GREEK GOVERNMENT DEBT CRISIS AND ITS IMPACT ON THE ECONOMY OF GREECE AND THE EU
# TABLE OF CONTENTS

Table of Contents ........................................................................................................................................... 2
List of Figures ....................................................................................................................................................... 3
List of Tables .......................................................................................................................................................... 3
Chapter – 1; Introduction .................................................................................................................................. 4
  1.1 Research Aims ........................................................................................................................................... 5
  1.2 Research Objectives .................................................................................................................................. 6
Chapter – 2; Greece’s economy ......................................................................................................................... 8
  2.1 Overview of Greece’s Economy .................................................................................................................. 8
  2.2 Government Debt Crisis (2010-2015) ..................................................................................................... 10
Chapter – 3; Impact of the Greek Government Debt Crisis on Eurozone ...................................................... 13
  3.1 Economic Growth in EU countries ............................................................................................................. 13
  3.2 Savings, economic growth and demographic change in the EU ............................................................... 15
Chapter 4- Impact of Greek Government Debt Crisis on Greece’s Citizens ................................................... 19
  4.1 Social Effect of Crisis on Greece’s Citizens ............................................................................................... 19
  4.2 Current and Potential future labour force shortages ............................................................................... 22
  4.3 Labour market participation and unemployment rate of young people ............................................... 27
Chapter 5- Conclusion ...................................................................................................................................... 31
References ............................................................................................................................................................. 32
LIST OF FIGURES

Figure 1- Comparison of GDP Growth Percentage of Greece to Eurozone (1961-2009) (Source; Eurostat) ..... 9
Figure 2- Debt Profile of Eurozone countries (Source; The Lisbon Council, 2011) ............................................ 12
Figure 3- GDP per capital in EU-15 (1950-2012) (Source; Balcerowicz, 2013) ...................................................... 14
Figure 4- Elderly Greek pensioner (Yam, 2015) ........................................................................................................ 21
Figure 5- Beveridge Curve 2006-2014 (Source; Eurostat) .................................................................................... 25
Figure 6- Unemployed persons, in millions, EU-28 and Greece, 2000-2015 (Source; Eurostat) ......................... 28
Figure 7- Youth unemployment rates, EU-28 and Greece, 2000-2015 (Source; Eurostat) ............................... 29
Figure 8- Employment rates (%) by age group, 2014 (Source, Eurostat) .............................................................. 30
Figure 9- Employment rates by gender and age group 15-64, 2014 (Source; Eurostat) ........................................ 30

LIST OF TABLES

Table 1- Episode of acceleration and slowdowns among EU-15 states (Source; Conference Board Total Economy Database (TED))........................................................................................................ 15
Table 2- Highest correlations and corresponding lags of TFR with various indicators of economic recession by country, 2000-2011 (Source; Eurostat, 2014) .................................................................................. 26
The current Greek government-debt crisis also known as the Greek depression is a major international political event that has taken place in the European Union. The crisis had occurred in the late of 2009, making it the first of the five ‘sovereign debt crises’ within the Eurozone. Other sovereign states that comprised the European debt crisis include Portugal, Ireland, Spain, and Cyprus. All five countries were unable to repay or refinance their government debt or bail out over banks that were indebted under each of the country’s national supervision causing the need for assistance from third parties such as other Eurozone countries, the European Central Bank (ECB), or from the International Monetary Fund (IMF).

The economy of Greece is the 45th largest in the world based on nominal gross domestic product (GDP), producing on average $238 billion per year. Furthermore, it is the 51st largest economy based on purchasing power parity with the average of $86 billion per year (EU, 2015) By 2013, Greece had the thirteenth largest economy within the 28 member states of the European Union. The Greece economy fits into the category of a developed country with their economy based mostly on the service sector. To break down, Greece’s economy is divided as follows with its percentage contribution to the national economic output as approximated in 2012:

✓ Service sector – 81 %
✓ Industry- 16 %
✓ Agriculture- 3.4 %

The most important of Greece’s industries are tourism and shipping. This is apparent as by 2013, Greece had recorded about 18 million international tourists. According to UNWTO (2013) Greece was the 7th most visited country in the European Union and the 16th most visited country
in the world. Greece’s economy has seen many ups and downs beginning with World War II which had caused Greece’s economy to become devastated but recovered in the 1950-1980 Greek economic miracle (Allison and Nicolaidis, 2012). This was followed by high levels of GDP growth in Greece which was considered above the Eurozone average. However, the country had made another downward spiral with the Great Recession and subsequent Greek government-debt crisis.

