure of political instability which maximizes the relationship between itself and the individual political events. In other words, PCA generates a compound variable which has the highest possible correlations with the individual types of political instability. The components that stem from PCA are normalized variables which mean that the principal components are standardized z scores. In particular, PCA estimates 'weight-age' by normalizing the given variables X_j. In line to Armstrong (2009) that is:

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[58] As the political events (events that create a political unstable environment) are highly correlated to each other (based on the 'funnel of causality' analysed by Campbell et al (1960)), the result, from adding the variables individually in the same regression, is multicollinearity. The method of principal components allows the original data to choose the weights of the various events, so that the variation of the events is then maximized.

[59] 'What we want to see are means of 0 and standard deviations of 1' (Armstrong, 2009:1).

[60] In the political instability index have been included both serious events which cause governmental stability such as coups and revolutions and less serious events such as demonstrations.

[61] The full version of PCA analysis is been presented into the Appendix II.

$$F_1 = a_1 \, N(X_1) + a_2 \, N(X_2) + \ldots\ldots\ldots + a_k \, N(X_n)\ldots\ldots\ldots.. \tag{2}$$

Where, a_j = weights or Eigen vectors estimated by method of principle components and this vector is associated with the Eigen value of first principle component; and F_1 the PCA Index.

$N(X_j)$ = Normalized X_j variable.   .

Thus, PCA constructs a new set of variables from the given set of variables, which will be pair wise uncorrelated and of which the first will have maximum possible variance and the second the maximum possible variance among those uncorrelated with the first, and so forth. However, in this study only the first principle component is considered/used to construct the index of political instability. This method maximizes the variance of new variable for the proper choice of coefficients. The results from PCA are presented in Appendix II and the components that have been chosen absorb the biggest percentages of the total variation[62].

For the economic variables concerned, in explaining growth, the choice will be made by following the recommendations made by Bleaney and Nishiyama (2000), Levine and Renelt (1991), Sachs and Warner (1997) (who reviewed the existing literature and compared different variables). Those are government expenditures as part of consumption, governmental investment, inflation, employment rates and openness to international trade, which are all included in the main model. The dependent variable is the GDP growth rate. Then, the set of the exogenous variables are: firstly, the employment growth suggested by the previous research (i.e. Solow, 1956; Boltho and Glyn, 1995; Pandalino and Vivarelli, 1997; Walterskirchen, 1999; etc.) to measure the employment impact on economic growth

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[62] Armstrong D. (2009) explains the rules of f how to choose the right components in PCA and what shall we check in screeplots (eigenvalues >1 which is been followed as a rule of thumb).

(the labor according to Solow, 1956). The result which stems from the previous research is that high employment leads to growth. Then, a set of economic explanatory variables will consist of employment growth, openness to trade (as a proxy for the importance of international factors to economic activities), inflation rate, governmental consumption (general government expenditure), and investment.

In relation to the instruments to be employed, according to Paldam (1996), variables such as ethnic fractionalisation (by Annett, 2001; Ellingsen, 2000; and Collier and Hoeffler, 2004)), effective legislature, defense expenditure, the party fractionalization index, effective executive and head of state will be used. The above are relevant to the political instability and they will be used as exogenous instruments to predict PI and this predicted PI will be used as the exogenous variable in the equation (1).

In this chapter, the data[63] for economic variables are from Penn World Tables, the data for inflation obtained from the World Development Indicators, the employment rates are from Labor Statistics Database[64]. The panel consists of data for 20 European countries, covering a period of 55 years, over 1950-2004. The choice of the sample countries and period coverage, were constrained by both the availability and completeness of data and the interest researching the European context. The Western Europe is one of the most prominent areas (in terms of wealth) and the most stable (in terms of governmental stability) compared it with other regions around the world. In addition, from the table 4.1 on the descriptive statistics (appendix III), it can be inferred that governmental and defense

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[63] The data are stationary in levels. The panel unit root test is explained in chapter 3 and the results are in Appendix VI.

[64] Summary statistics of the data are presented in the appendix III.

expenditure, openness to trade, party fractionalization index and inflation, show high deviation from the mean. That can be explained due to disparities among countries in the sample (inclusion of developing countries used in the data, i.e. some Balkan countries).

4.6 Estimation of the Model

In this section we estimate an IV estimator model to account both economic growth and political instability (PI) as endogenous variables (by further using the compound measure of the PI as discussed above). Unless otherwise noted, all of the variables are measured in a yearly frequency[65]. That means that for each country, both economic and political variables are measured as their individual mean annual values over the testing period (see, e.g., Alesina et al., 1996; Fosu, 1992; Barro, 1991).

To begin with, all regressions are estimated using the IV estimator to address the endogenous problem of interaction between growth and political instability in estimation. The IV estimator relies on the quality of instruments, known as 'good instruments'[66], to reveal their efficiency of estimation. A rule of thumb followed is that the instruments need to be exogenous and the instruments are employed to estimate an instrumental variable to replace the corresponding or concerning variable that is endogenous. This will ensure that our estimation or tests will not be biased. In the equation (3) below, it shows how the predicted values of political instability are constructed for estimations in Table 4.6.2.

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[65] As has been used by Alessina et al (1996), Barro (1991) and Fosu (1992; 2001).
[66] 'Good instruments should be both relevant and valid: correlated with the endogenous repressors and at the same time orthogonal to the errors' (Baum and Schaffer, 2003: 2).

$\hat{P}_{it}{}^{67}$=-0.3545003+5.61*defense +0.0001145*party_francionalization_index -

             (0.77)   (1.92)

1.371315*head_of_state+2.091536*effective_executive+0.832866*ethic_franctionalizatin_in

(-8.42)   (7.21)   (0.80)

dex -0.859649*effective_legislature   (3)

  (-3.82)

Based on Adkins and Hill (2008) (Hausman Test) to test endogenous relationship, the GDP growth rates are regressed against the actual PI and the predicted PI, to test if they have any statistical difference in explain GDP. The null hypothesis is 'No difference' if the endogenous relationship does not exist. This test is presented in table 4.6.1 below, showing that the null hypothesis is rejected.

Table 4.6.1 HAUSMAN TEST (ENDOGENEITY TEST)			
g_{it}	Coef.	Std. Err.	z
b_{it}	-.1241483	.101404	-1.22
$\hat{P}_{it}$	-.0000174	3.20e-06	-5.42
_cons	4.163991	.2314629	17.99
R^2 = 0.06 N= 498			
Note: g_{it}= α+βb_{it} +θ $\hat{P}_{it}$+v_{it} (4)			

Having controlled the endogenous impact on estimation of the relationship between GDP and PI, the estimated results are presenting in table 4.6.2.

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[67] Political instability is been represented as a function of the defence expenditures, the type of the head of each state, the effective executive of the state, the legislative selection process, the party fractionalization index, the ethnic fractionalization index. Z values are included in the parentheses.

Table 4.6.2 RESULTS[68] OF ESTIMATION (equation 1) EUROPEAN COUNTRIES 1950-2004				
Dependent variable g_{it}	**1**	**2**	**3**	**4**
$\hat{P}_{it}$	-9.71 (-5.23)*	-8.87 (-4.86)*	-9.39 (-4.63)	-9.18 (-4.95)*
s_{it}	-4.20 (-0.87)			
i_{it}	17.94 (16.41)*	18.07 (16.66)*	18.01 (16.49)*	17.96 (16.47)*
t_{it}	-0.02 (-3.09)*	-0.01 (-2.14)*		
r_{it}	-0.10 (-4.13)*	-0.10 (-4. 37)*	-0.09 (-4.15)*	-0.09 (-4.22)*
l_{it}	62.84 (7.05)*	60.60 (6.93)*	56.09 (6.56)*	56.61 (6.65)*
h_{it}	0.04 (0.48)	0.04 (0.53)		
Polity2$_{it}$		-0.06 (-1.73)**	-0.10 (-2.76)*	-0.10 (-2.98)*
t80$_{it}$			-0.0002 (-0.05)	
t81$_{it}$				-0.002 (-0.83)
Prob > chi2	0.00	0.00	0.00	0.00
R^2	0.83	0.83	0.82	0.82
Hausman Test	0.2563	0.1803	0.1797	0.3811
Number of Observations	530	498	465	465
Sargan Test	11.159 P=0.457	11.421 P=0.349	11.067 P=0.386	11.056 P=0.324
F-Test	41.74 P=0.00	40.13 P=0.00	41.41 P=0.00	41.32 P=0.00

*=5% significant **= 1% significant t-values shown in parenthesis

[Note: the instrumental variable $\hat{P}_{it}$ is placed in estimations as replacement of actual b_{it}]

$g_{it}=a+\theta s_{it}+\kappa i_{it}+\lambda t_{it}+\xi r_{it}+\gamma l_{it}+\varphi b_{it}+\psi h_{it}+\omega m_{it}+\epsilon_{it}$ (equation 1)

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[68] The long run effects can be tested in future research by contacting a dynamin regression estimator which is based on a two step procedure. For more see Mark et al. (2005). The current chapter invastigates the short term effect of the relationship between economic growth and PI.

As shown in table 4.6.2, our estimation finds that inflation has a significant negative effect on economic growth which is consistent with evidences given by Gokal (2004). For government expenditure, it is non –significant for its impact on GDP. The negative impact of government consumption on GDP was evidenced by the previous literature (Landau, 1983; Baro, 1991; Gwardney et al, 1998; Fölster and Henerkson, 2000), although the impact is not confirmed in our estimation of Western European sample countries since there is an insignificant effect in the current analysis.

In contrast, investment and employment rates have a positive significant effect on economic growth which makes it consistent with the findings of the previous literature (Barro, 1991;1996; Barro and Sala-i-Martin, 1992, among others).

Openness to trade shows mix[69] results in the past literature with findings to indicate positive, negative and no effect at all on economic growth. The above mixed findings result mainly due to different measures of openness to trade (poor data quality and endogeneity of trade openness create mostly mixed results), or the variety of trade directions/policies followed by different countries (Edwards, 1993).

Openness to trade (exports plus imports divided by GDP), here, has negative coefficients (Table 4.6.2, models I and II) and the explanation rests, mainly, on the dependency theory which highlights the fact that an economy which is been influenced by foreigners is not developed (Amin, 1974). Another explanation might lie to the fact that foreign trade might create a problem of the crowding effect on domestic producers, in an economy in the long run which would affect GDP growth adversely. Furthermore, since this chapter tests the impact of institutional factors such as political instability on economic

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[69] See Edwards (1993) and Lopez (2005) for the detailed survey of the literature.

growth, openness to trade turns negative due to governmental incapability to resolve effectively the societal conflict. That is consistent with the previous literature (i.e. Aghion, Howitt and Mayor-Foulkes (2005), Borrmann, Busse and Neuhaus (2006), Dollar and Kraay (2003), Freund and Bolaky (2007), etc., who note that institutional quality is the driver of economic development and trade is its catalyst).

For robustness test, in regressions 3 and 4, the openness to trade has been replaced by two variables open80 and open81 (dummies). The creation of the two dummies above, was to capture the 1980s savings and loans crisis that spread from Latin America to Europe (and the rest of the world), by causing a failure to the import substitution policies. The findings show (table 4.6.2 regr. 3 and 4) that both open80 and open81 become insignificant which means that there is no effect of trade on economic growth in the sample of countries used for the period researched. However, the governmental changes excluded from both regressions since that variable turns democracy as non-significant on growth, with open80 or open81 in the same regression. According to Cavalo (2008) the more open to trade a country is, the more exposed it becomes to international dangers. The years under study cover major shocks of the 20th century such as the cold war and the oil crisis among others which affected severely Western Europe. Protectionism became a key policy for Europe which led governments to intervene both into the market and in trade. The above policies resulted in a negative impact in economic growth in the long run.

By controlling the interact effect between GDP and PI, our estimation finds that the predicted values of political instability have a significant negative impact on economic growth. The above is the result of unorthodox or repressive governmental policies which

lead to bad economic performance, and in return that bad performance affects the stability of the regime.

A basic assumption is that the prerequisite for a polity to thrive is stability, in terms of effective governance (decision making) and institutionalized procedures (Hurwitz, 1973). The people of a state must be able to count on the government's functional continuance and in the efficient production and distribution of public goods and services. When states are unable to adequately produce and distribute goods and services, then 'governments lose legitimacy, and the very nature of the particular nation-state itself becomes illegitimate in the eyes and in the hearts of a growing plurality of its citizens' (Rotberg 2003: 1). How will people act when they deem their governments are illegitimate? Will they demand for a new government into the office (legitimate elections through anti-government demonstrations)? Will they revolve like that of the Bolsheviks, the French Revolution, or the current revolution in Egypt and Bahrain? The probability for violence and conflict is high and, therefore, the analysis of government's ability and its sovereignty to meet the citizen's needs is vital.

Another important finding is the regime type plays a key role only to the first situation which means that regime type affects economic growth through the channel of political instability (under civilian regimes –where human and political rights allow citizens to present freely their discontent to the governmental policies) whilst there is not such a case in the political instability equation. That is true when the political arena is dominated by traditional elite groups or individuals who control the party system, exercise political pressure, direct voters through clientism or vote buying, apply force and even

assassinations. The above is a consistent finding with Blanco and Grier (2009) that state that countries with long democratic regimes are more unstable than otherwise.

Since the importance of ethnic fractionalization is embedded in our instrumental variable of the PI, our finding of the PI negatively related to GDP growth implies that the more proportion to the division within society could affect economic growth more adversely in the long run. Easterly and Levine (1997) focus on finding what cause low growth rates in sub-Saharan Africa. They report that ethnic fractionalization is linked with low rates of schooling, underdeveloped financial institutions, deformed foreign exchange markets, high government deficits, and poor institutional quality which lead to social unrest and political instability. Alesina, et al. (1999) declare that more ethnically diverse regions are associated with higher spending and deficits per capita, and lower spending shares on public goods such as education. Ethnic differences will here be considered as a possible explanation of high concentration levels of influence and persistence of internal conflict[70]. The findings show, that ethnic fractionalization affects negatively growth, because the higher ethnic fractionalization[71] leads to the higher instability. Differences in national identities, as a notion, are very important social phenomena and it that motives internal conflicts around the world. The above relationship has also been evidenced this chapter, conclusively, political stability is expected to be correlated with homogenous societies in Western Europe.

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[70] Andriole and Hopple (1984) highlight the fact that both violence and any kind of social unrest stems from 'normal' domestic violence such as ethnic and religious differences in a country.

[71] As religious fractionalization is not considered the religious conflicts per se but rather the religious divisions, defined as different religious relationships, which makes conflicts more violent, and at the same time make it harder for aggressive believers to establish intergroup trust, making conflicts more extended.

As for the party fractionalization, that predicts the instrumental variable of PI positively significant, the negative impact of the predicted PI on GDP indicates that more political fractions could handicap a country's governability to promote GDP growth in the long run. Furthermore, the effectiveness of law and order measured by the effective legislature that is negatively related to the predicted PI shows that the better the legal system can be conducive to growth through enhancement of political stability in the long run.

4.7 Concluding Remarks

This chapter investigates the relationship between political stability and economic growth among European economies. The above examination, though, leads in a question: If there is a relationship between the two variables above, to what extent does political stability affects economic growth? In the context of the European experience, these questions are quite motivating. In the light of the increasing interest in this issue (mostly in terms of causality and which way the causality runs) this chapter sheds some light on the ongoing debate - the relationship between political instability and economic growth - by exploring the above relationship in the Western European region.

Most of the past theoretical research that has been discussed in the literature review implies that less political instability (measured by many different stability/instability indicators) leads to more economic growth. Another school of thought noted that bad economic policies which lead to bad economic performance ultimately lead to an unstable political environment. A third school of thought noted that there is a joint relationship between political instability and economic growth. However, the insights that can be drawn

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by controlling for the effects of different political regimes/ political environments on a nation's economy, is that the puzzling relationship is a two way path.

Following the econometric estimation method of the instrumental regressors (IV) model employed by this chapter, the hypothesis of endogeneity (joint causality) has been examined between political instability and economic growth, something that a single equation model cannot illuminate. Hence, the IV regressors model is applied to the investigation of both the direct and indirect (as has been stated above) channels through which political instability affects growth.

The effects of political instability on economic growth are measured with those variables which have shown their explanatory power to the PI in our estimation. Among those are the ethnic and religious diversities in countries. According to Annett (2001), a society which is being separated through ethnic or religious groups is unsteady. The imbalance and instability caused by ethnic and religious discrepancies make political instability endogenous.

A key finding is that there is an inter-causal relationship between political instability and economic growth and there exists joint endogeneity between these two indicators. Furthermore, our study identifies that more political party fractions will handicap government's ability to pursue growth strategies for the economy in the long run. This evidence suggests that if democracy is developed through more fractional political influences then this could create more political uncertainty for future changes and development by destabilizing growth. Our argument is consistent with Goldstone et al. (2004), Schwartzman (2005) and Blanco and Grier (2009). They argue that one major effect of the democratic system is its inefficiency in the decision making area. This

inefficiency can, also, weaken business competitiveness and productivity, via the slow decision –making process and diversifying resources from production to democratic politics, such as lobbies, consultation, debating, etc. the slow productivity brings slow growth which in turn might create citizens–rebellion-behavior.

Long lived democracies have a higher probability of experiencing instability than equally long lived autocracies. The key to economic performance is the 'good governance'. In the long lived democracies' case, the character of political competition between parties or interest groups becomes corrupted with a *clientele* character, driven by personal interests. Additionally, the elected chief executives are controlled, in many cases, by financial or legal promises and deals with other elite groups in the society. Thus, personal interests are included in the decision making arena which are driven by *opportunity* leaders.

And this is actually the case for most of the Western European countries, considered to be long lived democracies.

Future research is required to check the political system itself on long lived democracies.

CHAPTER V

POLITICAL INSTABILITY AND ECONOMIC GROWTH: THE GREEK ECONOMIC CYCLES IN THE 20TH CENTURY

'Greece is caught in the struggle between the West and the East, and …the Greeks are not merely fighting their own battle…'

CIA Released Documents -Current Situation in Greece (ORE 28-48)

5.1 Introduction

The current economic critical situation in Greece has shifted the world's attention to the state of affairs that the institutional and economic regime encompasses. The current joint IMF-EU-ECB 110 billion emergency loan to Greece that has come under strict conditions evokes past experiences and academic interest. The Greek institutions are alleged to be unable to control the above situation, given that economic growth is significantly deteriorating.

Greece's[72] historical experience has been very different from other Western European countries, both in terms of political events, cultural development and policy reforms. Clogg notes that 'Greece's heritage of … several centuries of Ottoman rule have left their distinctive legacy on the development of Greek economy and society' (1979: vii). During the 20th century, Greece as a developing nation, which just came out of poverty, tried to overcome the economic problems that it was facing. However, Greece was facing the future by looking at it 'forward economically and backward politically' (Carey and Carey, 1968: vii). After World War II, and especially after the civil war of 1944-1949, Greece tried to

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[72] Carey and Carey describe modern Greece as 'a country of basic contradiction… [one] which is more than the remains of bygone greatness' (1968:vii).

heal its wounds socially and even more urgently economically. Various political setbacks and military events such as the defeat of the Greek Army in Asia Minor in 1922, the losses, the killing and starvation during the World War II and the civil[73] war afterwards, have racked Greece throughout the 20th century. The result was the enormous economic destruction of Greece in terms of both infrastructure and man power.

The above events placed Greece amongst the poorest and most bankrupt countries in Europe with a chaotic economic position during the first half of the 20th century. The main reasons, are as follows: firstly, the disaster that World War II caused in Greece since the army absorbed most of the Greek wealth in order to be preserved (Drakatos, 1997), secondly, the productive manpower has been significantly decreased, because of the war and most economic production units that (such as factories, agriculture units etc.) were destroyed (Drakatos, 1997). Thus, in an attempt to cover its needs, Greece had to borrow money in a significant scale relative to GDP, from other countries and foreign banks during the 1950s[74] and onwards.

As far as the Greek political scheme is concerned, the main characteristic were the vivid political turnover i.e. different political regimes –like monarchy, dictatorships, semi-democracy and democracy – which succeeded one another. In addition, foreign born kings ruled in Greece, along side corrupt politicians, and five military dictatorships that were established in 1912 (and has continued). The policies and decisions which came as an outcome from the above political arena influenced key political economy issues such as the allocation of governmental resources (spending). The above in turn was one of the main

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[73] During the civil war the Greeks of the left and the right have begun to fight each other in order to gain control of the government.

[74] After World War II Greece were funded by USA in terms of aid for reconstruction for about 20 years.

concerns of Greeks who tried to overcome Greece's economic under-development just before World War II.

This chapter examines the relationship between political instability and the short term movements (fluctuations of the economy) of economic growth (measured by the economic growth cycles) in Greece throughout the 20th century. The measurement and analysis of cycles characterize a very important subject for the light they may throw on (a) the level and variability of growth, and (b) the sources of economic instability. Greece[75] has been chosen as a case study because its relevance feeds into current events which affect the Euro area as a whole. The current stability of the Euro requires us to investigate Greek institutions, governmental policies (i.e. governmental expenditure) and societal unrest as potential explanatory variables that led to the current critical socioeconomic situation. However, Bollen and Jackman (1989) note that ascertaining similarities amongst case studies that occur in a different historical context must be implement in a context –specific case. Therefore, the choice of Greece allows the use of country- specific characteristics to draw important conclusions regarding the effect of political instability on a country's well being. Case studies are believed to be the natural way to confirm or disprove the results given by cross -country studies (Abadie and Gardeazabal, 2003). Therefore, are political events captured?

According to Gupta (1990) and Alessina et al. (1992) and Leblang and Bernhard (2000) two indexes, one of political instability and one of governmental changes, should be constructed as an index of violent political instability or of governmental changes[76] based

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[75] Greece in terms of research is classed among the PIGS that currently threatened the stability of Euro.
[76] The index of governmental changes captures the non violent instability of the polity and is related to the policies and choices made of the government which affects directly the economic arena.

on time –series data. The general conclusion that stems from the past is that political instability severely affects economic booms and busts. However, as has been stated by Asteriou and Price (2001) the problem is that cross –country studies assign only one value to political instability in each country in a sample. Their approach categorizes different countries within the sample as more or less unstable compared to the rest countries in the same sample. Therefore, the above approach does not provide country specific information about events that influence the economic arena e.g. in Greece the high boost in growth rates during the 1960s, and especially during the military regime in 1967, was not incorporated in their analysis. This chapter addresses these deficiencies by examining events specific to Greece.

