

SCHOOL OF GRADUATE STUDIES

**AN ECONOMETRIC ANALYSIS OF THE IMPACT OF DEMOCRACY ON
ECONOMIC GROWTH OF GHANA FROM 1970 TO 2008**

KNUST

BY

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APPROVAL

I Dr. Sr. Eugenia Amporfu have read this dissertation undertaken by Amengor Eyram Natson in partial fulfillment of the requirements for the award of a Master of Arts in Economics. I therefore certify that it was duly undertaken by the for-mentioned student and was duly supervised by myself.

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DECLARATION

I, Amengor Eyram Natson declare that this dissertation was written by myself and submitted in partial fulfillment of the award of a Master of Arts Degree in Economics under the supervision of Dr. Sr. Eugenia Amporfu.

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DEDICATION

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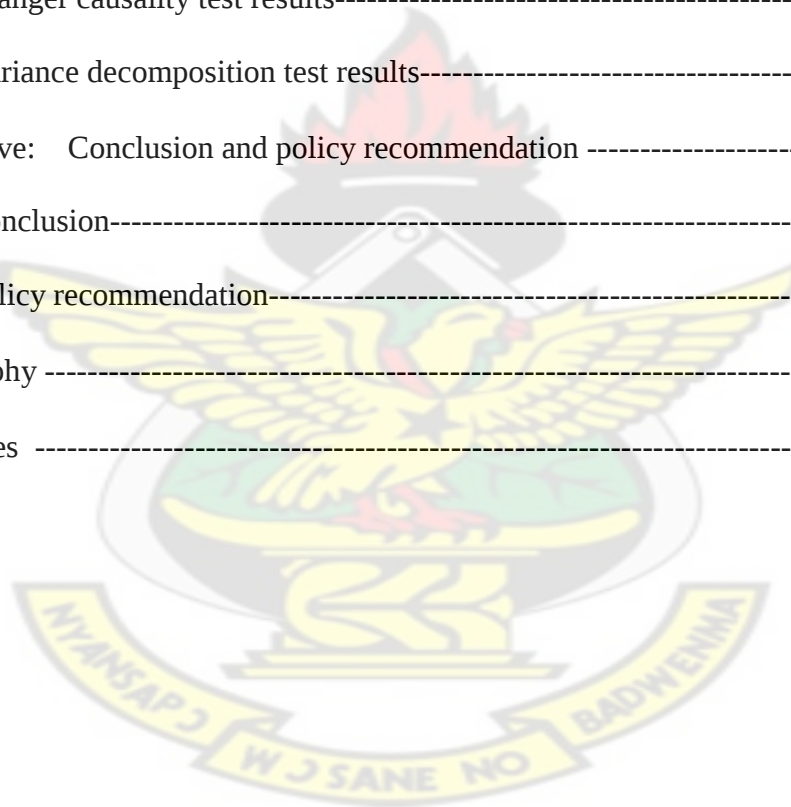
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Abstract

This study investigated the causal relationship between Democracy and Economic Growth in Ghana for the period 1970-2008 using an Error Correction Model (ECM). Questions were raised whether democracy causes economic growth or economic growth causes democracy. The objective of this study was to examine the causal relationships between these variables using Granger causality tests.

To achieve this objective, ADF unit root tests was carried out for time series data in levels and second differences. Johansen co-integration analysis was applied to examine whether the variables are co-integrated of the same order taking into account the maximum eigenvalues and trace statistics tests. An error correction model was selected to investigate the long-run relationship between democracy and economic growth. Granger causality test was applied in order to find the direction of causality between the examined variables of the estimated model.

It was observed that there was a negative relationship between democracy and economic growth in the short run but a positive relationship in the long run. The estimated coefficient of error correction term found statistically significant with a negative sign, which confirmed that there was not any problem in the long-run equilibrium between the examined variables. The results of Granger causality tests indicated that there is a unidirectional causal relationship between democracy and economic growth.

CHAPTER ONE

INTRODUCTION

It was common in the 1980s and early 90s to read commendations of Ghana's economic growth achievements. Leechor (1994) described Ghana as a frontrunner in the economic reform process, and the Bretton Woods institutions regularly put Ghana forward as a showcase of economic success in Africa. But this occurred at a time when many Ghanaians showed little appreciation of that growth achievement (Aryeetey and Fosu 2002). The continuing fragility of the economy and the significant social costs of adjustment made it difficult to appreciate economic growth in a period of reforms. While there is no doubt about the fact that the economic growth record of the last two decades, following reforms, differed from that of the first two decades in terms of consistency, it is also clear that the factors behind the growth experiences of shorter periods in-between show remarkable similarity. Whenever there has been considerable capital injection into the economy, this has been followed by significant growth.

Ghana's has undergone various political regimes and this has been accompanied by different growth rates which has not been very consistent. Ghana attained independence in 1957 under the late Osagyefo Dr. Kwame Nkrumah. Currently Ghana is in the fourth republic which has been a sustained period of democracy that is from 1992 to the present.

Nkrumah believed in socialism, it was therefore not surprising that he began to develop close ties with the Soviet bloc. He was overthrown in a coup d'état in 1966. The country was ruled by the National Liberation Council which handed over power in 1969 to Dr Kofi Abrefa Busia. He was also overthrown in 1972. From 1972 to 1979 there were three successive military rules. The

first regime was headed by General Kutu Acheampong, second by Frederick Akuffo and finally Flight Lieutenant Jerry John Rawlings. The latter abolished constitution dissolved parliament and placed a ban on opposition political parties.

In the mid 1980 stability returned and the economy had started recovering with the help of the international monetary fund's Structural Adjustment Policies. Ban on opposition political parties was lifted and a new constitution was drafted and approved in a referendum in April 1992. Presidential elections were held in 1992 in which Rawlings standing in the name of his newly formed party the National Democratic Congress (NDC) won by a 58% majority. (Haynes, 1995)

President Rawlings was elected again in 1996 for his second term with 57.5% of votes. His nearest rival, John Kufuor of the New Patriotic Party (NPP), gained 39%. On 7 December 2000, President Rawlings stepped down in accordance with the terms of the Constitution which allows for just two terms of office. In the presidential elections which followed, his NDC party was represented by the vice-president, Professor John Atta Mills and the opposition NPP party was led by John Kufuor. In a second round of elections, Kufuor won with 57% of the vote. He was formally sworn in as president on 7 January 2001. (Haynes, 1995).

Well endowed with natural resources, Ghana has roughly twice the per capita output of the poorer countries in West Africa. GDP in 2002 equaled \$42.5 billion and GDP per capita was \$260.00. In the same year the GDP real growth rate was 5.8 percent. Tough structural adjustment measures have been implemented and a liberal economic framework has been put in place after 1992. Throughout the 1990s, Ghana's GDP continued to grow at around 4% per year. A declining trend was seen from 1998 to 2000, but under the new Kufuor government the economy started

to display once again increasing growth rates.

The Ghanaian economy began to experience a slowdown in GDP growth from independence and has remained turbulent during much of the period since then. Indeed most post independence governments, including civil and military regimes, inherited negative or declining economic growth records. The exception is the President Mills government. For instance, both the National Liberation Council and National Redemption Council governments on assumption of power inherited negative growth records of 5 percent in 1966 and 3 percent in 1972 respectively, with the Limann government taking over a negative growth record of about 1.7 percent in 1979 using 1987 as the base year. Similarly the Rawlings Provisional National Defense Council (PNDC) inherited a negative growth record of about 3 percent in 1981, whilst the Rawlings National Democratic Congress (NDC) took over power in 1993 with a GDP growth rate that had fallen from a positive rate of 5.2 percent in 1991 to about 3.5 percent in 1992. The beginning of the Kuffour's government in 2001 also coincided with the period when the GDP growth rate had declined successively to hit a low of 3.7 percent in 2000. Contrary to these unfavourable past GDP growth records, the Mill's government has been fortunate enough to assume power at a time when the GDP growth record has risen successfully to hit a peak level of 8.43 percent in 2008.

The acceleration of economic growth has translated itself into upward trend in the per capita GDP growth from less than 2 percent in 2000 to about 7 percent in 2008 or from about \$220 to \$712 over the same period. This has resulted in the movement of a substantial number of Ghanaians out of poverty.

As the fact is appreciated that Ghana has undergone some significant improvements in economic growth, it may have come from many sources, including sound economic policies, foreign direct investment, and the political regimes among others. This paper generally seeks to find the impact of democracy on the economic growth of Ghana from 1970 to 2008.

1.1 STATEMENT OF PROBLEM

Since African countries started attaining independence, growth has been linked to their ability to attain healthy democracy. Theories developed for Africa in most cases has emphasized that the growth of African nations would come about if they will undergo multiparty democracy. Some of the arguments levelled in favour of this assertion are that;

- It ensures continuity of development projects in the economy. Meaning that the growth of the economy would not be interrupted by anything.
- It brings in foreign investment because the stability of the economy will encourage people to invest there because they know that their asset would be safe.
- It creates a peaceful environment that gives labour the peace of mind to go about their activities hence increasing labour's productivity and efficiency. This will lead to increase in output hence economic growth.
- It leads to the protection of rights and higher investment in education among others.

Winston Churchill is supposed to have said that “democracy is the worst form of government except for all the other forms that have been tried from time to time.” There are indeed barriers to democracy's ability to flourish in many societies. And finally, exporting democracy is

probably neither easy nor always feasible and we should be careful in such attempts.

