ARCADA

The impact of the global financial crisis on entrepreneurship development: A comparative analysis of Europe and Africa between 2004 - 2011

Stanley Ugochukwu Emenike

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	14174
Author:	Stanley Emenike
Title:	The impact of the global financial crisis on entrepreneurship development: A comparative analysis of Europe and Africa between 2004 - 2011.
Supervisor (Arcada):	Andreas Stenius
Commissioned by:	

Abstract:

The recent global financial crisis of 2007 that began in the USA was caused by a bubble in mortgage industry and ineffective financial regulations. As a result of financial globalization, it spilled over to other economies and caused a global recession. Europe and African nations were not left out as GDP growth rate declined, unemployment increased, currencies depreciated, and trade surplus decreased etc. The researcher undertook a study to examine the impact of the global financial crisis on entrepreneurship development in Europe and Africa. In order to answer the research questions, data were collected from secondary sources showing the effect on different economy with central focus on Europe and Africa region. The research shows a positive relationship between dependent and independent variables. The study also reveals the degree of effects varied across regions and countries due to difference in economic structure. The financial crisis had a common and more general impact on entrepreneurship development which was a decline in new firm start-ups, increased rate of firm failure, slow growth, reduced investment, unemployment, change in productivity for existing firms, and decline in bank support in regards to credit facilities.

Keywords:	Entrepreneurship, Recession, Financial Crisis, Regression, Dependent variable, Independent variable
Number of pages:	68
Language:	English
Date of acceptance:	16th december 2013

CONTENTS

FIGURES

TABLES

ABBREVIATIONS

AIG: American International Group Inc.

ANOVA: Analysis of variance

CESIS: Centre of Excellence for Science and Innovation Studies

CPI: Consumer Price Index

EC: European Commission

EU: European Union

FCIC: Financial Crisis Inquiry Commission

FICO: Fair Isaac Corporation

GDP: Gross Domestic Product

GEM: Global Entrepreneurship Monitor

GFC: Global Financial Crisis

IMF: International Monetary Fund

NBDR: New Business Density Rate

NBR: New Business Registered

OECD: Organization for Economic Co-operation and Development

SME: Small and Medium Scale Enterprises

1 INTRODUCTION

The global economy has occasionally been hit by crisis and the most recent, will not be the last. However, certain factors made this the most severe after the Great Depression of the 1930s, which includes financial market failure, macroeconomic problems and implementation of policy shortcomings.

The recent GFC indicates clearly that through financial transactions and international trade, nations have become integrated to the extent that an economic crisis in a nation has negative effect on other nations of the world. The recent crisis is seen as the biggest shock to the global financial market after the great recession in the 1930's. The GFC has been pervasive and the most recent which started in 2007 was caused by the United States subprime mortgage market. Prior the crisis, the US economy was characterised by flexible credit conditions, low risk management, low risk premium, aggressive lending practices which encouraged financial institutions to lend customer for mortgage. When subprime borrowers began to default due to increased interest rate as well as the prices of houses began to decline, financial institution were forced to repossess the properties. The economic contraction caused a spill-over effect which escalated negatively affecting the rest of the world economies and its global financial system. This development has created some challenges for the entrepreneurs in terms of access to finance, due to changes in the interest rate and inflation rate, a drastic decline in demand for goods and services as well as tightening credit terms which have affected cash flow etc.

Entrepreneurship development in recent times has been regarded as the bedrock and ingredient to economic stability and development around the globe, considering its impact in creating opportunities and meeting the needs of companies and individuals. The importance is recognised globally. It is a contributor to social economic growth and development by creating employment, enhancing economic development, improving the standard of living, promoting effective domestic utilization, conserving foreign exchange, creating new market development, and healthy competition as well as being one major contributor to an economy's GDP which have come from different sectors of the economy.

1.1 Aim of the research

The aim of the research is to determine the extent to which entrepreneurship development, and activities has been affected by the global financial crisis as well as ascertain the extent of business shock. The broad objective is to identify and analyze key macroeconomic variables and financial factors that may have adversely impacted the development of entrepreneurship in Europe and Africa.

1.2 Research Question

1. What is the effect of the global financial crisis on entrepreneurship in Europe and Africa?

2. What economic variables involved, directly affect the development of entrepreneurship in these areas?

1.3 Description of material

The materials needed to carry out this study are gathered from statistical publications from the World Bank, Organization for Economic Co-operation and Development, European Commission, and Global Entrepreneurship Monitor (GEM) etc. The mentioned institution's have comprehensive data published periodically which are necessary to answer the research questions.

1.4 Description of method

For this research, quantitative research methodology is selected. Secondary data collection is selected to collect data and information. To attain the objectives of the research, secondary data will be collected from books and publications on the subject matter as well as publications from the World Bank and the Organization for Economic Co-operation and Development (OECD).

A comparative analysis of inflation, GDP and interest rate and other macroeconomic variables would be done to ascertain the impacts of the global financial crisis on entre-

preneurship development in Europe and Africa. Also, regression analysis will be used to show the impact and level at which entrepreneurship development is affected by the crisis.

1.5 Limitations

The limitation of study is that individual Small and medium scale companies will not be studied but general changes in micro-economic data of both continents. The researcher chose to take a wider approach to the study because limiting to a few selected firms may not give a true picture of the entire Small and Medium scale Enterprises (SME). Also, due to insufficient data's accessible for certain countries, 8 countries will be selected from both continents.

1.6 Technical frame of reference

The earlier research relating to global financial crisis was by Michael Parkin, Melanie Powell and Kent Matthews in their book on Economics. In order to quantify the macro-economic effect of the global financial crisis, key variables were explained. The book gave a historical perspective as well as graphical presentation of the great depression and recession in the 1930's, 1974-75, 1980-81 and 1990-92. It went further to show the trends within the periods and the effects on Gross Domestic product, inflation, unemployment, interest rate and business cycle. The macroeconomic variables were examined on a global level with major focus on the economy of the United Kingdom.

1.7 Appropriate background information

The world was caught unaware in the event of the collapse of a small segment of the US mortgage market. This eventually spread from the finance sector to households and business, with damaging effects on the world economy. The subprime mortgage market had been growing at a speedy rate as loans were aimed at low income households with cheap interest rates with the belief that customers would refinance their loans even if they ran into financial difficulties. Subprime debt worth billions of US dollars had seeped into the financial system. While this was happening, everyone was content even

the credit rating agencies saw nothing wrong with the system thus neglecting the risks. As interest began to rise, house prices began to fall and subprime loan default increased. Cash flow slowed down which affected investors and financial institutions as they were reluctant to invest and lend respectively. Panic began to set in and extended to other financial system around the world.

2 OVERVIEW OF THE GLOBAL FINANCIAL CRISIS

The global financial crisis started in the United States of America (USA), where its financial center which is regarded as the most sophisticated in the world, failed to anticipate what was coming. The origin of the 2007 crisis dates back to early 2000s when the surplus of savings generated in a part of the world economy were absorbed by deficits in the developed nations (Pol , 2009. 5). The savings were initially invested on information technology but as the dot-com bubble occurred, investments were cut back. The groundwork for the debt bubble for 2001 to 2008 was laid by the innovation in the mortgage market in the USA. There was a significant increase in sub-prime mortgage after the dot-com bubble reaching 20% of total mortgage origination from 2005- 2006 (Pol, 2009. 6). The growth of the sub-prime market gave rise to lenders having easy access to finance through securitization and re-securitization. Also lax regulatory set up gave Americans easy access to mortgage loans and by the end of 2007, massive debts were held by Americans as interest rates rose (Desai 2011, 1).

The financial crisis that began in summer 2007 caused great uncertainty and deceleration in the growth of global economy since the great recession of the 1930s which intensified in September 2008. Some financial institutions such as Citigroup, Merrill – Lynch, Bears Stearns, Fannie Mac, Lehman brothers, and AIG went through difficult times and were either rescued by government bailout, merged or went bankrupt. When Lehman brothers went bankrupt in September 2008, the general perception that banks were too large to fail no longer holds, as it became clear that every bank were at risk. Reassessing the risk previously overlooked, investors withdrew from the market and liquidity dried up. Significantly, economic activities in the US declined in the months that followed and the first quarter of 2009, leading to a global shake-off as many other countries felt the sneeze worldwide. Bear Stearns on the other hand, had their hedge funds portfolio damaged by sub-prime mortgage and had to be rescued by the government.

According to report by Supreme Audit Institutions (2010, 15), the development of the crisis in Europe became visible during the second quarter of 2008, as growth began to decline. The EU commission had made a forecast that in 2009, growth would be at 1.5 per cent, just below the forecast of 2008. Many believed that the EU would not be af-

fected severely by the crisis in the financial market and the decline in economic and business activities in the USA. Households began to reduce their consumption as consumer confidence fell drastically to record low, and businesses began to restrain from fixed investments. In mid-September 2008, the crisis hit the EU hard as bank survival became uncertain, equity market fell, export volume declined by close to 15 per cent over the two quarters that followed, and limited access to capital became evident.

According to Oluwole Owoye (2009, 2), experts believed that Africa would not feel the impact of the financial crisis or that the impact would be minimal as they had limited exposure to the global financial market, an underdeveloped financial sector, restricted ownership of banks by foreigners and assertion that no financial institution outside South Africa possessed European or United States subprime mortgage backed securities or other derivative securities. Nevertheless, he went further to state that data showed the continent felt the impact as other transmission channels like foreign direct and portfolio investments, international trade, private remittance, flows from foreign aid, and tourism caused the economies in Africa to plummet.

2.1 Causes of the Global Financial Crisis

The financial crisis was caused by various factors (directly and indirectly) which impacted on the US economy thereby having spillover effect on the global economy. An enquiry was set up to investigate and analyze the crisis and on Jan 27, 2011, Financial Crisis Inquiry Commission (FCIC) released a report after investigation on the causes of the crisis. According to members of the commission, the crisis could have been avoided but a result of misjudgments, human action and inaction; signs were ignored.

The commission was of the conclusion that the crisis was caused by the following factors (FCIC 2011):

- Failure and ineffective financial market regulation;
- Corporate governance breakdown and reckless risk taking by many financial firms;
- Excessive borrowing by household, and Wall Street that put the financial system on a collision course with crisis;

- Policy makers were unprepared for the crisis thereby showing lack of understanding of the financial system;

- Systematic breaches in ethics and accountability.

2.1.1   Failure and ineffective financial regulation

Understanding the rationale behind the crisis was subject to an enquiry as to why the crisis spread at such devastating rate. The enquiry suggested that the financial market played its part, as market participant panicked; the credit market froze, and over the counter derivatives market was used to fuel the financial market that was already on fire (Ciro. 2013.48).

According to Jansen et al (2009.9), the government of the United States boosted the subprime crisis development through legislation which forced banks to extend credit facility to customers with bad credit history and lower income with legislation such as the Community Reinvestment Act.

The report provided by the Financial Crisis Inquiry Commission (FCIC) was acknowledged by, then the US treasury secretary, Timothy Geithner. He accepted that the limitation in the supervisory and regulatory framework in the US did not evolve to follow the growth and pace of the financial industry (Ciro. 2013.48). The constraint and shortcoming that existed in the financial market supervision and regulation undermined the capacity and ability of the regulatory framework to shield the economy from the crisis. Timothy Geithner went further to state the reason as to why the regulatory and supervisory framework failed. He said that the US were running side by side a parallel banking system that was largely unregulated with the standard banking system that was highly regulated. The weakness in the parallel banking system spilled over to the standard banking system.