This research will look to uncover the various causes that led to the recent debt crisis faced by Greece and its consequent effects on the Greece economy. Therefore, the primary focus of the current study is to develop an understanding of the impact of factors on the Greek population in terms of unemployment, government welfare programs, consumer spending power, and other socio-economic impacts. The details of the research aim and objectives of the current study have been described in length below;

1.1 Research Aims

The research aims of the current study are:

✓ Address the research questions: What are the socio-economic impacts of Greece government debt crisis on the citizens of Greece? What had caused these socio-economic implications and the current debt crisis?

✓ Develop an understanding of how the Great Recession had influenced the resulting debt crisis and how the Greece government had influenced its economy to be led into such a crisis.

✓ Investigate major economic decisions that had produced economic instability in Greece. There is a need to highlight the various major decisions that the Greece government had
taken, especially the country’s statistical credibility since Greece had applied for Euro membership in 1999.

✓ Investigate the economic impact that has been made since the debt crisis had begun in regards to the country’s local economy and the international economy, particularly the Eurozone’s economy.

✓ Identify the major stakeholders’ roles and responsibilities within the Greece economy, particularly towards the stakeholders take on economic policies and programs.

✓ Analyses the efficacy of present economic strategies that haven been implemented, produce recommendations based on those strategies to improve economic gain and ensuring that the current crisis is not repeated in the future.

1.2 Research Objectives

The research objectives are;

✓ Review economic trends of the Greece economy in terms of the economic and business cycle. This will reveal the current and historic performance of the economy. Data will be obtained from various sources such as the IMF database, World bank database, and Eurostat.

✓ Explore economic concerns that are linked to the Greece’s GDP growth rates, government deficit, government debt level, budget compliance, and statistical credibility. Based on these factors a link will be made to macro- and micro- economy changes that had impacted the citizens of Greece.

✓ Review the current practices and policies that have been established to minimise the limit or reduce the negative effects on the economy.
The primary aims of this research is to determine the socio-economic effects of the Greek crisis on the citizens of Greece. The study looks to produce evidence based recommendations and suggestions to improve the country’s economy and prevent this crisis from occurring again. Therefore, the concerned research question of the current study is:

What are the social and economic implications of the Greece government debt crisis on the citizens/residents of Greece?

The question will be addressed throughout the study and particularly when providing recommendations for improving the economy to return to a stable position.
2.1 Overview of Greece’s Economy

Greece’s economy had evolved for most of the 19th century due to the upsurge of the Industrial Revolution, a contributing era that transformed a great deal of the world. There was a gradual and steady development of industry as well as further development of shipping in Greece who was once dominated by an agriculture economy. Between 1833 and 1911, average rate of per capital GDP growth was lower for Greece compared to other Western European nations (Kostis and Petmezas, 2006). There was a surge in industrial activity but was limited to heavy industry such as ship building mainly in Greece’s cities of Ermoupolis and Piraeus (Kostis and Petmezas, 2006; Skartsis, 2012).

However, even with the new strength in industry to power the economy, Greece had faced economic hardships and ended up defaulting on external loans in 1826, 1843, 1860, and 1894. During this time the standard of living in Greece had mirrored the economic trend of the times. According to Bairoch (1976) the per capita income using the indicator of purchasing power of Greece in comparison to France was 68% of France in 1850, 56% of France in 1880, 62% of France in 1938, 75% of France in 1980, 90% of France in 2007 and 96.4% of France in 2008. Greece development after World War II is linked to the Greek economic miracle which witnessed growth rates that can be compared with that in Japan. During the time, Greece ranked first in Europe in terms of GDP growth.