The rest of the chapter is constructed as follows. Section 2 covers a short historical background of both political and economic events in Greece. Section 3 reviews the existing arguments. Section 4 discusses the empirical model underlying the Greek case, and gives an explanation of data and measurements used. Section 5 presents the empirical results and, finally and section 6 concludes this chapter.

5.2 The Greek Phenomenon –An Epigrammatic Political and Economic Background

> *'…Nothing occurs at random, but everything for a reason and by necessity'*
> *(Kirk and Raven 1957:413)*

The Ancient Greek spirit established the ground for both economic and political thinking. According to Ancient Greek philosophers, i.e. Aristotle, Democritus, Pythagoras etc., the explanation of both economic and political phenomena lies in the observation and

rationalization of human behavior. On the one hand the existence of various human wants, needs and desires cause economic phenomena[77] (e.g. the division of labor) and on the other hand the fulfillment of human expectations sets the ground of the political actors. The balance between the rationalization and the expectations in line with the notion of happiness (in terms of economic flourishing and development) and soreness (in terms of being poor) were the principles[78] that ancient Greek though inherited to the modern world.

Even some ancient Greeks were preaching[79] virtues such as rationalization and modesty, contemporary Greeks in a majority demonstrate the opposite. Over the last 100 years Greece has been healing its wounds from wars (revolution against the Ottoman Empire, World War I and II, civil war), economic destruction and a vivid political turmoil. It is a well established fact that political instability and the political environment are linked with the economic and fiscal environment in a country. Below we will present economic and fiscal events and we will try to understand the general political historical context around them and investigate their links related to the social unrest in Greece and the unstable environment that existed.

Furthermore, the investigation of the Greek economy for almost 100 years[80] discovers the impact of the past into the present (since the economic problems are almost similar to

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[77] For more see Diels (1954).

[78] An individual should always appraise his economic actions and behaviour through the rational of 'the limit between the beneficial and the non-beneficial' (Diels 1954:188).

[79] For example Democritus[79] was against overconsumption and waste of goods with ethical behaviour and control of wealth (Kanellopoulos 1985).

[80] The period under study has been chosen so as to examine the past, which especially for Greece, is crucial since that leads to a better understanding of the reasons behind the Greek economic and political instability that exist since Greece's emergence as an independent nation. A short term analysis is inadequate for a comprehensible contemplation on the nature and the extent of the Greek economic plight. Thus, a long term systematic examination of the Greek political regime evolution and its impact on economic growth is essential since it lacks in the current literature.

the ones that Greece was facing in the previous century). According to Alogoskoufis (1995) the Greek economy is of particular interest to the researchers who seek evidences from changes that occur when the political or economic state of affairs change. The current situation of Greece demands a radical change and that requires some investigation.

The Greek economy can be portrayed by 'economic cycles'. For example, after the World War II, the 'reconstruction' of the economy was initially followed by the 'preparation' for economic development and policies for economic development in the 1950s and the 1960s followed by higher rates of economic growth in the 1960s and 1970s and then came a reversal in the growth rates in the 1980s leading to a weakening of the Greek economy in the 1990s. The above introduces a big economic cycle (Drakatos, 1997).

Following its establishment as a sovereign state in 1830's, Greece did not manage to achieve either economic growth or political stability. Greece's ability to overcome the chaos, that four centuries of Ottoman rule caused, in both its economy and society, was limited and severely forced the process of economic modification. The consecutive victories of the Greeks against the Turks until 1824 were based on a profound desire to discard the Ottoman oppression. However, Greece's endeavor could not be fully successful without financial assistance. Financially, so far, most actions were based on private offerings from rich Greeks of the Diaspora or ship-owners of certain islands, e.g. Hydra, Spetse, Psara, as well as from extra taxation. Nevertheless, a modem nation could not only exist with 'gifts' or non-existent resources, thus the prospect of obtaining a loan from abroad appeared inevitable (Dertilis, 1980). Many bankers became interested such as the Rothschild House, Jacques Lafitte and the Behrendos & Co. The external *funding* was also a kind of political manipulation since foreign forces were trying to interfere in the Greek

political scheme. Nevertheless, Britain succeeds to hold two loans that are known as the Independence Loans (Dertilis, 1980). Table 2.1 shows a summary of the foreign loans:

Table 5.2.1 SUMMARY OF FOREIGN LOANS – GREECE 1879-1914			
	1824-1825	1879-1893	1898-1914
Number of contracted loans	2	9	8
Total nominal value(millions of £)	2.8	26	28
Average effective interest rate (%)	5.5	6.1	4.5
Debt per capita (%)		12.8	13.3

Source: adapted from: Ali Coşkun Tunçer, p.2 (available at:
http://www2.lse.ac.uk/economicHistory/seminars/TuncerMar10.pdf)

However, to test the effects of financial institutions on Greek economic growth is not the focus of this chapter. Nevertheless, it is important to refer to the effects of public debt (especially foreign/external debt) on political instability (debt as a % of GDP measures a country's banking system which is among the basics institutions that promote growth through the channel of monetary stability and investment). Previous[81] literature reports that political instability negatively affects loans in some countries, since loaning is used mainly to finance military expenditure for either security reasons (e.g. external threats) or internal turnouts (e.g. violent social unrest). Wars and civil conflict create instability in a country which in turn might cause episodes of sovereign default by affecting adversely a country's productivity. A government in order to balance the unstable political environment and the social insurrections, finances military expenses by diversifying part of its budget towards it. Thus, this chapter investigates the effects of political instability on Greek economic growth cycles in the content of financial stability.

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[81] See for example Roe and Siegel (2011), Hatchondo et al. (2007) among others.

As shown in table 5.2.1, the history of Greek sovereign borrowing started with the independence loans of 1824 and 1825, amounting to £2.8 million in total (Kofas, 1981). The two loans that were negotiated in 1824 and 1825 and were advanced in exchange for the Greek governmental consent that Greece would be sited under the guardian of England (Dertilis, 1980).

The table 5.2.1 further illustrates that the entire 19th century became the period of foreign loans, and bankers who fought for the control of new countries like Greece and Latin America (Dertilis, 1980). At the time of the acknowledgment of Greek Independence by Europe in 1830, scholars at that era, note that bankers will start their control and that was a reality (Dertilis, 1980). Greek economy was totally underdeveloped until the end of 19th century with bankers and foreign powers to fight for controlling a bankrupt state. However, Greece did not have enough sources to make any repayments of the loans. An agreement between the Greek government and bondholders was finally concluded in September 1878, which was followed by an era of rapid debt expansion (Andreades, 1906). This recorded the first crisis in debt repayment in Greek history. After the 1878 resolution to the debt repayment crisis, Greece contracted 9 loans, £26 million in total (See Table 5.2.1), most underwritten by French deposit banks, i.e. the Comptoir National d'Escompte, the Société Générale and the Crédit Lyonnais, and British banks i.e. Hambros of London, who acted as intermediaries between potential lenders and Greek government (Andreades, 1906). Table 5.2.2 shows the loans adopted by Greece from 1824-1935.

	Table 5.2.2 FOREIGN LOANS GREECE 1824-1935		
YEAR	**LOAN**	**INTEREST RATE**	**NOTES**
1824	£0.8 million	5%	
1825	£2 million	6%	
1826	Debt repudiation		Unilateral suspension of loan servicing payments
1832	60 million drachmas	5%	Gesture of goodwill by the Protecting forces in view of advent of the monarchy
1843	Debt repudiation		Unilateral suspension of servicing of the 1832 loan
1856	Imposition of international financial control		Non –recognition of the loan by the Greek monarchy
1864	Debt compromise		Final settlement of the 1832 loan
1879	60 million gold FF	6%	Final settlement of the 1824-25 loans
1879	£1.2 million	5%	
1880	60 million gold FF	6%	The national bank of Greece contracted a foreign lottery loan in metallic currency, at high interest rate, on behalf of the Greek government.
1880	120 million gold FF	5%	
1883	10 million gold FF	5%	
1884	170 million gold FF	5%	
1887	91 million gold FF	4%	
1889	111 million gold FF	4%	
1890	80 million gold FF	5%	International monetary turmoil. The loan was particularly covered (53 million drachmas). The credit standing of the Greek state decreased.
1892	Foreign markets' distrust of Greek state		Mr. Law (economic attaché of the English embassy) and Mr. Roux (economic attaché of the French embassy) made a report on the Greek economic situation. They were fully supported by the Greek government, which envisaged the agreement on a new foreign loan.

Year	Amount	Interest	Notes
1893	Debt repudiation		The Law report, which depicted favourably the Greek economy, was published, whereas the Roux report, which pointed out to the loss of the Greek State's solvency, was never published. The government was unable to contract a new foreign loan. Unilateral refusal to pay amortisation. Repayment (in gold) of only 30 per cent of the interest on due foreign loans, as well as repayment (in banknotes) of 50 per cent of due interest.
1894	Negotiations		Deadlock. Unsuccessful effort to issue a capitalisation loan (interest coupons falling due would be paid off by means of bonds).
1895-96	New negotiations		
1898	Debt compromise 150 million gold FF	2.5%	The system of tax collection and management was audited by creditors
1902	44 million drachmas	4%	
1906	20 million gold FF		
1907	20 million drachmas	5%	
1910	110 million gold FF	4%	
1914	335 million gold FF	5%	Credit that the Allied Powers agreed to extend after the end of the war. In the meantime, the country should issue paper money of equal value. However, these credits were not actually released, and thus severe exchange rate fluctuations occurred.
1918	850 million gold FF		
1924	£10 million	7%	Refugee loan
1927	£9 million	6%	Stabilization loan
1928	£4 million	6%	Public works loan
1932	Debt repudiation		Unilateral suspension of amortisation payments for the external debt.
1935	Debt compromise		World War II suspended all payments

FF: Loan contracted in gold with a consortium of banks (the National Bank of Greece, the Bank of Epirus and Thessaly, the Bank of Industrial Credit and the Bank of Constantinople) for interest and amortisation payments on the outstanding external debt.

Source: adapted from: Lazaretou (1999), pp.18-19.

Greece, as mentioned above, started to loan in order to finance national projects of infrastructure and development and military expenses. Foreign creditors were willing to loan to Greece since it was a new established state and could use any help as could get. The problem started with the independence loans. Greece's inability to repay the Independence

loans damaged the country's reputation as a borrower and kept her out of the European capital markets for many years. Thus, higher national expenditure on the repayment of national debt and its financing through more foreign borrowing caused higher interest rates and budget deficits (Lazaretou, 1999). The above led to repayment crisis which in turn harmed Greece's reputation as a borrower and the country was soon over indebted.

Table 5.2.3 ASSESMENT OF GREECE'S CREDITWORTHINESS	
Before 1879	Greece was unable to have access to international capital markets. A short-term domestic debt was issued at a very high rate (8%).
1879	Greece rebuilt its reputation in the international capital markets after a debt compromise was reached for previous foreign loans.
1880-84	Efforts for the drachma to join Latin Monetary Union. Long-term foreign borrowing from the money markets of Western Europe on favorable terms (5%). Improvement of borrowing terms in the domestic money market: the interest rate was cut to 6-7% and loan maturities were extended.
1886-89	Foreign investors' expectations that the drachma would return to the gold standard. Borrowing from abroad at a low interest rate (4 %), with a small or no guarantee.
1890-97	Greece's creditworthiness tottered. Foreign creditors were unwilling to lend the country.
1898	Debt renegotiation. Successful implementation of a long-term stabilization program with the assistance of foreign creditors.
1899-1909	Borrowing from abroad at a low interest rate (4%). Bonds of domestic loans became tradable in the domestic money market. Bond lottery at par value.
1910-14	Greece's creditworthiness improved. Possibility to borrow from abroad, owing to a war emergency, at a low rate (4-5%).
1915-22	International capital markets were unwilling to lend Greece, owing to the wartime turmoil, the post-war political and monetary instability in the country, and the pendency of Greece's national defense debts. As of 1920, unwillingness of the domestic market as well to grant loans to the Greek government. Continuous issuance of short-term Treasury bills (at 6%), short term loans from the National Bank of Greece, and money issuance.
1923-25	End of the war. Fiscal adjustment and short-term domestic debt stabilization efforts. The country's creditworthiness improved. Conclusion of a new foreign loan (at 7%).
1926-27	Stabilization program. The country rebuilt its reputation. Agreement on a new foreign loan at a low rate (6%), conditional upon the drachma's entry in the international monetary system and the imposition of fiscal discipline.
1944-62	$224.2 millions. Part of USA's aid to Greece.

Source: adapted from Lazaretou, (1999), pp.22 and Ferris (1986), pp. 148.

Above, is the table which reviews Greece's creditworthiness. The debt crisis started in Greece in 1826 (see table 5.2.2) even though the country was not an independent state yet. The struggle against the Ottoman Empire was ongoing in 1826 and quite a few Great powers (e.g England and France) were showing interest on the new forthcoming state. With an insignificant tax base and no institutions to gather money, the Greek non-state was facing bankruptcy even before her independence from the Ottoman rule. Interestingly, Greece never even took half of that loan which is known as the Greek loan scandal and yet the country had to repay it (Rosen, 1992). However, in the very same year the 10.500 inhabitants started leaving Messolonghi town after a year's Turkish siege with very few of them to survives. 1843 was another significant year (table 5.2.2). Another debt crisis appeared. King Otto took a huge amount of money to repay older loans, to support the standing Bavarian army and a big proportion was repayment to the Sultan as compensation for lost territories. The fiscal instability resulted in debt crisis in 1843 that caused a military revolution led by Colonel Dimitrios Kallergis yielding the popular demand for a new constitution and a Greek Orthodox king. 1893 was marked with Trikoupis (prime minister of Greece at that era) proclamation of bankruptcy. He stated to the parliament '... gentlemen we are bankrupt' (Vergopoulos, 1977). Another repayment crisis in 1893 followed by high national expenditure for infrastructure this time, and military expenses in order to fight for Crete's independence and reunion with Greece a few years later (Kofas, 1989). The political unstable environment with many social demonstrations and unrest in general highlight the above year. Furthermore, associated with debt crisis, the Great Depression was very bad both economically and politically for Greece. The high unemployment rates resulted in high social unrest especially with the excess of manpower

caused by the refugees from the Asia Minor War. Furthermore, the effects of the Great Depression led to an unsuccessful coup in 1933 and another one in 1935. The political impasse of that era enabled General Metaxas to prevail King George to rule by what is known as the 'Regime of 4th of August'. Once again the army compromises the debt in Greece. From the above stems that the unstable political environment was related with the unstable and highly indebted economic environment and the huge fiscal *holes* in Greece. This alone creates the urge for the investigation of the social unrest related to debt and their effects on economic cycles in Greece.

Additionally, due to its location which is situated between West and East, Greece is particularly keen on defense expenditure since it is placed in a highly unstable region (Veremis, 1982). It is among the European countries that are situated in the volatile Balkan[82] area. It faces military threats from Turkey[83], for centuries, which leads to high defense expenditure (the highest among European countries and the NATO -5.6% of GDP, during the decade 1990s-2000 compared to 3.5% in NATO[84]) (Dunne and Nikolaidou, 2001). Thus, the continuous clashes and frictions with Turkey create security uncertainty which lead to high levels of defense spending[85]. Both countries come out to be betrothed in an arms pursuit which becomes rougher after the Turkish invasion of Cyprus in 1974.

Furthermore, the Greek economy is very weak since its establishment as an independent state and the extra difficulties that arose from the Greek participation in the European and

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[82] The unstable security situation in Balkans (i.e. the collapse of Yugoslavia and the civil war, successive disputes with Albania and FYRUM) which stem from a recent upsurge of nationalism and ethnic conflict in the last decades (Kollias, 1994).

[83] Even though the Greek-Turkish quarrel dates back centuries, Greece (despite her economic problems) is forced to continue to assign a big proportion of her national expenditure in defence expenses.

[84] In contrast to the USA, where the defence spending is less than 4% of GDP, Greece as a small country has relatively higher military expenditure overall (see table 2.3).

[85] For more see: Constas 1991; Tsitsopoulos and Veremis 1991; Ifestos and Platias, 1992.

Monetary Union –EMU. However, many of the loans that adopted by the Greek government mainly financed military needs as mentioned. Table 5.2.4, below proves the high governmental spending regarding the defense expenditure.

Table 5.2.4 DEFENCE EXPENDITURE GREECE 1965-2008			
YEARS	As a % of GDP	YEARS	As a % of GDP
1960	4.9	1990	5.9
1961	4.2	1991	2.1
1962	4.0	1992	2.4
1963	3.9	1993	3.2
1964	3.6	1994	3.7
1965	3.5	1995	3.5
1966	3.7	1996	2.4
1967	4.5	1997	3.2
1968	4.8	1998	3.7
1969	4.9	1999	3.5
1970	4.9	2000	4.4
1971	4.9	2001	3.4
1972	4.7	2002	3.2
1973	4.2	2003	2.6
1974	4.3	2004	2.7
1975	6.8	2005	2.9
1976	6.9	2006	4.5
1977	7.0	2007	4.5
1978	6.7	2008	2.0
1979	6.3		
1980	5.7		
1981	7.0		
1982	6.8		
1983	6.8		
1984	7.1		
1985	7.0		
1986	6.2		
1987	6.3		
1988	6.4		
1989	5.7		

Source: adapted SIPRI yearbooks different years.

In contrast to the USA, where the defense spending is less than 4% of GDP, Greece as a small country has relatively higher military expenditure overall (see table 5.2.4). In addition

to the high military spending, the political turmoil and rapid governmental changes reduced the business confidence and the productive capability that can create tax revenues for the country. The deterioration of tax revenues generation capability plus high military spending made the country more difficult in serving her foreign debt liabilities, in particular at the beginning of the 20th century and until the World War II. Additionally, despite the large foreign donations, by the United Nations, inflation[86] remained a key policy concern, at the same period, since it was making government expenditure inelastic and the public administration incapable of reforming the economic area.

After World War II and the civil war, the 1952 constitution, declared Greece a parliamentary democracy with a monarchy, which followed by a decade of domination by rightwing parties. A short period of irregular governments resulted in a constitutional crisis over the role of the military in 1965 and the political instability resulted in the military coup of 21 April 1967. The period from 1949 to mid 1970s is known as the Greek economic miracle. A number of events and policies created the term economic miracle. The US aid to Greece followed by the Marshall Plan, which was used mainly to accelerate the Greek GNP (Stathakis, 1994). Furthermore, the economic policies followed Zolotas plans, governor of the Central Bank at that era (e.g. the government to forward to the market imports of goods and materials), new monetary parity plans, the Central Bank started selling gold sovereigns to keep public faith, huge reconstruction projects and development of tourism, to name a few (Stathakis, 1990). After the miracle though more problems arose since the government from the 1980s and on relied on foreign loans once more to cover pre-election clientistic promises.

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[86] Some of the years of the period 1914-1923 were characterized by high inflation rates. More specifically in 1918 the General cost of living index rose by 134.62%, in 1916 by 35.90%, in 1922 by 59.80% and in 1923 by 85.69%. On the other hand in 1919 the said index dropped by 11. 75%. See Annual Statistical Yearbooks of Greece of years 1930 and 1936.

The past influences the present and sometimes affects the future. That was the case for Greece during the 20th century. The period under study (1919-2008), for Greece was tense both politically and economically: foreign born kings, corrupt politicians, individual bourgeoisies and elites, different political regimes succeeded one another, World War II, civil war, economic bankruptcy, debt, the 'Revolution of the Generals', and in the next decades (restoration of democracy in 1974) a democratic state with vast economic problems[87].

The above indicate that the Greek case is a political and economic 'phenomenon' by itself and the events and policies behind each government during the 20th century characterizes this uniqueness.

5.3 Existing Arguments

Greece entered the 20th century with a large number of problems both in the territorial and political area. The role of the government was that of the intermediate between landlords and peasants and at the same time it was chasing laisse –faire policies for both the above (Feris, 1986). Hence, Greece like other Balkan countries became totally depended on the 'Great Powers' for loans and investment from the late 19th century and onwards. Thus, any kind of economic development, in the Balkans generally, during the first decades of the 20th century, was slowed down by lack of capital, communications, public infrastructure, product competition, etc (Close, 2002). In Greece, particularly, any kind of public infrastructure was built by foreign firms and funded by foreign capital. The result was that

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[87] Alogoskoufis describes Greece as '… [a] 'success story' .. [with a] 'problem[atic] economy'…' (1995:150).

any kind of foreign investment in Greece was serving economic and political foreign interests. Moreover, since Greece was a poor agrarian economy, it lacked resources for heavy industrial production. Additionally, heavy bureaucracy and heavy burden on retaining large size of army resulted in the public debt rose to very high levels from the late 19th century until the 1930s[88] (Close, 2002).

Over the past century the Greek economy had periods both of low and high economic growth. The post-war Greece has been gradually altered from an agricultural economy to become one of the fastest growing economies in Europe. After a rapid increase on the economic growth rates which started in the mid 50s and continued until the mid 70s (the years that followed the end of the civil war, with a governmental interaction which started in 1946 and until the resignation of the military regime in 1974) the growth rate of GDP slowed to only 1.5 percent annually in the period after 1974 and until mid 90s (Madison, 1995).

The poor economic performance was attributed mostly to weakening economic policies in the period after 1974 and particularly during the 1980s. Beginning in 1974 the Greek government ran huge and constant budget deficits (i.e. 5% during the 1970s, 16.4% during the 1980s) and the monetary policy fuelled a sharp increase in political instability and inflation[89] (Bosworth and Kollintzas, 2001). Table 3.1 shows the data for external loans after the reconstruction of democracy.