2.1.2   Corporate governance breakdown and reckless risk taking

The enquiry to the cause of the financial crisis brought profound findings as to breakdown of corporate governance and irresponsibility. The commission disclosed ignorance by management of AIG (the multinational Insurance Corporation) on the risk and

terms of its derivatives worth 79 billion USD exposed to mortgage related securities. Also mortgage lender such as Fannie Mae's desire for larger market share, bonuses and profit led it to increase its exposure to risky securities and loans as the mortgage market was peaking. These were some classic examples as many institution were reckless in their actions by taking much risks with little capital and dependence on short term funding (FCIC 2011).

According to Lenssen et al (2010), "the business of business is to ensure a good governance of its own affairs (corporate governance) as well as a good governance of global and industry sector stability and sustainability (global governance)". The deficit on governance in the global economy starts from government and market failures. Government and market failure are exploited by companies in a profitable way in the short term, while in the long term the exploits undermines the sustainability and stability of the entire industry gradually, spreading to the entire economy which was evident in the financial crisis.

2.1.3 Excessive borrowing by household and Wall Street that put the financial system on a collision course with crisis

The genesis of the crisis began from a general psyche of the American people attaching size and quality of a home to define financial success. Everybody wanted a home; even those that already had one wanted an upgrade i.e. adding a swimming pool, or a bigger deck, build-out basement etc. With the events at that time in terms of rising house prices and low interest rate with cheap credit available, it all made sense to invest heavily on housing considering the minimal risk. Financial institutions gave loans to customers without taking credit ratings of individuals into cognizance. The credit score required to acquire mortgage according to Fair Isaac Corporation (FICO) standard was 680 and above (Gup 2010, 8). Sub-prime loans were offered to those with low credit score which as at 3rd quarter of 2007, accounted for nearly half (43%) of the homes foreclosed (Gup 2010, 8).

In the years preceding the crisis, households, as well as financial institutions borrowed a lot of money making them vulnerable to financial distress if their investments value declined. Investment banks such as Lehman brothers, Bear sterns, Merrill Lynch, Gold-

man Sachs and Morgan Stanley were all operating with a thin capital. It was revealed that their leverage were in the ratio of 40:1 i.e. for every 40 dollars in asset, there was 1 dollar in capital to cover losses. The institutions were borrowing money on short term basis which had to be renewed daily. For example, from 2001-2007, mortgage debt in the US almost doubled and household mortgage debt rose by more than 63% while wages remained stagnant. Also, the combined leverage, including guarantees and loans owned by mortgage lenders like Fannie and Freddie stood at 75:1 (FCIC 2011, xix).

2.1.4   Policy makers were unprepared for the crisis thereby showing lack of understanding of the financial system

After investigating the cause of the global financial crisis, the report shows that policy makers, who were charged with the responsibility of watching over the market, were not prepared for the event that unfolded in 2007. The Federal Reserve board, treasury department, and the Federal Reserve Bank were hampered as they didn't have full grasp of the financial system, particularly over the years preceding the crisis. They were in belief that risks were diversified when actually, it was concentrated. Lack of understanding in the financial system was shown in the inability of policy makers to anticipate what was coming, as they felt the housing bubble would not affect the entire financial system. Furthermore, the chairman of the Federal Reserve Ben Bernanke and secretary of treasury Henry Paulson assured the general public that the housing bubble would be contained (FCIC 2011, xxi).

The US government displayed inconsistency in handling the crisis when they rescued Bear Stearns and placed Freddie Mae and Fannie Mae into conservatorship. This was followed by their decision to save AIG, and not to save Lehman Brothers thereby allowing it to go bankrupt, and created a sense of panic as well as uncertainty in the market.

2.1.5   Systematic breaches in ethics and accountability

There was an erosion of standards in ethics and responsibility that increased the severity of the financial crisis which stretched from mortgage borrowers to financial institutions and policy makers. For example, reports show that between the summers of 2006 to 2007, the percentage of mortgage loan defaulters doubled, which clearly indicate that

borrowers intentionally took loans they had no capacity paying. Lenders on the other hand made mortgage available to borrowers; they knew could not afford the loan, which in turn caused losses to mortgage security investors. Also lenders paid mortgage brokers yield spread premium to put borrowers into high cost loans in order to get higher fees (FCIC 2011, xxii).

2.2 Macro-economic variables in a recession

The factor that describes a macro economy is often referred to as key macroeconomics variables. These factors are important in ascertaining the state of an economy at the regional or national level. The major concern of macroeconomist is to analyze and understand the determinants of the major aggregate trends in an economy with respect to inflation, interest rate, total output of goods and services, and unemployment. Analyzing macroeconomic variables, seeks to explain the impact and cause of short run fluctuations in business cycle (GDP) and the main determinants of the long run part of economic growth.

2.2.1 Economic growth and business cycles

Economic growth is measured by rate of change in Gross Domestic Product (GDP). The business cycle in an economy involves alternating period in economic growth and contraction. It can also be described as an economic activity tendency to fluctuate, moving from high economic activity level to negative growth. The business cycle goes through four phases which includes peak, recession, trough and recovery. According to Turker (2010, 159), the business cycle begins at a peak, drops to a bottom, climbs steeply, and then reaches another peak and once the trough is reached, the upswing starts again.

Business cycle varies in intensity and duration, and one business cycle is divided into four phase as illustrated in the figure below. The figure below illustrates how fluctuation of Gross Domestic Product can be measured by trend line, which indicates real GDP upward trends over time. The two peaks indicate that the economy is operating close to its production possibility curve and real GDP is at high level. In between each peak, a recession in the economy follows which indicates a decline in real GDP and increase in

unemployment. Trough phase depicts the stage where the economy reaches its mini-
mum, followed by an upward transition to expansion.
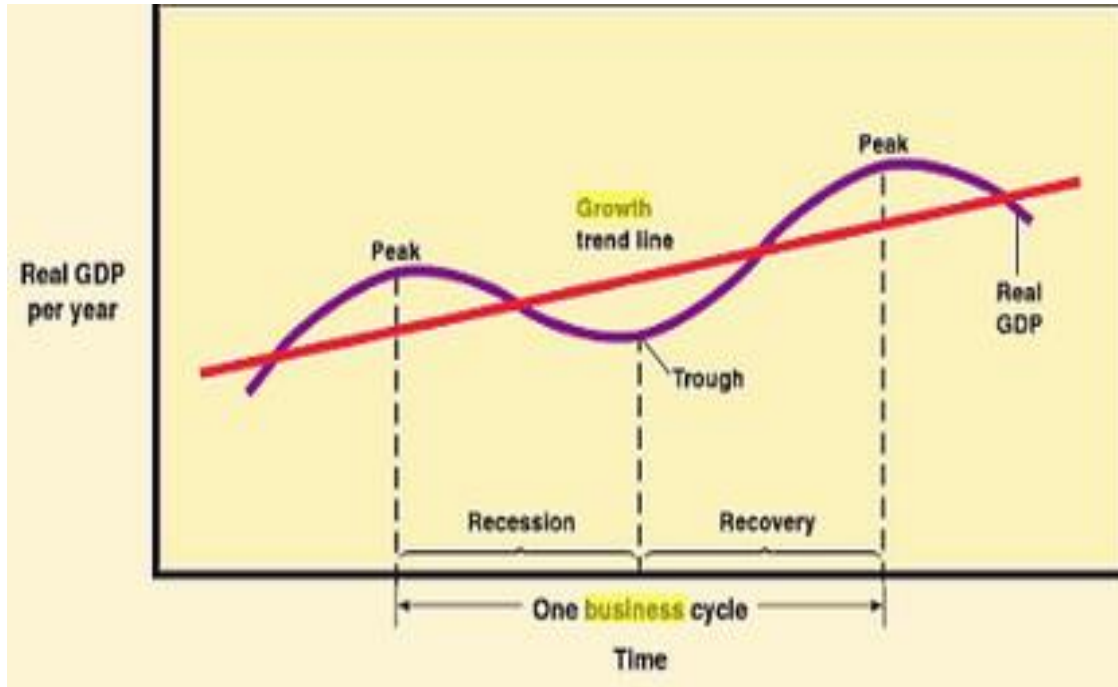
Figure 1: Hypothetical business cycle (Figure by author, based on Turker 2010 p. 159)

The most common indicator describing the economic development of a country is the
GDP. It measures the total value of goods and services produced in a country during a
year. Since it describes the total level of production, it is mostly used as a yardstick to
measure economic achievement. From the chart below, the Euro area and Sub-Saharan
Africa witnessed a major contraction in the growth rate in 2009 to -4.40% and 2.00%
respectively. Both regions had a relatively similar fluctuating growth trend from 2003 to
2007. The GDP growth rate began to decline from 2007, when the crisis started, until
2009 before it started to have a gradual increase.
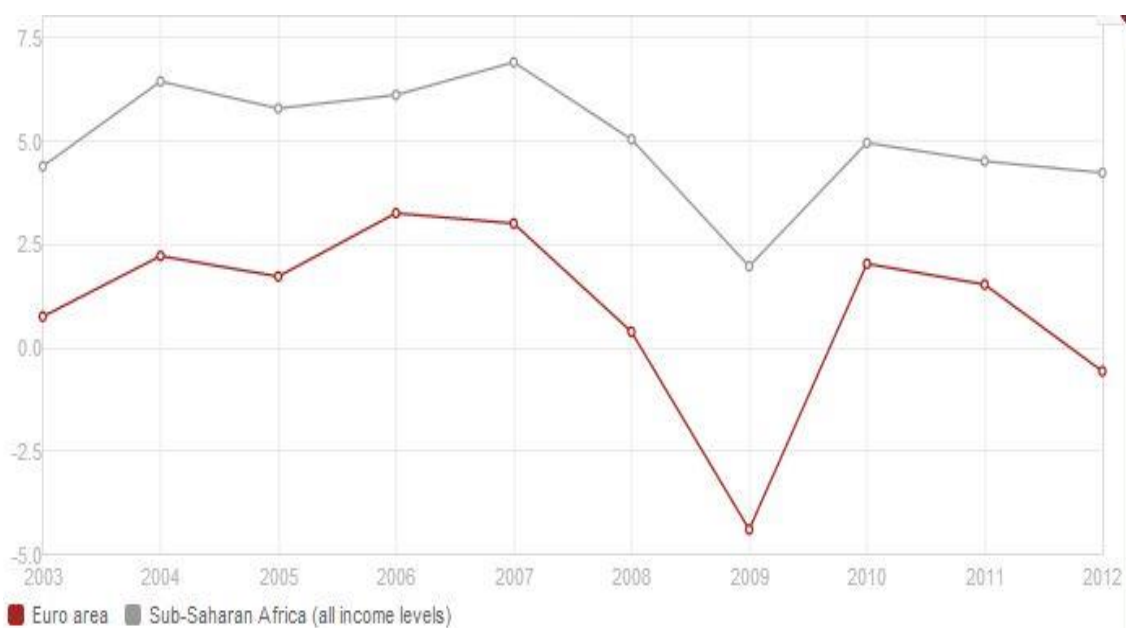
Figure 2: GDP growth (annual %) (Source: World Bank)

2.2.2 Unemployment

This is one of the recognized economic indicators of a recession. Unemployment can be defined as those persons who don't have a job but are willing and available to work during a certain period of time. According to Williamson (2011, 33), there are four factors that affect unemployment, which explains the behavior observed in rate of unemployment. These factors are structure of employment, aggregate economic activity, sectoral shifts, and government intervention. Firstly, the structure of population affects the rate of unemployment as workers in different age groups tend to act differently in the labor market. Secondly, the rate of unemployment inversely fluctuates along with aggregate economic activity i.e. the unemployment tends to be low when aggregate output is above trends. Thirdly, sectoral shifts are changes that occur in the structure of production in the long run e.g. there could be a shift from the service sector of an economy to the manufacturing sector as workers tend to shift from the declining sector to an expanding sector. Finally, intervention by the government affects the rate of unemployment, especially unemployment insurance system e.g. an unemployment compensation entails that costs of job search are reduced and therefore unemployed persons tend to search longer thus increasing rate of unemployment.