It must also be emphasized that, sustained economic growth requires secure property rights and a level playing field for generating new technologies and entry by new firms. Democracy is the best guarantor for such sustained economic growth. Economic growth generates various vested interests, ranging from landed elites to businessmen in declining industries to privileged workers. These vested interests will try to block the introduction of new technologies and stop the entry of new firms. Democracy is not perfect, but with its more egalitarian distribution of political power, it will have greater resistance against vested interests than autocracy. (D'souza 2008)

Using the above controversy and looking at the fact that most African, West African and specifically Ghana has not had growth coming in quite easily though there has been some significant period of democracy and coupled with the fact that democracy has not been significant and consistent, this dissertation seeks to find out the impact that democracy actually has on economic growth using data on growth rate and democracy in Ghana.

1.2 OBJECTIVES OF STUDY

a. Main objective

To assess the impact of democracy on Ghana's economic growth

b. Sub Objective

- i. To assess the causal relationship between democracy and GDP growth rate in the short run and long run.

1.3 SIGNIFICANCE OF STUDY

Many have argued that development of African nations would come about if they are able to sustain growth and have a stable economy. This they argued can be achieved only when they

have democracy. This study will help in identifying the impact of democracy on economic growth and the extent to which democracy contributes to economic growth in Ghana.

It will also serve as bases for further work in identifying how political regimes determine the economic growth of an economy.

It adds up to existing knowledge on the relationship between democracy and economic growth.

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1.4 SAMPLING

This study uses secondary data on GDP growth rate from 1970 to 2008. A set of dummy variables is also developed for democracy over the period 1970 to 2008. Periods of constitutionally elected governments are called democratic regimes and self imposed governments are called autocratic regimes. The former is given a value of one “1” and the latter a value of zero “0”

1.5 CONCEPTUAL FRAMEWORK

This paper works within the framework of cointegration analysis and granger causality test. It takes a univariate analysis approach. The data on GDP growth rate is tested for stationarity because it is time series variable but that of democracy is used as it is because they are levels. Secondly a cointegration test is undertaken to determine the long run equilibrium relationship between the two variables. If there is any long run relationship then the data must be transformed in order to conduct the third stage process of granger causality to determine which of the two variables determine the other.

1.6 ORGANIZATION OF STUDY

The study is divided into five chapters.

Chapter one deals with the introduction, the statement of the problems, significance of the study, objectives, conceptual framework and the organization of the project.

Chapter two provides an overview of existing literature. This chapter provides a review of already existing literature on the relationship between democracy and economic growth.

Chapter three describes the data that form the basis for the research reported in this work and provides an overview of the methods or the methodology used in the study. Again it will deal with the theoretical framework and the empirical model that underpin the analysis of the data.

Chapter four reports the results of the empirical analysis. That is, deals with the presentation, analysis and discussion of the data collected.

Chapter five which is the last chapter look at the summary, conclusion and policy recommendations of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Democracy is defined as a system of government in which the whole population rules through elected representatives. Democratization is a complex and difficult process that can stretch over several generations and is prone to fallbacks. An authoritarian regime that undergoes such a process ideally passes through several periods. The first phase is the liberalization of the old regime that is authorities relax their controls on the political activities of citizens and officially recognize basic civil liberties. The next stage, democratic transition, involves the construction of participatory and competitive political institutions. It is “a shift from one set of political procedures to another, from an old pattern of rule to a new one”, usually via free and fair elections. Extreme political uncertainty characterizes this time of struggle between competing political forces over the rules of the political game and for the resources with which this game is played. The direction of a transition, therefore, is not necessarily linear and might not end in a democratic regime but, instead, one that is authoritarian. Democratic consolidation, the final stage, requires time. A democracy is regarded as consolidated if the institutional features of democracy are in place and citizens have become habituated to democratic values, practices, and culture. (Ikpi, 1997)

Economic growth on the other hand is defined as the sustained increase in real per capita income over period of time as a result of increases in productive capacity in the face of growing population. (Aryeetey et al, 2005)

2.2 An Overview of Ghana's Economic Growth

At the time of independence, the Ghanaian economy was quite well endowed in respect of natural resources, skills and finance. With a productive agriculture, not only feeding the population but also providing substantial volumes of cocoa for export, the Ghanaian economy had a solid base from which to advance. Industrial output value-added was nearly 20 per cent of GDP. Besides, before independence, education had flourished and capital had been accumulated. In 1957 Ghana's economy was, by African standards, a flourishing economy, with a per capita income of approximately US\$600 in today's prices

Ghana recorded an average growth rate of 4.1% between 1950 and 1960 with growth averaging 5.5% per year during the first few years of independence. This was the period that Ghana adopted a five year development plan to map out projects that would further advance the country's development. With the euphoria of independence, the leadership then thought the country needed to hasten its socio-economic advancement.

It was therefore not surprising that, an extensive network of roads, rail network, building of primary and secondary schools, universities and hospitals. It was this period that, the Akosombo Hydro Dam, Tema Harbour, Tema Motorway and proliferation of state farms were embarked upon. This period saw Ghana relying heavily on gold and cocoa exports to finance most of these projects.

The subsequent history has been one of a rapidly rising population combined with a much less rapidly rising output. The late 1960s to 1970 witnessed a decline in Ghana's annual average GDP from 4.1% to 2.1% as a result of the first military coup d'état in 1966 with the subsequent

suspension of the country's 7-year development plan. This resulted in Ghana recording its first negative growth in 1966. From then on, growth became turbulent through to 1979, with the country recording as high as -14% growth in 1975. This development preceded a policy reversal from a moderate market-oriented stance to an inward-looking protectionist regime and the oil price shock.

In 1981, GDP per capita had fallen to \$400 (in 1975 prices); both agriculture and industry had suffered, the latter more dramatically, its share of the total national output falling from 19 per cent in 1965 to 9 per cent in 1981

By the end of 1981, the economy was in chaos. The response was the return to the military rule of Flight Lieutenant Rawlings. He brought in a government comprised of both military officers and civilians and dedicated to moral and economic uplift. At first, the government attempted to stabilize the economy through its own efforts, mobilizing the population and emphasizing the need for improved performance. But by the end of 1982 the government recognized that assistance from outside was imperative and, for the first time, approached international financial agencies specifically the Bretton Woods Institution for assistance.

The lesson that those of us here and future generations could learn from the growth history of Ghana from 1957 to 1981 is that, the years in which negative growth was experienced coincided with changes in government and in most cases with policy changes or reversals.

To reverse the trend of stagnant and negative growth, Ghana adopted Economic Recovery programme (ERP) with a major support from IMF and the World Bank in 1983. In 1986, the ERP was supplemented with the Structural Adjustment Programme (SAP). The implementation of the ERP and SAP led to the liberalization of various sectors of the economy such as: Exchange Rate Policy; Fiscal and Monetary policy; Privatization; and Trade policies.

The economy responded positively to the reforms, as it recovered from its negative growth rate. The economy recorded a remarkable growth rate of 8% in 1984 and has averaged about 5% per annum with relatively little variance up to 1990. The growth slowdown in the 1990s as the country struggled to overcome challenges of transition from military rule to democratic rule.

The year 2000 and beyond saw another phase of stability in our democratic governance as there was a peaceful change of government. The opposition New Patriotic Party (NPP) government took over from the ruling National Democratic Congress (NDC).

Ghana was fully back to the path of economic development. Average GDP growth rate during the period was over 5.2%, reaching a peak of 7.3% in 2008.

2.3 A review of Ghana's Economy and its Democratic Development?

Since independence in 1957, Ghana has tried a number of approaches to achieving acceptable rates of growth and development. When Ghana gained her independence she was the world's leading producer of cocoa and this supported a well-developed infrastructure to service trade, and enjoyed a relatively advanced educational system.

The government sought to use the apparent stability of the Ghanaian economy as a springboard for economic diversification and expansion and began the process of moving Ghana from a primarily agricultural economy to a mixed agricultural-industrial one (Aryeetey and Fosu 2005). But unfortunately, the price of cocoa collapsed in the mid-1960s, destroying the fundamental stability of the economy. Since then, Ghana has been caught in a cycle of debt, weak commodity demand, and currency overvaluation, which has resulted in the decay of unproductive capacities and a crippling growth rate.

The growth rate record of Ghana has been one of unstableness when the post-reformed period is compared to the earlier period. With high GDP growth in the 1950s and early 1960s, the economy began to experience a reduction in GDP growth in 1964. According to Aryeetey and Fosu (2005), growth was turbulent during much of the period after mid-1960s and only began to stabilize after 1984. In 1966, 1972, 1975-1976, 1979 and 1983, the growth rate of real GDP was negative for Ghana'. The GDP growth has been negative for a number of years. This is mainly due to political instability between these years, even though some years recorded some positive growth in 1974, 1977 and 1978. From 1984 to 2006, the GDP growth has averaged about 3.9 to 4.5 percent. (Aryeetey, Fosu 2005)

By the time European colonialists arrived in Ghana, many of their societies were open to the participatory elements of Western democracy while some others were not. Despite varying political regimes, Ghana generally followed the socialist course. From 1972 to 1978, the military government under Ignatius Kutu Acheampong reactivated various state enterprises left uncompleted or abandoned after Nkrumah's overthrow. The chief attribute of the military governments was a single-minded, even slavish, devotion to personal wealth accumulations. The

bureaucracy was over bloated. The liberalisation efforts of the following civilian Limann government were widely fruitless. (Rothchild, 1995).

In 1981, Rawlings' PNDC, espousing African socialism, attempted to translate dependency theory into policy terms by imposing a wage and price freeze. There were calls for nationalisation. At the beginning, Rawlings' government was not dependent on any of the key organised professional groups in the country; it rested on socialist movements, students' movements, workers, a young neo-Marxist intelligentsia, and militant trade unionists. Since it drew its backing almost exclusively from urban quarters, also Rawlings' government though involving different agents reflected the state-centric bias of preceding governments. (Chazan, 1994).