Furthermore, political instability is a multidimensional indicator which is difficult to be measured and defined. Political instability includes instability and changes in regimes,

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[88] The governmental debt in Greece was 25.4% of the total current state revenues in 1883, 25.7% in 1910, 26.2% in 1922 and almost 33% in 1932 (Ferris, 1986: 66).
[89] According to CPI the inflation rates in Greece were: 5.455% in 1965, -1,667% in 1967, 12,903% in 1974, 26,291% in 1980 and fell into 22,884% in 1990.

governmental policies, and social unrest in a nation. However, there is a growing literature arguing that political instability affects economic growth by affecting government expenditure, investment, political decisions etc[90]. Hence, political instability affects the stability of the governments, political regimes and the people themselves in a nation. In its turn the above unstable political environment, affects the availability of features of production (i.e. human capital, investment, etc) (Asteriou and Siriopoulos, 2000).

A large literature documented the effects of political instability on economic choices by using different indicators to measure instability. On the one hand, Barro (1991; 1996), Levine and Zervos (1996), Easterly and Levine (1992) among others used individual indicators of political instability in cross –country regressions (i.e. the number of coups or assassinations etc) with economic growth as the dependent variable. On the other hand, Hibbs (1973), Gupta (1990), Campos and Karanasos (2008) and others constructed indices which summarized data according to the political violence and social unrest concepts.

Here one of the main focuses is on the effects of political instability, as a channel of the political regimes *per se*, on economic cycles in Greece. The effects of political instability and as an extension the effect of political regimes on economic growth in Greece, has been examined by two other papers (Alexakis and Petrakis, 1991; and Asteriou and Siriopoulos, 2000). The main difference is that, the above papers examined the effect of political instability on the capital market in Greece.

Alexakis and Petrakis (1991) examine the influence of socio -political instability on the ASE (Athens Stock Exchange) by using two indicators,1) the number of working hours that has been lost due to strikes and 2) the degree of participation of left –wing representatives

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[90] See for example Stern, 1989; Alesina et al, 1996; among others.

in the Greek Parliament. However, their analysis was rather limited in terms of the political instability index they used, since many dimensions of political events were not included in that index.

Asteriou and Siriopoulos (2000) use a more complete index of political instability by including various phenomena of political unrest in order to capture their effects on the fluctuations of the ASE general index. The above paper examines empirically the relationship between political instability, stock market development and economic growth. Furthermore, they investigated the fluctuations of the ASE share price and how this index is being influenced by political instability. Their findings support the fact that political instability affects negative both economic growth and the development of stock market in Greece. Asteriou and Siriopoulos (2000), support that, a reduction of political instability will increase the economic stability and consequently will decrease the degree of investment's uncertainty. In turn, the above will increase the degree of risky investments in industry rather than investment in housing and land.

Furthermore, Alogoskoufis (1995) metaphorically represents the Greek economy after the restoration of democracy in 1974 as the 'two faces of Janus'[91]. The economic situation in that era is been characterized by fractures and discrepancies in economic trends. For the twenty years up to 1974, Greece encompassed high growth rates and low inflation; and for the twenty years thereafter, the economy declined (high debt rates, public sector deficits) and inflation became extremely high. Alogoskoufis (1995) argues that the above changes result mainly from the political transition (restoration of democracy in 1974), with a subsequent decline in political and economic institutions. The decline of the political and

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[91] Janus was a two-faced Roman God which represented the beginning and end in any form (i.e. life and death).

economic institutions, results from the notion of the democratic regime (restoration of democracy) which appeared haphazardly, and along with further political events (such as the dichotomy of Cyprus, the first oil shock and high levels of social unrest, Alogoskoufis; 1995). Then, the government was following planned policies in order to avoid repression or to prepare the country for the opportunities which would stem from Greece's entrance in EU (EC at that time) (Alogoskoufis, 1995). The government evolved in the social conflict of income redistribution and since its main objective was the re-election it was following weak policies in terms of taxes and mainly about the protection of property rights (Alogoskoufis, 1995). The public demand for a big state on line to the desire of income redistribution, led to large increases in government spending and business taxes (Alogoskoufis, 1995).

The empirical research centered on business cycles in Greece is not very extended and it is concentrated mostly on Real Business Cycles (RBC) models to investigate the output fluctuations. To begin with, Christodoulakis *et al.* (1993) contacted a comparison study of the cyclical behaviour of the Greek economy related to other EU economies. In their study they use quarterly and annual data since 1960 and a RBC model. Christodoulakis *et al.* (1993) highlighted that similarities exist in the business cycles in Greece and the other EU countries. Their conclusion show that the integration of the Greek economy within the EU under homogeneous institutions and policies it is not be a problem as far as business cycle is concerned.

Kaskarelis (1993) and Karasawoglou and Katrakilidis (1993) examine the monetary policies, such as budget deficits and inflation, over business cycles in Greece. The results

show that monetary policies, especially the ones which are related to governmental deficits are explaining a big proportion of the output fluctuations.

Kollintzas and Vassilatos (1996) research the post-war Greek economy, especially the effects of fiscal policy and transfers from abroad, by using a RBC model. The authors concluded that government consumption, output and the productivity of factors of production have an adverse relationship. Conversely, an increase in government investment affects positive output growth and higher productivity. The above directed the authors to conclude that increases in governmental consumption, foreign transfers and domestic transfers in the post-1973 era in Greece led to decreases of the Greek economic performance.

Furthermore, Apergis and Panethimitakis (2007) investigate the behavior of basic macroeconomic variables of the Greek Economy in respect to the business cycle over the period 1960-2003. Their findings show that consumption fluctuate procyclically like real wages. The same conclusions held when payments were made for policy regime changes. Finally, they highlighted the fact that real shocks drive the Greek economy, which means that demand policies are ineffective.

In short, the previous literature on the Greek economy supports the fact that the governmental policies (e.g. high governmental consumption) were the drovers of people's revolt which in turn hindered economic growth.

5.4 Data and Method of Approach

One of the few undoubted facts in the literature is the strong correlation between a country's economic performance and the political arena through the channel of political and financial stability. However, this chapter uses GDP cycle[92] (the difference between real GDP and its trend is the cyclical component of GDP[93]) as the dependent variable (explanation of the construction of the GDP cyclical component is below).

The used data[94] set was constructed from several different sources. The data on population and per capita GDP are from Maddison (The World Economy –OECD), government expenditure, imports and exports per capita, the number of revolutions and coups, and the number of political assassinations, etc (see the summary statistics below) are from Bank 2009, and the data for debt is from the National Statistic Service of Greece (Statistical Yearbooks different volumes) and the inflation is from the International Historical Statistics Europe 1750-2000. The definitions of these variables can be found in Appendix I.

Krienhaous (2004) notes that over a thousand papers exist and hundreds of different control variables have been used to explain economic growth. The political data used in this research have been chosen for two main reasons. Firstly, political instability has a negative effect on the decision making process of a government and secondly, political instability introduces uncertainty to the economic environment[95]. The economic variables used are also are particularly important in order to capture the governmental functions of the Greek

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[92] As economic cycles this chapter adopts the definition highlighted by Michaelidis et al. (2007), according to which business/economic cycles are considered as deviation cycles, i.e. fluctuations around a trend.

[93] Hodrick and Prescott (HP) filter has been used to determine the trend of GDP. The trend component solves the following: $Tt = 1 + 0.1t$.

[94] The graphs of the various variables are in Appendix IV.

[95] See Barro, 1991; Cukierman et al., 1992; Benhabib and Spiegel, 1992; Alesina et al, 1996, among others.

economy overall (according to the availability of the data). Thus, the economic variables included in the regression are: population growth rates as a proxy for the underlying human capital, government expenditures as a proxy for governmental investment, inflation, and openness to international trade as a proxy for the importance of international factors to economic activities. Descriptive statistics are shown in Table 5.4.1 below:

| Table 5.4.1 | | | | | |
| Descriptive statistics of Key Variables (after the interpolation) | | | | | |
Variable	Observations	Mean	Std. Dev.	Min	Max
GDP growth rates	90	0.0279	0.058	-0.160	0.128
Population growth rates	90	0.007	0.007863	-0.037	0.029
Regime type1(civilian)	90	0.833	0.374766	0	1
Openness to trade growth rates	89	0.069	0.197	-0.544	0.78
Party fractionalization index	90	5465.367	1913.47	0	8253
National expenditure	90	139288.4	207744	537	726303
Inflation growth rates	58	0.0026	0.156	-0.38	0.87
Assassinations	89	0.168	0.406	0	2
Debt growth rates	78	0.080	0.093	-0.154	0.23
General strikes	89	0.258	0.699	0	5
Guerrilla warfare	89	0.281	1.454	0	13
Governmental crises	89	0.461	0.784	0	3
Purges	89	0.483	1.046	0	5
Riots	89	0.405	0.974	0	6
Revolutions	89	0.191	0.520	0	3
Antigovernment demonstrations	89	0.337	0.690	0	4
Coup d'état	83	0.072	0.261	0	1
Constitutional changes	90	0.111	0.350	0	2
Legislative elections	90	0.333	0.497	0	2
Cabinet changes	90	0.877	1.120	0	7

The above table derives from the data themselves. It describes the basic features in the study. The full data set covers one country -Greece over the sample period 1919 to 2008.

Since the data are records taken through time, missing observation is a common problem[96]. The most common methods to fill in the missing values are: time –series decomposition[97], least squares approximation[98] and numerical interpolation[99]. Due to missing observations, among some variables this research used the numerical interpolation[100] to fill in the missing values in order to facilitate a more comprehensive analysis[101]. The above way obtains linear specific interpolation and extrapolation of the missing values, so as the analysis will not lose observations. This has been done by interpolating the variables with missing data (incomplete series) by filling in the gaps along with the time dimension which is actually the measurement through which, the variables with missing values, show changes.

In addition, from the table 5.4.1 on descriptive statistics above, it can be inferred that the standard deviation in trade, defense, national expenditure, and party fractionalization index, show high deviation from the mean. That can be explained due to political shocks during the years in the sample (World War II, Civil War, and Cold War) or due to missing values in the above variables.

Furthermore, the political instability indexes (such as political instability, and governmental changes, which are created by employing PCA and used in the analysis below) include variables that are shown in Appendix II. The indexes are being

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[96] The missing observation problem might occur because of lost records or mistakes or just no data available at all which is the case for Greece.

[97] For more see West, 1997; McGuckin, Sarnowitz and Ozyildirim, 2001.

[98] This stems by calculating the sum of the squares of the residuals. For more see: Vanicek and Wells, 1972; Knol and Ten Berge, 1989; Björck, 1996; Wasito, 2003.

[99] For more see: Terry, Bee and Kumar, 1986; Shih, 1998; Fung, 2006.

[100] About the allowed percentage of missing values to fill, Bennett, 2001 referred at the 10% of the time series and Peng et al, 2006 at the 20% and Wright, 1998:3 refers that 'the best percentage of each data set should be developed'. For more information see: Steven and Glombitza, 1972; Damsleth, 1980; Hillmer, Bell, and Tiao, 1983; and Harvey, 1989; Solow et al., 2003. For deleting the period of missing values Schlomer et al (2010) highlight the fact that deletion of missing data should not be followed. An exception can be considered the case where the missing values are <1% according to McKnight et al, 2007.

[101] Specifically this research used the Stata command: ipolate y year, gen (y1) epolate.

standardized[102] after constructing one variable out of many (out of an index of variables which has been described above) through PCA (principal components analysis). PCA generates a compound variable which has the highest possible correlations with the individual types of political instability. The results from PCA are presented in Appendix III[103].

Furthermore, a cycle, which stems from *kyklos*, is a Greek origin word which symbolizes a sporadically repeated sequence or recurrence of events. The identification of cycles is one way researchers are able to identify patterns in data. Since events in general recur over and over again with regularity (i.e. seasons), researchers developed the ability to plan for the future or forecast. A widespread exhilaration feeling appeared in the 1960s, among scholars and politicians, that economic crises and business cycles could be cured in Greece. Nevertheless, the poor economic performance in the mid 1970s in Greece changed the interest towards the business cycle theory, and the efficiency of economic policies proved inadequate during the 1980s (Michaelidis et al., 2007). A period of renewed interest in business cycles theory started in the 1990s which shifted the academic interest on the role of productivity and technological change for the broadcast of shocks (Kaskarelis 1993).

The depended variable used in the current study is the economic cycle. To extract it the Hodrick-Prescott filter (HP filter) was used. The linear, HP-filter[104] approach is a widely used method through which the long-term trend of a series is obtained using only actual

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[102] 'What we want to see are means of 0 and standard deviations of 1' (Armstrong, 2009:1).

[103] Armstrong D. (2009) explains the rules of how to choose the right components in PCA and what shall we check in screeplots.

[104] Many studies used HP-filter for different purposes. See for example: e.g. Danthine and Girardin, 1989; Blackburn and Ravn, 1992; Backus and Kehoe, 1992; Fiorito and Kollintzas, 1994; Belegri-Roboli and Michaelides 2007, among others.

data. Then the trend is attaining by minimizing the fluctuations of the actual data around it.

According to Baum the HP filter removes a smooth trend τ_t from a time series x_t by solving

the minimazion equation with respect to T_t:

$$\min \sum_{\tau=1}^{T} \ [(x_t - T_t)_2 + \lambda((T_{t+1} - T_t) - (T_t - T_{t-1})^2] \qquad (1)$$

Where the coefficient $\lambda^{105} > 0$ determines the smoothness of the long term trend. Below is
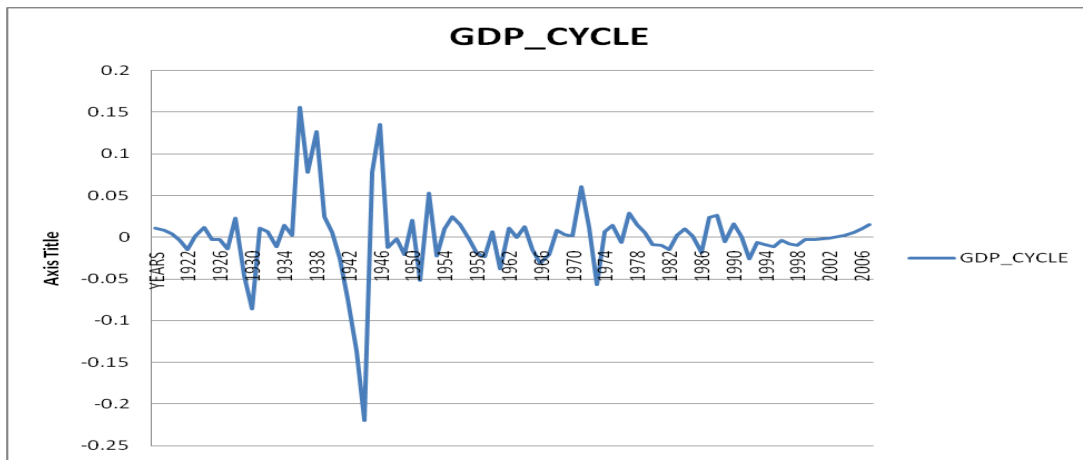
the cyclical component for Greece.

Figure 5.4.1: GDP Cyclical component in Greece 1919 -2008.

To investigate the relationship between the economic cycle and political instability this

study employs the following function:

$$GDP\_CYCLE_t = f\ (X_t,\ PI_t,\ GC, EU_t, REGT_t) \qquad (2)$$

<u>*Where*</u>: *GDP_CYCLE_t* is the difference between the real GDP and its trend throughout the

years; *X_t* denotes a set of economic variables that determine economic growth at time t.

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[105] The parameter λ controls the smoothness of the variance series and thus the volatility of the cycle.

Those are: trade openness (TO_t), population growth rates (POP_t), national expenditure (GE_t), inflation (I), debt growth rates (D_t); all telephone entries, including cellular to proxy infrastructure ($PHON_t$); PI_t is the socio –political instability indexes constructed for Greece; GC_t is the index for changes in government caused by non-violent turmoil; EU_t denotes a dummy variable which takes the value of 1 from the year Greece joined EU and onwards and 0 otherwise; $REGT_t$ is a dummy takes 1 for the civilian regime type in Greece in the period under study, and 0 otherwise; the model also includes the error term to capture random shocks on growth over the past. The model estimation starts with the analysis of the order of integration of each variable by using the Augmented Dickey Fuller (ADF) test. The ADF test is based on the following regression:

$$\Delta Y_t = \alpha + b_t + \rho Y_{t-1} + \sum_{i=1}^{m} \gamma_i \, \Delta Y_{t-1} + \varepsilon_t \tag{3}$$

Where Y_t is a variable concerning stationarity; Δ is the first difference operator, t is time and ε_t is the error term. (a) If $b \neq 0$ and $\rho = -1$ implies a trend stationary (TS) model; (b) If $b=0$ and $-1 < \rho < 0$ implies an ARMA Box/Jenkins class of models; (c) If $b=0$ and $\rho=0$ implies a difference stationary (DS) model where Y variable is integrated with degree one. The null hypothesis for this test is that the series contain unit roots[106] and the result for ADF test is reported in table 5.4.2 below.

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[106] The data should have a constant mean, variance, and autocorrelation through time (Chatfield, 1984).

VARIABLES	ADF TEST		
	LEVEL t	*1st DIFFERENCE* t	*2nd DIFFERENCE*[108] t

Table 5.4.2
TEST FOR STATIONARITY[107]

VARIABLES	LEVEL t	1st DIFFERENCE t	2nd DIFFERENCE[108] t
GDP_CYCLE	-6.70**		
POP	-7.37**		
I	-7.49**		
D	-1.57	-9.43**	
GE	7.77	-2.36	-17.36**
TO	-6.30***		
PI	-8.03**		
GC	-8.62**		
EU	-0.66	-9.38**	
REGT	-4.08**		
PHON	-0.05	-2.05	-9.09**

Notes

−Estimation with intercept and trend for the level and intercept for the first differences. Lag order is determined using AIC with a maximum of 8 lags allowed.

− *, **, *** denote significance of rejection of the Null hypothesis of non stationarity at the 10%, 5%, and 1% levels, respectively.

The ADF test shows that most variables are stationary[109] at level; a few become stationary either at first or second difference[110]. So the variables in the equation (4) are in fact integrated of order.

To test for heteroscedasticity is the next task. In estimating OLS regression models, as in the current study, it is assumed that the variance of the error term is constant. Ordinary

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[107] Variables whose means and variance change over time are known as non-stationary or unit root variables and sometimes their estimation in a regression might give misleading inferences; that is due to possible existence of structural breaks. A series or data often contain a structural break due to a change in policy or international disasters or even sudden shocks in the economy (i.e. the Asia Minor events in 1922, World War II in 1940 etc). Structural breaks can be determined through an F –test (Chow test): for example a structural break exists in the period that World War II started, in 1940, (F-stat- 2, 34 p. F (7, 67) = 0.336). Thus, by following recommendations by Perron and Qu (2006; 2007), structural breaks need to be addressed more thoroughly in a future research.

[108] Second differences in time series have been used in the literature before. See for example Hamilton, 1989; Al –Yousif, 2002; Mishra et al, 2009; Adamopoulos, 2010.

[109] For more about unit roots in macroeconomic data and their characteristics see: Dickey and Fuller, 1979; Nelson and Plosser, 1982; Banerjee, Lumsdaine, and Stock, 1992; Libanio, 2005; among others.

[110] The idea of differencing was developed by Box and Jenkins (1976).

least squares estimates are consistent in the presence of heteroscedasticity, but the conventional standard errors are no longer valid. This assumption of homoscedasticity is frequently violated. An explanation lies to the fact that low incomes countries, like Greece, adopt more extensively unstable and unreliable policies than higher income countries. Thus, in a model where economic cycle is the dependent variable, the error variances associated with Greece, which is a low income country, may be much higher. If this is the case, then heteroscedasticity exists and appropriate correction for the problem is called for. Furthermore, many economic time series are non –linear in nature and a non linear type of process that arises in such type of data is the autoregressive conditional heteroskedasticity – ARCH- process (Goering and Pippenger, 1994). A number of tests[111] (like the Durbin - Watson) followed so as to identify existence of non linearity. Another common used test is Engle's (1982) Lagrange Multiplier (LM) test which can be used to detect non linearity in the data. Thus, the LM[112] test for autoregressive conditional heteroskedasticity (ARCH) was employed[113]. A rule of thumb to be followed is to check the p- value of the squared residuals if it is significant[114]. The LM test shows that the p-value is 0.0005 (table 6.3) which means that we shall reject the null hypothesis that there is no serial autocorrelation, thus there is definitely an arch effect. The White Test, the Breuch Pagan test and the Arch test, which detect heteroskedastisity and the ARCH effect, are shown in the table 5.6.1 below. All tests show that we reject the null hypothesis of homoskedasity.

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[111] The discussion of the tests can be found in Appentix III.

[112] Engle's (1982) Autoregressive Conditional Heteroscedasticity-Lagrange Multiplier (**A**RCH-LM) test is the undisputed standard test to detect ARCH.

[113] The Box-Ljung Q test is a much better test to check for autocorrelation.

[114] If the *p*-value is <.05 we cannot reject the null of no autocorrelation. Here the *p*-value is highly significant so the residuals of our model are high correlated.

5.5 Estimation of the Model

This chapter uses the PARCH model by following Higgins and Berra (1992), and Ding et al. (1993) proposition of a class of models which allows the optimal power transformation to be estimated, so as to investigate the properties of the time series data (economic cycles) in Greece. Since Engle's (1982) paper, many extensions and generalizations of the ARCH model have appeared[115]. These additions to the family endeavored to improve both the mean and variance equations to better capture the stylized features of high frequency data (Ding et al, 1993). Higgins and Bera (1992) (and as extended by Ding et al. (1993)) suggested a model which expands the ARCH class of models to analyzing a wider class of power transformations than simply taking the absolute value or squaring the data as in the conventional models. The conventional ARCH models focus on absolute or squared features in the data (or the conditional variance is related to lagged absolute or squared residuals and lagged conditional standard deviations or variances).This class of models is called power ARCH (PARCH). Additional features of those models are that they are closely related to the ARCH model introduced by Ding and Granger (1996) and the integrated GARCH introduced by Baillie et al. (1996).

Since Engle's (1982) and Bollerslev's (1986) work, ARCH[116] models have been widely used in the analyses of financial markets (i.e. stock prices, interest rates, or exchange rates).An ARCH (autoregressive conditionally heteroscedastic) model is a model

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[115] For more see Bollerslev, Chou and Kroner (1992); Bera and Higgins (1993); and Bollerslev, Engle and Nelson (1994).