Types of unemployment

1. Frictional unemployment is a result of normal turnover due in the labor market. It includes people who are temporarily between jobs, because they are changing or moving occupation, and those who are just entering the labor market.

2. Seasonal unemployment arises due to changes in tourist patterns, weather or other seasonal factors and usually occurs in the short term. Seasonal factors tend to cause complication in unemployment data as unemployment rate increase in certain months and declines in other months despite the unchanged condition of the economy. According to Hall & Lieberman (2009, 154), in order to prevent complications in each months unemployment rate, an adjustment process that removes any changes in the rate that occurs in that month i.e. if unemployment rate in May is one percentage point higher than other periods, then an adjustment for May would be the actual rate less one percentage point.

3. Structural unemployment occurs when workers lose their jobs as a result of skill mismatch, or technology obsolescence. According to Hall & Lieberman (2009, 155), late 2007, in the USA before the recession, unemployment stood at 4.7% during which jobs were available for language translators, nurses, science and math teachers. Those laid off from other sectors lacked the skills to fill the available jobs due to skill mismatch.

4. Cyclical Unemployment occurs as a result of a decline in the total production of an economy typically during a recession. When there is a recession in an economy, total output declines and the unemployment rate rises.

The chart below shows the unemployment rate trend from 2003 to 2011 in the EU where there was a downward slope from 2005, which signifies a decline in unemployment, until 2008 where unemployment started to increase. According to the European Commission, member states were affected differently by the crisis because they regulated and structured their labor market differently. The rate of unemployment, which measures the degree of unemployed persons to the total labor force, rose from 6.7% in

May 2008 to 8.9% in May 2009 which was the highest since 2005. EU data could not be compared with Sub-Saharan Africa, reason being that data were unavailable.
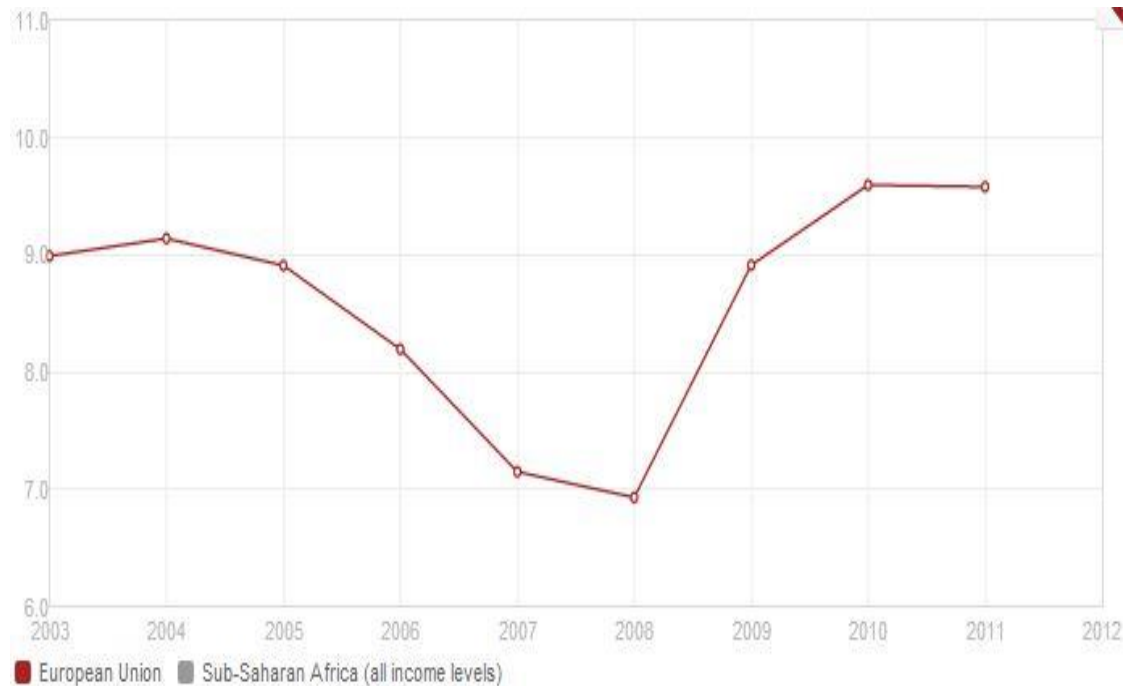
Figure 3: Unemployment rate (% of total labour force) (Source: World Bank)

2.2.3 Inflation

Inflation can be said to be a general increase in the price level of goods and services over a certain period. In economic sense, a reasonable inflation rate should be less than 5% and anything above that is regarded as high. The inflation rate is the percentage change in the price level from the previous period.

Inflation is measured by calculating the change in a weighted price index over time. This is called a Consumer Price Index (CPI), which combines prices of a range of goods and services. Prices are recorded in different areas of a country and in different kinds of stores, such as corner shops and supermarkets. Different goods and services are given different weights because, for example, a larger proportion of household income is spent on food than on tobacco. Food is thus given more weight than tobacco (Anderton 2008.217). A period of inflation brings changes in other variables which include interest rate and exchange rate.

Interest rate is the percentage value of amount received by a lender from the borrower. When inflation is high, the value of money drops which in turn affect the cost of borrowing (interest rate). To ascertain the real interest rate in terms of goods and services that money can buy, it is the nominal interest rate minus inflation rate. Inflation rate varies across countries and when this differs over a long time, it results to a change in foreign exchange value of money.

Types of inflation

1. Demand-pull inflation: According to Michael Parkin et al (1997, 834), this inflation arise as a result of an increase in aggregate demand. When there is high demand for goods and services, sellers may be unable to meet with the supply. Seller could respond by increasing the prices which generally pull up the price level in the economy by pressure from total expenditures of buyers. Other individual factor that increase aggregate demand are increase in government purchase, increase in the money supply, increase in demand for export when the economy is at full employment or near full employment, and increase in the GDP and price level in the rest of the world.

2. Cost-push inflation: It is an inflation that results from an increase in cost of production. A pressure in price from seller's side due to cost push up is passed on to buyers which could cause cost-push inflation. According to Patrick and Gerry welch (2009, 117), upward pressure in price could be a result of increase in raw material, labor, machinery, fuel, borrowing etc. A classic example was from the period of July 2007 to July 2008 the price of a barrel of oil increased from $69.61 to $137.11.

Harmonized Indices of Consumer Prices are created for making international comparisons of consumer price inflation, it represent the change in prices of a standard goods/services which households purchase for consumption. In the chart below, inflation was at its highest point in 2008 when the Euro area and Sub-Saharan Africa recorded a rate of 4.07% and 10.6% respectively. The rate of inflation in Sub-Saharan Africa is alarming despite the decline in the subsequent years; it is still on the high side.
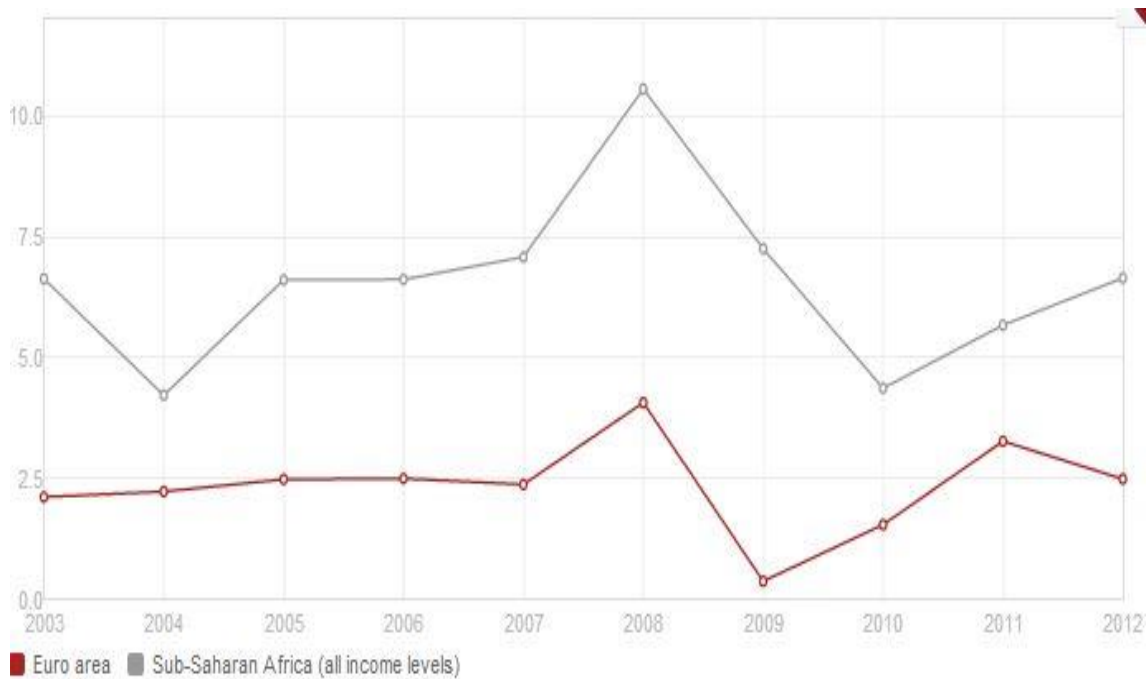
Figure 4: Inflation rate (annual %) (Source: world Bank)

2.2.4 Current Account Balance

The current account measures flow of trade in goods/services as well as net transfers. It records the payments from imports i.e. the purchase of goods/services from other nations, receipt from export i.e. sales of goods/services to other nations, receipt of interest income from other nations, payment of interest to other nations, and other transfers and gift. Services include factor and non-factor services, where factor services refer to activities rendered to other countries that generate income in terms of investment income (including interest, profit and rent) and compensation of employees (including salaries and wages), while non-factor services include services such as insurance, shipping, banking etc. (Agarwal Vanita 2010, 309).

Current account surplus and deficits

When the sum of credit (receipt) exceeds the sum of debits (payments), it implies that the current account has a surplus which shows that the country is experiencing a net inflow of income. According to Blanchard and Milesi-ferretti (2012, 141), There are good reasons for current account surplus e.g. retirement savings accumulated by aging popu-

lation, limited investment opportunities in home country, as well as positive productive externalities arising from a strong tradable sector, which leads to export growth strategy characterized by high export and low domestic demand. They went further to state bad reasons for current account surplus e.g. inefficient financial intermediation, lack of social insurance, as well as distortions in as a result of insufficient global liquidity provision leading to high accumulation of reserve.