When the PNDC assumed power on 31 December, 1981, the country was already in the midst of a multifaceted crisis of political weakness, social fragmentation, and economic decline. The "retrogressive cycle" starting from the beginning of independence resulted in the steady loss of sovereignty by the state, which had been pervaded by increasingly particularistic and personal interest. The state organizations had been misused by a series of feeble and capricious rulers, by an overstaffed administration, and by greedy patrons. Problems of state autonomy were complicated by state incapacitation. Since many individuals and social groups no longer viewed the state as an important source of benefits, they worked out means to stay away from its extracting reach. State-society relations were in almost total disorder, and the country was impoverished. (Chazan, 1994).

The “socialist” measures taken by Rawlings frightened away the few potential investors left and further undermined Ghana’s bargaining position in the international economic arena. The measures used by the PNDC and the violent style in which they were conducted contributed considerably to the confusion and turmoil associated with this stage. In its attempt to clear the state of corrupt elements, the PNDC ousted almost all skilled administrative personnel. By the beginning of 1983, more than two-third of Ghana’s top-level professionals had left the country. Moreover, in order to incorporate the people into the revolutionary governing process, a wide network of popular institutions were established, e.g. the People’s Defence Committees (PDCs) and Workers’ Defence Committees (WDCs). These popular structures coexisted with the formal administration and formed a dualistic decision-making framework which made policies unreliable and often contradictory. The absence of resources magnified the limited capabilities of formal institutions. Already by late 1983, however, Rawlings, in contrast to Benin’s Kérékou and Mali’s Traoré, managed to engineer not only economic growth, but also legitimacy by liberalising the political system in response to popular demand. Also in Ghana’s case, political events during the 1980s led to the end of authoritarianism and the strengthening of civil society; however, they did not immediately lead to the end of the ruling regime. (Rothchild, 1995).

The end of authoritarianism in Ghana can be attributed to the following reasons:

- ✓ Since state power was perceived to equal the will of the people or majority rule and because it was regarded as a symbol for national unity, unanimity, and consensus, which served the common good, there was no room for constructive criticism or even active involvement in politics. This situation eventually led to government incapacity and failure or considerable political concessions and often violent popular protest.

- ✓ Statist elites had an instrumental view of the state that was “highly pragmatic, grossly inequitable, and tremendously costly”; the state was a means of extracting resources from the population, which were redistributed according to political rather than economic considerations. Bureaucratic corruption, clientelism, and abuses of offices were regarded as natural, but in the end proved a primary source of instability.
- ✓ Economic growth was paramount to other political goals. Accordingly, governments tied their legitimacy primarily to economic performance. Thus, the profound crisis during the 1980s equaled the end of those regimes, which were no longer able to sustain their immensely costly networks of supporters (more details below). (Chazan, 1994).

In Ghana, social cleavages were exacerbated and political reforms delayed by economic liberalisation and development due to an ambitious IMF adjustment programme launched by Rawlings’ government in late 1983. However, the Ghana’s political evolution accompanied by enduring positive economic growth developed in straight contradiction to the expectations of modernisation theory, with the aim of generating legitimacy by restoring Ghana’s economic and political stability, Rawlings introduced the Economic Recovery Programme, restructured his government to include heads of major official agencies, public corporations, and the army, and overhauled the official network of popular organisations. Thus, political representation of any opposition was effectively foreclosed.

However, political institutions were separated from bureaucratic and judicial ones, and the chase of educated groups was stopped. (Rothchild, 1995). Yet, a major social consequence was the

further expansion of the network of voluntary and local associations that had increased considerably during Ghana's political unreliability before 1981. As occupational, service, community, and religious organisations grew significantly, new interest groups were created, e.g. human rights associations. The diversification of the associational setting and its gradual institutionalization was amplified by the flow of resources from abroad. Within these networks, specific concepts of authority, community, distributive justice, and conflict resolution were defined. Moreover, participatory values were inspired and experience gained in the small-scale. Since many of the new groups were founded at the intermediate level, the associational boom also had potential of aggregating local interests. In fact, institutional life in the country became pluralised.

Moreover, economic activities in the informal sector flourished: micro-industries and small manufacturing cooperatives developed, local markets revived, there were shifts in patterns of agricultural production, and new distribution networks were created. By the mid-1980s, the informal sector accounted for approximately 85% of employment. Social service activities, too, developed around the second economy. Some of the new enterprises got involved in the housing market, and others worked in health, education, sanitation, and infrastructure development. Despite the social inequalities emerging from the informal sector, the vitality of activities in the parallel market was in itself "an act of political assertion." The combination of associational growth and informal economic activity also shaped a different type of elites. These strata began to form an important political counterweight to state-based elites and represented new bargaining potential missing in clientelist networks. The emergence of organisational forms of pluralism

resulted in a greater degree of social interlinking at the grassroots as well as intermediate level. (Chazan, 1991).

Ghana's government under Rawlings constantly faced the problem of regime legitimacy. The majority of the population distrusted the state and had organised an autonomous associational and economic life out of its reach. This eventually led to the granting of elections on the district level, a gesture that contributed to stabilising PNDC rule and allowed the Rawlings government to breathe a sigh of relief. In reaction, however, the PNDC had to face pressures from groups organised at the intermediate level. They claimed that the local government reforms were an only incomplete answer to the much wider need for democratisation, which implied nationwide elections. (Chazan, 1991)

The government came also under long-lasting pressure of leaders of domestic opposition groups, particularly of the umbrella Movement for Freedom and Justice (MFJ) and the smaller socialist Kwame Nkrumah Revolutionary Guards (KNRG). From its founding in the mid- 1990s until early 1992, most anti-PNDC organisations were synchronized by the MFJ, which later split up. The Movement criticised Rawlings' regime for four reasons: failure to distribute the gains of economic growth relatively equitably, the deteriorating standard of higher education and social services, the decline of the rule of law, and finally the absence of a civilian, elected government guaranteeing human rights. The MFJ was established in August 1990, at a time when the government was calling for a widespread discussion on the future frame for politics in Ghana. Many saw it as a fairly serious threat to the PNDC's continued supremacy, because it was

supported by politicians from Ghana's two main political traditions. The Convention People's party of Kwame Nkrumah and the United Party of the late Kofi Busia. Their leaders formed an extraordinary mixture of socialists and liberals, who had been committed to the re-establishment of party political rule for a long time.

Around 1990/91, the international trend of opinion and events was powerfully towards democratisation: "Latin America, the former Soviet Union and Eastern Europe, East Asian and parts of Africa were all undergoing democratisation 'experiments'." Rawlings realised that in such a climate further economic growth and the attraction of international finance under an authoritarian government was unlikely. In 1991, the interim results of Ghana's nation-wide debate on the political future of the country were presented. By then, the trend was steadily towards a multiparty system. The results were to form the basis for discussions on the content and form of a new Ghanaian constitution. It was to be drafted by the end of 1991 by a 258 member Consultative Assembly, appointed by the government but made up largely of representatives of corporate groups. After two re-elections under rather dubious circumstances, Rawlings' decade of purposive, effective, dynamic and relatively uncorrupt rule eventually ended in 2000. (Haynes ,1995).

The defeat of the NDC in the 2000 general elections, after being in power for two successive terms of four years each, was therefore a landmark that vindicated the virtues of democracy as the only political system for stabilizing and legitimizing the exercise of political power. In the years that followed there was an appreciable increase in GDP growth rate to the extent that by the close of the second term of the Kuffour administration GDP growth rate was 8.43

2.3 Empirical Review of Literature

There have been numerous further specifications of democracy. Diamond (1999), analyses the relevant literature and provides a complete list of conditions that a regime has to meet in constitutional theory as well as in fact to be called a fully liberal democracy:

- (1) Control of the state and its key decisions and allocations lies with elected officials; in particular, the military is subordinate to the elected authority.
- (2) Executive power is constrained by the autonomous power of other government institutions such as an independent judiciary, parliament, and other mechanisms of horizontal accountability.
- (3) Electoral outcomes are uncertain, with a significant opposition vote and the presumption of party alternation in government, and no group that adheres to constitutional principles is denied the right to form a party and contest elections.
- (4) Cultural, ethnic, religious, and other minority groups are not prohibited from expressing their political interests, speaking their language or practicing their culture.
- (5) Beyond parties and elections, citizens have multiple, ongoing channels for expression and representation of their interests and values, i.e. they can form and join diverse, independent associations and movements.
- (6) There are alternative sources of information, including independent media, to which citizens have free access.
- (7) Individuals also have substantial freedom of belief, opinion, discussion, speech, publication, assembly, demonstration, and petition.

(8) Citizens are politically equal under the law.

(9) An independent, non-discriminatory judiciary, whose decisions are enforced and respected by other centres of power, effectively protects individual and group liberties.

(10) The rule of law protects citizens from unjustified detention, exile, terror, torture, and undue interference in their personal lives not only by the state but also by organized non-state or anti-state forces. (Diamond, 1999)

Liberal democracy therefore is defined as a system in which political authority is to be constrained and balanced, individual and minority rights are protected, the rule of law is assured, and a supreme constitution guarantees that the state acts in accordance with the laws. In such a state of rights, the courts enforce restrictions on popularly elected governments when they violate the laws or the constitutional rules. At the heart of liberal democracy, therefore, are the rule of law, the separation of powers, and certain normative moral standards, i.e. the protection of certain unalienable rights.

Electoral democracy is a civilian, constitutional system in which the legislative and chief executive offices are filled through regular, competitive multiparty elections with universal suffrage. (Przeworski et al, 2000).

Henderson states that “The democratic process, with its emphasis on bargaining and compromise, offers a meaningful alternative for handling conflict if leaders choose to use it. Democracy should not be viewed as an idealistic process, but as a realistic way to accommodate demands with a minimum of conflict. With a large measure of democracy, conflict should not grow as sharp as to invite repression.”