[116] Yet, there currently exists an actual family of ARCH models integrating the original ARCH model of Engle, the generalised ARCH (GARCH) model of Bollerslev (1986) as well as a host of other models (see Bollerslev, Engle and Nelson (1994) or Bera and Higgins (1993) for a survey). A further recent development in the ARCH literature devoted to the power term by which the data are transformed known as PARCH (Power ARCH) introduced by Ding et al. (1993).

for the variance of a time series. The ARCH models are used to describe a changing, possibly volatile variance. Although an ARCH model could possibly be used to describe a gradually increasing variance over time, most often it is used in situations in which there may be short periods of increased variation. However, the ARCH models have been applied also in macroeconomics (not only in finance and risk analysis); even though their usage is less frequent[117] (Hamilton, 2008). The original ARCH model[118] speculates the existence of a relationship between past squared deviations of the observations and their existing conditional variances (Fornari and Mele, 1997). Hence, Engle (1982) recommends the ARCH model, in the cases where the conditional estimated variance depends on past information, in order to overcome the uncertain hypothesis of one-period estimated error. Under ARCH, maximum likelihood estimates are more efficient than those of OLS. Engle (1982) presumes that the conditional variance is a positive function of the values of the lagged squared error terms instead of a fixed constant. In other words, the conditional variance, below represented in equation (3), depends on p lags of squared errors, and the ARCH (p) model is specified by:

$$\sigma_t^2 = a_0 + \sum a_i \ \varepsilon_{i-i}^2 \tag{3}$$

 Where $\alpha_0 > 0$, $\alpha_i \geq 0$ (i=1,...,p) to avoid negative variance.

Here σ_t^2 is the conditional variance at time t, α_0 is a constant parameter, and α_i is the ARCH coefficients. Since σ_t^2 is the conditional variance its value must always be positive. In order to ensure that the equation is meaningful, all the coefficients in the right hand side of the

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[117] Examples of papers which used ARCH, GARCH & PARCH models in macroeconomic applications are: Lee, Ni, and Ratti, 1995; Grier and Perry, 2000; Servén, 2003; Elder and Serletis, 2006; Fountas and Karanasos, 2007; Campos and Karanasos, 2008.
[118] Bollerslev, 1986; Nelson, 1991; Glosten *et al.,* 1993 ;) and others have generalized the basic ARCH model in various directions, for both finance and economics.

equation, namely α_i are required to be non-negative. Since the conditional variance σ_t^2 is affected by the past squared errors ε_{i-1}^2, and α_i are non-negative the present volatility is positively correlated with the past error terms[119]. Furthermore, Pagan and Sabau (1987) highlight that an incorrect functional form of the ARCH process for the errors of a regression model can result in inconsistent maximum likelihood estimators of the regression parameters which is the case for the Greek data under the ARCH(1) model. Although Engle (1982) focused on the convenient linear ARCH model, he acknowledged that 'it is likely that other formulations of the variance model may be more appropriate for particular applications' (p. 993). Therefore, as aforementioned, the ARCH family of models was extended beyond the specification of the initial ARCH model of Engle (1982) and the GARCH model of Bollerslev (1986). Ding et al. (1993) argue that the use of a squared term is probably quite restrictive and maybe other power terms might be more efficient. As such extended specifications were proposed which allows the optimal power transformation (at the variance equation). The general asymmetric power ARCH model introduced by Ding et al. (1993) specifies σ_t as of the form:

$$\sigma_t^d = \alpha_0 + \sum_{i=1}^{p} \alpha_i \left(|\varepsilon_{t-i}| + \gamma_i \varepsilon_{t-i} \right)^d + \sum_{i=1}^{q} \beta_{t-i} \; \sigma_{i-1}^d \qquad (4)$$

Where: the α_i and β_i are the standard ARCH and GARCH parameters, the γ_i are the leverage parameters and d>0 is the parameter for the power term. In this chapter the restrictions made are[120]: $\alpha_i = 1$ for i>1, $d^{[121]}$= from 0.7 (estimation 1 in table 5.5.1) to 0.82 (fixed) and, and $\beta_i = 0$, $\gamma i = 0$ (results are presented in table (5.5.1) below):

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[119] The arch test for the current chapter showed $N*R^2=13.17$ with a p-value=(0.0003).
[120] The restrictions made in this chapter are similar to the ones proposed by Higgins and Bera (1992).

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Table 5.5.1 ESTIMATION RESULTS -PARCH -GREECE 1919-2008				
Dependent variable GDP_CYCLE	(1)	(2)	(3)	(4)
C	0.015 (2.35)**	0.003 (0.77)	0.01 (1.77)	0.002 (0.92)
POP	0.74 (1.99)**	0. 89 (2.56)**	0.82 (2.51)**	0. 87 (2. 59)**
GE	-0.005 (-0.86)	0.01 (1.56)	0.007 (2.24)**	0.002 (1.98)*
I	-0.02 (-1.43)	-0.05 (-0.30)	-0.01 (-0.73)	-0.004 (-8.28)
TO	0.05 (6.13)**	0.04 (2.68)**	0.06 (3.77)**	0.02 (3.54)**
D	-0.0001 (-0.42)			
PI	-0.002 (-0.90)	-0.003 (-1.98)**	-0.003 (-2.12)**	-0.004 (-2.24)**
GC	-0.003 (-3.49)**	-0.002 (-0.71)*		-0.003 (-1.86)*
EU	0.0012 (0.30)	0.003 (0.058)	-0.001 (-0.002)	
PHON	6.66 (1.40)	5.22 (0.56)	3.21 (0.54)	
REGT	-0.03 (-5.12)**	-0.008 (-1.87)*	-0.02 (-3.61)**	-0.02 (-4.51)**
$R^{2(122)}$	0.15	0.12	0.11	0.11
N	87	87	87	87
D-W stat	1.58	1.59	1.57	1.58
Arch Test	$N*R^2=0.04$ p-value=(0.91)	$N*R^2=0.62$ p-value=(0.43)	$N*R^2=0.71$ p-value=(0.98)	$N*R^2=0.65$ p-value=(0.79)
α_0	0.02 (2.93)**	0.03 (6.60)**	0.02 (4.12)**	0.02 (2.93)**
α_1	0.92 (4.74)**	0.73 (4.65)**	0.85 (4.84)**	0.89 (4.74)**
d	0.7	0.82	0.82	0.82
F-stat[123]	5.17 (0.010)*	1.81 (0.458)	4..61 (0.010)*	4.82 (0.010)*
z-statistics is reported in parentheses. *, **, *** indicates significance at the 90%, 95%, and 99% level, respectively. α_i is the ARCH parameter and α_0 the constant and d the power from (4).				

[121] By following recommendations made by Campos et al.(2012) the heteroskedacity parameter d is fixed ranging from 0.7 to 0.82.

[122] The low R^2 is a result of firstly poor measurement of labour (population growth rates) and secondly due to missing variable 'capital/fixed assets' result of non availability of data for Greece.

[123] F-statistics or likelihood ratio statistic tests whether the unrestricted model shall be rejected when compared with the restricted one. In our estimation, we specify the unrestricted model as one without the restriction of power d in estimation, and the restricted model as one with the restriction of power d at a value presented in the Table 5.5.1. Our estimation shows, (with exception in column 2, that the unrestricted model, as null hypothesis indicates that should be rejected so that the specified power d in the restricted estimation or model is statistically justified) that the PARCH model with restricted d is better fitted in the current chapter's analysis.

The results for this chapter are essentially summarized in the table (5.5.1). Table 5.5.1 above, shows that significant and positive (procyclical[124]) effects on economic cycles in Greece are: trade openness and population (proxy for labor force). Negative (countercyclical) effects on economic cycles cause: the governmental expenditure[125], inflation, PI, regime type1 (proxy for democracy), and the governmental changes. Acyclical are debt[126], EU and phones (a proxy for infrastructure).

To start with, the population growth[127] (used as proxy for labor) has a positive and significant effect on economic cycle. That result is consistent with the Simon-Steinmann Economic Growth Model[128] (even though no clear cut generalizations can be made for all the countries around the globe). Hence, Simon (1987) noted that in the long run the population growth has a positive net effect on economic growth. A rapidly growing population implies a fast increase in a country's labor force. A large proportion of young people in the labor force ease the technological adjustments and economic growth through their greater flexibility and mobility. Hence, it encourages productive advances such as technological progress, efficient and wise usage of natural resources, which may increase saving and thus, economic growth. Moreover, the population growth in Greece thrived through strong governmental health care and social policies especially after the 1950s.

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[124] A variable is procyclical if the contemporaneous statistically significant correlation coefficient between the variable under study and output is positive. The opposite, countercyclical relates to negative correlation and insignificant coefficient leads to acyclical relationship.

[125] In Greece the increase in public expenditure after the 1950s, (especially salaries and wages) resulted at an increase in the public debt since the biggest part of the Greek governmental spending was financed by national borrowing. When the variable debt is not included in the regression national expenditure become procyclical due to different direction (development) of monetary resources for developmental purposes.

[126] See Elmendorf and Mankiw, 1999 for a literature survey on public debt.

[127] The impact of population growth can be dated from Thomas R. Malthus's era (with his work 'An Essay on the Principle of Population' 1803; reprint, New York: A. M. Kelley, 1971).

[128] The basic idea to the theory introduced by Julian Simon and Gunter Steinmann is that the greater the total population, the greater the level of technological growth yielding greater per capita income. Simon (1987) also refers to the above theory as the 'Population Push' model.

Moreover, larger population density has particular advantages for the provision of education, transportation, and sanitation. The aforementioned makes the result consistent with the fact that in regression (1), table 5.5.1, the proxy for infrastructure (phones) is affecting the Greek economy in a positive way.

An interesting finding is that the governmental changes index has a significant negative effect which makes it countercyclical to growth cycles. The obvious conclusion is that the effects from the multiparty democratic regimes and the different policies which stem from the different political party boost the economy. The negative impact of political instability on boosting economic growth is consistent with the previous literature[129] (which investigates case studies) and it is been associated with both violent and less violent governmental changes (political instability[130] and governmental changes). Greeks have a passionate and somehow *obsessed* interest for politics. The multi -party system in Greece is a possible reason which directs to social unrest or ideological conflicts[131] into the society. According to Esteban and Ray (2008) the intensity of conflict or unrest is closely associated with the degree of party fractionalization. And that the above relationship is reverse. This is the case for this research also since in Greece the number of parties correlates with the social unrest indices, which negatively affects economic growth cycles. Another explanation stems from what Enikolopov and Zhuravskaya (2007) describe as *poor governance* in countries which they built strong national political parties with inefficient political representatives who care only for their personal career, especially in

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[129] For empirical evidence that supports this claim, see: Asteriou and Syriopoulos, 2000; Asteriou and Price, 2001; Ghura and Mercereau, 2004; Campos and Karanasos, 2008; among others.
[130] The indicators that have been used in PCA are shown in Appendix II.
[131] For more about the relation of party fractionalization and conflict see Esteban and Ray, 2008.

developing countries (such as Greece). All the above seems to cover the political arena in Greece over the last 90 years.

The governmental spending indicator is insignificant in (1) and (2) (no effect on the economic cycles). The main reason behind that is that politicians and policy makers in Greece followed the governmental expansion policies concept. In other words, they consider that through the governmental spending will provide enhanced public goods (i.e. infrastructure and education or health) and higher salaries (especially for the public servants). However, this governmental spending over the years (especially when there was no proper income for the government) led to inefficient usage of productive resources, constant tax reforms, budget deficits and higher interest rates which led to an almost bankrupt nation. Hence, according to La Feber (1980), USA[132] controlled the Greek economy (taxes, budget, foreign exchange and credit) and the national political affairs (after the Civil War -1946-1949 the Greek government was divided and could not control the internal unrest effectively), after World War II. Hence, in the governmental expenditure the defense expenditure are included, which as can be seen from the table 5.2.3 comparatively are very high.

Furthermore, the debt indicator is countercyclical which is consistent with the previous literature[133]. On the contrary many researchers[134] support the fact that debt can be procyclical to economic cycles. This means that fiscal policy should be procyclical only in recessions, when the government wants to borrow but the economic situation prohibits

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[132] In 1947 England stopped the military –economic aid to Greece and America interfered with the Truman's doctrine which came into action and affected both the economic and political arenas in Greece for more than a decade (1947-1960).

[133] See Kumar and Woo (2010); Aghion and Marinescou (2008); Barro (1979), among others.

[134] For further discussion of the debt's procyclicyality see Alesina and Tabelini (1990) and Alesina et al. (2008) among others.

creating more debt. An alternative explanation describes a procyclical fiscal policy as the effect of the political agency problem[135]. However, this is not the case of Greece. The governmental spending was not used principally to build up national public capital or to improve the inflation policies, but it was used mainly for defense and security reasons. Furthermore, many times throughout the economic Greek history, the payment of interest rates was not manageable to pay and the tax revenues were not enough to cover the Greek governmental expenses. Thus, the debt was increasing and a solution through stabilizing financial policies were not occurred which led to the current economic crisis.

Interestingly the indicator of democracy (regime_type1 indicator) has a negative effect on economic growth (countercyclical) in Greece. The main reason is that the governmental policies in Greece, throughout the 20th century, were following a trend towards redistribution and not towards growth. A second reason is that the political system in Greece was dominated by a group of elite politicians who also dominated the decision making area by using 'political resources according to their own personal interests, and the political authority is largely exercised based on clientelist traditions. Both indicators of the EU integration and as a result EU influence in the Greek affairs, and the infrastructure, have an insignificant (acyclical) effect on the Greek economy as expected by economic theories. Trade openness [136] is positively (procyclical) and inflation[137] affects the economy negatively (countercyclical) which are consistent with the existing findings from literature[138] that small open economies are profoundly influenced by the terms of trade.

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[135] For more information see Jensen and Meckling (1976).
[136] For more information see Knütter and Wagner, 2011.
[137] For an analysis of inflation and the business cycles see Bajada, 2002.
[138] For more see Apergis and Panethimitakis (2006).

To sum up, Greece had to fight a number of costly wars and participate as an unequal partner in the EU under powers such as UK, France, and Germany. Previous literature refer to the dependence of Greece in external funds without mentioning that the majority of loans were used by the government not to enhance the private sector (investment) but to finance the governmental spending and most probably previous debts which created a vicious cycle in both the economic the political foreign dominant arenas.

5.6 Concluding Remarks

The 20th century was dominated by an unstable political and economic environment. The relationship between political stability and economic performance elevated a continuous debate in both the economic and the political economic literature in the past decades. The common scholarly perception is that an essential condition for economic growth is a stable political environment. The previous research focused both in a global and in a regional context, emphasized that political instability creates uncertainties in both political and economic environment. That in turn distorts economic decisions (i.e. investment, production etc.) which reduce long –run economic growth.

The venture of this chapter was to investigate the effect of political instability and debt on economic cycles in modern Greece. Greece was a poor country, from the beginning of its existence as a free nation. It was an underdeveloped country until the late 1950s, with low productivity in agriculture and a very weak industrial sector (a situation partly accredited to the Civil War between1944 - 1949). The result of the Greek Civil War was the defeat and banning of communists and the establishment of a political system which added anti-communism to Greek party politics. In the meantime international forces (i.e.

USA) and the army had become imperative forces in Greek politics. Both Civil war and the failure of the right wing governments to push forward a concrete industrialization program drove Greece once again to depend in external funding.

Furthermore, the findings show that, in a historical context, the growth was booming through the investment in human capital, the openness to trade and infrastructure (procyclical movement of the variables). The unstable political environment (captured in the current chapter with two indexes –political instability and governmental changes) created busts in the Greek economy (countercyclical movement of the above variables). The national expenditure was also busting the economy but the question which remains is whether this spending was driven in the right direction (e.g. investment and support of the business activities) and the resources of these revenues for spending, since Greece was depending for a long time on foreign funds and loans.

The European integration variable seems acyclical which means that has no effect on the Greek economic cycles. What is interesting though is that the democracy indicator (regime_type1) is countercyclical to GDP cycles which mean that it eventually busts the economy.

Previous literature (e.g. Passas and Labrinidis, 2011) state that the current situation (high rates of debt and instability) in Greece are the outcomes of the policies made in the mid 1970s and 1980s (the government did not achieve structural changes, or adjust the banking system, the capital markets, the tax collection system which on line with huge amounts of governmental spending, resulted in economic imbalances and budget deficits). However, I strongly believe that the problem existed since 1830s the year of Greek independence. Many reasons drove the current stagnation in Greece e.g. inflation, public

debt, irrational management of public resources and extensive funds' waste. There is a need in the current era not only to alleviate the public debt with other loans but to place it in a downward trajectory in the long run.

In short, for the Greek case a valid reality is that for many decades (especially after the Revolution of the Colonels in 1964) politicians focused too much in the notion of the democratic ideology and to promote and establish democracy rather than economic development of the country. This ideology dominated the attention on governmental policies that can inevitably be paid by the price of poor economic growth, which ultimately caused the current economic crisis.

CHAPTER VI

CONCLUDING REMARKS

6.1 Summary

What is the connection between political regimes, political instability and economic growth in a country? The link between these three phenomena occupied scholars and politicians for many decades. However, this continuum of scholarly concern, related to the role of politics and the development of nations, concluded in three different replicas: first, the political regimes generate development and thus economic growth by keeping the people happy and therefore supportive, second, a country's economic growth determines the basis of its political system and depending on the level of the growth the reactions of the people vary and third the political regimes (and its channel –political instability) have no association with economic growth in a country.

The previous literature (e.g. Lipset (1959), Huntington (1968), Bueno de Mosquita and Downs (2005), Siegle, Weinstein and Halperin (2004, 2005), Przeworski and Limongi (2000), among others), explicate most of the determinants of growth which would justify any possible connection between growth and political regimes in a country and as extend the people's reaction. Still, most of the previous literature referred to mainly the democratic regimes as either the regime which generates economic growth or as the regime which result from growth. To name a few arguments, Huntington states that 'few relationships between social, economic, and political phenomena are stronger than that between the level of economic development and the existence of democratic politics' (2003: 97). Przeworski et al. (2003) examines the conditions which determine the prevailing of democratic or

authoritarian regime in a country. Specifically, Przeworski et al. (2003) identify and evaluate development as the main factor associated with the political regimes in a country (among other factors such as the history, political culture institutions etc).

In recent years, the transitions to democracy in Southern Europe and Latin America, and the fall of communism in Eastern Europe and in ex-Soviet Union, have given new impulse to the debate concerned the role of the political regimes and their institutions, and especially the democratic ones, in generating economic growth. By understanding the way political regimes affect economic growth is fundamental for both theoretical and practical reasons. Not only there is an intrinsic value in knowing how politics affects development, but also is crucial in understanding the policy decisions under the above relationship.

Through reviewing the literature of political economy of development, economics and politics and the studies of key intellectuals such as Lipset, Huntington, De Mosquita and Downs etc., this thesis showed that although there are patterns and theoretical explanations related to the connection between economic growth, political instability and political regimes, in the case of Western European countries only a mixture of these explanations suit. In order to explain these theoretical links and patterns between democracy and economic growth this thesis discussed the key political and economic theories associated with the above relationship and their theoretical explanations. Then, it empirically described and tested the theories to conclude that there is a link between the political regimes and economic growth with reference to Western European countries. Finally, this thesis tested both the theory and the results draw from the previous chapters, in a country case study, Greece, as a means of 'complementarity of [a] single-unit and cross-unit research designs… with an aim to generalize across a larger set of units'(Gerring,

2004:341). Thus, the combination of the above two methods 'of analysis offers the most valuable tool for policy makers as well as for researchers' (Isaksson and Hee Ng, 2006:iii).

That led to the discovery that the analytical perspective of the democratization process is not the same in every country in the world and that some cases such as the Greek one should be reconsidered and re-understand the controversy over development and the regime type by taking into consideration the historical events and the country's culture and political structure.

6.2 The relation between political regimes and economic growth- discussion

Development and economic competitiveness have become an important objective for many nations. However, despite attempts to achieve long-term economic growth, it has evaded from many countries. The concern of whether the political regimes promote economic growth or the economic well being is a precondition to the regime type goes back to 1950s. Much ink has been spent on trying to explain, to analyze and test cases over whether the economic growth leads to democratic regime or not. Some economies have grown rapidly over the last decades, while others have languished, subjecting a large portion of their populations to grinding poverty. What explains this wide variance in economic performance? Economists have as yet only explained roughly half of the story. Having recognized that traditional models only account for half of the variance, research began to centre on political factors. By examining the results of all the previous literature, one will observe that they were inconclusive and they left space to be continuing.

Even though they reached some conclusions such as that there are some indicators i.e. per capita income, property rights, pressures for immediate consumption etc. most

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researchers concluded that the political regime and in particular democracy, is related to economic development and that the existence of non-democratic regimes lead countries to poverty: 'The more well to- do a nation, the greater the chances that it will sustain democracy. . . .' (Lipset, 2003: 56). The fact is however, that 'the conclusion is that social scientists know surprisingly little'(Przeworski and Limongi, 1993:51); thus each case should be researched under cautious moves and by considering the history, culture and the specific needs of each state or region. Moreover, there should be a clear understanding on this point of what a regime type is and what is its distinction to the state; 'the regime type refers to the form of government and the way decisions are made [whilst] a key function of the state is to promote economic growth and deliver developmental outcomes' (Menocal, 2007).

As said by Huber, Rueschemeyer and Stephens there were two research traditions which dealt with whether social or economic conditions favor a political regime and especially democracy: 'cross-national quantitative studies and comparative historical work' (1993: 71). Lipset published an essay in 1959, in cross –national quantitative research, by using a range of aggregate data on development and democracy and he observed that there was actually a positive connection between development and democracy and gave the stimulus and opened the way for the other researchers in this topic. Lipset (1959) used the modernization theory as his theoretical interpretation, a conception in which society, economy and the political regime are related. Furthermore, according to Huber, Rueschemeyer and Stephens 'the interpretation of [Lipset's] results …put primary emphasis on the spread of communication and education and the growth of the middle classes, all of which were supposed to lead to greater political interest…thus creating the

behavioral basis for democratic governance' (1993: 72). Lipset's result was questioned by intellectuals of comparative historical studies, and the most prominent example was the work of Moore, *The social origins of Dictatorship and Democracy* in 1966. Moore's work and other's such as O' Donnell (1973), talked about the chances of democracy as capitalistic economic development spread around the world. Those intellectuals' analysis was built on political economy's approach and came to the conclusion, as Moore wrote, that 'the route that ended up in capitalist democracy…was itself a part of history that almost certainly will not be repeated' (Moore, 1966: 5).