When the sum of debit (payment) exceeds the sum of credit (receipt), it implies that the current account is in deficit which shows the country experienced a net outflow of income. Current account deficit can arise for "good" or "bad" reasons. Failure in financial regulations fueling credit booms is a bad reason for deficits while international lending and borrowing associated with welfare gains e.g. temporal low price on export and high investments due to high marginal product of capital are good reasons for deficit (Blanchard and Milesi-ferretti 2012, 141).

From the chart below, it can be deduced that the European Union (EU) and Sub-Saharan Africa experienced a current account imbalance which was significant especially in the EU during the crisis in 2008. The EU experienced a deficit from 2006 to 2008 with the later having a huge deficit of -61.735 billion US dollars. Sub-Saharan Africa had always experience a deficit except for 2007 where it had a surplus of 9.9 billion US dollars. The deficit reflects weaknesses in domestic demand (in surplus nations) and cost competitiveness and weak price often merged with high debt levels (in deficit nations).
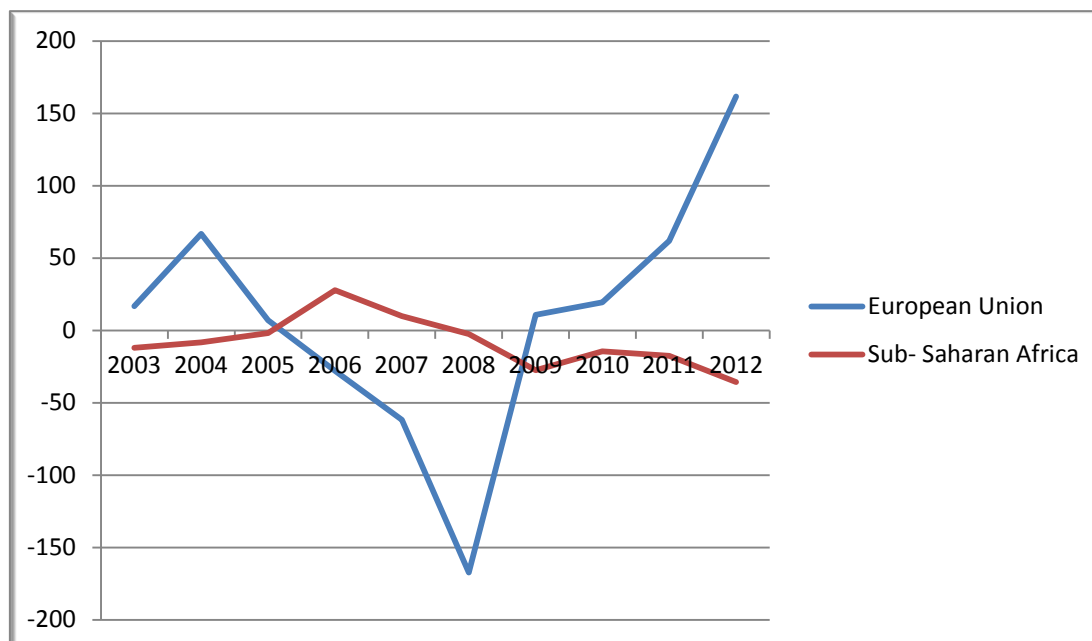
Figure 5: Current Account Balance (US Dollars Billions) (Source: International Monetary Fund)

2.3 Entrepreneurship concept

The term was first used in early 16th century for army leaders in France and applied for the first time to business in the 18th century to define a person who trades on goods by buying and selling at an uncertain price. There is no generally accepted definition of entrepreneurship, but several scholars over time have given definition based on their ideology and viewpoints. Most definitions state that it is the starting of a business concern by putting into action one's business plan and utilizing limited resources at his/her disposal.

According to Merriam – Webster dictionary, "*an entrepreneur is one who manages and assumes the risk of a business or enterprise.*"

Natarajan & Amishi (2009, 2), quoted Peter Drucker's definition of an entrepreneur as one who constantly searches for changes, responds to such changes, and exploits the changes as an opportunity. Entrepreneurs require a specific tool which is innovation, the means by which changes are exploited as an opportunity for business.

Entrepreneurship basically means to start up a business/company based on findings of certain niche in a market place which aims at creating goods and services to satisfy

needs and wants of customers in order to make a profit while creating employment and rendering value added services. It is a concept of self-fulfilling one's dream and aspirations.

In order to enhance the understanding of this study, it is important to review the concept of entrepreneurship and consider previous work related to the topic. The concept of entrepreneurship was first established in the 1700's and its meaning has evolved ever since (Pande Jagdish 2009). They simply equate it with starting up a business and one's willingness to bear risk for new venture. Others view an entrepreneur as an innovator who markets his creativity by developing goods and services in demand by the market.

One of the early theories of entrepreneurship was Richard Cantillon's theory of entrepreneurship where he defined the entrepreneur as an agent who buys means of production at certain prices to combine them into new product. He classified economic agents into three main actors which includes property owners (capitalist), hirelings (wage workers) and entrepreneurs. According to him, the entrepreneurs are the most active of three agents in connecting customers with producers. According to [brown and Thornton, n.d.], Cantillon's theory specifically defined entrepreneurship by giving it a broad application by stating it as "*anyone who invests (in the sense of acquiring and employing resources) with the purpose of selling goods in the future at an uncertain price*".

According to Pande Jagdish (2009, 38), Joseph Schumpeter expressed explicitly the economic function of an entrepreneur. The entrepreneur is one of the main movers of economic development as they function in an innovative way. Innovation is distinguished in five type which are introduction of a new product (or an improvement of an existing product), introducing new production method, the opening of new market, acquiring new source of supply of raw material, and creating a new type of industrial organization. Any that performs the function mentioned is regarded as an entrepreneur whether they are dependent employee of an organization, such as directors or managers or independent owners. The most favorable climate for innovation is when the economy is nearing equilibrium, for then it is relatively easy to foresee the future.

2.4   Entrepreneurship development

An economics scholar Joseph Schumpeter in his theory of economic development stated that entrepreneurs are important and key drivers of economic development.

According to OECD (2009), entrepreneurship development has been identified to be the key generator of income and employment, productivity, innovation, growth and development and is believed to offer ways to meet economic, environmental and social challenges. In recent times, it has been threatened by the global financial crisis as ventures became more vulnerable not only in accessing funds but also increased payment delays on receivables, shortage in working capital, decrease in liquidity, and reported increase in defaults, insolvency and bankruptcy. For example, in Belgium, 43% of surveyed entrepreneurial ventures experienced extended delays in receivables and also in Netherland 50% of ventures had to deal with longer payment terms from their customers.

According to Saroj & Mehndiratta (2009,3), entrepreneurs play a significant role in contributing and developing an economy as new ideas, new products and new units come into the economy broadening the production and product base of a country. The entrepreneurship importance for economic development can be considered under the following points:

- Industries are developed in different part of a country most especially in backward and rural areas.
- New markets are developed, product and concepts leads to increase and establishment of product base and markets.
- Production capacity enhancements in a country lead to optimum utilization of resources and expand the market base.
- Natural resources are utilized optimally as more industries are established in the country.
- Processing of local material into finished for export as well as domestic consumption is encouraged.

Every economy is keen in encouraging economic development, implying a development in industry and agriculture resulting in a rise in the per capita income of the country.

The economic development of any nation cannot occur spontaneously but dependent on human resources. According to Gordon et al (2009.18), the role of an entrepreneur in economic development can be studied under the following:

1. Coordinating roles: The vital role of an entrepreneur is to coordinate the different factors of production. This involves the selection of the right type of factors, employing the right quantity of each factor, division of labor, use of the best technology etc. Schumpeter believes that economic development is made possible if new combinations of production factors are undertaken. In the absence of this role, the factors of production will stay dormant in the country. Thus, entrepreneurs improve economic growth by integrating and coordinating the resources in the country.

2. Agent's role: Entrepreneurs often acts as agent and catalyst of economic development by recognizing opportunities and putting them to action. They seize opportunities, set up industries and business undertakings thereby aiding economic transformation.

3. Innovation roles: Innovation raises the productive efficiency of a country leading to greater output and income. Over the years, entrepreneurs have innovated and developed new products which have resulted in economic development.

4. Risk assumption role: This is one of the most important roles of an entrepreneur as they assume risks. Every business undertaking involves risks and business cannot be done if entrepreneurs are not willing to bear risks. The economic benefit of risks is profit. The amount of profit is highly dependent on the amount of risks undertaken. Capital formation is made possible as a result of saving of wealth from profit generation which could as well be seen as an ingredient for economic development.

5. Role of capital formation: Entrepreneurs are regarded as human agent required to mobilize capital to utilize natural resources, to carry on trade, and to create market. Economic development would remain stagnant without capital formation.

6. Export promotion role: Export trade is an important ingredient to economic development as this creates inflows of money into the economy. Entrepreneurs stimulate advancement by means of their entrepreneurial activities and act as agent, of economic development.

2.5 Economic conditions that can affect entrepreneurship opportunities

The existence of entrepreneurship occurs in any economic conditions. The economic state of a country influences the form and tendency of entrepreneurial activity. The conditions in an economy affecting the availability of entrepreneurial opportunities are the level of economic growth, stability of macroeconomic conditions, income level, and employment levels.

When a country experiences sustained economic growth and stable macro-economic conditions, there is the likelihood that entrepreneurship form manifested is of great value to the country (GEM, 2006). In such environment, low- innovation, low value entrepreneurship would decrease in favor of high value and innovative entrepreneurship due to economic stability. Literatures in entrepreneurship have shown that economic conditions influence creation of new business. In times of harsh economic condition, people tend to consider engaging in entrepreneurship often leading to initial upsurge in new business creation. This upsurge is often followed by a huge failure rate and decline in funding source leading to a decline in new business startup rate.

Evidence from studies has different views on the influence of unemployment in new business creation rate. According to Wildeman et al (1998), studies show that unemployment rate gives incentives for people to engage in entrepreneurship. Other studies opined the effect of unemployment has no significance on start-up rates (Gomez & Spencer 2004). Thus, drivers to entrepreneurship in a country are influenced in two ways.

Income level serves as an indicator of prosperity. When income level in a country is high, it often translates to availability of funds which eases new business creation. Income per capita importance as a driver for new business creation is supported by different studies (Tan, Begley & Schock 2005). The higher the income level over time leads to high new business creation rates.

3 RESEARCH METHODOLOGY

The chapter discusses the approach adopted in carrying out the research. A discussion of quantitative research and data analysis is given as well as a brief outline of the validity and reliability of the study. The process of data collection is also discussed in details.

3.1 Quantitative research

Quantitative method was chosen as the most suitable way in seeking answers to the research questions. Quantitative research is an approach that is quantifiable where raw data are collected by different data collection techniques and turned into relevant information by mathematical or statistical manipulation. A more concise definition is explaining phenomena by gathering numerical data which are analyzed using mathematical or statistical based methods (Muijs Daniel, 2004.1). The objective of quantitative research is to quantify data and make a general result from a sample which is suitable in establishing a cause-and-effect relationship. The goal of this study was to gain an insight and understand the macro-economic variables that may have impacted on entrepreneurship development. In this research study, data was collected from the World Bank, Global Entrepreneurship Monitor (GEM) and OECD which provide access to international data's.