Allison and Nicolaidis (2012) assert that between 1960 and 1973 Greece’s economy grew by an average of 7.7% compared to 4.7% for the remaining EU-15 countries and 4.9% that was present
for OECD countries. Allison and Nicolaidis (2012) also report that exports during 1960 and 1973 had grew with an average rate of 12.6% a year.

Figure 1 - Comparison of GDP Growth Percentage of Greece to Eurozone (1961-2009) (Source: Eurostat)

Greece’s economy is supported significantly by the service section, particularly for its shipping industry and tourism. The Greek Merchant Navy is the largest in the world with Greek owned vessels comprising of 15 per cent of the global deadweight tonnage as of 2013 (Eurostat, 2015). Greece’s shipping industry boomed due to the increased demand of international maritime between Greece and Asian countries which led to an increase of investment into the shipping industry. Shipping has remained a traditional and key sector player in the Greek economy since ancient times to present. However, Greece is also a significant agricultural producer in the EU. The country has been a major legatee of the Common Agricultural Policy of the European Union since its entry into the EU allowing for Greece’s agricultural infrastructure to be upgraded and output thus increasing (Eurostat, 2015). This resulted in 885% increase in organic farming in
Greece between 2000 and 2007, it is considered the highest percentage change in all of the EU (Eurostat, 2015).

Since Greece is a large economy situated in the Balkans it has become a regional investor. The country has become large foreign investor of capital in countries such as Albania, Romania, Bulgaria, Serbia, and the Republic of Macedonia. Between 1997 and 2009, Greece had input 12.11 per cent of foreign direct investment capital in Republic of Macedonia (Eurostat, 2015). Solely analyzing the year 2009, Greece had invested in 380 million euros in the Republic of Macedonia using its companies such as Hellenic Petroleum to make imperative strategic investments (Eurostat, 2015).

2.2 Government Debt Crisis (2010-2015)

The year 2009 closing, the Greek economy had faced the most severe economic crisis since 1974 caused by various combinations of local and international factors with the government of Greece revising its deficit from the predicted 3.7 per cent in early 2009 to 6 per cent in September 2009 and a GDP of 12.7 per cent. Greece has unfortunately become the most shaken epicentre of the consolidated European debt crisis since the implosion of Wall Street in 2008. While many of the global financial markets were whirling from the implosion, Greece announced in October of 2009 that it had been understating its deficit figures for many years which led many to question the soundness of Greece’s finances. This led to Greece being shut down from further borrowing in the financial markets. By April-May 2010, the country was heading towards bankruptcy which was threatening to set off a new financial crisis.

The masking of real deficit and debt levels was a result of the Maastricht Treaty signed in 1992. Under the treaty, member states of the EU had pledged to limit their deficit spending and debt
levels. Nonetheless, by the early 2000s, a few EU member states, including Greece was failing to operate within the limits set by the Maastricht requirements and instead began to securitise future government revenues to decrease their debts and deficits. This allowed sovereign states’ such as Greece’s officials to hide their deficit and debt levels through various techniques such as inconsistent accounting, off balance sheet transactions, and use of complex currency and credit derivative structures. However, in 2009, Greece’s newly elected government had stopped hiding the country’s true indebtedness and budget deficit. The under reporting of figures came to light after three revision of the 2009 budget deficit forecast that was proclaimed as being from 6-8% of GDP; the Maastricht Treaty asks for no greater than 3 per cent of GDP, was changed to 12.7% after Pasok had won the 2009 October national elections. The low forecast of 6-8% was reported towards late in the year around September 2009 which had not really corresponded with the situation. In actuality, Greece had debt that exceeded $ 400 billion which is over 120% of GDP and France owned 10 per cent of the debt.
The beginning of 2010 brought with it anxiety and tensions of excessive national debt as lenders began to demand higher interest rates from Greece who had higher debt levels, deficits, and current account deficits. This made it difficult for Greece government to finance more budget deficits and repay or even attempt to refinance existent government debt, especially since
economic growth rate was low in the country and a large percentage of debt was in control of foreign creditors.
3.1 Economic Growth in EU countries

The European Union’s economy is considered to be heterogeneous with policies that vary tremendously from country to country, resulting in outcomes that also vary depending on each country. However, even with the diversity in economies there are certain vivid patterns that separates strong economies from weaker ones, or economies that are equally strong and weak. For example, Sweden is considered as the EU’s best managed economy, but is also considered the worst (Economic Commission, 2015). The Swedish economy holds strong finances but its overall growth has been seeing a downward spiral since 2009 as export demand and consumption fell (Economic Commission, 2015).