In the 20th century issues such as democracy, dictatorship and totalitarianism were fore fronted. Historically, the 20th century created the need to research the development of a country under specific political regimes such as democracy and dictatorship, and tried to explain and analyze the connections among those objectives. Many papers, books and conferences have documented the fact that there is a close relationship between a country's political regime and its development (Hadenius, 1992; Midlarsky, 1997). However, parameters such as the political culture of a country, the political learning of a country's people and a country's history require further research.

6.3 Contribution

From the post-war years to the present, the US and major Western European countries such as Britain and France and even the Federal Republic of Germany and later the reunified Germany and Italy, (previously a Fascist and a Nazi country), have established the parliamentary democracy as their political system. A justification lies to that this phenomenon depends on the economic prosperity and social stability that the European

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Western countries achieved in that era (even though they experienced sporadic economic recession and social turmoil). Another explanation could be that the above success was accomplished by their constant efforts in which they reallocated resources in their economic, social, and industrial policies and they changed the role of the state (e.g. extensive economic planning and systematic government intervention) in so flexible a way that they might successfully respond to the changing economic and political conditions.

The sustained, high economic growth in Western Europe during the post-war period and up to 1973 led to remarkable changes in the region but drastically everything changed thereafter. In recent years, the liberalization of international trade has clearly demonstrated that European industry can not compete with the Asian industry. Most European countries have suffered high and remarkably constant unemployment and the growth rates were less than 2% in a yearly basis. The above historical events captivated the interest to undergo with the current research.

The question which this thesis investigated was the effects of political regimes and instability on economic growth (whether the changing political environment affected the economic area and vice versa) in the Western world. To do so, a broad set of political indicators were used and a more clear measure of democracy (civilian regimes) so as to avoid stretching of its definition (see introduction for more information).

Another significant input of this thesis is the endogeneity test between political instability and economic growth which has not been tested and presented empirically (at least not to my knowledge). Previous research presumed the existence of endogeneity based on previous literature and as such researchers were trying to take endogeneity (between the above two variables) into account into their calculations. Additionally, the previous

research was measuring political instability either with individual indicators or by contacting factor analysis (e.g. Jong a Pin, 2009; Fielding, 2003) among variables that have used by previous research. This thesis, by following the political theory of political unstable systems and instability (Gupta, 1990), explained the reasons behind the chosen variables and their implication in the political system. Furthermore, this thesis constructed an index of political instability by contacting PCA so as to capture the effects of each individual political indicator into the index.

A very interesting finding and input at the same time, is the implication and effects of the sovereign debt in relation with the defence expenditure, into the booms and busts of the Greek economy. By contacting a historical research from 1919 until 2008 this thesis shed light into the problematic Greek economic situation by revealing that part of the Greek debt is due to high defence expenditure and misallocation of the governmental resources. The investigation of the sovereign debt in relation with the violent and non-violent citizenry' behaviour and their effects on the economic booms and busts, was not examined that thoroughly before (to my knowledge).

6.4 Policy Implications

This thesis investigated the relationship between politics and economics. In particular it examined the direct and indirect effects of political institutions on economic growth in developed countries. The political institutions in question are the political regimes and the political instability which is related to governmental and societal stability and policy uncertainty. This thesis, further, captured the effects of politics on long-term trends on

economic growth, rather than short-run factors (e.g., transitional crises, external shocks). Thus, the outcome variable is the long-term yearly rate of economic growth.

Policy uncertainty is one of the most important issues related to economic growth. It causes problems by lowering investment, increasing inflation and in turn by increasing people's discontent. People's discontent leads to political instability which is a major outcome of policy's failure to provide security and happiness to the people. As a result of that, violence, demonstrations and a high turnover rate in government leads to the inability to develop policy consensus. The above, consecutively leads to the governmental inability to adopt a consistent long-term growth policy by ending in handicapping economic growth. A profound conclusion of this thesis is that good governance[139] (the way that government exercise their power and the decision made) matters for both people's happiness and the polity's stability which are profoundly related to economic growth.

Consequently, governance and especially *good governance* 'have permeated development discourse and especially research agendas and other activities funded by public and private banks and bilateral donors' (Weiss 2000: 796). The need for change the way governments operate, was signaled by the *1997 World Development Report* (*The State in a Changing Word*) which argues that a successful and efficient state is fundamental for the setting the rules for the production of good and services, the institutions' agendas, the way markets work and progress which lead to people's happier lives. It is generally accepted that a way to progress is to change (to develop) and that change needs to be in line with a state's culture and structure. Therefore, a way to achieve sustainable growth is to

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[139] Good governance, according to the UNDP, is the way a state deals with its political, economic and administrative affairs through the mechanisms, processes and institutions and by allowing the citizens to pursue their interest and exercise their legal obligations.

reform both institutions and the way governments exercise their power. The basic concern should not be anymore the competition between states for power but the people's happiness and security otherwise their discontent will lead to policy failures and underdevelopment.

Currently, the world undergoes a major economic crisis. The question which arose in the past couple of years is what led the whole world to fail economically especially after the third way of democratization. My question is how we will be able to overcome this failure which seems to be not a societal failure but the outcome of wrong governmental decisions. It is clear that there is a gap in policy reforms. The answer lies to the past: wealth sharing and redistributive policies made possible the boost of economic growth. Additionally, the rise of welfare state and progressive taxation smoothed the integration of capitalism and democracy in today developed countries, and that that fiscal treaties and agreements was achievable in the context of specific internal and external threats. The role of the state should be to create the conditions for a stable political and legal environment and the role of political institutions should be to facilitate socio-political interactions to mobilize the people to participate in economic, social and political decisions. That will increase the possibility of sustained growth and help the European countries to overcome the current situation.   Thus, a clear suggestion, especially for Western Europe, is to start thinking about which policies and institutions are suitable to provide help and legitimize the gaps that have been left in policies, and about which supranational (EU) and domestic governance changes are required to estimate the political conditions that unremitted the permutation between growth and social progress in successful cases.

6.5 Future research

'This democracy thing: would it really matter if it withered in the world's vines in the coming years?' (Keane, 840: 2010). This question needs a further examination especially during the current economic crisis. How can the existing political institutions help the world to overcome this economic crisis and avoid another Great Depression? In a world that power can be gained with many ways (even in democratic polities) such as backroom agreements, the investigation of democracy as a global value and not a Western ideal needs further examination by account the current economic crisis and the people's revolts.

Another interesting topic which needs to be addressed further is the relationship between the sovereign debt and the high defense expenditure with reference to the Greek case. The findings reveal that this relationship is partly one of the causes of the current economic troubles in Greece. The fear of another Turkish invasion and the instability in the Balkans lead Greece to spend enormous amounts of money for security and locate governmental recourses to that direction instead of supporting private investment and private enterprises. Future research needs to address the above relationship and imply policy resolution measures.

Lastly, future research needs to further analyze the politico-economic map (figure 2.6.3) that this thesis formed by empirically testing it into both developed and developing countries. The above will give us a better understanding of the situation of each individual country related to both their political and economic systems so as to form policy recommendations of economic growth.

REFERENCES

- Abadie, A., and Gardeazabal, J. (2001) The economic costs of conflict: A case control study for the Basque country. *NBER Working Paper series*. Working paper 8478.

- Abadie, A., and Gardeazabal, J. (2003) The Economic Costs of Conflict: A Case Study of the Basque Country. *The American Economic Review*. 93 (1) 113-132.

- Abramovitz, M. (1986) Catching Up, Forging Ahead, and Falling Behind. *Journal of Economic History*. 46 (2) 385-406.

- Acemoglu, D., Ticchi, D. and Vindigni, A. (2008) A Theory of Military Dictatorships. Discussion Paper No. 3392. Germany: IZA. Available at: http://ftp.iza.org/dp3392.pdf (accessed in April 2008).

- Acemoglu D., Johnson S., and Robinson J., A., and Yared, P. (2008) Income and democracy. *American Economic Review*. 98 (3) 808-842.

- Adamopoulos, A. (2010) The relationship between Credit Market Development and Economic Growth. *American Journal of Applied Sciences*. 7 (4) 518-526.

- Ades, A. and Chua, H., B. (1997) Thy Neighbor's Curse: Regional Instability and Economic Growth, *Journal of Economic Growth*. 2 279–304.

- Adkins, L., C., and Hill, R., C. (2008) *Using Stata for Principles of Econometrics*. John Willey and Sons: USA.

- Adriole, S., J., and Hopple, G., W. (1984) *Revolution and Political Instability*. London: Francis Printer LTD.

- Afonso, A., and Furceri, D. (2008). Government size composition, volatility and economic growth. *European Central Bank Working Paper Series*. No 849.

- Aghion, P., Howitt, P., and Mayor-Foulkes, D. (2005) The Effect of Financial Development on Convergence: Theory and Evidence, *Quarterly Journal of Economics,* vol. 120, pp. 173-222.

- Aisen, A., and Veiga, F., J. (2010) How Does Political Instability Affect Economic Growth? *IMF Working Paper.* WP/11/12.

- Aizenman, J., and Marion, N., P. (1993) Macroeconomic uncertainty and private investment,*Economics Letter.* 41 207-210.

- Ake, C. (1974) Modernization and Political Instability. A theoretical Explanation, *World Politics*. 26 (4) 576-591.

- Al –Yousif, Y., K. (2002) Financial development and economic growth Another look at the evidence from developing countries. *Review of Financial Economics*. 11 131–150.

- Alesina, A., and Tabellini, G. (1990) A Positive Theory of Fiscal Deficits and Government Debt. *Review of Economic Studies*. 57 403–414.

- Alesina, A., Ozler, S., Roubini, N., and Swagel, P. (1992) Political Instability and Economic Growth. *National Bureau of Economic Research*. September 1992.

- Alesina, A., Perotti, R. (1994) The Political Economy of Growth: A Critical Survey of the Recent Literature. *The World Bank Economic Review*. 8 (3) 351-371.

- Alesina, A., Rodrik, D. (1994) Distributive Politics and Economic Growth. *The Quarterly Journal of Economics*.109 (2) 465-490.

- Alesina, A., Özler, S., Roubini, N., Swagel, P. (1996) Political Instability and Economic Growth. *Journal of Economic Growth*. 1 189-211.

- Alesina, A., Baqir, R., and Easterly, W. (1999) Public Goods and Ethnic Divisions, Quarterly *Journal of Economics*. 114 1243–84.

- Alesina, A., Campante, F., R., and Tabellini, G. (2008) Why is fiscal policy often procyclical? *Journal of the European Economic Association.* 6 (5) 1006-1036.

- Alexakis, P., and Petrakis, P. (1991) Analysing Stock Market Behaviour in a Small Capital Market. *Journal of Banking and Finance*. 15 471-483.

- Alogoskoufis, G. (1995) The Two Faces of Janus: Institutions, Policy Regimes, and Macroeconomic Performance in Greece. *Economic Policy.* 149-92.

- Alptekin A. (2009). Military Expenditure and Economic Growth Literature: A Meta –Analysis. *University of Surrey.* DP 02/09.

- Amin, S. (1974) *Accumulation on a World Scale: A Critique of the Theory of Underdevelopment.* New York: Monthly Review Press.

- Andreades, A. (1906) The Currant Crisis in Greece. *The Economic Journal*. 16 (61) 41-51.

- Anglade, C., and Fortin, C. (1985) The State and Capital Accumulation in Latin America: A Conceptual and Historical Introduction in *The State and Capital Accumulation in Latin America*. Christian Anglade and Carlos Fortin, eds. Pittsburgh: University of Pittsburgh Press.

- Annett, A. (2000) Social fractionalization, political instability, and the size of government. *IMF Working Paper No. 82*. Washington DC, International Monetary Fund.

- Annett, A. (2001) Social fractionalization, political instability, and the size of government, *IMF Stuff Papers.* 48 (3) 561-592.

- Aristotle (350 B.C.E) *Politics* book IV part III, translated by B. Jowett. Available at: http://classics.mit.edu/Aristotle/politics.4.four.html (accessed in November 2007).

- Arendt, N. (1958) *The origins of totalitarianism*. London: George Allen & Unwin Ltd.

- Armstrong, D. (2009) Measurement in the Social Sciences (TT 2009). Available at: http://www.quantoid.net/Oxford.php (accessed in January 2010).

- Apergis, N., and Panethimitakis, A., (2007) *Stylized Facts of Greek Business Cycles: New Evidence from Aggregate and Across Regimes Data*, SSRN Working Paper Series, January 2007. Available at: http://ssrn.com/abstract=990245 (accessed in May 2011).

- Asteriou, D., and Siriopoulos, C. (2000) The role of Political Instability in Stock Market Development and Economic Growth: The case of Greece. *Economic Notes*. 29 (3) 355-374.

- Asteriou, D., and Price, S. (2001) Political Instability and Economic Growth: UK Time Series Evidence. *Scottish Journal of Political Economy*. 48 (4) 383 - 399.

- Attanasio, O., P., Picci, L., Scorcu, A., (2000). Saving growth investment: A macroeconomic analysis using a panel of countries. *Review of Economics and Statistics,* 82 (2), 182–211.

- Auvinen, J. and Nafzinger, W. (1999) The sources of humanitarian emergencies, *Journal of Conflict Resolution*. 43 (3) 267–290.

- Badiou, A. (2005) *Being and Event*. Trans. Oliver Feltham. London: Continuum.

- Backus, D., K., and Kehoe, P., J. (1992) International evidence on the historical properties on business cycles. *American Economic Review*. 82 (4) 864-888.

- Baillie, R., T., Bollerslev, T. and Mikkelsen, H.O. (1996) Fractionally integrated generalised autoregressive conditional heteroscedasticity. *Journal of Econometrics*. 74 3 - 30.

- Bajada, C. (2002) The effects of Inflation and the Business Cycle on Revision on Macroeconomic Data. *Australian Economic Review*. 35 276-286.

- Banerjee, A., Lumsdaine, R., and Stock, J. (1992) Recursive and sequential tests of the unit-root and trend-break hypotheses: theory and international evidence. *Journal of Business and Economic Statistics*.10 (3) 271-287.

- Banerjee, A., Marcellino, M. and Osbat, C. (2005) Testing for PPP: Should We Use Panel Methods?. *Empirical Economics*. 30 77–91.

- Banks, A. (2008) Cross-National Time-Series Data. *CNTS Data Archive*.

- Barro, R., J. (1991a). *A cross country study of growth, saving and government*. In: Bernheim, S. (Eds.), National Saving and Economic Performance, NBER, Cambridge: MA.

- Barro, R., J., (1991b) Economic growth in a cross-section of countries, *The Quarterly Journal of Economics.* 106 407–443.

- Barro, R., J and Sala-i-Martin, X. (1992): Convergence. *Journal of Political Economy.* 100 (2) 223-251.

- Barro, R. (1994) Democracy and Growth. NBER Working Paper 4909. *National Bureau of Economic Research, Cambridge.*

- Barro R., J. and Lee, J., W (1994) Sources of Economic Growth. *Carnergie – Rochester Conference Series on Public Policy*. 40 1-46.

- Barro, R. and Sala-i-Martin X. (1995). *Economic Growth*. New York: McGraw-Hill.

- Barro R., J. (1996) Determinants of economic growth: A cross country empirical study. *NBER Working Paper Series.* Working paper 5698.

- Baum, C. F., Schaffer, M. E., and Stillman, S. (2003) Instrumental variables and GMM: Estimation and testing, *Stata Journal.* 3 1–31.

- Belegri-Roboli, A. and Michaelides, P., (2006) Measuring Technological Change in Greece. *Journal of Technology Transfer*. 31 663-671.

- Benhabib, J., and Spiegel, M., M. (1992) The role of human capital and political instability in economic development. *C.V. Starr Centre for Applied Economics, New York University in its series Working Papers, with numbers 92 24*.

- Bennett, D., A. (2001) How can I deal with missing data in my study? *Australian and New Zealand Journal of Public Health.* 25 464–469.

- Bera, A., K. and Higgins, M., L. (1993) ARCH Models : Properties, estimation and testing. *Journal of Economic Surveys.* (4) 305 -362.

- Bhalla, S. (1994) *Freedom and Economic Growth: A Virtuous Cycle?* In Democracy's Victory and Crisis eds A. Hadenious. UK: Cambridge University Press.

- Bils, M., and Klenow, P. (1996) Does Schooling Cause Growth or the Other Way Around? University of Chicago: GSB mimeo.

- Birch, A., H. (1993) *The concepts and theories of modern democracy*. UK: Routledge.

- Björck, Å. (1996) *Numerical methods for least squares problems*. USA: Society for Industrial and Applied Mathematics.

- Blackburn, K., and M. Ravn (1992) Business Cycles in the United Kingdom: Facts and Frictions. *Economica*. 59 382-401.

- Blanco, L., and Grier, R. (2009) Long Live Democracy: The Determinants of Political Instability in Latin America. *Journal of Development Studies*. 45 (1) 76-95.

- Bleaney, M., and Nishiyama, A. (2000) Explaining Growth: A Contest between models, *Credit Research Paper*. No 00/11, August 2000.

- Bollen K., A., and Jackman, R., W., (1989) Democracy, stability, and dichotomies. *American Sociological Review*. 54 (4) 612-621.

- Bollerslev, T. (1986) Generalised Autoregressive Conditional Heteroskedasticity. *Journal of Economic*. 31 307-326.

- Bollerslev, T., Engle, R.F. and Nelson, D.B. (1994) *ARCH Models*, in: R.F. Engle and D. McFadden Eds., Handbook of econometrics, Vol. 4 (North-Holland: Amsterdam).

- Boltho, A., and Glyn, A. (1995) Can Macroeconomic Policies Raise Employment? *International Labor Review*. 134 451-470.

- Booth, J., A. (1989) Framework for Analysis, in John A. Booth and Mitchell A. Seligson, (eds.), *Elections and Democracy in Central America.* Chapel Hill: University of North Carolina Press.

- Bosworth, B., and Kollintzas, T. (2001) Economic Growth in Greece: Past Performance and Future Prospects. Paper provided by Athens University of Economics and Business, Department of International and European Economic Studies in its series *Athens University of Economics and Business* with number 134.

- Boulding, K., E. (1989) Three faces of Power. USA: Sage.

- Bound, J., Jaeger, D., A., and Baker, R. (1995) Problems with instrumental variables estimation when the correlation between the instruments and the endogenous explanatory variable is weak. *Journal of the American Statistical Association*. 90 443-450.

- Borrmann, A., Busse, M., and Neuhaus, S. (2006) Institutional quality and the gains from trade. *Kyklos*. 59 345-368.

- Burkhart, R., E., and Lewis-Beck, M. S. (1994). Comparative Democracy: The Economic Development Thesis. *American Political Science Review,* 88 (4), 903-910.

- Butkiewicz, J., and Yanikkaya, H. (2005) The impact of socio-political instability on economic growth: Analysis and implications. *Journal of Policy Modeling*. 27 629–645.

- Britt, D., W. (1997) *Conceptual Introduction to Modelling: Qualitative and Quantitative Perspectives.* New Jersey: Lawrence Erlbaum Associates, Inc.

- Brunetti, A. (1997) Political Variables in Cross –Country Growth Analysis. *Journal of Economic Surveys*. 11 (2) 163-190.

- Brunetti, A. (1997) Political Variables in Cross –Country Growth Analysis. *Journal of Economic Surveys*. 11 (2) 163-190.

- Brzezinsi, Z. (1956) Totalitarianism and Rationality. *The American Political Science Review*.50 (3) 751-763.

- Calvert, P. (1987) Political Succession and Political Change in *The Process of Political Succession*. Peter Calvert, ed. London: Macmillan.

- Campbell, A., Converse, P., E., Miller, W., E., and Stokes D., E. (1960) *American Voter*. New York: John Wiley.

- Campos, N., F. and Nugent, J., B. 2000. Who is Afraid of Political Instabilit*y? Journal of Development Economics*. 67 (1)157-172.

- Campos, N. and Karanasos, M. (2008) Growth, volatility and political instability: Non-linear time-series evidence for Argentina, 1896–2000. *Economics Letters*, 100, 135–137.

- Campos, N.,F., Karanasos, M. and Tan, B., (2012) Two to tangle: Financial development, political instability and economic growth in Argentina. *Journal of Banking and Finance.* 36 (1) 290- 304.

- Carey J., P., C. and Carey A., G. (1968) *The web of modern Greek Politics*. New York and London: Columbia University Press.

- Cavalo, E., A. (2008) Output Volatility and Openness to Trade: A Reassessment. *Economía*. 9 (1) 105-138.

- Chan, S. (2002) *Liberalism, Democracy and Development.* Cambridge: Cambridge University Press.

- Chatfield, C. (2004) *The Analysis of Time Series: An Introduction, 6th edition*. Florida: CRC Press, LLC.

- Chen, L., E., (2007) Development First, Democracy Later? Or Democracy First, Development Later? The Controversy over Development and Democracy. Available at:

  http://www.democ.uci.edu/research/conferences/2007%20Democracy%20and%20 Development%20Papers/chen.pdf (accessed at 18 December 2007).

- Christodoulakis, N., Dimelis, S., and Kollintzas, T., (1993) Comparisons of Business Cycles in Greece and the EC: Idiosyncracies and Regularities. *Centre for Economic Policy Research.* Discussion Paper 809.

- CIA (1948) Released Documents -Current Situation in Greece. (*ORE 28-48*).

- Clogg R. (1979) A short History of Modern Greece. London: Cambridge University Press.

- Close, D., H. (2002) *Greece since 1945*. London: Pearson Education.

- Cohen, D. and M. Soto (2001) Growth and Human Capital: Good Data, Good Results. *OECD Development Centre*. Technical Papers No. 179.

- Collier, R., B., and Collier, D. (1991) *Shaping the Political Arena: Critical Junctures, the Labor Movement, and Regime Dynamics in Latin America.* Princeton: Princeton University Press.

- Collier, P. and Hoeffler, A. (2004) Greed and grievance in civil war, *Oxford Economic Papers*. 56 (4) 563–595.