3.2 Data analysis

In order to establish a cause-and-effect relationship, the researcher used regression in analyzing data. Data is analyzed using the Statistical Package for Social Science (SPSS). Regression analysis is a tool in statistics for investigating relationships among variables to ascertain the effect of one variable on another.

According to Xin Yin (2009.2)," *Regression analysis is the method to discover the relationship between one or more response variables (also called dependent variables, explained variables, predicted variables, or regressands, usually denoted by y) and the predictors (also called independent variables, explanatory variables, control variables, or regressors, usually denoted by x1, x2,……xp)*".

The researcher will employ a multiple linear regression in analyzing data. This regression is for modeling the relationship between two or more variables; the dependent variable (y) and independent variable (x). The regression model is often expressed in the following form:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k + \varepsilon$$

Where Y= dependent variable;

β_0= y intercept;

β_1= slope of the regression line;

x= independent variable;

ε= random error.

Therefore, the multiple regression equations for the research would be:

NBDR= $\beta_0 + \beta_1$GDP - β_2Inflation +ε

NBDR is the value of the dependent variable, β_0 is the constant, β_1 is the beta coefficient or slope for GDP, GDP is the first independent variable explaining the variance in NBDR, β_2 is the beta coefficient or slope for inflation. Inflation is the second independent variable explaining the variance in NBDR and ε is the standard error of coefficient.

NBR = $\beta_0 + \beta_1$GDP - β_2Inflation +ε

NBR is the value of the dependent variable, β_0 is the constant, β_1 is the beta coefficient or slope for GDP, GDP is the first independent variable explaining the variance in NBR, β_2 is the beta coefficient or slope for inflation. Inflation is the second independent variable explaining the variance in NBR and ε is the standard error of coefficient.

Note: Based on economic theory, the expected sign for the independent variables should be positive β_1GDP and negative β_2Inflation. In order words, GDP is expected to have positive effect on NBDR and NBR while inflation is expected to have negative effect on NBDR and NBR. A high inflation is associated with low value of NBDR and NBR holding GDP fixed.

3.2.1 Statistical Package for Social Science (SPSS)

SPSS application for Windows will be used to analyze the data collected. It is the most powerful and available software used to summarize data in order to determine if there are any differences between groups; relationships amongst variables. All the data is interpreted and treated by using relevant information from analysis method.

3.3 Dependent Variables

Newly registered business NBR (Numbers): This is the number of new limited liability company registered in a calendar year. It is a legal entity that is distinct from the owners and has its own privileges. Data on the total number of closed companies are excluded as a result of heterogeneity in the measurement and definition of legal entities. Although, the number of businesses registered may not state much about entrepreneurial innovativeness as understood by Schumpeter, it is related partly to Kirznerian entrepreneurship i.e. small incorporated businesses and self-employed need to exploit and perceive new market opportunities in order to survive. Kirznerian entrepreneurship indicator would be the number of high growth businesses per active person or per capita i.e. business that recognizes opportunities may explore and expand their niche (Kosi Tanja, 2012.19). NBR is denoted with y_2 sign in the regression analysis.

New business entry density rate (NBDR): This is the number of companies limited by liability or its equivalent registered newly per 1000 working age people i.e. ages ranging from 15-64 per calendar year. Limited Liability Company is a company where the liability of the members is limited by their investments in the company. The study collects data on all limited liability companies regardless of size. Sole proprietorship and partnerships are not included in the analysis as a result of the differences with respect to regulation and definition worldwide. NBDR is denoted with y_2 in the regression analysis.

3.4 Independent Variables

Independent variable are selected, measured, or manipulated by a researcher to ascertain the relationship to an observed phenomenon. In research, these variables are antecedent

conditions that are assumed to affect a dependent variable. The variables are either observed or manipulated by the researcher so that it can be related to the values of the dependent variable. The independent variables for this study are GDP growth rate (x1), and inflation rate (x2). All of which have been explained in previous chapter. The study concentrates on analyzing the impact of these macroeconomic variables on entrepreneurship development.

Theoretically, studies show the effect of a financial crisis in an economy which on the long run could affect entrepreneurship development (Michael Parkin et al 1997). Inflation causes a lot of distortion in an economy which makes planning difficult for entrepreneurs with regards to level of production under inflationary periods and predicting effective demand. On the other hand, push and pull factors could drive a person to entrepreneurship. In the case of unemployment, the push factor is a dominant force which drives a person into starting their own business due to redundancy and income insecurity.

3.5 Validity and Reliability

It is said that designs, samples, and measures don't have validity; only inferences, conclusions or proposition can be said to be valid. A lot of different conclusions and inferences are made when conducting research study. Many of these are not the main hypothesis of the study but are related to the process of doing research. All research, fundamental or applied, involves observation or measurement. When we observe or measure we are interested with how our observations are swayed by the circumstances in which they were made or whether what we intended to measure is measured. Validity in quantitative research determines whether what is measured is truly what was intended or how genuine the research result are (Joppe, 2000.2). According to Wainer & Braun (1998), validity in quantitative research is described as construct validity. The construct is the concept, question or hypothesis, notion that determines which data to gather and how it will be gathered.

Reliability in research terms means consistency or repeatability. A measure is deemed reliable if it gives the same result consistently (assuming what is been measured isn't changing). The extent to which consistency of result over time and accuracy of the rep-

resentation of total population under study is reliable if the study is reproduced under a similar methodology (Joppe 2000). Repeatability of result ideas is embodied in the citation of Kirk & Miller (1986.41-42) where three types of reliability was identified which relates to the stability of measurement over time; the degree to which given repeatedly, measurement remains the same ; and the similarity of measurements within a certain period of time.

The validity of data used in the study are relevant and appropriate to answer the research questions since it truly measures what it intended to be measured. Multicollinearity is a risk in using multiple regression method as it analyses the whole bundle of predictors on dependent variables. It may not give results on which predictor is superfluous with respect to others and may not give results about individual predictor. The sources of data and the data itself are believed to be trustworthy and reliable for the study. Data from World Bank and OECD are internationally recognized and accepted while GEM data captures different types of entrepreneurial activities including part-time, self-employment and informal economy activities. Data by GEM are unique because it provides information about the entire spectrum of new businesses and it's a major database for global comparative entrepreneurship. Finally, along with reliable data, measurement consistently would give the same results over time given similar methodology.

4 DATA PRESENTATION AND ANALYSIS

In an attempt to ascertain the relationship between the dependent variables and independent variables, multiple regression is employed by the researcher. The researcher chose to analyze data from four countries in Europe and Africa respectively which was dependent on the availability of data. Data's collected was between the years 2004 to 2011. The variables used are as follows:

Independent variables:

GDP growth rate = Gross domestic product growth rate (x1);

Inflation rate (x2)

Dependent variables:

NBDR = New business density rate (y1);

NBR = New business registered (y2)

The tables below are a summary of multiple regression output for the countries analyzed where the dependent variable remained constant. The multiple regression output can be found in the appendices.

Western Europe - Germany

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.586	0.628
Coefficient of Determination (R^2)	0.343	0.398
ANOVA - P value	0.350	0.285

Table 1: Multiple regression summary for Germany

Eastern Europe - Russia

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.550	0.550
Coefficient of Determination (R^2)	0.302	0.302
ANOVA - P value	0.406	0.407

Table 2: Multiple regression summary for Russia

Northern Europe - Finland

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.773	0.793
Coefficient of Determination (R^2)	0.598	0.628
ANOVA - P value	0.103	0.084

Table 3: Multiple regression summary for Finland

Southern Europe - Italy

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.554	0.420
Coefficient of Determination (R^2)	0.307	0.176
ANOVA - P value	0.400	0.615

Table 4: Multiple regression summary for Italy

West Africa - Nigeria

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.309	0.283
Coefficient of Determination (R^2)	0.095	0.080
ANOVA - P value	0.778	0.812

Table 5: Multiple regression summary for Nigeria

North Africa - Algeria

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.678	0.485
Coefficient of Determination (R^2)	0.459	0.236
ANOVA - P value	0.215	0.511

Table 6: Multiple regression summary for Algeria

Southern Africa - South Africa

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.709	0.821
Coefficient of Determination (R^2)	0.502	0.674
ANOVA - P value	0.175	0.106

Table 7: Multiple regression summary for South Africa

East Africa - Botswana

Independent Variables	NBDR	NBR
Correlation Coefficient (R)	0.717	0.681
Coefficient of Determination (R^2)	0.514	0.464
ANOVA - P value	0.165	0.210

Table 8: Multiple regression summary for Botswana

4.1 Findings

Germany: In the second column, the dependent variable (new business density rate) can be predicted using the correlation coefficient (R). In this case, NBDR is the correlation between the actual and predicted scores of the dependent variable. R value ranges from 0 to 1, with greater value indicating that the value predicted is more correlated with the dependent variable. A value of 0.586 indicates a moderate level of relationship between the dependent variable (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 is 0.343; therefore about 34.3% of the variation of new business density rate is explained by GDP rate and Inflation rate. The ANOVA indicates whether the regression is a good fit. The P value has to be less than 0.05 to be statistically significant in predicting the dependent variable. The P value of 0.350 indicates that the predictor is insignificant and cannot be used to predict NBDR. The coefficient table is not useful in this instance since the predictor is statistically insignificant and so the coefficient cannot be interpreted.

In the third column, the R value is positive with a value of 0.628 showing a moderate relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.395 implies that 39.5% of the variation of new business registered is explained by GDP and inflation rate. The ANOVA shows a P value of 0.285 which is greater than 0.05 i.e. (0.285>0.05) which means that the predictor is statistically insignificant in predicting the dependent variable. Since the predictor is not statistically significant, the coefficient table is irrelevant and cannot be interpreted.

Russia: The second column table depicts a positive correlation coefficient i.e. R value of 0.555.This shows that there is a moderate relationship between the dependent (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.302 implies that 30.2% of the variation of NBDR is explained by GDP and inflation. The ANOVA shows a P value of 0.406 which is greater than 0.05 i.e. (0.406>0.05). This implies that the predictor is statistically insignificant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is statistically insignificant.

In the third column, the correlation coefficient i.e. R value is positive with a value of 0.550. This shows a moderate relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.302 implies that 30.2% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.407 which is greater 0.05 i.e. (0.407>0.05). Therefore, the predictor is statistically insignificant in predicting the dependent variable. Since the predictor is statistically insignificant, the coefficient table is irrelevant and cannot be interpreted.

Finland: The second column shows a positive correlation coefficient (R value). The R value 0.773 shows that there is a strong relationship between the dependent variable (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.598 implies that 59.8% of the variation of NBDR is explained by GDP and inflation. The ANOVA shows a P value of 0.103 which is greater than 0.05 i.e. (0.103>0.05). This implies that the predictor is not statistically significant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is statistically insignificant.

The third column has a positive correlation coefficient of 0.793. This shows a strong relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.628 implies that 62.8% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.084 which is greater 0.05 i.e. (0.084>0.05). Therefore, the predictor is not statistically significant in predicting the dependent variable. Since the predictor is not statistically significant, the coefficient table is irrelevant and cannot be interpreted.

Italy: The second column shows a positive correlation coefficient (R value). The R value 0.554 shows that there is a moderate relationship between the dependent (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.307 implies that 30.7% of the variation of NBDR is explained by GDP and inflation.