Many African regimes seem to be stuck in transit. The resulting pseudodemocracies have adopted multiple parties and many other features of electoral democracy, but they still lack a forum of electoral contestation sufficiently fair to allow the peaceful turnover of government. Formally democratic institutions exist, but they mask what in reality is authoritarian control. (Diamond, 1999)

North (1990) said, a society's institutional framework seems to play an instrumental role in the long-term performance of its economy. As appropriate data have become available, empirical researchers have added economic freedom, democracy, and other institutional variables to the set of potential determinants of economic welfare. More specifically, many studies attempt to identify the variables that determine economic growth and how they do so. But some interesting questions remain, as the following review of the relevant literature will show.

A significant body of research indicates that economic freedom enhances economic growth. Baumol (2002) stresses that the free-market economic system acts as a powerful innovation machine a fundamental driving force behind growth processes in societies where the rule of law prevails. Dutz and Hayri (2000) find a high correlation between long-term growth and effective enforcement of antitrust and competition policy. Farr et al (1998) discover a Granger causal relationship working from economic freedom to economic well-being. Barro (1996) furnishes empirical evidence supporting the idea that free markets and maintenance of property rights foster economic growth. However, not all the literature is so conclusive.

Haan and Sturm (2001) maintain that economic freedom brings countries to their steady state level of economic growth more quickly, but does not increase the rate of steady state growth. Siemann (1998) offer an even more skeptical view: according to these authors, the positive effect of economic freedom on economic growth is not robust, but depends on the indicator of economic freedom used.

The connection between political freedom and either economic freedom or economic growth is much more controversial. Farr et al (1998) find no evidence of causal relationships working between both freedoms. Friedman (1962) believes that democracy and economic growth are mutually reinforcing. Under this hypothesis, democracy should facilitate economic growth through the development of an institutional framework more compatible with incentives to engage in productive transactions. In other words, democracy is the political system that allows markets to perform adequately. In his discussion of this question, Rodrik (2000) reaches a suggestive empirical conclusion: participatory democracies favor what he calls “higher-quality growth”: more predictable long-term growth rates, greater short-term stability, better resilience to adverse shocks, and a more equitable distribution of wealth. The implication is that democracy helps build better institutions because it works as an efficient meta-institution for eliciting and handling local knowledge.

Democratic institutions can foster growth in a variety of ways. Przeworski and Limongi (1993) hypothesize that democracy should positively influence economic growth through better protection of property rights, which promotes savings and investment. Rodrik’s (1999) results

indicate that participatory and democratic institutions cushion the impact of negative external shocks on economic growth.

Svensson (1999) finds that the long-term impact of international aid on growth depends on the political and civil liberties in the host country. In particular, aid tends to have a positive impact on growth only in countries with democratic governments. But Knack and Keefer (2001) also provide some evidence that higher aid levels erode institutional quality, as measured by indexes of bureaucratic quality, corruption, and the rule of law.

Mauro (1995) shows the extent to which corruption hinders economic growth. Del Monte and Papagni (2001) provide further evidence in support of this premise. They also point out that corruption may be relevant in underdeveloped countries where society lacks democratic control over government, a possibility investigated by Paldam (2002). According to his results, democracy seems to decrease corruption, and lower corruption rates may provide for higher growth, but the effect is slight and fragile. He also suggests the potential for rent-seeking is large in countries with highly regulated economies—that is, with little economic freedom. The countries also tend to have high corruption, although that link is not clear for Bliss and Di Tella (1997) who present a microeconomic model that shows that increased competition may not reduce corruption.

Democracy promotes gender equality and foster female education, which tends to promote growth by increasing human capital. For instance, Behrman et al. (1999) test the hypothesis that increases in female literacy also enhances the human capital of the next generations. They

conclude that, during the green revolution in India, a significant and positive relationship between maternal literacy and childhood schooling reflected the productivity effect of home schooling. Moreover, as Barro (1996) explains, female education reduces fertility and infant mortality, paving the way for increases in growth.

Despite the fact that political freedoms are a fundamental component of human development, social scientists are also aware of the growth-hindering aspects of democracy. Majority suffrage tends to redistribute income and reduce efficiency. Democratic governments that try to maximize tenure must respond to popular demands for greater consumption and spending. Representative legislatures allow well-organized interest groups to lobby and legally appropriate resources at the expense of society as a whole. In their interesting study, Tavares and Wacziarg (2001) find that democracy hinders growth because it reduces investment in physical capital and also because it raises the ratio of public consumption to GDP. What then is the net impact of democracy on economic growth? The literature fails to provide a conclusive answer.

Typically ambiguous results can be found, for example, in a study by Helliwell (1994), who concludes that democracy may have either a positive or a negative influence on economic growth; Siemann (1996) state that the relationship is not robust. Przeworski and Limongi (1993) address the question of how political rights affect economic growth both positively and negatively. They interpret their likewise ambiguous results to mean that while political institutions are important for economic growth, reducing them to democratic and nondemocratic regimes does not seem to account for the relevant differences.

In another cross-country empirical study, Barro (1997) established that democracy has a nonlinear effect on growth. Increases in political rights initially increase growth, which tends to slacken once a certain level of democracy is attained. His own interpretation of these results is that, in the strictest dictatorships, increased freedom stimulates growth by limiting governmental abuse. But after achieving some degree of political freedom, further increases in democracy hinder growth by intensifying the redistribution of resources.

Chong and Calderón (2000) show that improvements in the institutional framework have positive influence on economic growth, especially in poor countries. After establishing and solving a full system of equations determining growth and the channel variables, Tavares and Wacziarg (2001) affirm that the overall impact of democracy on growth is moderately negative. In their search for causality links, Farr et al (1998) conclude that political freedom does not Granger-cause economic wellbeing. Taking a different approach, Minier (1998) studies the experience of countries in which the level of political freedom changes significantly. Countries that democratize seem to grow faster, while countries becoming less democratic grow more slowly.

Economists have also studied the existence of reverse causality between liberties and growth. Specifically, economic growth appears to prompt institutional and political change, while prosperity appears to enhance democracy. There is some empirical evidence for this idea, known as the Lipset hypothesis (Lipset 1959). In a comparative historical survey, Huber, Rueschemeyer, and Stephens (1993) confirm the existence of such a relationship. The explanation, in their view, is that economic development enlarges the working and middle

classes, making it more difficult for elitist groups to exclude them politically. Posing the question of whether a higher standard of living favors democracy, Barro (1999) finds a relationship in data gathered from a large number of countries. His premise holds when democracy is measured in terms of electoral rights or civil liberties, and the standard of living is approximated by per capita GDP, percentage of primary school attained, equality between male and female primary schooling, and middle-class share of income. The same conclusions are to be found in Farr et al (1998), as well as in Helliwell (1994), whose analysis reveals that the impact of income on democracy is positive and robust.

Burkhart and Lewis-Beck (1994) conduct a very similar study for less developed countries, concluding that democracy does not trigger economic development, but rather that economic development furthers political rights, so that a certain degree of economic development is prerequisite to democratization.

Chong and Calderón (2000) deduce from their analysis that economic growth favors institutional improvement apparently in less time than it takes for institutional quality to enhance growth.

Democratic governments are vulnerable to demands for re-distribution to lower-income groups, and are surrounded by rent-seekers for “directly unproductive profit-seeking activities” (Krueger 1974, Bhagwati 1982). Non-democratic regimes can implement coercively the hard economic policies necessary for growth, and suppress the growth-retarding demands of low-income earners and labor in general, as well as social instabilities due to ethnic, religious, and class struggles. Democracies cannot suppress such conflicts. For economic progress, markets should

come first and authoritarian regimes can easily facilitate such policies. In addition, some level of development is a pre-requisite for democracy to function properly (Lipset's 1959 hypothesis).

All in all, this view implies that political democracy is a luxury good that cannot be afforded by developing countries. Other proponents of the conflict view and stricter state command on the economy include Galenson (1959), Andreski (1968), Huntington and Dominguez (1975), Rao (1984-5), and Haggard (1990). Such a view became fashionable after the growth success stories in South Korea, Taiwan, Hong Kong and Singapore in the 1950s and 1960s. The arguments rest on several assumptions, the main one of which is that if given power, authoritarian regimes would behave in a growth friendly manner. In that vein, several contrasting cases are provided where dictators pursued their own welfare and failed ostensibly in Africa and the socialist world (de Haan and Siermann 1995, Alesina *et al.* 1996).

Proponents of democracy, on the other hand, argue that rulers are potential looters (Harrington 1956) and democratic institutions can act to constrain them (North 1990). Most of the assumptions of the conflict view can be refuted with good reasons (see Sirowy and Inkeles 1990, and the references therein). Implementation of the rule of law, contract enforcement and protection property rights do not necessarily imply an authoritarian regime. The latter has a tendency to confiscate assets if it can expect a brief tenure (Olson 1993) or even in the long-run (Bhagwati 1995), for more corrupt and extravagant use of resources, internally inconsistent policies, and short-lived and volatile economic progress (Nelson 1987). The motivation of citizens for work and invest, the effective allocation of resources in the marketplace, and profit maximizing private activity can be maintained with higher political rights and civil liberties. In addition, Bhagwati (1995) argues that democracies rarely engage in military conflict with each

other, and this promotes world peace and economic growth. They are also more likely to provide less volatile economic performance. Finally de Haan and Sierrmann (1995), note that a strong state and an authoritarian state are not the same thing.