- Collier, D., and Levitsky, S. (1997) Democracy with Adjectives: Conceptual Innovation in Comparative Research. *World Politics*. 49 (3) 430-451.

- Coase, R., H. (1960) The problem of social costs. *Journal of Law and Economics.* 3 1-44.

- Coase, R., H. (1989), *The Firm, The Market and The Law*. Chicago: University of Chicago Press.

- Congleton, R., D. (2001) On the Durability of King and Council: The Continuum between Dictatorship and Democracy. *Constitutional Political Economy.* 12 193–215.

- Constas, D. (1991) *The Greek-Turkish Conflict in the 1990s: domestic and external influences*. New York: St. Martin's Press.

- Cukierman, A., Neyapti, B., and Webb, S. (1992) Measuring the independence of central banks and its effect on policy outcomes. *The World Bank Economic Review.* 6 (3) 353-398.

- Cuzan, A., Moussalli, S., and Bundrick, C. (1988) Fiscal Expansion and Political Instability in the Iberic – Latin Region, *Public Choice*. 59 225-238.

- Dahl, R. (1956) A preface to democratic theory. Chicago: University of Chicago Press.

- Danthine, J.P., and M. Girardin (1989) Business Cycles in Switzerland. A Comparative Study. *European Economic Review*. 33 31-50.

- De Haan, J., and Siermann, C., L., J. (1995) A Sensitivity Analysis of the Impact of Democracy on Economic Growth. *Empirical Economics*. 20 197-215.

- De Haan, J., and Siermann, S., L., J. (1996) New Evidence on the Relationship between Democracy and Economic Growth, *Public Choice*.86 (1-2) 175-198.

- De Haan, J., and Siermann, C., L. (1996) Political Instability, Freedom and Economic Growth: Some Further Evidence. *Economic Development and Cultural Change.* 44 (2) 339-350.

- De Haan, J. (2007) Political institutions and economic growth reconsidered. *Public Choice*. 131 281–292.

- De Mesquita, Bueno B. and Downs G (2005) Development and Democracy. *Foreign Affairs.* 84 (5) 77-86.

- Dertilis, G.(1980) *To Zefema ton Trapezon* (The Banking Question). Athens.

- Diamond, L., Linz, J., J. and Lipset S. M. (1995) *Politics in Developing Countries: Comparing Experiences with Democracy, 2nd ed*. Boulder, CO: Lynne Rienner Publishers.

- Dick, W., G. (1974) Authoritarian versus Nonauthoritarian Approaches to Economic Development. *The Journal of Political Economy*. 8 (4) 817-827.

- Diels, H. (1954) *Die Fragmente der Vorsokratiker*. Berlin: Weidmannsche, vol. II.

- Ding, Z., Granger, C.W.J. and R. Engle (1993) A long memory property of stock market returns and a new model. *Journal of Empirical Finance*. 1 83-106.

- Ding, Z. and Granger, C. W.J. (1996) Modelling volatility persistence of speculative returns: A new approach. *Journal of Econometrics*. 73 185 - 215.

- Di Scala, S. (1980) *Dilemmas of Italian Socialism: the Politics of Filippo Turati*. Amherst: University of Massachusetts Press.

- Dollar, D., and Kraay, A. (2003) Institutions, trade, and growth. *Journal of Monetary Economics.* 50 133-62.

- Drakatos K. (1997) *The big cycle of the Greek economy*. Athens: Papazisis (in Greek).

- Drew, P. (1974) Domestic Political Violence: Some problems of measurement. *Sociological review*. 22 (1) 5-25.

- Dunne, P., Nikolaidou, E. & D. Vougas (2001) Defense Spending and Economic Growth: A Causal Analysis for Greece and Turkey, 1960-1996. *Defense and Peace Economics*. 12 (1) 5-26.

- Easterly, W., and Levine, R. (1997) Africa's Growth Tragedy: Policies and Ethnic Divisions. *Quarterly Journal of Economics*. 112 (4) 1203-1250.

- Easton, D. (1957) An Approach to the Analysis of Political Systems. *World Politics*. 9 (3) 383-400.

- Easton D. (1979) *A Systems Analysis of Political Life*. Chicago: University of Chicago Press (first published 1965).

- Easton, D. (1981) The Political System Besieged by the State, *Political Theory*. 9 (3) 303-325.

- Edwards, S. (1993) Openness, trade liberalization, and growth in developing countries, *Journal of Economic Literature*. 31 1358–1393.

- Edwards, S. (1998) Openness, productivity and growth: what do we really know? *Economic Journal*. 108 383– 398.

- Elder, J., and Serletis, A. (2006) Oil Price Uncertainty. *Working paper*. Forthcoming in the *Journal of Money, Credit and Banking*.

- Ellingsen, T. (2000) Colorful community or ethnic witches' brew? Multiethnicity and domestic conflict during and after the Cold War, *Journal of Conflict Resolution*. 44 (2) 228–249.

- Elmendorf, D., and Mankiw, N., G. (1999) Government Debt, in J. B. Taylor and M. Woodford (eds.), *Handbook of Macroeconomics*, Vol. 1C. Amsterdam: North-Holland.

- Eggertsson, T. (1990) *Economic Behavior and Institutions*. Cambridge: Cambridge University Press.

- Engle, R., F. (1982) Autoregressive Conditional Heteroscedasticity with Estimates of Variance of United Kingdom Inflation. *Econometrica.* 50 987-1008.

- Enikolopov, R., and Zhuravskaya, E. (2007) Decentralization and Political Institutions. *Journal of Public Economics*. 91 (11-12) 2261-2290.

- Esteban, J., and Ray, D., R. (2008) Polarization, Fractionalization and Conflict. *Journal of Peace Research.* 45 (2) 163–182.

- Everest –Phillips, M. (2008) Beyond constrains: Promoting the politics of economic growth in Developing countries. *SPIRU Working Paper 22.*

- Fedderke, J., Klitgaard, R. (1998) Economic Growth and Social Indicators: An Explanatory Analysis. *Economic Development and Cultural Change*. 46 (3) 455-489.

- Feng, Y. (1995) Regime, polity and economic growth: The Latin American experience. *Growth and Change.* 26 (1) 77-104.

- Feng, Y. (1996) Democracy and growth: The sub-Saharan African case1960-1992. *Review of Black Political Economy*. 25 (1) 95-126.

- Feng, Y. (2003), *Democracy, Governance and Economic Performance: Theory and Evidence*, Cambridge: MA, MIT Press.

- Feris, A., F. (1986) *The Greek Economy in the Twentieth Century.* London & Sydney: Groom Helm.

- Fielding, D. (2003) Modeling Political Instability and Economic Performance: Israeli Investment during the Intifada. *Economica.*70 (277) 159-186.

- Fiorito, R., and T. Kollintzas (1994) Stylized Facts of Business Cycles in the G7 from a Real Business Cycle Perspective. *European Economic Review*. 38 235-269.

- Fishman, R. (1990) Rethinking State and Regime: Southern Europe's Transition to Democracy. *World Politics*. 42 422–40.

- Fosu, A., K. (1992) Political instability and economic growth: evidence from sub-Saharan Africa. *Economic Development and Cultural Change*. 40 (4) 829–841.

- Fosu, A., K. (2001) Political instability and economic growth in developing economies: some specification empirics*, Economics Letters*. 70 289–294.

- Fornari, F., and Mele, A. (1997) Sign – and Volatility– Switching ARCH Models: Theory and Applications to International Stock Markets. *Journal of Applied Econometrics*. 12 49-65.

- Fotopoulos, T. (1992) Economic restructuring and the debt problem: the Greek case. *International Review of Applied Economics*. 6 (1) 38-64.

- Fotopoulos, T. (2005) *The Multidimensional Crisis and Inclusive Democracy*. Athens: Gordios.

- Fountas, S., and Karanasos, M. (2007) Inflation, Output Growth, and Nominal and Real Uncertainty: Empirical Evidence for the G7. *Journal of International Money and Finance*. 26 229-250.

- Fölster, S, Henrekson, M. (2001) Growth effects of government expenditure and taxation in rich countries. *European Economic Review*. 45 (8) 1501-1520.

- Frey, B., and Eicherberger, R. (1994) The Political Economy of Stabilization Programs in Developing Countries. *European Journal of Political Economy*. (10) 169-190.

- Freund, C., and Bolaky, B. (2008) Trade, regulations, and income, *Journal of Development Economics.* 87 (2) 309-321.

- Friedman, M. (1962) *Capitalism and Freedom.* Chicago: University of Chicago Press.

- Friedrich, C., J. (1954) The Unique Character of Totalitarian Society. Friedrich, Carl Joachim (ed.) Totalitarianism: Proceedings of a conference held at the American Academy of Arts and Sciences, March 1953. Cambridge: Harvard University Press, pp. 47–60, discussion pp. 74–84.

- Friedrich, K., and Brzezinski, Z. (1965) *Totalitarian Dictatorship and Autocracy.* Cambridge, Mass.: Harvard University Press

- Fung, D., S.,C (2003) Methods for the Estimation of Missing Values in Time Series. PhD Thesis. Available at:

  http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1063&context=theses&sei-

  redir=1#search="fill+in+the+missing+values+are:+time+â□"series+decomposition

  " (accessed at November 2010).

- Galenson, W. (ed.). (1959). *Labour and Economic Development*. New York: Wiley.

- Gandhi, J. (2008) Dictatorial Institutions and their Impact on Economic Growth. *European Journal of Sociology.* 49 (1) 3-30.

- Gasiorowski, M., J. (1990) The Political Regimes Project. *Studies in Comparative International Development.* 25 (1) 109-125.

- Gastil, R., D. (1990) The Comparative Survey of Freedom: Experiences and Suggestions. *Studies in Comparative International Development.* 25 (1) 25-50.

- Gerring, J. (2004) What is a case study and what is it good for? *American Political Science Review*. 98 (2) 341-354.

- Gerring, J., Bond, P., Barndt, W., T. and Moreno, C. (2005) Democracy and Economic Growth A Historical Perspective. *World Politics*. 57 (3) 323-364.

- Gerschenkron, A. (1943) *Bread and Democracy in Germany*. Berkeley: University of California Press.

- Gerschenkron, A. (1962) *Economic Backwardness in Historical Perspective*. Cambridge: MA Belknapp Press.

- Ghali, K. H. (1998) Public Investment and Private Capital Formation in a Vector Error-Correction Model of Growth. *Applied Economics*. 30 837-844.

- Ghura, D., and Mercereau, B. (2004) Political Instability and Growth: The Central African Republic. *IMF Working Paper*. WP/04/80.

- Glaeser E., L., La Porta, R., Silanes, F.,L., and Shleifer A. (2004) Do institutions cause growth? *Journal of Economic Growth*. 9 271-303.

- Glosten, L., Jagannathan, R., and Runkle, D. (1993) On the relation between the expected value and the volatility of the nominal excess return on stocks. *Journal of Finance*. 48 1779-1801.

- Goering, G., E., and Pippenger, M., K., (1994) A note regarding ARCH and threshold processes: results from a Monte Carlo study. *Applied Economic Letters.* 1 210-213.

- Goldsmith, A., A. (1987) Does Political Stability Hinder Economic Development? Mancur Olson's Theory and the Third World. *Comparative Politics*. 19 (4) 471-480.

- Goldstone, J., Bates, R., Gurr, T., Marshall, M., Ulfelder, J., and Woodward, M. (2004) It's all about State Structure: New Findings on Revolutionary Origins. *Homo Economicus*. 21 429-455.

- Goldstone, J., Bates, R., Gurr, T., Marshall, M., Ulfelder, J. and Woodward, M. (2005) A global forecasting model of political instability, in: *Proceedings of the annual meeting of the American Political Science Association, Washington DC*, available at: http://globalpolicy.gmu.edu/pitf/pitfp5.htm (accessed at October 2010).

- Green, W., H. (1992) A Statistical model for Credit Scoring. *Working Papers 92-29*, New York University Leonard N. Stern School of Business, Department of Economics.

- Green, W., H. (2008) Econometric Analysis 6/E. USA: Prentice Hall.

- Grier, K., and Tullock, G. (1989) An empirical analysis of cross-national economic growth, 1951-1980. *Journal of Monetary Economics*. 24 (1) 259-276.

- Grier, K., B., and Perry, M., J. (2000) The Effects of Real and Nominal Uncertainty on Inflation and Output Growth: Some GARCH-M Evidence. *Journal of Applied Econometrics.* 15 45-58.

- Grochová, L. and Kouba, L. (2010) Elite Political Instability and Economic Growth: Empirical Evidence from the Baltic States. *MENDELU Working Papers in Business and Economic.* 1/2010.

- Gokal, V and Hanif, S. (2004) Relationship between Inflation and Economic Growth. *Economic Department Reserve Bank of Fiji,* Available at: reservebank.gov.fj (accessed at April 2010).

- Gourevitch, P. (2008) The role of politics in Economic Development. *Annual Review of Political science*. (11) 137-159.

- Gupta, D., K. (1990) *The Economics of Political violence. The effects of Political Instability on Economic Growth*. New York: Praeger.

- Gwartney, J.D., Lawson, R.A. and Holcombe R.G. (1998) The scope of Government and the Wealth of Nations. *Cato Journal*. 18 (2) 163-190.

- Gyimah-Brempong, K., and Traynor, T., L. (1999) *Political* Instability, Investments and Economic Growth in Sub-Saharan Africa. *Journal of African Economies.* 8 (1) 52–86.

- Hacohe, M., H. (2002) *Karl Popper, The formative years 1902-1945.* Cambridge: Cambridge University Press.

- Hadenius, A. (1992) *Democracy and Development*. Cambridge: Cambridge University Press.

- Haggard, S. (1990) *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries*. Cornell University Press.

- Hall, R., E., and Jones, C., I. (1999) Why do some countries produce so much more output than others. *The Quarterly Journal of Economics.* 114 83–116.

- Hamilton, J., D. (2008) *Macroeconomics and Arch*. Mimeo, University of California-Sa*n* Diego*.*

- Hansen, L. (1982) Large sample properties of generalized method of moments estimators. *Econometrica.* 50 (3) 1029 -1054.

- Hansen, L. P. and Singleton, K. J. (1982) Generalized Instrumental Variables of Nonlinear Rational Expectations Models. *Econometric.* 50 1269-1286.

- Harvey, A., C. (1989), *Forecasting, Structural Time Series Models and the Kalman Filter*. Cambridge: Cambridge University Press.

- Hatchondo, J., C., Martinez, L., Saprita, H., (2007) The Economics of Sovereign Defaults. *Economic Quarterly of the Federal Reserve Bank of Richmond*. 93 (2) 163-187.

- Hausman, J.A. and Taylor, W.E. (1981) Identification in Linear Simultaneous Equations Models with Covariance Restrictions: An Instrumental Variables Interpretation. *Econometrica.* 51 (5) 1527–1549.

- Hayek, F., A. (1944) *The Road to Serfdom*. Chicago: The University of Chicago Press.

- Hewlett, S., A. (1980) *The Cruel Dilemmas of Development: Twentieth Century Brazil*. New York: Basic Books.

- Hibbs, D. (1973) *Mass Political Violence: A cross –sectional Analysis*. New York: Willey.

- Hillmer, S.,C., Bell, W., R. and Tiao, G.,C. (1983), *Modeling Considerations in the Seasonal Adjustment of Economic Time Series.* In Zellner, A. (ed.), Applied Time Series Analysis of Economic Data. Washington, D.C.: U.S. Department of Commerce. Bureau of the Census.

- Higgins, M., L. and Bera, A., K (1992) A class of nonlinear ARCH models. *International Economic Review*. 33 137 – 158.

- Huber E., Rueschemeyer, D. and Stephens, J., D (1993) The impact of Economic Development on Democracy. *The Journal of Economic Perspectives*. 7 (3) 71-86.

- Huntington, S., P. (1968) *Political Order in Changing Societies*. New Haven and London: Yale University Press.

- Huntington, S. and Dominguez, J. (1975) *Political Development* in F. Greenstein and N. Polsby (eds.) Handbook of Political Science, Vol. 3 Macro political Theory, Reading, Mass, Addison Wesley, 1-1 14.

- Huntington, S. (1987) The goals of Political Development *in Understanding Political Development, Weiner and Huntington (Ed.).* Boston: Little Brown & Company.

- Huber, E., Rueschemeyer, D., and Stephens, J., D. (1993) The impact of economic development on democracy. *Journal of Economic Perspectives*. 7 (3) 71- 86.

- Hurwitz, L. (1973) Contemporary Approaches to Political Stability, *Comparative Politics.* 5 (3) 449-463.

- Hsiao, C. (2003) *Analysis of Panel Data*. UK: Cambridge University Press.

- Jackman, R., W. (1993) *Power without Force: The Political Capacity of Nation States.* USA: The University of Michigan Press.

- Jackson, J., E., (1991) *A User's Guide to Principal Components*. New York: Wiley.

- Jaguaribe, H. (1973) *Political Development: A General Theory and a Latin American Case Study.* NY: Harper & Row.

- Johnson, P. (1976) *A History of Christianity*. New York: Atheneum.

- Johnson, J. W. (1964) *The Military and Society in Latin America*. Stanford: Stanford University Press.

- Jong-A-Pin, R. (2009) On the measurement of political instability and its impact on economic growth. *European Journal of Political Economy*. 25 (1) 15-29.

- Ifestos, P., and A. Platias (1992) *Greek Deterrence Strategy*, Athens: Papasissis Publications.

- Im, K., S., Pesaran, M, .H., and Shin, Y. (2003) Testing for Unit Roots in Heterogeneous Panels. *Journal of Econometrics*. 115 (1) 53-74.

- Isham, J., Kaufmann, D., and Pritchett, L., H. (1997) Civil Liberties, Democracy, and the Performance of Government Projects. *The World Bank Economic Review*. 11 (2) 219-242.

- Islam, N. (1999) Reflections on Democracy and Development in Bangladesh. *Journal on Bangladesh Studies*. 1 (1) 1-6.

- Isaksson, A., and Hee Ng, T. (2006) Determinants of Productivity: Cross country analysis and Country case studies. UNIDO. Staff working paper 01/2006. Available at:

  http://www.unido.org/fileadmin/user_media/Publications/Pub_free/Determinants_of _productivity_corss_country_analysis_and_country_case_studies.pdf (accessed August 2011).

- Kanellopoulos, A. (1985) *Economic Thought and Politics of Ancient Greece*. Athens: Karamperopoulos.

- Karasawoglou, A., and Katrakilidis, K. (1993) The Accommodation Hypothesis in Greece. A Tri-Variate Granger-Causality Approach. *SPOUDAI*. 43 (1) 3-18.

- Kaskarelis, I. (1993), Investigating the Features of Greek Business Cycles. *SPOUDAI*. 43 (1) 19-32.

- Kean, J. (2009) *The life and death of Democracy*. London: Simon & Schuster UK Ltd.

- Kennan, G., F. (1978) *The Cloud of Danger*. Boston and Toronto: Hutchinson.

- Kirk, G. and Raven, J. (1957) *The Pre-Socratic Philosophers*. Cambridge: Cambridge University Press.

- Kirmanoglu, H. (2003) Political Freedom and Economic Well-Being: A Causality Analysis. *International Conference on Policy Modelling*, Istanbul, Turkey.

- Knol, D., L., and ten Berge, J., M., F. (1989) Least squares approximation of an improper correlation matrix by a proper one. *Psychometrika.* 54 53–61.

- Knütter, R. and Wagner, H. (2011) Optimal Monetary policy during Boom –Bust Cycles: The Impact of Globalization. *International Journal of Economics and Finance*. 3 (2) 34-44.

- Kumar, M., S., and W., J. (2010) Public Debt and Growth. *IMF Working Paper.* WP/10/174.

- Kofas, J., V. (1981) *Financial Relations of Greece and the Great Powers 1832-1862*, East European Monographs. New York: Wynne.

- Kollias, C. (1994) *The Economic Effects of Defence Spending in Greece 1963-90. Some preliminary Econometric Findings*. *SPOUDAI*. 44 (3-4) 114-130.

- Kollintzas, T., and Vassilatos, V. (1996) A Stochastic Dynamic General Equilibrium Model for Greece. *Centre for Economic Policy Research.* Discussion Paper No. 1518.

- Kormendi, R., and Meguire, P. (1985) Macroeconomic determinants of growth: cross country evidence. *Journal of Monetary Economics*. 16 (4) 141-163.

- Krieckhaus, J. (2004) The Regime Debate Revised: A Sensitivity Analysis of Democracy's Economic Effect. *British Journal of Political Science.* 34 635-655.

- Kurzman, C., Werum, R., and Burkhart, R., E. (2002) Democracy's Effect on Economic Growth: A pooled Time –Series Analysis, 1951-1980. *Studies in Comparative International Development*. 37 (1) 3-33.

- Kuznets, S., S. (1966) *Modern Economic Growth: Rate, Structure, and Spread*. New Haven CT: Yale University Press.

- Kwasi Fosu, A. (1992) Political instability and economic growth: evidence from Sub-Saharan Africa, *Economic Development and Cultural Change*. 40 (4) 829–841.

- La Feber, W. (1980) *America, Russia and the Cold War 1945-1980*. New York: John Willey.

- Lane, P., R., and Tornell, A. (1996) Power, Growth, and the Voracity Effect. *Journal of Economic Growth*. 1 213–41.

- Lazaretou, M., S. (1999) The drachma on the metallic monetary standards: lessons from the past. Bank of Greece, Economic Bulletin. 13 7/99.

- Leblang, D., A. (1997) Political Democracy and Economic Growth: Pooled cross − Sectional and Time Series Evidence. *British Journal of Political Science*. 27 453-472.

- Leblang, D., and Bernhard, W. (2000) The Politics of Speculative Attacks in Industrial Democracies. *International Organization*. 54 (2) 291-324.

- Lee, K., Ni, S., and Ratti, R., A. (1995) Oil Shocks and the Macroeconomy: The Role of Price Variability. *Energy Journal.* 16 39-56.

- Lensink, R., Bo, H., and Sterken, E. (1999) Does uncertainty affect economic growth? An empirical analysis. *Weltwirtschaftliches Archiv.* 135 379-396.

- Lensink, R., Hermes, N. and Murinde, V. (2000) Capital Flight and Political Risk. *Journal of International Money and Finance.* 19 (2000) 73-92.