The ANOVA shows a P value of 0.1228 which is greater than 0.05 i.e. (0.1228>0.05). This implies that the predictor is statistically insignificant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is statistically insignificant.

In the third column, the correlation coefficient i.e. R value is positive with a value of 0.420. This shows a weak relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.176 implies that 17.6% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.615 which is greater 0.05 i.e. (0.615>0.05). Therefore, the predictor is statistically insignificant in predicting the dependent variable. Since the predictor is statistically insignificant, the coefficient table is irrelevant and cannot be interpreted.

Nigeria: The second column shows a positive correlation coefficient (R value). The R value 0.309 shows that there is a weak relationship between the dependent variable (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.095 implies that 9.5% of the variation of NBDR is explained by GDP and inflation. The ANOVA shows a P value of 0.778 which is greater than 0.05 i.e. (0.778>0.05). This implies that the predictor is not statistically significant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is statistically insignificant.

The third column has a positive correlation coefficient of 0.283. This shows a weak relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.080 implies that 8% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.812 which is greater 0.05 i.e. (0.812>0.05). Therefore, the predictor is statistically insignificant in predicting the dependent variable. Since the predictor is statistically insignificant, the coefficient table is irrelevant and cannot be interpreted.

Algeria: The second column table depicts a positive correlation coefficient i.e. R value of 0.678.This shows that there is a moderate relationship between the dependent (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.459 implies that 45.9% of the variation of NBDR is explained by GDP and inflation. The ANOVA shows a P value of 0.215 which is greater than 0.05 i.e. (0.215>0.05). This implies that the predictor is not statistically significant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is not statistically significant.

In the third column, the correlation coefficient i.e. R value is positive with a value of 0.485. This shows a weak relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.236 implies that 23.6% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.511 which is greater 0.05 i.e. (0.511>0.05). Therefore, the predictor is not statistically significant in predicting the dependent variable. Since the predictor is not statistically significant, the coefficient table is irrelevant and cannot be interpreted.

South Africa: The second column shows a positive correlation coefficient (R value). The R value 0.709 shows that there is a strong relationship between the dependent variable (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.502 implies that 50.2% of the variation of NBDR is explained by GDP and inflation. The ANOVA shows a P value of 0.175 which is greater than 0.05 i.e. (0.175>0.05). This implies that the predictor is statistically insignificant in predicting the dependent variable. The coefficient table is irrelevant and cannot be interpreted since the predictor is statistically insignificant.

The third column has a positive correlation coefficient of 0.821. This shows a strong relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.674 implies that 8% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA depicts a P value 0.106 which is greater 0.05 i.e. (0.106>0.05). Therefore, the predictor

is statistically insignificant in predicting the dependent variable. Since the predictor is statistically insignificant, the coefficient table is irrelevant and cannot be interpreted.

Botswana: In the second column, correlation coefficient R is 0.717 which shows a strong positive linear relationship between the dependent variable (NBDR) and independent variables (GDP and inflation). The coefficient of determination R^2 is 0.514; therefore about 51.4% of the variation of new business density rate is explained by GDP rate and Inflation rate. The ANOVA depicts P value of 0.165 (i.e. 0.165>0.05) which indicates that the predictor is insignificant and cannot be used to predict NBDR. The coefficient table is not useful in this instance since the predictor is statistically insignificant and so the coefficient cannot be interpreted.

In the third column, the R value is positive with a value of 0.681 showing a moderate relationship between the dependent variable (NBR) and independent variables (GDP and inflation). The coefficient of determination R^2 of 0.464 implies that 46.4% of the variation of new businesses registered is explained by GDP and inflation rate. The ANOVA shows a P value of 0.210 which is greater than 0.05 i.e. (0.210>0.05) which means the predictor is statistically insignificant in predicting the dependent variable. Since the predictor is statistically insignificant, the coefficient table is irrelevant and cannot be interpreted.

5 DISCUSSION AND CONCLUSION

5.1 Discussion

Data analysis reveals the relationship between macroeconomic variables and entrepreneurship indicators. The findings show a positive relationship between the dependent and independent variables. The result varied between strong, moderate and weak relationships among countries proving that a decrease or increase in the macroeconomic variables had an impact on entrepreneurship. An economic state can influence the form and tendency of entrepreneurial activity (Nikolina Fuduric, 2008). The lack of statistical significance in the result from regression analysis on macro-economic variables and entrepreneurship indicators implies one or more reasons. The researcher took into cognizance the time frame from 2004 to 2011 without any disparity which included the period of recession and period of economic stability. According to Zoltan & Catherine (2003, 27), during the period of recession, coefficients tend to be statistically significant in predicting dependent variables but statistically insignificant during economic stability. Also, it could be as a result of the method of data analysis employed by the researcher. As previously stated, multicollinearity is a risk in using multiple regression method as results may not be a reflection of individual predictor. This assertion is based on a previous study by CESIS (2007,16), when controlling for issues relating to multicollinearity, regression needs to be re-run without one of highly correlated explanatory variable as the level of significance tend to change to reflect individual predictor. Another possible reason is that there is the possibility that using two predictors in the regression analysis affects significance outcome. The possible pattern of outcome in a multiple regression analysis using two independent variables is as follows: (SABLE 2000)

- Sum of square regression is statistically insignificant: b_1 and b_2 are both statistically insignificant.
- Sum of square regression is statistically significant: b_1 and b_2 are both statistically significant.
- Sum of square regression is statistically significant: b_1 is statistically significant and b_2 is statistically insignificant.

- Sum of square regression is statistically significant: b_1 is statistically insignificant and b_2 is statistically significant.
- Sum of square regression is statistically significant: b_1 is statistically insignificant and b_2 is statistically insignificant.

The first pattern which relate to the outcome of this research shows that the independent variable used were both statistically insignificant in predicting the dependent variable. This implies that the independent variables (GDP and Inflation) cannot be used in predicting the dependent variables (NBDR and NBR). It is basically for the reason that a result which lacked statistical significance should be preferably viewed as inconclusive instead of an indication of no effect.

The macroeconomic variables used in this study were statistically insignificant in predicting the entrepreneurship indicators. Perhaps demographic indicators could be used in predicting entrepreneurship development. According to some scholars, demographic characteristics like gender, age, education and previous work experience has an impact on entrepreneurship development (Indarti and langenberg, 2005, Islam et al, 2011).

According to Reynolds et al. (2000), individuals between the ages of 25 – 44 years are more active in entrepreneurship. Work experience is recognized as significant factor to entrepreneurial performance as prior experience related to similar business ensures growth and survival (Hanks and Chandler, 1994). Also a research study found that education on entrepreneurship produces self-sufficient resourceful individuals; increases new business formation; increase the probability of self-employment and new product (Libecap and Charney, 2000). Finally, there is high tendency that most entrepreneurs are men, but women have embraced self-employment and the number of women entrepreneurs is increasing (Torrington et al., 2005).

Researchers on entrepreneurship often acknowledge that the main support structure for the development of entrepreneurship in a country is a solid macro-economic environment (Shane 2003; Storey 1999). Different reports discussed the impact of the crisis on both regions. The economic climate in Europe weakened gradually from the first half of 2008 which was a reflection in the deceleration in world trade and growth. There was a deep contraction in GDP to as much as 1.8% which continued into 2009 where it contracted further by 2.5% quarter-on-quarter. The crisis impacted negatively on public fi-

nance within a short time as government debt-to-GDP ratio increased in almost all member states wiping out the pre-crisis progress achieved. This deterioration in public finance was a result of increased pressure on expenditure and decline in revenue (European commission 2011.8). In 2010, gross government debt in the EU increased, to around 80% EU-wide and 85% of GDP on aggregate in the euro area. The budgetary impact of the crisis compounded the effect of demographic change, which added a fiscal burden of some 4.5% of GDP.

According to the International Monetary Fund (2009), economic growth in Sub-Saharan Africa began to decline in the final half of 2008 falling from an average of 7% in 2007 to 5.5% in 2008. Countries within the region with a relative developed financial market like Nigeria and South Africa felt the impact before other countries. The recession affected most countries in Africa through variety of channels which includes a drop in investment, global trade decline, cut in foreign aids, and fall in remittance from African workers overseas. Prior to the crisis, it experienced strong economic growth averaging 6.5% per year between 2002 and 2007 which were facilitated by high external demand for its primary commodities and macroeconomic reforms. However, the sustained growth came to a halt as per capita income declined by nearly 1% in 2009 which was the first contraction in a decade. The countries took some measures to mitigate the economic unrest and in 2010, GDP rose to 4.2% and 4.9% in 2011. One major source of revenue in some African economies is export in commodities and as a result of the crisis, export demand declined. The volume in world trade declined by 12.4% in 2009 which subsequently affected Africa commodity pricing. Prior to the crisis, commodities such as energy, metals, food increased by 329%, 230% and 102% respectively between 2003 and 2008 but declined tremendously by 64%, 46% and 39% respectively between 2008 and 2009. The most affected is crude oil which experienced a decline in price by more than 50% between the same periods. It experienced a negative growth in export of 4.9% in 2009 which caused current account deficit by 3.2%. The major stock market like that of Nigeria and Egypt felt the crisis more as market volatility increased while wealth losses were recorded. The stock market indices decreased by 67% between 2008 and 2009 which had significant negative effect in the finance sector and on aggregate demand (IMF 2009). The foreign exchange market of African currencies has had its

share of the crisis as most currencies depreciated against the dollars which in turn increased risk faced by domestic firms.

The crisis took a heavy toll on various societies in the region as there was a sharp rise in unemployment in 2008. The unemployment rate was represented by 7% in 2008 and 10% in 2010 of the labor force in the EU-27 (EC 2011.6). A high unemployment rate was registered in Estonia, Greece, Ireland, Latvia, Spain, Slovakia, and Lithuania exceeding 12%. The rise in unemployment is a central problem. On aggregate, 9.6% of the working population was unemployed. Youth unemployment in some countries can be as high as 40% and there was an estimate that around 80 million people lived below the poverty line in Europe (EC 2010).

According to macro-economic data's from the World Bank as highlighted in the review of literature, the impact of the crisis was similar in both regions except for the degree of impact. The GDP growth trend was similar but the main difference was that Euro area felt the impact more as it had a deep contraction of -4.4% while Sub-Saharan Africa had a decrease of 2% in 2009 compared to previous years. The impact of inflation was felt more in Sub-Saharan Africa as it had a very high inflation rate in 2008 of up to 10.6% with Democratic republic of Congo, and Angola both having a very high inflation while Zimbabwe were in hyperinflation. This inflation rate is regarded very high because any rate above 5% in economic sense is high (Anderton 2008). The Euro area had a major increase in inflation rate in 2008 at 4.07% which seems reasonable considering the fact that it's below 5%. The rate of unemployment could not be compared because data for Sub-Saharan Africa is not available in most countries but in the Euro area, unemployment increased in 2009 to 9.4% from 7.4% in 2008 and rose to 10% in 2010 and 2011 respectively. Data's from IMF shows that the European Union had a deficit in its current account balance between 2006 to 2008 with the later having the highest imbalance of -167.313 billion (USD) while Sub-Saharan Africa continued to have a deficit except for 2006 and 2007. The region had its highest imbalance in 2009 with -27.544 billion (USD). Based on the facts, Europe and Africa felt the impact of the crisis. Although the impact varied as Europe felt the impact more on GDP growth rate and current account balance while Africa were faced with high inflation.