Among these conflicting views and insignificant empirical results, it is natural that a so called skeptical view has arisen. The proponents of this view argue that it is the institutional structure and organizations, rather than regimes *per se*, that matters for growth. Pro-growth governmental policies can be instituted in either regime. A sound leadership that will resolve collective action problems and be responsive to rapidly changing technical and market conditions is more essential for growth (Bardhan 1993). Although a supporter of democracy, Bhagwati (1995) argues that markets can deliver growth under both democratic and authoritarian regimes. However, there have also been examples that the institutional structures under both regimes are afflicted by not making the “right” choices for their subjects.

Empirical evidence shows that all the aspects of the institutions made precise above, i.e. economic democracy, governance and private sphere in the economy have high correlations with political democracy. In other words, the mere existence of participatory democracy implies the broader institutions conducive to growth. As Rodrik (1999) argues, democratic regimes can be the Meta institution for building market-supporting institutions.

Various studies find that political democracy has enormous indirect effects on growth through human capital accumulation, income distribution, and political stability (Baum et al, 2003, Alesina *et al.* 1996). In addition, Sturm and de Haan (2001) find that the presence of democracy in a country positively affects the level of economic freedom. Thus, on the question of political

democracy and growth, the broader associations that encompass the channels, or the indirect effects, between democracy and growth should be remembered rather than one-to-one causation from regime to growth.

As Bhagwati (1995) and Rodrik (2000) point out, democracies provide higher quality growth through various means. Rodrik puts it in the following way: participatory democracies enable a higher-quality growth by allowing greater predictability and stability in the long-run, by being stronger against external shocks, and by delivering better distributional outcomes. Democratic institutions would help markets function “perfectly”, as is assumed in neoclassical economic models. As an extension to such arguments, the “volatility” channel has also been shown to be an important indirect effect of democracy on growth. Sah (1991) had argued that authoritarian regimes exhibit more volatile performance than democracies. Nondemocratic regimes are not a homogenous lot (de Haan and Siermann, 1995, Alesina *et al.* 1996, Alesina and Perotti 1994), whereas democracies are more homogenous and can provide stable economic progress. Such a notion also implies less volatile and long-lived economic progress.

Quinn and Woolley (2001) hints the endogeneity between growth and volatility, while Mubarak (2005) analyzes this new channel in multi-equation framework and finds that higher levels of democracy increases growth through lower volatility.

By 2002, one can conclude that some of African transitions, that are twenty-two cases, were flawed. In these nations, rulers could not stop the progress of opposition demands for political reform and allowed the reform process to unfold to a significant degree. Often they agreed to competitive elections, at the same time they exploited the powers of their post to manipulate

electoral laws, monopolize campaign resources, or interfere with the polls. Cameroon, Gabon, and Mauritania, were more or less dubious elections that usually returned the current president to power. (Landman, 1999)

Only nine countries experienced true transitions to democracy, i.e. democratic regimes emerged through valid elections. If we add the five states that fulfilled the minimum criteria for democracy already before 1994, i.e. Botswana, The Gambia, Mauritius, Senegal, and Eritrea, we find that 14 out of 52 or 27% of African states experienced democratization. However, since the populations of these countries are comparatively small, less than a fifth of the African population came to live under democratic regimes. (Bratton et al, 1997).

Despite deficits, Africa has clearly undergone a wave of democratization efforts. Based on above considerations on the nature of democracy, we can proceed to ask for the sources of African democracy: the significance of political culture and its role in economic growth.

The African experience with democracy in the postcolonial period has been complex and puzzling. Frequently, attempts to introduce and sustain democratic rule from the 1960s through the 1980s wavered. At the same time, many Africans have conducted “an unremitting quest for democratic rule”, as evidenced in the surge of democratisation during the early 1990s: the ambivalence of democratic practice has gone hand in hand with the on going search for a democratic order. (Chazan, 1994)

Most authors generally agree that standard measures of national-level economic aggregate indicators alone explain little of Africa’s recent political changes. Widner, (1994) finds no association linking political liberalisation in Sub-Saharan Africa with growth of gross domestic product, per capita income, defense expenditure, development assistance, inflation, or the rural

workforce. Neither is there a relationship between reform and states experiencing a bonus in natural resources or foreign aid.

In Bratton and van der Walle's panel data analysis of African regime change, democratic tradition and behaviour of political actors seem to provide a better explanation for democratic transition than economic factors. (Bratton et al, 1997)

In any case, the citizens of every state, independent from their form of government, are not indifferent to their country's economic performance. Bratton et al (1997) argued that the African long-run economic crisis undermines the legitimacy of any political regime, democratic or autocratic, when governments are held responsible for existing economic conditions. However, democratic regimes have the ability to legitimize themselves also with their specifically democratic output. "Democratic governments rarely rely for legitimacy on economic performance to the same extent as authoritarian governments do, but they too must improve material conditions on their watch. In a consolidated democracy, economic grievances are expressed through the ballot box and can lead to the replacement of one elected government by another; in a no consolidated democracy, however, the penalty for poor performance may well be the end of democratic rule itself and a return to authoritarianism. Overcoming economic crisis while simultaneously achieving democratization is a distinctive challenge facing Africa.

Sirowy and Inkeles (1990) suggest that there are three major views on the effects of democracy on growth which they label the conflict, the compatibility and the skeptical. The conflict thesis suggests that democracy and economic growth are incompatible because elected officials longing for popular approval make shortsighted decisions designed to maximize success at the next election. This makes them receptive to rent-seeking interest groups whose objective is to

divert resources from productive activities in favour of immediate consumption. Related arguments are that democracy is less conducive to long term stability (World Bank, 1991, pp. 132-133) or long term development (Barro, 1996) because of the tendency in majority voting systems to enact rich-to-poor redistribution of income including land reforms.

On the other hand, the compatibility thesis proffers that democratic features such as political pluralism, institutional checks and balances and freedom of the press provide safeguards against systemic abuse or predatory behaviour often associated with authoritarian regimes. Friedman (1962) was one of the first to suggest that economic and political freedoms are mutually reinforcing. He postulated that an expansion in political freedom fosters economic freedoms such as secure property rights and certainty of contract, which, in turn, underpin higher rates of economic growth.

The third perspective, which is the skeptical view, suggests there is no systematic relationship between democracy and economic growth. While it might generally be true that there is more economic freedom under a democracy than an autocracy, there is no guarantee it will be at an optimum (Esposito and Zaleski, 1999). Even in a democracy there will be those whose aim is to challenge the private property status quo if it is in their best interests, and because of the very nature of a democracy they will have more opportunities to do so (Przeworski and Limongi, 1993).

The empirical evidence on the three perspectives is not clear-cut. Sirowry and Inkeles (1990) review thirteen studies; of which, six supported the skeptical view, four suggested qualified or conditional relationships, and three provided unconditional support for the conflict perspective.

In a later survey, Brunetti (1997) reviewed 17 empirical studies of the democracy-growth relationship. He found nine studies report no relationship, one study a positive, one study a negative, three studies a fragile negative relationship and three studies a fragile positive relationship between democracy and economic growth .

Helliwell (1994), Barro (1996) and Tavares and Wacziarg (2001) found that democracy has either a non-significant or moderately weak negative effect on growth once other growth-determining variables are held constant. On the basis of the mixed findings in the literature, a reasonable conclusion is that: We do not know whether democracy fosters or hinders growth (Przeworki and Limongi, 1993, p. 64). However, as a proviso to this, the balance of empirical evidence is with the conflict and skeptical views rather than the compatibility view.

By way of summary, the interplay between democracy and economic growth can be said to form various cause effect chains, which have been studied theoretically and empirically but are not fully understood. Ghana and Africa as a whole has come a long way when it comes to the democratic governance. There have been some positive strides in terms of economic growth. Can we really attribute these things to the adoption of democracy? If we can to what extent does democracy affect economic growth? These are the primary questions that this dissertation goes to look at.

CHAPTER THREE

METHODOLOGY

3.0 DATA

The data used in this article are GDP growth rate (Y) and a dummy variable of zero for autocratic rule and one for democratic rule for democracy (Demo) for the period 1970-2008. The period of analysis was dictated by data availability. Annual data on GDP growth rate is available from 1970 to 2008. Data on GDP is obtained from the World Bank's World Development indicators CD-ROM and that of democracy is obtained using dummy variables. "0" represents period of autocratic rule and "1" represents period of democratic rule. The period of autocratic rule is given zero because it is a period in which both political and civil liberties of the people are taken away. It is a period of dictatorship in which everyone must conform to the will of the ruling government in which case, there is no room to object or say anything against the ruling government. A period in which there is open governance where the people are allowed to have a say. In these periods there is freedom of expression, association, movement, right to live, right to vote etc. It is a period in which the government in power was elected by the people through a general election. A period in which these things exist qualifies to score one. The period 1960 to 1966 was not included because the period though an elected government, there were some level of restriction on the freedom of the people. Though a democratic rule there were elements of autocracy hence in totality for this thesis the period does not qualify to be a democratic period nor is it autocratic. The period 1967 to 1969 was also excluded because it had some links with the previous government.

In the nutshell this paper looks at the causal relationship between democracy and economic growth of Ghana from the period 1970 to 2008

3.1 Introduction to methodology

The methodology used in this study is outlined as follows; Granger causality tests require that the time series be stationary. Otherwise, the F-statistics from the tests will follow nonstandard distributions, and the empirical results will be misleading (Sims et al., 1990). If the original series is nonstationary, they must be transformed into stationary series by differencing the series until they are stationary. However, when two time series are cointegrated, there is a long-run equilibrium relationship between the two series. Hence, in the presence of cointegration, the simple Granger causality tests can become inappropriate and should be modified, since only short-run effects will be captured when all the series are in first difference. Thus, standard Granger causality tests, augmented with error-correction terms (derived from the long-run cointegrating relationships), are used to examine the long-run effects. Such tests are carried out on $I(0)$ time series to guarantee that inferences made from the tests are valid. (Engle and Granger, 1987).