- Lensink, R. (2001) Financial development, uncertainty and economic growth. *De Economist.* 149 (3) 299-312.

- Levine, R., and Renelt, D. (1991) Cross –country studies of Growth and Policy. *Policy, Research and External Affairs Working Papers Series.* WSP 608

- Levine, R., Renelt, D. (1992) A sensitivity analysis of cross-country growth regressions. *American Economic Review.* 82 942–963.

- Levine R., and Zervos, S., J. (1993) What we have learned about Policy and Growth from Cross –Country Regressions? *American Economic Review.* 83 (2), 426-430.

- Levin, A., Lin, C., F., and Chu, C., S., J. (2002) Unit Root Tests in Panel Data: Asymptotic and Finite-sample Properties. *Journal of Econometrics.* 108 (1) 1-24.

- Lin, S. (2000) Government debt and economics growth in an overlapping generations model. *Southern Economic Journal.* 66 (3) 754-763.

- Linz, J. (1964) An authoritarian regime: The case of Spain in Erik Allard and Yrjo Littunen (ed.), *Cleavages, Ideologies and Party Systems.* Helsinki: Westermarck Society.

- Linz, J. (1975) Totalitarianism and Authoritarian Regimes in *Handbook of Political Science* V. 3, Macropolitical Theory, Fred Greenstein and Nelson Polsby, eds. Reading, MA: Addison-Wesley Press.

- Linz, J., J. (1994) Presidential or Parliamentary Democracy: Does It Make a Difference? in Juan J. Linz and Arturo Valenzuela, (eds.), *The Failure of Presidential Democracy.* Baltimore: Johns Hopkins University Press.

- Lipset, S. M. (1959) Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *American Political Science Review* 53 (1) 69-105.

- Lipset, S. M. (1963) *Political Man*. London: Heinemann.

- London B., and Williams, B., A. (1990) National Politics, International Dependency and Basic Needs Provision: A cross –national Analysis. *Social Forces*. 69 (2) 528 - 587.

- Londregan, J., and Poole, K. (1990) Poverty, the Coup Trap, and the Seizure of Executive Power. *World Politics.* 42 (2) 151-183.

- Marchart, O. (2007) *Post-Foundational Political Thought*: *Political Difference. Ed.* Nancy, Lefort, Badiou and Laclau. Edinburgh: Edinburgh University Press.

- Maddala, G., S., and Wu, S. (1999) A Comparative Study of Unit Root Tests with Panel Data and a New Simple Test. *Oxford Bulletin of Economics and Statistics*. 61 (0) 631-652.

- Madisson, A. (1995) *Monitoring the World Economy, 1820-1992*. Paris: OECD Development Studies.

- Maggi, G., and Rodríguez-Clare, A. (2000). Import penetration and the politics of trade protection. *Journal of International Economics*. 51 287-304.

- Malatesta, E. (1977) Errico Malatesta: His life and Ideas. USA: Freedom Press.

- Mann, M. (2004) *Fascists*. UK: Cambridge University Press.

- Mankiw, N., G., Romer D. and Weil D., N. (1992) A Contribution to the Empirics of Economic Growth. *Quarterly Journal of Economics*. 107 (2) 407-437.

- Macpherson, C., B. (1977) *The life and Times of Liberal Democracy*. New York: Oxford University Press.

- Mark, N., C, Ogaki, M. and Sul, D. (2005) Dynamic seemingly unrelated cointegrating regressions. *Review of Economic Studies*. 72 797-820.

- Mauro, P. (1995) Corruption and Growth. *Quarterly Journal of Economics*. 110 (3) 681-712.

- McGuckin, R., H., Ozyildirim, A. and Zarnowitz, V. (2001) The composite index of leading economics indicators: how to make it more timely. National Bureau of Economic Research, Cambridge, MA. NBER Working Paper no. 8430.

- McKinight, P., E., McKnight K., M., Sidani, S., and Figueredo A., J. (2007) *Missing Data, A Gentle Introduction.* New York, London: The Guilford Press.

- McKinlay, R., D., and Cohan, A., S. (1975) A Comparative Analysis of the Political and Economic Performance of Military and Civilian Regimens: A Cross-National Aggregate Study. *Comparative Politics*. 8 1-30.

- McMillan, J., Rausser G., and Johnson, S. (1993) Freedoms and Economic Growth: Transitional and Permanent Components. *Center for Agricultural and Rural Development*, Iowa State University. Working Paper 93 –WP 115.

- Menocal, A., R. (2007) Analysing the relationship between Democracy and Development: Defining basic concepts and assessing key linkages. Prepared for the Wilton Park Conference on Democracy and Development. Available at: http://www.odi.org.uk/PPPG/politics_and_governance/publications/arm_wiltonpark _DemocracyandDevelopment.pdf (accessed 20 March 2008).

- Michaelides, P., Milios, J., Vouldis, A., and Lapatsioras, S. (2007) Business Cycles in Greece 91960-2008): An Econometric Investigation. *Journal of Economics and Business*. X (1) 71-106.

- Michell, B. (2003) International Historical Statistics; Europe 1750-2000, (5th ed). England: Palgrave Macmillan.

- Midlarsky, M., I. (1997) *Inequality, Democracy, and Economic Development.* Cambridge: Cambridge University Press.

- Mill, J. S (1859) *On liberty*. London: John W. Parker and son West Srtand.

- Miljkovic, D., and Rimal, A. (2008) The impact of socio –economic factors on political instability: A cross –country analysis. *The Journal of Socio-Economics*. 37 2454-2463.

- Mises, L. V. (1981) *Socialism: An Economic and Sociological Analysis*. Indianapolis: Liberty Classics.

- Moore, B., Jr., (1966) *Social Origins of Dictatorship and Democracy*. Boston: Little, Brown.

- Morrison D., G., and Stevenson, H., M. (1971) Political Instability in Independent Black Africa: More Dimensions of Conflict Behavior within Nations. *The Journal of Conflict Resolution*. 15 (3) 347-368.

- Mueller D., C. (1982) Redistribution, Growth, and Political Stability. *The American Economic Review*. 72 (2) 155-159.

- Munck, G., L. (1996) Disaggregating Political Regime: Conceptual Issues in the Study of Democratization. *Kellogg Institute Working Paper 228.* Notre Dame. (In.:

The Helen Kellogg Institute for International Studies, University of Notre Dame, 1996).

- Mussolini, B. (1935) Fascism: Doctrine and Institutions. Rome: 'Ardita' Publishers.

- Narol, R. (1968) *Some thoughts on Comparative Method in Cultural Antropology*, in H. M. Blalock and A. Blalock (Ed), in Methodology in Social Research. New York: McGraw -Hill.

- Nelson, C., and Plosser, C. (1982) Trends and random walks in macroeconomic time series: some evidence and implications. *Journal of Monetary Economics*.10 139-169.

- Nelson, D., B. (1991) Conditional heteroskedasticity in asset returns: a new approach. *Econometrica.* 59 347-370.

- Newey, W., K. (1987) Efficient Estimation of Limited Dependent Variable Models with Endogenous Explanatory Variables. *Journal of Econometrics*. 36 231-50.

- Nordhaus, W. (1975) The Political Business Cycle. *Review of Economic Studies*. 42 169-1990.

- North, D., C. (1990) *Institutions, Institutional Change and Economic Performance.* New York: Cambridge University Press.

- O' Donnell, G. (1978) Reflections on the Patterns of Change in the Bureaucratic-Authoritarian State. *Latin American Research Review.* 13 (1) 3-38.

- O'Donnell, G. and Schmitter, P. (1986) *Transitions from Authoritarian Rule: Tentative Conclusions about Uncertain Democracies*. Baltimore: The Johns Hopkins University Press.

- Olson, M. (1982) *The rise and decline of nations: Economic growth, stagflation, and social rigidities.* New Haven: Yale University Press.

- Olson, M. (1993) Dictatorship, Democracy, and Development. *American Political Science Review.* 87 567-76.

- Olson, M., (2000) *Power and prosperity: Outgrowing communist and capitalist dictatorships.* NY: Basic Books.

- Padalino, S., and Vivarelli, M. (1997) The Employment Intensity of Economic Growth in the G-7 Countries. *International Labour Review.* 136 191-213.

- Papaioannou, E., and Siourounis, G. (2008b) Economic and social factors driving the third wave of democratization. *Journal of Comparative Economics.* 36 (3) 365-387.

- Passas, C. and Labrinidis, G. (2011) EU and the structure of the Greek Economy. Paper presented in the conference '*Neoliberalism and the Crises of Economic Science*' 20-22 May, 2011, Istanbul University, Beyazit; IIPPE & Turkish Social Sciences Association (TSSA).

- Peng, C., J., Harwell, M., Liou, S., M., and Ehman, L., H. (2006) Advances in missing data methods and implications for educational research. In S. Sawilowsky (Ed.), *Real data analysis.* Greenwich, CT: Information Age.

- Perron, P. and Qu, Z. (2006) Estimating Restricted Structural Change models. *J. Economics.* 134 373-399.

- Perron, P. and Qu, Z. (2007) Estimating and Testing Structural Changes in Multivariate Regressions. *Econometrica.* 75 (2) 459-502.

- Person, T., and Tabelini, G. (1991b) Is inequality harmful for growth? Theory and Evidence. *Mimeo*. Sweden: Stockholm University.

- Person, T. and Tabelini, G. (1994) Is Inequality harmful for growth? *The American Economic Review*. 84 600-621.

- Person T., and Tabellini, G. (2006) Democracy and Development: The Devil in the Details. *The American Economic Review*. 96 (2) 319-324.

- Pesaran, H. (2007) A Simple Panel Unit Root Test in the Presence of Cross-Section Dependence. *Journal of Applied Econometrics.* 22 (2) 265-312.

- Peterson, E., T. (1951) Why Democracies Fail? This is the hard core of Freedom. *The Daily Oklahoman*. December 9, 1951, page 12A.

- Petras, J., and Leiva, F., I. (1994) *Democracy and Poverty in Chile: The Limits to Electoral Politics.* Boulder, Colo: Westview Press.

- Pinho, C., and Madaleno, M. (2009) Political Regimes and Economic Growth. *Revista Enfoques*. 7 (11) 471-490.

- Plumper, T. and Martin, C.W., (2003) Democracy, government spending, and economic growth: a political-economic explanation of the Barro-effect. *Public Choice*. 117 (1-2) 27-50.

- Polachek, S., W., and Sevastianova, D. (2010). Does Conflict Disrupt Growth? Evidence of the Relationship between Political Instability and National Economic Performance. *IZA DP* No. 4762.

- Popper, K. (1945) *The open society and its enemies*. London: Routledge and Kegan.

- Poulantzas, N. (1974) *Fascism and Dictatorship*, London, New Left Books, (first published in 1970).

- Pourgerami, A. (1988) The Political Economy of Development. *Public Choice*. 58 123-141.

- Przeworski, A. and Teune, H. (1970) *The Logic of Comparative Social Inquiry (Comparative studies in behavioral science.* New York& London: John Wiley & Sons Inc.

- Przeworski, A. and Limongi F. (1993) Political Regimes and Economic Growth. *The journal of Economic Perspective.* 7 (3) 51-69.

- Przeworski, A., Alvarez, M. E., Cheibub, J. A and Limongi, F. (2000) *Democracy and Development: Political Institutions and Well-being in the World 1950-1990.* New York: Cambridge University Press.

- Psacharopoulos, G. (1994) Returns to Investments in Education: A Global Update. *World Development*. 22 (9) 1325-1343.

- Pye, L. (1966) *Aspects of Political Development*. Boston: Little, Brown.

- Rao, V. (1984) Democracy and Economic Development. *Studies in Comparative International Development*. 67-80.

- Ray, D. (1998) Development Economics. USA: Princeton University Press.

- Remmer, K. (1978) Evaluating the Policy Impact of Military Regimes in Latin America. *Latin American Research Review*. 13 (2) 39-54.

- Remmer, K. (1990). Democracy and Economic Crisis: The Latin American Experience. *World Politics*. 42 (3) 315-335.

- Riker, W., H., and Weimer, D., L. (1993) The Economic and Political Liberalization of Socialism: The Fundamental Problem of Property Rights. *Social Philosophy and Policy*. 10 79-102.

- Robock, S., H. (1971) Political Risk: Identification and Assessment. *Columbia Journal of World Business*. 6 (4) 6-20.

- Rodrik, D. (1989) Policy Uncertainty and Private Investment in Developing Countries. *NBER Working Paper No. 2999*.

- Rodrik, D. (1997). Democracy and Economic performance. *Working Paper, Harvard University.*

- Rodrik, D., (2000). Institutions for high –Quality Growth: What they are and how to acquire them. *Centre for Economic Policy Research,* Discussion Paper No. 2370.

- Roe, M., J., and Siegel, J., I. (2011) Political Instability: Effects on Financial Development, roots in the severity of economic inequality. *Journal of Comparative Economics*. Forthcoming.

- Rosen, F (1992) *Bentham, Byron and Greece: Constitutionalism, Nationalism and Early liberal political thought*. England: Oxford.

- Rotberg, R., I., (2003) *State Failure and State Weakness in a Time of Terror*. Massachusetts and Washington, DC: World Peace Foundation and Brookings Institution Press.

- Rustow, D., A. (1970) Transitions to Democracy: Toward a dynamic model. *Comparative Politics*. 2 (3) 337-363.

- Ryn, J. (2003) A Systems-based, Production-centered Theory of Political Economy. Paper prepared for delivery at the 2003 *Annual Meeting of the American Political Science Association,* August 28 - August 31, 2003.

- Samanni, M., Teorell, J., Kumlin, S. and Rothstein, B. (2008) The QoG Social Policy Dataset, version 4Nov08. University of Gothenburg, The Quality of

Government Institute, available at http://www.qog.pol.gu.se (accessed at February 2010).

- Sanders, D. (1981) *Patterns of Political Instability*, NY, St Martin's Press.

- Schatzman, C. (2005) Political Challenge in Latin America: Rebellion and Collective Protest in an Era of Democratization. *Journal of Peace Research*.42 (3) 291-310.

- Sachs, J., D., and Warner, A. (1997) Fundamental Sources of Long-Run Growth. *American Economic Association Papers and Proceedings*. 87 (2) 184-188.

- Schlomer, G., L., Bauman, S., and Card, N., A. (2010) Best Practices for Missing Data Management in Counselling Psychology. *Journal of Counselling Psychology*. 57 (1) 1-10.

- Schneider, F., and Frey, B., S. (1985) Economic and political determinants of foreign direct investment. *World Development*. 13 161–175.

- Scott M. (1995) Transitions to Democracy and Democratic Consolidation, in Mainwaring, O'Donnell, and Valenzuela, eds.; Stephan Haggard and Robert Kaufman, *The Political Economy of Democratic Transitions* Princeton: Princeton University Press.

- Scully, G. (1988) The institutional framework and economic development. *Journal of Political Economy*. 96 (3) 652-662.

- Sen, A. (1999) Democracy as a Universal Value. *Journal of Democracy*. 10 (3) 3-17.

- Servén, L. (2003) Real-Exchange-Rate Uncertainty and Private Investment in LDCS. *Review of Economics and Statistics*. 85 212-218.

- Shea, J. (1997) Instrument Relevance in Multivariate Linear Models: A Simple Measure. *Review of Economics & Statistics*.79 348-352.

- Siegel, A. (1998) *The totalitarian paradigm after the End of Communism. Towards a theoretical Reassessment*. Netherlands: Rodopi B.V. Editions.

- Siegle, J., T., Weinstein, M., M. and Halperin, M., H. (2004) Why Democracies Excel. *Foreign Affairs.* 83(5) 57-71.

- Siermann, C., L., J. (1998) *Politics, Institutions and the Economic Performance of Nations.* Northampton, MA: Edward Elgar Publishing, Inc.

- Simon, H., A. (1968) Notes on the Observation and Measurement of Power, in Bell, Edwards, Wagner, (Ed) *Politics Power: A reader in Theory and Research.* USA: The Free Press.

- Simon, J., L. (1987) Population Growth, Economic Growth and Foreign Aid. *Cato Journal*. 7 (1) 159-193.

- SIPRI Yearbooks (Various Years), Stockholm International Peace Research Institute, Taylor & Francis, London.

- Sivory, L., and Inkeles, A. (1990) The effects of Democracy on Economic growth and Inequality: A Review. *Studies in Comparative International Development*. 25 (1) 126-157.

- Sloan, J and Tedin, K., L. (1987) The Consequences of Regime Type for Public – Policy Outputs. *Comparative Political Studies*. 20 (1) 98-124.

- Smith, A (1937) *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Modern Library.

- Solow, A.R., Stone, L., Rozdilsky, I. (2003) A critical smoothing test for multiple equilibria. *Ecology*. 84 1459–1463.

- Stathakis, G. (1994) U.S. Economic Policies in Post Civil War Greece, 1949-1953: Stabilization and Monetary Reform. *Journal of European Economic History*. 24 (2) 375-404.

- Stathakis, G. (1990) Approaches to the Early Post-War Greek Economy: A Survey. *Journal of Modern Hellenism*. 7 163-190.

- Stepan, A., C. (1988) Rethinking Military Politics. Princeton: Princeton University Press.

- Stern, N. (1989) The Economics of Development: A Survey. *Economic Journal*. 9 579-585.

- Steven, D.M., Glombitza, R. (1972) Oscillatory variation of a phytoplankton population in a tropical ocean. *Nature*. 237 105–107.

- Temple, J. (1999) The new growth Evidence. *Journal of Economic Literature*. 37 (1) 112-156.

- Teorell, J., Charron, N., Samanni, M., Holmberg, S., and Rothstein, B. (2009) The Quality of Government Dataset, version 17June09. University of Gothenburg. The Quality of Government Institute, available at http://www.qog.pol.gu.se (accessed March 2010).

- Terchek, R., J. and Conte, T., C. (2001) Theories of democracy. A reader. USA: Rowman & Littlefield Publishers.

- Terry, W., R., Lee, J., B., and Kumar, A. (1986) Time series analysis in acid rain modeling: Evaluation of filling missing values by linear interpolation. *Atmospheric Environment.* 20 (10) 1941- 1943.

- Tsitsopoulos, G., and Veremi*s*, T. (1991*) The Greek-Turkish defense relations 1945-87*, in Alexandris, A. (ed) The Greek-Turkish Relations 1923-1987.Athens: Gnosi Publications (in Greek).

- UNPD (1997) Governance for Sustainable Human Development. *A UNDP policy paper.* Available a*t :* http://mirror.undp.org/magnet/policy/ (accessed at June 2011).

- Vanicek, P., and Wells, D., E. (1972) The Least Squares Approximation.. Canada: Department of Geodesy and Geomatics Engineering University of New Brunswick.

- Venieris, Y., P., and Gupta, D., K. (1986) Income Distribution and Socio-political Instability as Determinants of Savings: A Cross-Sectional Model. *Journal of Political Economy*. 94 (4) 873-83.

- Veremis, T. (1982) *Greek Security Considerations*. Athens: Papazissis Publications.

- Vergopoulos, K. (1977) The last administration of Trikoupis and the bankruptcy, *History of the Greek Nation [Istoria tou Ellenikou Ethnous]*. vol. 14 35-37. [in Greek].

- Von Bertalanffy, L. (1962) General System Theory – A Critical Review. *General Systems*. VII 1-20.

- Von Beyme, K. (1998) The Concept of Totalitarianism-A Reassessment after the End of Communist Rule. *Poznan Studies in the philosophy of the Science and the Humanities*. 65 39-54.

- Wagner, R., H. (1968) The concept of Power and the Study of Politics, in Bell, Edwards, Wagner, (Ed) *Politics Power: A reader in Theory and Research.* USA: The Free Press.

- Walterskirchen, E. (1999) The Relationship between Growth, Employment and Unemployment in the EU. European Economist for an Alternative Economic Policy Workshop, Barcelona, Spain. Available at: http://www.memoeurope.uni-bremen.de/tser/Walterskirchen_24months.PDF (accessed at April 2011).

- Wasito, I. (2003) Least Squares Algorithms with Nearest Neighbour Techniques for Imputing Missing Data Values. PhD Thesis. Available at: http://www.dcs.bbk.ac.uk/research/recentphds/ito.pdf (accessed at March 2011).

- Weiss, T. (2000) Governance, good governance and global governance: conceptual and actual challenges. *Third World Quarterly*. 21 (5) 795-814.

- West, M., 1997. Statistical inference for gravity models in transportation flow forecasting. *National Institute of Statistical Sciences*. Technical Report #60.

- White, K., J. (1992) The Durbin-Watson Test for Autocorrelation in Nonlinear Models. *The Review of Economics and Statistics*. 74 (2) 370-373.

- Wintrobe, R. (1990) The Tin pot and the Totalitarian: An Economic Theory of Dictatorship. *American Political Science Review*. 84 849-872.

- World Bank (1997) *World Development Report 1997: The Role of the State in a Changing World.* Oxford: Oxford University Press.

- Yang, T., L. (2006) Economic Transformation and its Political Discontents in China: Authoritarianism, Unequal Growth, and the Dilemmas of Political Development. *Annual Review of Political Science*. 9 143–64.

- Zablotsky, E., E. (1996) Political Stability and Economic Growth. *CEMA Working Papers 109*. Universidad del CEMA.

- Zarnowitz, V., and Ozyildirim, A. (2001) Time Series Decomposition and Measurement of Business Cycles- Trends and Growth Cycles. *Conference Board Working Paper*, No. 01-04, December.

- Zureiqat, H., M. (2005) Political Instability and Economic Performance: A Panel Data Analysis, available at: http://digitalcommons.macalester.edu/econaward/1.