World Bank data for countries analyzed shows that there was a general decline in new business registered and new business density rate in 2008 and 2009 respectively. Some countries in sub-Saharan Africa lacked enough data and so it is difficult to compare between both regions. The crisis had far reaching implications on entrepreneurship development in countries as a general contraction in finance accompanying the recession led to decline in new firm start-ups, increased rate of firm failure, slow growth, reduced investment, unemployment, and change in productivity for existing firms. Empirical evidence and economic theory supports these result of financial contraction (Cagetti and De Nardi, 2005a, 2005b; Gries and Naudé, 2009). The effects were experienced in some countries, for example, in the united kingdom the fund raised by venture capital declined from GBP1,010 million in 2006 to GBP179 million in 2008 (OECD 2009).

A feature of the financial crisis was its harsh impact on the financial market, which resulted in credit rationing. Countries where the financial market played a huge role in the economy encountered contractions in creation of new firm. A likely channel is through a business access to external finance. The general rise in financing resources on international financial markets and rise in interest rates prompted banks to make credit grants harsher. Thus, entrepreneurs in particular had difficulties when trying to obtain financial support. In the context of the diminution in supply and demand of bank credits, a decrease in the availability of credit facility by banks was registered. For instance, according to the Flash Eurobarometer study, 46% of the interviewed entrepreneurs that requested at least one form of external financing over the period January to July 2009 reported a reduction in the availability of bank credits (EC 2009.55). In the United Kingdom, the number of small business closure increased to 85 per day in early 2009, the federation of small businesses gave a summary of the problem stating costs are high, orders have declined, and banks are not helpful. Small businesses that could access finance in good times found it difficult during the crisis (Gjorgieva-Trajkovska & Jovanova n.d). The global financial crisis also reduces the entrepreneurs access and size to international market which basically is affected by credit cost and export demand.

5.2 Conclusion

The consequences of the crisis have been felt on a considerable scale in Europe and Africa, the magnitude and scope of its impact varied across regions due to difference in economic structure amongst countries. It is clear that entrepreneurship development is a key catalyst of economic development and even broader –sustainability of an economy as a whole. It is clear, that after the biggest global crisis in decades, entrepreneurship development has been halted as they are usually more vulnerable in the time of a crisis. There was difficulty in measuring entrepreneurship, but different variables were used to reflect entrepreneurship components; new businesses registered, and new business density rate. The empirical findings show a positive relationship between dependent and independent variables which is consistent with relevant theory. This implies that macro-economic variables used in the analysis had an effect on entrepreneurship development. Although macro-economic variables like unemployment were not used in the analysis due to non-availability of data in Sub-Saharan Africa, variables used were able to show the relationship between them.

The study has been able to answer the primary research question "What is the effect of the global financial crisis on entrepreneurship development in Europe and Africa" as well as identify key macro-economic variables and financial factors that have affected entrepreneurship growth. As discussed previously, one of the main consequences of the current global financial crisis is the changes in the access to credits for entrepreneurs. In this context and given the crucial importance of entrepreneurship in economic development, a recovery in the economy depends on economic stability.

REFERENCES

Agarwal, V. (2010). Macroeconomics: Theory and Policy. New Delhi. Pearson.

Anderton, A. (2008). Economics. 5th ed. Harlow. Pearson Education.

Blanchard, O, and Milesi-Ferretti, G. (2012). "Why current account balances should be reduced?" IMF Economic review. Vol. 10 No, 1.

Brown, C and Thornton, M. Entrepreneurship theory and the creation of economics: Insight from cantillon's essai. [Internet], Hawthorn, Swinburne University Available from: <http://www.swinburne.edu.au/lib/ir/onlineconferences/agse2011/000140.pdf>. [Accessed 26 January 2013].

Cagetti, M. & De Nardi, M. (2005a). `Wealth Inequality: Data and Models, Federal Reserve Bank of Chicago, Working Paper WP 2005-10. Chicago.

CESIS. (2007). Entrepreneurship and local growth: A comparison of the U.S. and Sweden. [Internet] Available from: <http://www.infra.kth.se/cesis/documents/WP103.pdf> [Assessed 25th November 2013].

Ciro, T. 2013. The global financial crisis: triggers, responses and aftermath. Ashgate publishing ltd. Surrey, England.

Desai, P. 2011. From financial crisis to global recovery. Columbia University Press. New York. USA.

European Commission (2009). Impact of the economic crisis on unemployment. [Internet] Available from: < http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Impact_of_the_economic _crisis_on_unemployment> [Assessed 5th October 2013].

European Commission (2011). Macro-economic report. [Internet] Brussels. Available from: <http://ec.europa.eu/europe2020/pdf/2_en_annexe_part1.pdf> [Assessed 5th October 2013].

European Commission, (2009) Flash Eurobarometer, no. 271, Brussels.

European Commission. (2010). Annual growth survey: advancing the EU's comprehensive response to the crisis [Internet]. Brussels. Available from: <http://ec.europa.eu/europe2020/pdf/en_final.pdf> [Assessed 12th November 2013].

European Commission. (2011) Annual growth survey: Macroeconomic report [Internet], Brussels. Available from: < http://ec.europa.eu/europe2020/pdf/2_en_annexe_part1.pdf> [Assessed 4 April 2013].

European Commission. (2011). Annual growth survey: Advancing the EU's comprehensive response to the crisis [Internet], Brussels. Available from: < http://ec.europa.eu/europe2020/pdf/en_final.pdf> [Assessed 4 April 2013].

FCIC. (2011). Final report of the national commission on the causes of the financial and economic crisis in the United States. Official Government Edition.

FCIC. (2011).The Financial Crisis Inquiry Report: Complete with dissenting views [Internet] Cosimo, Inc. Available from: < http://fcic-static.law.stanford.edu/cdn_media/fcic-news/2011-0127-fcic-releases-report.pdf>[Assessed March 02, 2013].

Gjorgieva-Trajkovika, O. & Jovanova, B . The impact of the global financial crisis on small and medium enterprises financing [Internet], Available from: < http://tinyurl.com/cfcd8ha > [Assessed 5 April 2013].

Gomez, C. & Spencer, W. (2004). The relationship among national institutional structures, economic factors, and domestic entrepreneurial activity: a multi-country study. Journal of Business Research, 57, 1098-1107.

Gordom, E. Natarajan, K & Arora, A. (2009). Entrepreneurship development. 1st ed. Mumbai. Himalaya Publishing House Ltd.

Gries, T. and Naudé, W.A. (2009). Entrepreneurship and Regional Economic Growth: Towards a General Theory of Start-Ups, Innovation: The European Journal of Social Science Research, 22 (3) June, pp. 309-328.

Gup, E, B. 2010. The financial and Economic Crisis: An international perspective. Edward Elgar Publishing Inc. Massachusetts. USA.

Hall, R & Lieberman, M. (2009). Macroeconomics: Principles and Applications. South Western Cengage Learning. Mason. USA.

Hank, S., Chandler, G,, (1994). Market attractiveness, resources based capabilities, venture strategies and venture performance. Journal of small business management 12 (1), 27 – 35.

IMF (2009). The implications of the global financial crisis for low-income countries. International Monetary Fund.

Indarti, N and Langenberg, M. (2005). A study of factors affecting business success among SME's. Empirical evidence from Indonesia.

Islam et al. (2011). Effect of entrepreneur and firm characteristics on the business success of SME's in Bangladesh. International Journal Of Business and Management. Vol. 6, No. 3.

Jensen, L. Beulig, N. Linsmann, K. (2009). US subprime and financial crisis- To what extent can you safeguard financial system risks. GRIN verlag.

Joppe, M. (2000). The research process. [Internet] Available from: <http://www.ryerson.ca/~mjoppe/rp.htm> [Assessed 5th May 2013].

Justo, R & Castro, J. (2008). Indicators of entrepreneurship activity: Some methodological contributions. International journal entrepreneurship and small business. Vol. 6 No, 4.

Kirk, J., & Miller, M. L. (1986). Reliability and validity in qualitative research. Beverly Hills: Sage Publications.

Kosi, T. (2012). Overview and comparison of datasets on entrepreneurship. Advance in business-related scientific journal. Vol 3 No, 1.

Lessen, G.,Bevan, D.,& Fontrodona, J. (2010). "Corporate responsibility and governance: the responsible corporation in a global economy" Corporate Governance, Vol. 10 Iss: 4.

Libecap, G & Charney, A. (2000). Impact of entrepreneurship education. Kuffman Center for Entrepreneurial Leadership.

Muijs, D. (2004). Doing quantitative research in education with SPSS. London. Sage Publications Inc.

Natarajan, G. & Amish, A. (2009). Entrepreneurship development. Mumbai. Global Media Publishing.

Nikolina, F. (2008). The sources of entrepreneurial opportunities: Individual and the environment. Aalborg. Aalborg University.

OECD (2009). Responding to the economic crisis: Fostering industrial restructuring and renewal. Paris: Organization for Economic Cooperation and Development.

Owoye, 0. (2009). The global economic and financial crisis: An overview of the effect on African countries. The journal of African policy studies Vol. 15 No, 1.

Michael, P., Melanie, P. & Kent, M. (1997) Economics. 3rd ed. Essex, Addison Wesley.

Pol, E. (2009). Understanding the global financial crisis. 9th Global Conference on Business & Economics (pp. 1-43). Cambridge, UK: Cambridge University.

Reynold, P et al. (2000). Global entrepreneurship monitor 2000 executive report. Kuffman Center for Entrepreneurial Leadership.

Roman, A. (n.d). The access to financing of small and medium enterprises in Romania and implications of the crisis [Internet]. Lasi, Romania. Brussels. Available from: <http://anale.feaa.uaic.ro/anale/resurse/2011SEfin4roman.pdf> [Assessed 12th November 2013].

SABLE. (2000). Multiple regression. [Internet], Available from: <http://simon.cs.vt.edu/SoSci/converted/MRegression/> [Assessed 16 December 2013].

Saroj, U. & Mehndiratta, V. (2009). Entrepreneurship development and management. Delhi. Abhishek Publications.

Shane, S. (2003). A general theory of entrepreneurship. Cheltenham, Edward Elgar.

Storey, D. J. (1999). Six Steps to Heaven: Evaluating the impact of public policies to support small business in developed economies. Oxford, Blackwell.

Supreme Audit Institutions. (2010). The causes of the global financial crisis and their implications for supreme audit institutions. [Internet]. Stockholm. Available from: < http://www.intosai.org/uploads/gaohq4709242v1finalsubgroup1paper.pdf> [Assessed 5th May 2013]

Tan, W.L., Begley, T.M., & Schock, H. (2005). Politico-economic factors associated with interest in starting a business: a multi-country study. Entrepreneurship: Theory and Practice.

Torrington, Derek et al., (2005). Human resource management 6th ed. Harlow. Person Education Limited.

Turker, I, B. (2010). Macroeconomics for today. 7TH ed. Mason, Cengage learning.

Wainer, H., & Braun, H. I. (1988). Test validity. Hilldale, NJ: Lawrence Earlbaum Associates.

Welch, P. and Welch, G. (2010) Economics: Theory and practice. 9th ed. New Jersey. John Wiley & Sons Inc.