The above is broken down in to three steps.

3.1.1 Unit Root Test

The first step is to test the time series for stationarity. This involves testing the order of integration of the individual series under consideration. Several procedures for the test of order of integration have been developed. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979, 1981) and the Phillip-Perron (PP) due to Phillips (1987) and Phillips and Perron (1988) but in this paper the Augmented Dickey-Fuller test is used.

Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favor of the alternative hypotheses of stationarity. The general form of ADF test is estimated by this regression.

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} +$$

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3.1.2 Cointegration Test

Thus, the second step is to test for cointegration using Johansen procedure. The order of VAR is selected using the Akaike's information criterion (AIC) and Schwarz's Bayesian criterion (SBC). Since it has been determined that the variables under examination are integrated of order 1, the co-integrated test is then performed. The testing hypothesis is the null of non-cointegration against the alternative, that is the existence of co-integration using the Johansen maximum likelihood procedure (Johansen, 1988). Once a unit root has been confirmed for a data series, the question is whether there exists a long-run equilibrium relationship among variables. According to Granger (1986), a set of variables, Y_t is said to be cointegrated of order (d, b) , denoted CI (d, b) , if Y_t is integrated of order d and there exists a vector, β , such that $\beta'Y_t$ is integrated of order $(d-b)$.

Co-integration tests in this study are conducted using the method developed by Johansen and Juselius (1990). The multivariate co-integration techniques developed by Johansen and Juselius (1990; 1992) using a maximum likelihood estimation procedure allows researchers to estimate simultaneous models involving two or more variables to circumvent the problems associated with the traditional regression methods used in previous studies on this issue. Therefore, the Johansen method applies the maximum likelihood procedure to determine the presence of cointegrated vectors in non-stationary time series.

Johansen (1988) and Osterwald-Lenum (1992) propose two test statistics for testing the number of cointegrated vectors (or the rank of Π): The trace (λ_{trace}) and the maximum eigenvalue (λ_{max}) statistics.

The Likelihood Ratio statistic (LR) for the trace test (λ_{trace}) as suggested by Johansen (1988) is:

$$\lambda_{\text{trace}}(r) = -T$$

Where: λ_i = The largest estimated value of i th characteristic root (eigenvalue) obtained from the estimated Π matrix $r = 0, 1, 2, \dots, p-1$

T = The number of usable observations. The λ_{trace} statistic tests the null hypothesis that the number of distinct characteristic roots is less than or equal to r , (where r is 0 or 1) against the general alternative. In this statistic λ_{trace} will be small when the values of the characteristic roots are closer to zero (and its value will be large in relation to the values of the characteristic roots which are further from zero). Alternatively, the maximum eigenvalue (λ_{max}) statistic as suggested by Johansen is:

$$\lambda_{\text{max}}(r, r+1) = -T \ln(1 - \lambda_{r+1}) \quad (4)$$

The λ_{max} statistic tests the null hypothesis that the number of r co-integrated vectors is r against the alternative of $(r+1)$ co-integrated vectors. Thus, the null hypothesis $r = 0$ is tested against the alternative that $r = 1$. If the estimated value of the characteristic root is close to zero, then the λ_{max} will be small.

It is well known that Johansen's co-integration tests are very sensitive to the choice of lag length. Firstly, a VAR model is fitted to the time series data in order to find an appropriate lag structure. The Schwarz Criterion (SC) is used to select the number of lags required in the co-integration test (Schwarz, 1978).

3.1.3 Error Correction Model

The variables included in the VAR model are co-integrated, the next step is to specify and estimate an Error Correction Model (ECM) including the error correction term to investigate dynamic behavior of the model. Once the equilibrium conditions are imposed, the EC model describes how the examined model is adjusting in each time period towards its long-run equilibrium state. Since the variables are co-integrated, then in the short run, deviations from this long-run equilibrium will feed back on the changes in the dependent variables in order to force their movements towards the long-run equilibrium state. Hence, the co-integrated vectors from which the error correction terms are derived are each indicating an independent direction where a stable meaningful long-run equilibrium state exists. The EC specification forces the long-run behavior of the endogenous variables to converge to their co-integrated relationships, while accommodates short-run dynamics. The dynamic specification of the model allows the deletion of the insignificant variables, while the error correction term is retained. The size of the error correction term indicates the speed of adjustment of any disequilibrium towards a long-run equilibrium state (Engle and Granger, 1987). The final form of the Error-Correction Model (ECM) was selected according to the approach suggested by Maddala, (1992). The general form of the Error Correction Model (ECM) used is as follows:

$$\Delta \text{GDP}_t = \beta_1$$

3.1.4 Test for Causality

The third step is to perform a standard Granger causality test. In the Granger causality tests, the order of lag is preset to four years corresponding to the number of years that a democratic government is allowed to stay in power over which they are to put up policies to improve upon the economy. In this section we examine the long run relationship between democracy and economic growth in Ghana using Granger causality tests within a univariate framework. While, unlike most cointegration tests, all variables need to be stationary in order to conduct a Granger causality tests. To ascertain the order of integration we apply the Augmented Dickey-Fuller (ADF) unit root tests. Having established that all variables are integrated of the same order after second differencing, we can now proceed to conduct the Granger causality tests.

Does democracy cause growth or growth causes democracy? One approach to answering this type of question is the test for causality introduced by Granger (1969) and Sims (1972). To determine what causal relationships exist between democracy and economic growth, we use a dynamic model and define causality along the lines established by Granger (Granger 1969). We say that the variable x is causing y if we are better able to predict y using all available information than if the information apart from x had been used. That is, if we control for the information contained in past values of y , and past values of x add significantly to the explanation of current y , then we may say that x Granger-causes y .

The basic idea of 'Granger' causality is to test whether lagged values of a particular variable significantly affect the contemporaneous value of another variable. More specifically, if X causes Y , then X should precede Y such that when Y is regressed on past values of Y , the addition of past values of X should contribute significantly to the explanatory power of the regression.

Furthermore, Y should not help to predict X. To test these implications, I proceed by estimating the following equation. (Granger, 1986)

$$Y_t = \alpha_0 +$$

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GDP growth rate as a cause of democracy

$$\text{Demo}_t = \alpha_0 +$$

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“the movements in the dependent variables that are due to their ‘own’ shock, versus shock to the other variables” (Olayiwola and Okodua 2009). In this case we are looking at the changes in GDP growth rate as a result of shocks that occur in democracy. The source of this forecast error is the variation in the current and future values of the innovations to each endogenous variable in the VAR. The percentage of the forecast variance due to each innovation, with each row adds up to 100.

Furthermore it provides the proportion of movements between dependent variables caused by it and other variables. In the analysis of variance decomposition, a ten year forecasting horizon is employed.



CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Unit Root Test

First is to test if the relevant variables which in this case are GDP_Growth is stationary and to determine its order of integration. The Augmented Dickey Fuller (ADF) test is used to find the existence of unit root in each of the time series. The stationarity of the demo is not undertaken because they are levels which are either zero or one. The results of the ADF test are reported in Table 4.1.1

Table 4.1.1: Unit Root test for Stationarity at Levels

	(ADF-Intercept)
GDP	-2.584(-3.679)*** (-2.967)(**)

Note: Significance at 1% (***) and 5% (**) error level. Figures within parenthesis indicate critical values at the corresponding error levels. Mackinnon (1999) critical value for rejection of hypothesis of unit root applied.

Source: Author's Estimation using Eviews 6.0.

The result in table 4.1.1 shows that the variable is not stationary in levels using the ADF test. This can be seen by comparing the observed values (in absolute terms) of the ADF test statistics with the critical values (also in absolute terms) of the test statistics at the 1% and 5% level of significance. Result from table 1 provides strong evidence of non stationarity, therefore, the null hypothesis is accepted and it is sufficient to conclude that there is a presence of unit root in the

variables at levels, following from the above result., the variable was differenced once and the ADF test was conducted, the result as shown in table 4.1.2

Table 4.1.2: Unit Root test for Stationarity at Second Difference

	(ADF-Intercept)
GDP	-7.697(-3.670)*** (-2.963)**

Note: *** and ** denotes Significance at 1% & 5% level, respectively. Figures within parenthesis indicate critical values. Mackinnon (1999) critical value for rejection of hypothesis of unit root applied. **Source:** Author's Estimation using Eviews 6.0.

The table 4.1.2 reveals that the variable became stationary at second difference, on the basis of this, the null hypothesis of non-stationary is rejected and it is safe to conclude that the variables are stationary. This implies that the variable is integrated of order two, i.e. I(2).

4.2 COINTEGRATION TEST RESULTS

Having confirmed the stationarity of the variable at I(2), we proceed to examine the presence or non presence of cointegration among the variables. When a cointegration relationship is present, it means Democracy and Economic growth share a common trend in the long-run equilibrium as suggested theoretically. The cointegration analysis was stated by employing the Johansen cointegration test.

4.2.1 Unrestricted Cointegration Rank Test (Trace)

Table 4.2.1: Test for cointegration

Hypothesized No of CE(s)	Eigen Value	Trace Statistics	5 Percent Critical Value	1 Percent Critical Value
None	0.522601	31.83093*(**)	15.41	20.04
At most 1	0.113871	4.473025	3.76	6.65

Trace test indicates 2 cointegrating equation at both 5% and 1% levels and also 1 cointegrating equation at 1% level.

*(**) denotes rejection of the hypothesis at 5%(1%) level

Source: Author's Estimation using Eviews 6.0.