While Greece and Spain have shown abstruse performance by doing well in some years and cataclysmically doing bad in other years.

The EU-15 had witnessed robust economic growth between the years beginning with the end of World War II and the 1970s. At the time, the consolidated gross domestic product per capita had increased in EU-15 countries more than 70 per cent than compared to less than 50 per cent in 1945 (OECD, 2011). Unfortunately, by 2007, the GDP per capital in EU countries had fallen to 68 per cent, with a great deal of it from Greece. According to the Organisation for Economic Co-operation and Development (OECD) (2011) the decrease in GDP per capita of EU states is caused by persistently lower productivity, lower employment, and less human capital; as Europe only surpasses developed countries like the United States in physical capital. The wide gap between the EU-15 and USA is attributed to the interaction between macroeconomic shocks in the 19702 and 1980s and the labour market institutions that were present during that time in
Europe causing a rising in unemployment rate (Blanchard and Wolfers, 2000). Ark *et al.* (2008), however, assert that differences between the USA and EU-15 can be explained by a greater adoption of information and communication technologies and more rapid productivity in the US than compared to the EU-15.

![Figure 3: GDP per capital in EU-15 (1950-2012) (Source: Balcerowicz, 2013)](Image)

The overall picture that is obtained from the analysis of the time period 1980-2007, is also important to show difference among the EU-15 countries. Different countries are known to display different growth performances during the 1980-2007-time period, with each of the EU-15 countries displaying different growth rates over time. Each of the 15 countries can be categorised using ‘growth episodes’ divided between accelerations and slowdowns, as seen in table 1. Each country that is either seeing an acceleration or slowdown are affected by factors of changes in systematic forces generally changing the institutional framework, the fiscal stance and the age structure of the population; and strong shocks, with persistent and strong accelerations of public and private spending driven by strong capital inflows and excessive growth of credit (Balcerowicz, 2013).
Balcerowicz (2013) defines slowdowns as periods when the GDP per capita in a given country grew 1 percentage point or slower than in the US for five years consecutively or longer. On the other hand, Balcerowicz (2013) describes accelerations as the periods when GDP per capita in a given country grew 0.5 percentage points faster than in the US for five years consecutively or longer.

### 3.2 Savings, economic growth and demographic change in the EU

It is evident from Mason (1988) study that there is a correlation between savings, economic growth, and demographic changes. It is common amongst the majority of industrialised countries that there is a main concern toward population dynamics and economic growth which is more focused on the affect that a declining new population and growing ageing population has. According to Mason (1988) a quickly growing population needs increased investment to
conserve the labour to capital ratio therefore its labour productivity. Aside from the basic relation that is present between population growth, savings and economic growth, the accretion of human capital, institutional and restructuring issues also play a vital role.

Based on the study (Mason, 1988) there is empirical evidence that supports domestic savings being a major source of investment. Based on comparisons between countries in the EU-15 a correlation is revealed between gross domestic savings ratio and gross domestic investment ratio of .064 and the slope of corresponding regression being the value of 0.63. This particular value is calculated from one per cent of increase in savings from an increase in investment by 0.63 percentage points.

On the contrary, Solow’s (1956) neoclassical growth model asserts that savings has no influence on the long term growth of total and per capita output due to the capital being dependent on increase of capital and labour ratio and requires an increase in share of output to replace and maintain the capital that is already of existence. Hence, Solow (1956) suggests that depreciation of capital has the possibility of ultimately leading to an excess of net investments. However, a continual increase in labour force may augment the process as more workers will be required to be equipped with capital. Thus, under the neoclassical structure, an increase in investment provisionally enriches the rate of growth of output and increase the level of output per worker.