Wileman, R.E, Noorderhaven, N., Hofstede, G., Wennekers, A., Thurik, A., & Veroeven, W. (1998). Cultural and economic determinants of entrepreneurship: An international study. Presented at the Annual Meetings of the Academy of International Business, Vienna, Austria.

Williamson, S. (2011). Macroeconomics. 4th ed. Boston. Pearson Education, Inc.

Xavier, S. R,. Kelly, D., Kew, J., Herrington, M. & Vorderwulbecke, A. (2012). GEM global report. [Internet] Available from: < http://www.gemconsortium.org/docs/download/2645> [Assessed 9th October 2013].

Xin, Y. (2009). Linear regression analysis: Theory and computing. Singapore. World Scientific Publishing Co.

Zoltan, J & Catherine, A. (2003). The geographic concentration of new firm formation and human capital: Evidence from the cities. [Internet] Available from: <https://www.ces.census.gov/docs/cache/paper_contents_101671.pdf> [Assessed 25th November 2013].

APPENDICES

Appendix 1: Western Europe – Germany data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	1.12	61856	1.2	1.7
2005	1.22	66668	0.7	1.5
2006	1.20	65195	3.7	1.6
2007	1.20	64932	3.3	2.3
2008	1.21	64840	1.1	2.6
2009	1.37	73260	-5.1	0.3
2010	1.37	73234	4.2	1.1
2011	1.29	71190	3.0	2.1

Macro-economic variables and Entrepreneurship indicators for Germany (Sources: World Bank, GEM, and OECD)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.586[a]	.343	.080	.08736

a. Predictors: (Constant), INFLATION, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.020	2	.010	1.305	.350[b]
	Residual	.038	5	.008		
	Total	.058	7			

a. Dependent Variable: NBDR

b. Predictors: (Constant), INFLATION, GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.380	.088		15.682	.000
	GDP	.004	.014	.128	.286	.786
	INFLATION	-.082	.056	-.652	-1.455	.206

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.628^a	.395	.153	3982.660

a.   Predictors: (Constant), INFLATION, GDP

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51722201.101	2	25861100.550	1.630	.285^b
	Residual	79307885.774	5	15861577.155		
	Total	131030086.875	7			

a. Dependent Variable: NBR

b.   Predictors: (Constant), INFLATION, GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	74270.807	4012.754		18.509	.000
	GDP	229.663	624.914	.158	.368	.728
	INFLATION	-4225.029	2566.451	-.708	-1.646	.161

a. Dependent Variable: NBR

Appendix 2: Eastern Europe – Russia data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	1.0	102752	7.2	10.9
2005	4.8	483970	6.4	12.7
2006	4.1	419318	8.2	9.7
2007	3.6	371109	8.5	9.0
2008	3.8	391341	5.2	14.1
2009	2.3	235449	-7.8	11.7
2010	2.3	235339	4.5	6.9
2011	0.8	84396	4.3	8.4

Macro-economic variables and Entrepreneurship indicators for Russia (Sources: World Bank & GEM)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550[a]	.302	.023	1.4494

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.555	2	2.277	1.084	.406[b]
	Residual	10.504	5	2.101		
	Total	15.059	7			

a. Dependent Variable: NBDR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.763	2.621		-.291	.783
	GDP	.098	.106	.350	.923	.398
	Inflation	.302	.234	.491	1.292	.253

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550[a]	.302	.023	146843.509

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46677860907.6 74	2	23338930453.8 37	1.082	.407[b]
	Residual	107815080835. 826	5	21563016167.1 65		
	Total	154492941743. 500	7			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-73409.539	265489.007		-.277	.793
	GDP	9987.646	10757.613	.352	.928	.396
	Inflation	30532.389	23706.347	.489	1.288	.254

a. Dependent Variable: NBR

Appendix 3: Northern Europe – Finland data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	2.2	7711	4.1	0.2
2005	2.4	8426	2.9	0.9
2006	2.9	10247	4.4	1.6
2007	4.0	13948	5.3	2.5
2008	4.0	14091	0.3	4.1
2009	3.5	12254	-8.5	0.0
2010	3.5	12391	3.3	1.2
2011	3.6	12742	2.8	3.4

Macro-economic variables and Entrepreneurship indicators for Finland (Sources: World Bank & GEM)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773[a]	.598	.437	.5123

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.948	2	.974	3.712	.103[b]
	Residual	1.312	5	.262		
	Total	3.260	7			

a. Dependent Variable: NBDR

b.   Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.756	.291		9.465	.000
	GDP	-.068	.046	-.443	-1.496	.195
	Inflation	.356	.137	.772	2.609	.048

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.793[a]	.628	.480	1745.414

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25750085.538	2	12875042.769	4.226	.084[b]
	Residual	15232353.962	5	3046470.792		
	Total	40982439.500	7			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9649.026	991.986		9.727	.000
	GDP	-239.858	155.521	-.439	-1.542	.184
	Inflation	1303.577	465.251	.797	2.802	.038

a. Dependent Variable: NBR

Appendix 4: Southern Europe – Italy data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	1.8	70235	1.7	2.2
2005	1.9	73644	0.9	2.0
2006	1.9	74785	2.2	2.1
2007	2.0	77587	1.7	1.8
2008	1.8	72884	-1.2	3.4
2009	1.7	68508	-5.5	0.8
2010	1.8	71003	1.7	1.5
2011	1.6	64591	0.4	2.7

Macro-economic variables and Entrepreneurship indicators for Italy (Sources: World Bank &GEM)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.554[a]	.307	.029	.1228

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.033	2	.017	1.105	.400[b]
	Residual	.075	5	.015		
	Total	.109	7			

a. Dependent Variable: NBDR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.895	.136		13.909	.000
	GDP	.028	.019	.578	1.470	.202
	Inflation	-.043	.063	-.269	-.684	.524

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.420[a]	.176	-.153	4308.324

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19889019.213	2	9944509.607	.536	.615[b]
	Residual	92808274.662	5	18561654.932		
	Total	112697293.875	7			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	73148.532	4779.694		15.304	.000
	GDP	696.167	672.849	.443	1.035	.348
	Inflation	-804.483	2220.264	-.155	-.362	.732

a. Dependent Variable: NBR

Appendix 5: West Africa – Nigeria data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	0.32	23457	10.6	15
2005	0.38	28988	5.4	17.9
2006	0.45	34531	6.2	8.2
2007	0.58	46240	6.4	5.4
2008	0.79	64017	6.0	11.6
2009	0.79	66089	7.0	11.5
2010	0.77	65074	8.0	13.7
2011	0.83	72396	7.4	10.8

Macro-economic variables and Entrepreneurship indicators for Nigeria (Sources: World Bank)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.095	-.267	.23383

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.029	2	.014	.263	.778[b]
	Residual	.273	5	.055		
	Total	.302	7			

a. Dependent Variable: NBDR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.895	.436		2.054	.095
	GDP	-.018	.056	-.140	-.321	.761
	Inflation	-.013	.023	-.245	-.560	.600

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.283[a]	.080	-.288	21672.050

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	204028996.873	2	102014498.436	.217	.812[b]
	Residual	2348388651.127	5	469677730.225		
	Total	2552417648.000	7			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	73171.977	40385.509		1.812	.130
	GDP	-1383.815	5170.128	-.118	-.268	.800
	Inflation	-1133.968	2162.104	-.231	-.524	.622

a. Dependent Variable: NBR

Appendix 6: North Africa – Algeria data table and regression **output**

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	0.24	4977	5.2	4.0
2005	0.23	4871	5.1	1.4
2006	0.19	4218	2.0	2.3
2007	0.16	3622	3.0	3.7
2008	0.20	4651	2.4	4.9
2009	0.19	4574	2.4	5.7
2010	0.17	4122	3.6	3.9
2011	0.19	4711	2.4	4.5

Macro-economic variables and Entrepreneurship indicators for Algeria (Sources: World Bank)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678[a]	.459	.243	.02369

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	2	.001	2.123	.215[b]
	Residual	.003	5	.001		
	Total	.005	7			

a. Dependent Variable: NBDR

c. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.147	.046		3.230	.023
	GDP	.015	.008	.683	1.875	.120
	Inflation	.000	.007	.014	.037	.972

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.485[a]	.236	-.070	466.433

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	335396.573	2	167698.286	.771	.511[b]
	Residual	1087798.927	5	217559.785		
	Total	1423195.500	7			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3517.839	896.989		3.922	.011
	GDP	191.913	154.869	.537	1.239	.270
	Inflation	85.341	141.304	.262	.604	.572

a. Dependent Variable: NBR

Appendix 7: Southern Africa - South Africa data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	5.43	37492	4.6	1.4
2005	7.44	44169	5.3	3.4
2006	8.54	39242	5.6	4.6
2007	8.23	36003	5.5	7.1
2008	9.18	29563	3.6	11.5
2009	7.89	24700	-1.5	7.1
2010	6.14	25184	3.1	4.3
2011	5.02		3.5	5.3

Macro-economic variables and Entrepreneurship indicators for South Africa (Sources: World Bank)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.502	.303	1.27412

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.194	2	4.097	2.524	.175[b]
	Residual	8.117	5	1.623		
	Total	16.310	7			

a. Dependent Variable: NBDR

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.597	1.458		3.152	.025
	GDP	.151	.217	.230	.698	.516
	Inflation	.371	.165	.739	2.246	.075

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821^a	.674	.511	5191.536

a. Predictors: (Constant), Inflation, GDP

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	222796316.149	2	111398158.075	4.133	.106^b
	Residual	107808191.279	4	26952047.820		
	Total	330604507.429	6			

a. Dependent Variable: NBR

b. Predictors: (Constant), Inflation, GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29276.681	6034.755		4.851	.008
	GDP	2093.365	883.540	.706	2.369	.077
	Inflation	-594.668	674.879	-.263	-.881	.428

a. Dependent Variable: NBR

Appendix 8: East Africa – Botswana data table and regression output

Year	New business density rate (Y1)	New business registered (Y2)	GDP Rate (X1)	Inflation Rate (X2)
2004	7.9	8990	4.6	1.4
2005	5.7	6581	5.3	3.4
2006	5.6	6591	5.6	4.6
2007	5.8	6927	5.5	7.1
2008	6.6	8050	3.6	11.5
2009	8.7	10852	-1.5	7.1
2010	9.1	11639	3.1	4.3
2011	9.4	12217	3.5	5.3

Macro-economic variables and Entrepreneurship indicators for Botswana (Sources: World Bank)

1.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717[a]	.514	.320	1.3278

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.324	2	4.662	2.644	.165[b]
	Residual	8.816	5	1.763		
	Total	18.140	7			

a. Dependent Variable: NBDR

b. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.257	1.520		6.748	.001
	GDP	-.510	.226	-.735	-2.260	.073
	Inflation	-.181	.172	-.342	-1.052	.341

a. Dependent Variable: NBDR

2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681[a]	.464	.250	2007.164

a. Predictors: (Constant), Inflation, GDP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17451616.845	2	8725808.422	2.166	.210[b]
	Residual	20143542.030	5	4028708.406		
	Total	37595158.875	7			

a. Dependent Variable: NBR

c. Predictors: (Constant), Inflation, GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12691.730	2297.497		5.524	.003
	GDP	-708.005	341.169	-.709	-2.075	.093
	Inflation	-193.716	260.585	-.254	-.743	.491

a. Dependent Variable: NBR