4.2.2 Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Table 4.2.2: Test for cointegration

Hypothesized No of CE(s)	Eigen Value	Trace Statistics	5 Percent Critical Value	1 Percent Critical Value
None	0.522601	27.35791*(**)	14.07	18.63
At most 1	0.113871	4.473025	3.76	6.65

Max-eigen value test indicates 1 cointegrating equation at both 5% and 1% levels and Max-eigen value test indicates 1 cointegrating equation at 1% levels

*(**) denotes rejection of the hypothesis at 5%(1%) level

Source: Author's Estimation using Eviews 6.0.

Table 4.2.1 and 4.2.2 shows the result of the cointegration test. In the tables both trace statistic and maximum Eigen value statistic indicates one (1) cointegration at both 5 percent and 1 percent level of significance. Suggesting that, there is a cointegrating relation between democracy and economic growth. This implies that democracy and economic growth has long run relationship. Thus the null hypotheses that there are no co-integrating equations are rejected. From the VAR analysis in the long run, a 1% increase in democracy causes 1.83% increase in economic growth. Hence in the long run there is a positive relationship between democracy and economic growth

4.3 ERROR CORRECTION MODEL

Having established that there is a cointegration relationship between Democracy and Economic Growth, an Error Correction Model is estimated to determine the dynamic behavior of the growth equation in the short run. The short run ECM is estimated using this model:

$$\Delta \text{GDP}_{t-i} = \beta_1$$

justifies the use of the term error correction mechanism. The Error Correction (EC) term, picks up the speed of adjustment of each variable in response to a deviation from the steady state equilibrium. The dynamic specification of the model suggests deletion of the insignificant variables while the error correction term is retained. The EC specification forces the long-run behavior of the endogenous variables to converge to their co-integrating relationships, while accommodates the short-run dynamics.

The Error Correction results is outlined as follows

$$\Delta GDP_{t-i} = 0.004 + 0.309\Delta GDP_{t-1} - 1.422\Delta Demo_{t-1} - 1.293ECT_{t-1} \quad (11)$$

[0.006] [1.892] [-0.572] [-5.624]

$$R^2 = 0.547 \quad F. Stat = 13.296 \quad AIC = 6.116 \quad SC = 6.290$$

A short-run increase in democracy per 1% induces a decrease of economic growth per 1.42% in the economy of Ghana imply a more than proportionate reduction in economic growth as a result of a small increase in democracy. From the error correction it is realized that there is a negative relationship between democracy and economic growth in the short run. This is justified on the grounds that in Ghana the democracy operates on the principle of the winner takes all. For that matter when there is a change in government, a new government is formed which takes a lot of time to find it feet. In the first two years or even in the first term of four years, it becomes a learning period during which economic growth declines.

The estimated coefficient of ECT_{t-1} is statistically significant and has a negative sign, which confirms that there is no problem in the short-run equilibrium relation between the independent and dependent variables at 5% level of significance.

4.4 GRANGER CAUSALITY TESET

The second difference of the data is taken to make it stationary because to undertake a granger causality test, the data must be stationary. The test results for the two equations outlined in the methodology are outlined below:

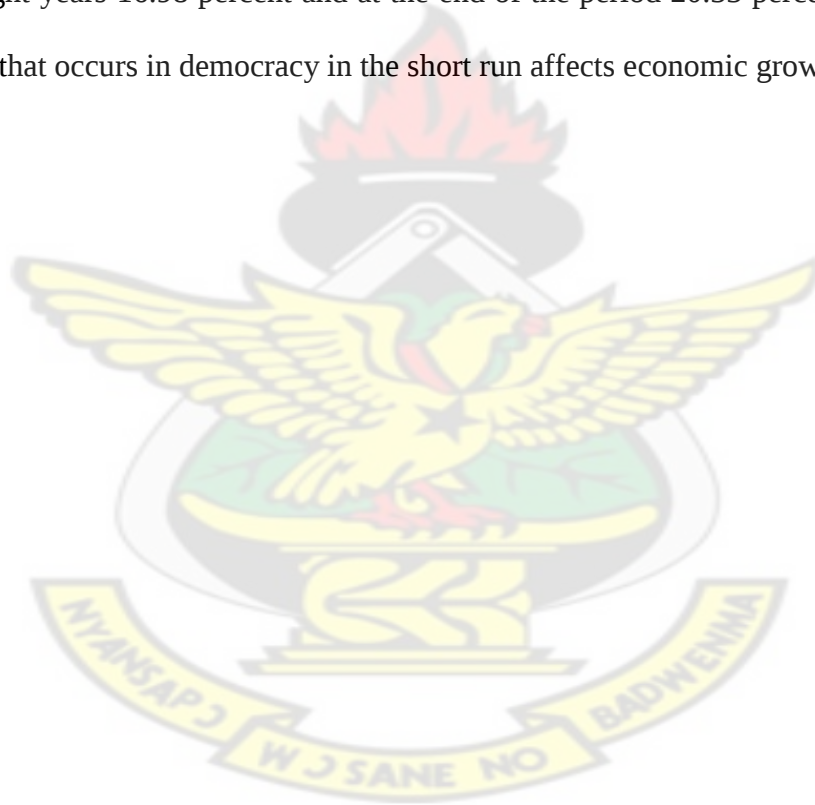
Null Hypothesis:	Obs	F-Statistic	Prob.
Demo does not granger cause GDP_GROWTH	31	2.79384	0.0423
GDP_GROWTH does not granger cause demo		2.02678	0.1147

From the above results the null which says that democracy does not granger cause growth is rejected meaning that democracy granger causes growth. In the second case the null hypothesis that says that Economic growth does not granger cause democracy cannot be rejected. This is therefore to say that there is unidirectional relationship between economic growth and democracy in which case economic growth does not granger cause democracy but democracy does cause economic growth. It is therefore necessary for democracy to exist before significant economic growth can be achieved.

4.5 VARIANCE DECOMPOSITION

The strength of variance decomposition lies in its ability to provide information about the relative importance of random innovations. Specifically, it provides information on the percentage of variation in the forecast error of a variable explained by its own innovations and

the proportion explained by innovations in other variables. Sims (1980) notes that if a variable is truly exogenous with respect to the other variables in the system, own innovations will explain all of the variables forecast error variance. The variance decomposition results are summarized in Table 5 over a 10-year period. After four years, 90.46 per cent of the variation in the forecast error for GDP growth rate is explained by own innovations, in the eighth year 83.02 percent, while at the end of 10 year period, the forecast error variance for income explained by own innovations is 79.67 percent. Democracy after four years contributes just 9.50 percent to GDP growth, after eight years 16.98 percent and at the end of the period 20.33 percent. This is to say that any change that occurs in democracy in the short run affects economic growth significantly.



CHAPTER FIVE

CONCLUSION AND POLICY RECOMMENDATION

5.1 CONCLUSION

This thesis focused on the impact of democracy on economic growth from the period 1970 to 2008. Economic growth rate and a dummy (“1” for constitutionally elected rule and “0” autocratic rule) for democracy were used as data. A unit root test conducted on economic growth revealed that the variable was non stationery.

A cointegration test was conducted to determine the long run relationship between democracy and economic growth. It was observed that there was a long run relationship between democracy and economic growth. From the VAR analysis in the long run, a 1% increase in democracy causes 1.83% increase in economic growth. Hence in the long run there is a positive relationship between democracy and economic growth.

Having established the long run relationship an error correction model was estimated to determine the short run dynamics of the growth relationship. It was observed that there was a negative relationship between democracy and economic growth in the short run where a 1% increase in democracy leads to 1.42% decrease in economic growth.

A granger causality test conducted to determine the causal relationship between economic growth and democracy showed that democracy granger cause economic growth whereas economic growth does not granger cause democracy. The implication is that there is a unidirectional causality between democracy and economic growth in favour of democracy. For growth to occur, democracy is important.

A variance decomposition undertaken to provide information on the percentage of variation in the forecast error of a variable explained by its own innovations and the proportion explained by

innovations in other variables showed that democracy after four years contributes just 9.50 percent to GDP growth, after eight years 16.98 percent and at the end of the period 20.33 percent. This is to say that any change that occurs in democracy in the long run affects economic growth significantly.

In conclusion, it is established that democracy is a prerequisite for economic growth. For Ghana to enjoy economic growth there must be democracy sustained over a long period of time.

5.2 POLICY RECOMMENDATIONS

Based on the outcome of this research the following recommendations are worth looking at.

Measures must be put in place to ensure that Ghana enjoys sustained democracy over a long period of time in order to ensure economic growth. This is because for business and other economic ventures to thrive well, there is the need for political stability. This will ensure that growth process is uninterrupted hence continuous growth that may even lead to development.

Economic growth therefore will come about when there is a sustained period of democracy. The following are some suggestions that will lead to sustained democracy.

- There must be a representative parliament with members elected on the basis of universal adult suffrage
- There should be regular and competitive elections with at least eight years for each government.
- There should be the existence of many political parties and an opposition in parliament to serve as a check on government.
- There should be the existence of the principle of separation of power and checks and balances to ensure that none of the organs of government becomes too powerful to encroach

upon individual rights and violate the constitution.

- There should be the rule of law, the existence of an independent press and an independent judiciary.
- There should be respect for fundamental human rights, equal opportunities for all and tolerance of varied views.

If all these features are present in Ghana's democratic system, then it will surely lead the country to economic growth in the long run.