Net investments, gross investments minus investment ardent for replacing depreciated assets helps to determine the definite intensification in a country’s actual value. On the contrary, for many countries there is no available data on net investment which may be considered as reliable. This is correct mostly for time series data. As a result, many empirical studies use gross investment in order to specify the resources accessible to increase a country’s physical plant. For a great deal of countries, net national savings can be decomposed into government savings and
private savings. Furthermore, the private savings can be further divided into corporate and household savings.

Leff (1969) investigated the impact of population growth on aggregate savings studied the life cycle of savings models that were linked to savings and demographic factors. Leff (1969) also incorporated effects on the household level and on the aggregate level too. Using the Leff (1969) structure, there is no similarity between current income and anticipated expenses as both consumptions and earnings are assumed to vary in various ways over the life cycle. With the life cycle savings, households are able to shift income between various time stages to acclimatise to the method of preferred disbursements. During time periods when earnings are to exceed the desired expenditures, households end up saving and the reverse occurs when earnings do not exceed the desired expenditures. Leff (1969) asserts that savings are highest in the mid of an individual’s life as they are saving for retirement.

The major source of investment, the aggregate savings, is dependent on savings of households that are currently working and the dissaving of current retired households. Based on the life cycle savings theory, a decline in fertility influences savings as: there is a reduced burden on childbearing costs leading to less consumption and an increase in savings at a household level, known as the dependency effect; and also reduced fertility causes population ageing which results in relatively older households increasing (Wasmer, 2004). All in all, older households typically on average have a lesser rate of savings, which in results as whole reduced savings. In the scenario of a growing population, households that contain the young and those who are saving outstrip those households that have the old or those of the dissaving. However, as a result, a growing population leads to an increase in aggregate savings; known as the growth effect. The
dependency effect generally implies a negative relation between rapid population growth and savings, the growth effect on the other hand implies a positive relation to these factors.

The dependency effect and rate of growth effect are both based on the life cycle hypothesis that is related to microeconomic theory. However, on the macroeconomic level, changes in factors such as age structure affect savings as an increase of younger groups may increase the consumption relative to the production with this reversing with an increase in older groups.
4.1 Social Effect of Crisis on Greece’s Citizens

Based on the analysis of the crisis faced by Greece it is evident that if Greece defaults its economy will contract further and jobs will become more difficult to acquire. The major risk of uncertainty that is related to the crisis can bring about a catastrophic effect. This will include Greek depositors have difficulty in getting their money out of banks resulting in government services becoming scarce. This can have an overall impact on voters running to the polls to elect new leaders amidst the crisis contributing to the financial mishap. It is evident that Greece’s role as a member state of the EU-19 is at stake with chances of the country having to exit the Euro. If the country is to leave the euro a new drachma; Greece’s currency, would be worth less than a euro with speculations saying that the drachma may be devalued by 50 per cent leading to costs of imports skyrocketing and also further soaring inflation (CNN Money, 2015).

The economy of Greece has already shrunk by 25 per cent with unemployment rising to record levels which will be discussed in the further sections of the paper. Currently one in two young people are without work; wages and pension have been cut; and many small and medium businesses have closed (CNN Money, 2015).

Aside from the magnanimous economic impacts of the crisis on Greece there are various social implications that have risen. According to Hope (2012) it was reported that 20,000 Greeks have been made homeless during 2012 and about 20 per cent of shops in the historic center of Athens have become abandoned. Furthermore, an estimate of 20 per cent of Greeks no longer have enough money to cover for daily expenses of food (Zetichik, 2015). With the Greek government under major pressure from its European creditors to cut expenditure was unable to provide a safety net for its own citizens to rely on. An example of this being a national program to move displaced people back to their homes through a stipend of a few hundred euros monthly which had severely faltered (Zetichik, 2015). Further decisions of the Greek government can be seen to create a harsher living environment for Greek citizens who are already on the poverty line by willing to sign for another 4.4 billion Euros worth of spending cuts to secure a deal with the bail
out (Pop, 2012). These budget cuts will amount in about 2 per cent of gross domestic product within the country’s sectors of defence, health-care, and pharmaceutical spending (Pop, 2012).