ECONOMIC VARIABLES DEFINITION

VARIABLES	*DEFINITIONS*
GRGDPCH	Growth Rate of RGDPCH (GDP)
Employment rates	2A Employment, general level (Thousands)-LABORSTA Labour Statistics Database
Debt	National Statistic Service of Greece (Statistical Yearbooks different volumes
Defense	National Defense Expenditure is calculated from National Government Expenditure and the ratio National Defense Expenditure/National Government Expenditure (data in per capita form) SIPRI Yearbooks different volumes.
Governmental Investment **Government Expenditure**	The component shares of real GDP for 1996 are obtained directly from a multilateral Geary aggregation over all the countries. Shares will not add up to 100 because the denominator includes the net foreign balance.
Inflation	
Openness to trade: OPENC	Exports plus Imports divided by GDP is the total trade as a percentage of GDP. The export and import figures are in national currencies from the World Bank and United Nations data archives.
Real GDP per capita (Constant Prices: Laspeyres): RGDPL	RGDPL is obtained by adding up consumption, investment, government and exports, and subtracting imports in any given year. The given year components are obtained by extrapolating the1996 values in international dollars from the Geary aggregation using national growth rates. It is a fixed base index where the reference year is 1996, hence the designation "L" for Laspeyeres.
POP: Population	Population (in thousands)-from Penn World tables and Madison.

POLITICAL VARIABLES DEFINITION

VARIABLES	*DEFINITIONS*
Antigovernment **Demonstrations**	Any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of distinctly anti foreign nature.
Assassinations	The average number of political assassinations per year per million populations.
Average Years of Schooling	Years of schooling, population aged 15 to 64.
Cabinet Changes	The number of times in a year that a new premier is named or 50 percent of the cabinet posts is occupied by new ministers.
Constitutional Changes	The number of basic alterations in a state's constitutional structure, the extreme case being the adoption of a new constitution that significantly alters the prerogatives of the various branches of the government.
Coups d'état	The number of extra constitutional or forced changes in the top government elite or its effective control of the nation's power structure in a given year. Unsuccessful coups are not counted

Effexec	Refers to the individual who exercises primary influence in the shaping of most major decisions affecting the nation's internal and external affairs. The "other" category may refer to a situation in which the individual in question (such as the party first secretary in a Communist regime) holds no formal governmental post, or to one in which no truly effective national executive can be said to exist.
	         (1) Monarch
	         (2) President
	         (3) Premier
	         (4) Military
	         (5) Other

Ethnic fractionalization	Ethnic fractionalization index.
EU influence	Dummy variable (1=years since Greece joined EU 0=otherwise)
General Strikes	Any strike of 1,000 or more industrial or service workers that involves more than one employer and that is aimed at national government policies or authority.
Governmental crises	Any rapidly developing situation that threatens to bring the downfall of the present regime - excluding situations of revolt aimed at such overthrow.
Guerrilla Warfare	Any armed activity, sabotage, or bombings carried on by independent bands of citizens or irregular forces and aimed at the overthrow of the present regime.
Head state	*Head of State* *(1) Monarch.* Chief of state is a monarch (either hereditary or elective) or a regent functioning on a monarch's behalf. *(2) President.* Chief of state is a president who may function as a chief executive or merely as titular head of state, in which case he will possess little effective power. The presiding officer of a legislative assembly or state council may qualify for the coding, even though the formal title may be that of "chairman". *(3) Military.* A situation in which a member of the nation's armed forces is recognized as the formal head of government. In case of conflict between (2) and (3), coding is determined on the basis of whether the incumbent's role is intrinsically military or civilian in character. *(4) Other.* This category is generally used when no distinct head of state can be identified; it also includes individuals not included in (1-3), such as theocratic rulers, as well as nonmilitary individuals serving in a collegial capacity.
Legislative elections	The number of elections held for the lower house of a national legislature in a given year. A limited number of by-elections are included, but most are not.

Party fractionalization index	Is a party fractionalization index, based on a formula proposed by Douglas Rae in "A Note on the Fractionalization of Some European Party Systems", *Comparative Political Studies*, 1 (October 1968), 413-418. The index is constructed as follows: $$F = 1 - \sum_{i=i}^{m} (t_i)^2$$ where t_i = the proportion of members associated with th ith party in the lower house of the legislature (where there are no parties, a zero is entered). In calculating the Index entries, independents are disregarded and legislative changes between elections are not taken into account. It should also be noted that sources vary on the distribution of seats (and even the overall number of seats) for many countries; thus figures calculated by different researchers may vary.
Phones	Proxy for infrastructure - all telephone entries , including cellular.
Polity2	Revised Combined Polity Score (The POLITY score is computed by subtracting the AUTOC score from the DEMOC score; the resulting unified polity scale ranges from +10 (strongly democratic) to !10(strongly autocratic)). It modifies the *Polity IV Project: Dataset Users' Manual* 16 combined annual POLITY score by applying a simple treatment, or ""fix," to convert instances of "standardized authority scores" (i.e., -66, -77, and -88) to conventional polity scores (i.e., within the range, -10 to +10).
Purges	Any systematic elimination by jailing or execution of political opposition within the ranks of the regime or the opposition.
Regime type	*(1) Civilian.* Any government controlled by a nonmilitary component of the nation's population. *(2) Military-Civilian.* Outwardly civilian government controlled by military elite. Civilians hold only those posts (up to and including that of Chief of State) for which their services are deemed necessary for successful conduct of government operations. An example would be retention of the Emperor and selected civilian cabinet members during

	the period of Japanese military hegemony between 1932 and 1945.
	(3) Military. Direct rule by the military, usually (but not necessarily) following a military coup d'état. The governing structure may vary from utilization of the military chain of command under conditions of martial law to the institution of an ad hoc administrative hierarchy with at least an upper echelon staffed by military personnel.
	(4) Other. All regimes not falling into one or another of the foregoing categories, including instances in which a country, save for reasons of exogenous influence, lacks an effective national government. An example of the latter would be Switzerland between 1815 and 1848.
Revolutions	Any illegal or forced change in the top government elite, any attempt at such a change, or any successful or unsuccessful armed rebellion whose aim is independence from the central government.
Riots	Any violent demonstration or clash of more than 100 citizens involving the use of physical force.

LIST OF COUNTRIES

(used in Chapter 3-Chapter 4)

Austria	Luxembourg
Belgium	Malta
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany (west Germany before the 1990)	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	Turkey
Italy	United Kingdom

APPENDIX II

In addition to the direct use of measurements, it has been employed Principal Components Analysis (PCA) as a mean to identify unobserved common factors –in the stability of the regime in this case. The use of PCA is been employed in order to orthogonize possible regression problems (multicolinearity in this case) by replacing a set of highly correlated indicators by their Principal Components (PCs) or as there are known by artificial variables. According to Hotteling (1933) PCs are a smaller set of primary uncorrelated variables that determine the value of the original variables. In short, PCs are mathematical linear derivatives from the original variables.

The main purpose of the PCA is to reduce the number of the correlated variables (in this case the political events) by choosing their PCs (uncorrelated variables) which they explain most of the variation in all the original variables. That way an alternative and much simpler description of the data (than the original data) will be obtained. It is notable here that PCA focus on variances without ignoring covariance and correlations (the full analysis of the PCA is below).

TABLE -PRINCIPAL COMPONENTS ANALYSIS (PCA)			
POLITICAL INSTABILITY INDEX			
PCA COMPONENTS			
Chapter 3			
VARIABLES	**EIGENVECTORS (Scoring Coefficients)**	**VARIABLES**	**EIGENVECTORS (Scoring Coefficients)**
ANOMIC VIOLENCE			
VIOLENCE	0.62		
ANTIGOVERNMENT DEMONSTRATIONS	0.62		
GENERAL STRIKES	0.48		
Component1-eigenvalue	**1.79**		
INTERNAL WAR			
ASSASINATIONS	0.71	**POLITICAL INSTABILITY VIONENT**	
GUERILA WARFARE	0.71	ANOMIC VIOLENCE	0.60
Component1-eigenvalue	**1.13**	INTERNAL WAR	0.61
ELITE VIOLENCE		ELITE VIOLENCE	0.51
COUP D' ETAT	0.71	**Component1-eigenvalue**	1.45
PURGES	0.71		
Component1-eigenvalue	**1.19**		
CHANGES IN GOVERNMENT			
GOVERNMENTAL CRICIS	0.54		
LEGISLATIVE ELECTIONS	0.46		
CABINET CHANGES	0.66		
CONSTITUTIONAL CHANGES	0.26		
Component1-eigenvalue	**1.70**		

TABLE -PRINCIPAL COMPONENTS ANALYSIS (PCA)	
CHANGES IN GOVERNMENT	
PCA COMPONENTS	
Chapter 4	
VARIABLES	**EIGENVECTORS (Scoring Coefficients)**
CHANGES IN GOVERNMENT	
GOVERNMENTAL CRICIS	0.54
LEGISLATIVE ELECTIONS	0.46
CABINET CHANGES	0.66
CONSTITUTIONAL CHANGES	0.26
Component1-eigenvalue	**1.70**

VARIABLES	EIGENVECTORS (Scoring Coefficients)	VARIABLES	EIGENVECTORS (Scoring Coefficients)

TABLE -PRINCIPAL COMPONENTS ANALYSIS (PCA)

POLITICAL INSTABILITY INDEX

PCA COMPONENTS

Chapter 5

VARIABLES	EIGENVECTORS (Scoring Coefficients)	VARIABLES	EIGENVECTORS (Scoring Coefficients)
ANOMIC VIOLENCE			
RIOTS	0.61		
ANTIGOVERNMENT DEMONSTRATIONS	0.39		
GENERAL STRIKES	0.69		
Component1-eigenvalue	**1.36**		
INTERNAL WAR			
ASSASINATIONS	0.71	**POLITICAL INSTABILITY VIONENT**	
GUERILA WARFARE	0.71	ANOMIC VIOLENCE	0.71
Component1-eigenvalue	**1.13**	INTERNAL WAR	0.71
ELITE VIOLENCE		ELITE VIOLENCE	0.71
COUP D' ETAT	0.71	**Component1-eigenvalue**	**1.43**
PURGES	0.71		
Component1-eigenvalue	**1.30**		
CHANGES IN GOVERNMENT			
GOVERNMENTAL CRICIS	0.61		
LEGISLATIVE ELECTIONS	0.32		
CABINET CHANGES	0.63		
CONSTITUTIONAL CHANGES	0.35		
Component1-eigenvalue	**1.87**		

APPENDIX III

| Table Summary statistics of Data –Chapter 4					
Variable	**Observations**	**Mean**	**Std. Dev.**	**Min**	**Max**
Effective legislature	1081	2.758557	.5853009	0	3
GDP growth rate	1039	2.950597	3.463136	-12.46	24.52
Employment growth rates	527	.009284	.0325564	-.0756829	.6091398
Governmental investment growth rates	1038	.0588154	.1075279	-.7018256	.4364912
Governmental expenditure growth rates	1040	.0339506	1.043107	-33.54177	.3590215
Inflation	849	8.242792	12.38918	-.8809975	110.1732
Openness to trade	1059	70.15325	44.50892	3.11	288.74
Assassinations	1070	.1757009	.9382069	0	15
General strikes	1070	.1878505	.6292244	0	6
Revolutions	1069	.0533209	.3541629	0	9
Antigovernment demonstrations	1069	.5285313	1.409033	0	14
Coups d'état	1083	.0083102	.0908229	0	1
Purges	1073	.0904007	.4386112	0	5
Constitutional changes	1081	.0249769	.1561268	0	1
Cabinet changes	1081	.4292322	.6031064	0	4
Legislative elections	1081	.2710453	.4509083	0	2
Polity2	935	8.396791	4.453398	-9	10
Regime type	1081	1.016651	.1481374	1	3
Governmental crises	1070	.3093458	.6978562	0	5
Ethic fractionalization index	935	.2171546	.1744347	.0396	.575165
Guerilla warfare	978	.1707566	.7326873	0	13
Defense expenditure	572	6943.056	8783.163	0	48648
Head of state	985	1.664975	.6176944	1	4
Effective executive	985	1.99797	.2851257	1	3
Party fractionalization index	985	6439.218	1991.196	0	8811

APPENTIX IV

The table below shows the variables used in chapter 5 and the missing values they contained (plus the percentage of the missing values). The variables which had missing values more than 21% have been dropped by the model since the large amount of variables can also influence the data missing problem (the likelihood of missing values is being increased) (McKnight et al, 2007).

Variable	Missing	Total	Missing/Total
TABLE -MISSING VALUES			
Chapter 5			
gdppercapita	5	90	.055556
pop	5	90	.055556
assasin	1	90	.011111
generstikes	1	90	.011111
guerwarf	1	90	.011111
governcrises	1	90	.011111
purges	1	90	.011111
riots	1	90	.011111
revolutions	1	90	.011111
antigovdem~s	1	90	.011111
partyfranc	21	90	.233333
regimetype	0	90	0
coups	7	90	.077778
constitcha~s	0	90	0
headofstate	0	90	0
premier	0	90	0
typeeffexe~t	0	90	0
electeffex~t	0	90	0
cabinetchang	0	90	0
legislelect	0	90	0
defenceper~a	34	90	.377778
nationexpe~a	19	90	.211111
propofworl~e	19	90	.211111
deptgdp	45	90	.5
ginicoef	62	90	.688889
natexpedpe~a	19	90	.211111
percentlit~e	7	90	.077778
count	0	90	0
popgrowht	5	90	.055556
gdpgrowth	9	90	.1
polity2	1	90	.011111
major	8	90	.088889
threats	8	90	.088889
social	1	90	.011111
unrest	1	90	.011111
citizendis~t	1	90	.011111
changes	8	90	.088889
government	8	90	.088889
politicali~y	8	90	.088889

socialunrest	8	90	.088889
governchan~s	8	90	.088889
regtype1	0	90	0
regtype2	0	90	0
regtype3	0	90	0
interregim~e	9	90	.1
trade	0	90	0
defence	0	90	0
pf	0	90	0
nationalex~d	0	90	0
literacy	0	90	0
polinstabi~y	0	90	0
dept	0	90	0
popgrowrate	6	90	.066667
gdpgrowrate	10	90	.111111
gdpgr	0	90	0
popgr	0	90	0
socialunre~s	0	90	0
goverchanges	0	90	0
growthnati~p	19	90	.211111
natexpgrrate	0	90	0
grtrade	1	90	.011111
lntrade	0	90	0
ln2trade	2	90	.022222
gtrade	2	90	.022222
importsper~a	19	90	.211111
exportsper~a	19	90	.211111
tradeperca~a	19	90	.211111
opentrade	0	90	0
tradegdp	9	90	.1
tradeop	0	90	0

Acronyms: gdpgr: growth rate of GDP; trade: openness to trade; popgr: growth rate of population; regtype, 1 for the civilian regimes, 2 for military-civilian regimes and 3 for military regimes; trade: the proportion of world trade (imports and exports); defence: the ratio of national defense expenditure to total national expenditure; literacy: literacy data, calculated, wherever possible, on the basis of non-literates, 15 years of age and over; nationalexpediture:National Government Expenditure assassin: the average number of political assassinations per year per million populations; genstrikes: general strikes which involve workers against governmental policies; riots: any violent demonstration or clash of more than 100 citizens involving the use of physical force; revolotions: any illegal or forced change in the top government elite; antigovdemonstrations: any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority; coupsdetat: the number of extra constitutional or forced changes in the top government elite or its effective control of the nation's power structure in a given year; purges: any systematic elimination by jailing or execution of political opposition within the ranks of the regime or the opposition; constchange: the number of basic alterations in a state's constitutional structure; governcrises: any rapidly developing situation that threatens to bring the downfall of the present regime; parfranc: party fractionalization index; defense: national defense expenditure; legelect: the number of elections held for the lower house of a national legislature in a given year; cabinetchange: the number of time in a year that a new premier is named and/or 50% of the cabinet posts are assumed by new ministers.
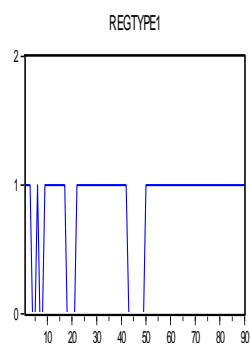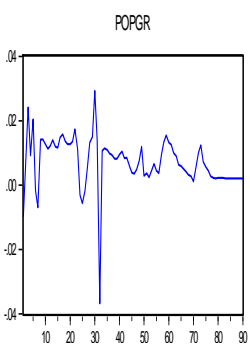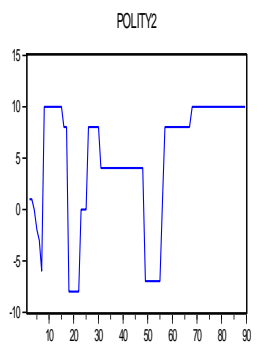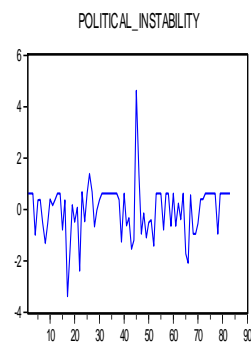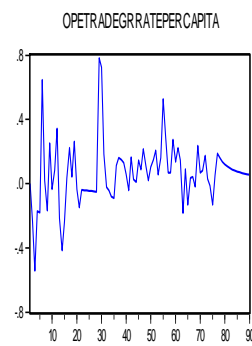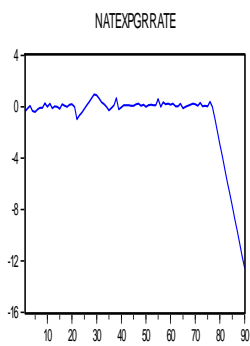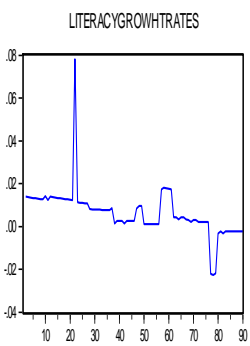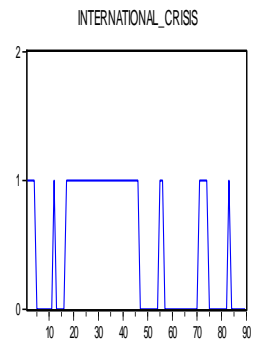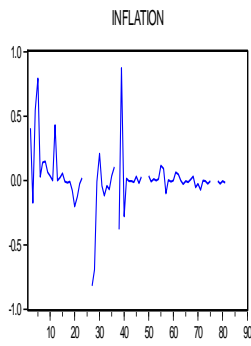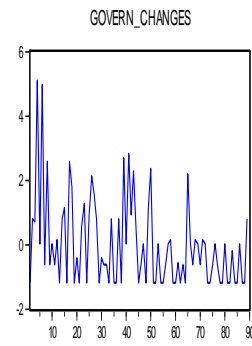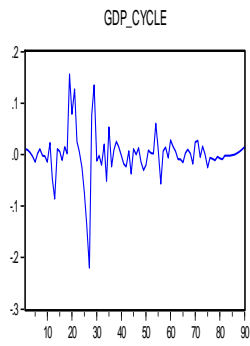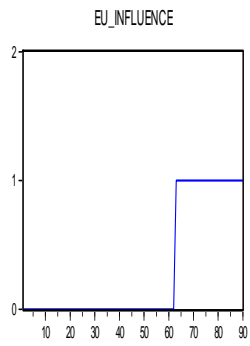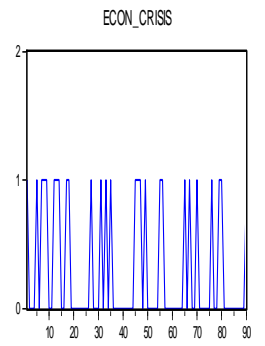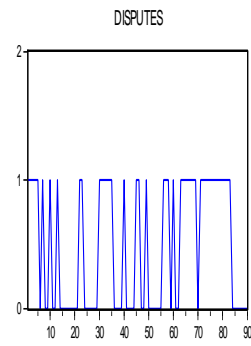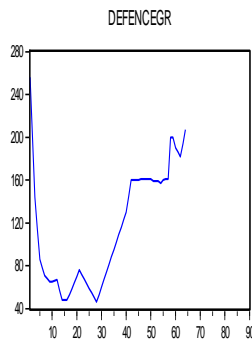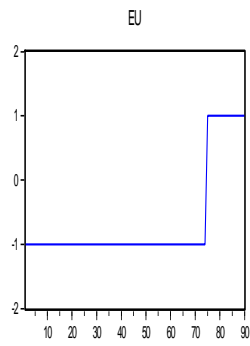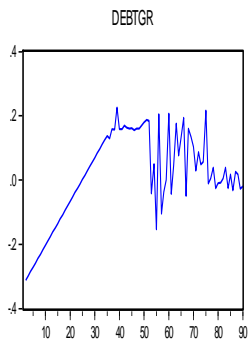
Pairwise Granger Causality Tests -Chapter 4

Sample: 1950 2004

Null Hypothesis:	Obs	F-Statistic	Prob.
POLITICALINSTABILITY does not Granger Cause GRGDPCH	906	4.13276	0.0163
GRGDPCH does not Granger Cause POLITICALINSTABILITY		7.31308	0.0007

Ho: Political Instability does not Granger cause Economic growth (and the other way round)

According to the p –value in both cases we cannot reject the Null Hypothesis

APPENDIX VI

Table 1-PANEL UNIT ROOT TEST PESARAN UNIT ROOT TEST INCLUDING TREND AND INTERCEPT		
	Pesaran test	**Fisher test**
GDP Growth rate per capita	-17.875**	
GDP (LEVEL)		73.9013**
POPULATION		-19.5082**
GOVERNMENTAL_ EXPENDITURE	-1.331*	
GOVERNMENTAL_INVESTMENT	-7.164**	
TRADE_OPENESS	-1.589*	
SCHOOLING	62.45**	
INFLATION	-4.727**	
EMPLOYMENT	-4.577**	
REVOLUTIONS		-11.6161**
CABINET CHANGE	-20.895**	
ASSASINATIONS	-6.322**	
GENERAL STRIKES	-16.273**	
CONSTITUTIONAL CHANGES		-17.9026**
LEGISLATIVE_ELECTIONS	-21.167**	
COUP D'ETAT		-11.3736**
PURGES		-17.0821**
GOVERNMENTAL CRICES	-17.664**	
EFFECTIVE LEGISLATION		-3.4147**
GUERILLA WARFARE	-3.093**	
RIOTS	-12.820**	
HEAD OF STATE		-1.6690*
PARTY FRACTIONALIZATION INDEX	-3.231**	
DEFENCE EXPENDITURE	-3.723**	
ETHNIC FRACTIONALIZATION INDEX		-4.1231**
CIVILIAN_REGIME		-1.7024*
POLITY2		-1.5516*
z values are reported. ** =5% significance, * =1% significance		