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APPENDIX

Appendix 1

Augmented Dickey Fuller Test on GDP

Null Hypothesis: GDP has a unit root

Exogenous: Constant

Lag Length: 9 (Automatic based on SIC, MAXLAG=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.583866	0.1077
Test critical values: 1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 02/28/11 Time: 07:43

Sample (adjusted): 1980 2008

Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.594565	0.230107	-2.583866	0.0187
D(GDP(-1))	0.165693	0.246016	-0.673504	0.5092
D(GDP(-2))	0.095206	0.246169	-0.386749	0.7035
D(GDP(-3))	0.104045	0.246442	0.422188	0.6779
D(GDP(-4))	0.055438	0.228627	0.242483	0.8111
D(GDP(-5))	0.133793	0.205585	-0.650791	0.5234
D(GDP(-6))	0.093806	0.177387	0.528819	0.6034
D(GDP(-7))	0.266425	0.150007	1.776083	0.0926
D(GDP(-8))	0.366101	0.124793	2.933671	0.0089
D(GDP(-9))	0.166675	0.095453	1.746140	0.0978
C	2.583173	0.851600	3.033316	0.0071

R-squared	0.865763	Mean dependent var	0.459310
Adjusted R-squared	0.791187	S.D. dependent var	4.339563
S.E. of regression	1.983008	Akaike info criterion	4.488804
Sum squared resid	70.78179	Schwarz criterion	5.007433
Log likelihood	54.08765	F-statistic	11.60914
Durbin-Watson stat	1.557532	Prob(F-statistic)	0.000006

Augmented Dickey Fuller Test on D(GDP, 2)

Null Hypothesis: D(GDP,2) has a unit root

Exogenous: Constant

Lag Length: 6 (Automatic based on SIC, MAXLAG=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.697841	0.0000
Test critical values: 1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP,3)

Method: Least Squares

Date: 02/28/11 Time: 07:46

Sample (adjusted): 1979 2008

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1),2)	9.185425	1.193247	-7.697841	0.0000
D(GDP(-1),3)	6.593399	1.090132	6.048259	0.0000
D(GDP(-2),3)	4.872075	0.929810	5.239860	0.0000
D(GDP(-3),3)	3.285222	0.717670	4.577622	0.0001
D(GDP(-4),3)	2.085409	0.472166	4.416686	0.0002
D(GDP(-5),3)	1.111205	0.262207	4.237885	0.0003
D(GDP(-6),3)	0.348877	0.105162	3.317512	0.0031
C	0.007194	0.559543	-0.012856	0.9899

R-squared	0.972525	Mean dependent var	0.034000
Adjusted R-squared	0.963783	S.D. dependent var	15.85056
S.E. of regression	3.016490	Akaike info criterion	5.269243
Sum squared resid	200.1827	Schwarz criterion	5.642896
	-		
Log likelihood	71.03865	F-statistic	111.2465
Durbin-Watson stat	1.752496	Prob(F-statistic)	0.000000

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Appendix 2

Johansen Cointegration Test

Date: 02/28/11 Time: 07:49

Sample (adjusted): 1972 2008

Included observations: 37 after adjustments

Trend assumption: Linear deterministic trend

Series: GDP DEMO

Lags interval (in first differences): 1 to 1

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.522601	31.83093	15.41	20.04
At most 1 *	0.113871	4.473025	3.76	6.65

Trace test indicates 2 cointegrating equation(s) at the 5% level

Trace test indicates 1 cointegrating equation(s) at the 1% level

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.522601	27.35791	14.07	18.63
At most 1 *	0.113871	4.473025	3.76	6.65

Max-eigenvalue test indicates 2 cointegrating equation(s) at the 5% level

Max-eigenvalue test indicates 1 cointegrating equation(s) at the 1% level

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

GDP	DEMO
-0.285805	0.783711
-0.041349	-2.027415

Unrestricted Adjustment Coefficients (alpha):

D(GDP)	4.525429	0.550389
D(DEMO)	-0.081285	0.103565

1 Cointegrating Equation(s): Log likelihood -118.8557

Normalized cointegrating coefficients (standard error in parentheses)

GDP	DEMO
1.000000	-2.742120 (1.23341)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-1.293390 (0.22998)
D(DEMO)	0.023232 (0.01575)

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Appendix 3

VECTOR ERROR CORRECTION ESTIMATES

Vector Error Correction Estimates

Date: 02/28/11 Time: 07:53

Sample (adjusted): 1972 2008

Included observations: 37 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1	
GDP(-1)	1.000000	
DEMO(-1)	-2.742120 (1.23341) [-2.22321]	
C	-1.983833	
Error Correction:	D(GDP)	D(DEMO)
CointEq1	-1.293390 (0.22998) [-5.62381]	0.023232 (0.01575) [1.47494]
D(GDP(-1))	0.309429 (0.16351) [1.89247]	-0.016710 (0.01120) [-1.49223]
D(DEMO(-1))	-1.422351 (2.48581) [-0.57219]	0.036027 (0.17025) [0.21162]
C	0.004901 (0.80470) [0.00609]	-0.000352 (0.05511) [-0.00639]
R-squared	0.547263	0.072895
Adj. R-squared	0.506105	-0.011388
Sum sq. resids	790.6313	3.708422
S.E. equation	4.894745	0.335226
F-statistic	13.29668	0.864885
Log likelihood	-109.1461	-9.944962
Akaike AIC	6.116007	0.753782
Schwarz SC	6.290160	0.927935

Mean dependent	-0.001622	0.000000
S.D. dependent	6.964868	0.333333
Determinant resid covariance (dof adj.)		2.658338
Determinant resid covariance		2.114631
Log likelihood		-118.8557
Akaike information criterion		6.965175
Schwarz criterion		7.400558

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Appendix 4

GRANGER CAUSALITY TEST

Pairwise Granger Causality Tests

Date: 02/28/11 Time: 10:14

Sample: 1970 2008

Lags: 6

Null Hypothesis:	Obs	F-Statistic	Probability
DEMO does not Granger Cause GDP1	31	2.79384	0.04228
GDP1 does not Granger Cause DEMO		2.02678	0.11472



Appendix 5

VARIANCE DECOMPOSITION

Variance Decomposition of GDP:			
Period	S.E.	GDP	DEMO
1	4.997688	100.0000	0.000000
2	5.032110	98.64778	1.352223
3	5.053676	97.81232	2.187676
4	5.067185	97.29440	2.705598
5	5.075658	96.97165	3.028347
6	5.080977	96.76987	3.230125
7	5.084318	96.64347	3.356530
8	5.086416	96.56418	3.435817
9	5.087735	96.51441	3.485590
10	5.088564	96.48315	3.516851

Variance Decomposition of DEMO:			
Period	S.E.	GDP	DEMO
1	0.319143	0.003066	99.99693
2	0.405854	0.209548	99.79045
3	0.451922	0.274843	99.72516
4	0.478615	0.304357	99.69564
5	0.494658	0.319842	99.68016
6	0.504481	0.328604	99.67140
7	0.510559	0.333773	99.66623
8	0.514343	0.336900	99.66310
9	0.516708	0.338818	99.66118
10	0.518188	0.340006	99.65999

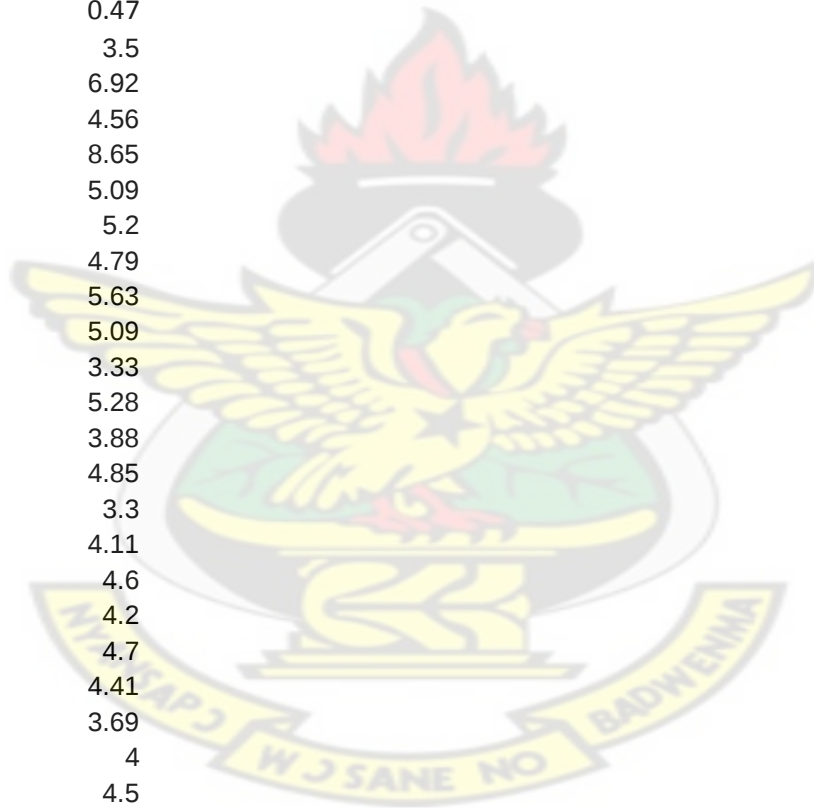
Cholesky Ordering:
GDP DEMO

APPENDIX 6

GDP Growth rate from 1970 to 2008

YEAR	GDP Growth Rate
1970	9.72
1971	5.22
1972	-2.49
1973	2.88
1974	6.85
1975	-12.43
1976	-3.53
1977	2.27
1978	8.48
1979	-2.51
1980	0.47
1981	3.5
1982	6.92
1983	4.56
1984	8.65
1985	5.09
1986	5.2
1987	4.79
1988	5.63
1989	5.09
1990	3.33
1991	5.28
1992	3.88
1993	4.85
1994	3.3
1995	4.11
1996	4.6
1997	4.2
1998	4.7
1999	4.41
2000	3.69
2001	4
2002	4.5
2003	5.2
2004	5.6
2005	5.9
2006	6.40
2007	6.46
2008	8.43

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