IMF officials such as Poul Thomsen, overseers of Greek austerity program, asserted that Greeks were now at their limit of tolerance for austerity citing that the Greek people had done enough in terms of reforms at a great cost to the population (Pop, 2012). This is evident from New York Times report (2013) which shows the adverse conditions by which Greek families are living. Due to increase in tax requirements such as on heating oil; raising taxes to 450 per cent even though many middle and lower middle class citizens of Greece were facing wage cuts and outright unemployment; 80 per cent of Greeks were unable to heat their homes for the winter season (NY Times, 2013). This is causing Greek citizens to turn to environmentally damaging solutions to heat their homes which includes cutting down of wood from forests giving rise to pollution in areas; such as Athens, where the city is already struggling with low air quality (NY Times, 2013).

According to Holodny and Udland (2015) local Greek businesses are in state of disorder with many Greeks now preferring merchandise and other tangible items over the euro. Greek banks have been closed since June 29 when the Prime Minister had announced a referendum vote on bailout terms; a vote which came back as “NO”. During this time, the Greek economy had seized up and banks began to run short of cash as assistance to the country from the IMF and ECB had dried after Greece had failed to pay over 1.5 billion euros that were owed to the IMF on June 30, 2015 (Holodny and Udland, 2015). Followed by bank closures, there have been capital controls set which have limited ATM withdrawals at Greek banks to 60 euros per day Holodny and Udland (2015). The figure below sums up the emotion and desperation that is being faced by the Greek people as the country as a whole prepares to deal with an insurmountable debt of 35 billion pounds. The image has been circulating all around social media and newspapers since the decision to limit ATM withdrawal.
The image in figure 4 is of 77-year-old Greek citizen Giorgos Chatzifotiadis, one of many Greek pensioners who were adversely affected by the country’s debt crisis (Yam, 2015). Chatzifotiadis was photographed outside of an Athens bank sobbing on the ground after he was unable to withdraw a pension on behalf of his wife (Yam, 2015). Pension funds have lost about 2.5 billion euros since 2012 in Greece which is backlogged with more than 400,000 pension applications to deal with which is considered to add to the country’s current existing tally of 2.65 million pensioners (Nardelli, 2015). Included in the package of savings and tax increases the creditors of Greece are demanding the government to cut pensions by an equivalent of 1 per cent of the country’s GDP (Nardelli, 2015).

However, the demands of the creditors have not been complied with by the Greek PM and his finance minister. There are several factors that need to be taken into account for the pension system in Greece. Firstly, solely based on the demographic profile of the country, Greece has about 20.5 per cent of people over the age of 65 in terms of its ageing population. Coupled with that is the youth’s unemployment rate which is still above 50 per cent, thus, the younger generations are unable to generate funds to pay for elderly services such as pensions in the near
future. Furthermore, Greek society is very dependent on its pensioners. According to Eurostat (2015) one in two households rely on pensions to make ends meet, while the country as an old-age dependency ratio that is well above 30 per cent. This means that for every 100 people of working age in Greece there are at least 30 people aged 65 or more. Lastly, the Greek pensions that are allotted are not considered to be enough to live a sustainable life. According to Nardelli (2015) there is an estimate of 45 per cent pensioners that receive pensions which are below the poverty line of just 665 euros per month.

4.2 Current and Potential future labour force shortages

There are numerous definitions and types of labour market shortages. However, commonly they refer to a situation where there is a need for quantity of workers exceeds the available supply of them at a specific wage and working conditions at a specific place and point in time (OECD, 2003; Ruhs and Anderson, 2010, IOM, 2012). This paper distinguishes two main types of labour shortages;

- Quantitative shortages which are caused by aggregate excess demand with insufficient workers to fill the overall demand.
- Qualitative shortages which are caused shortage in specific skills, occupations or sectors with available workers not having the needed skills, preferences or information to fill the shortages.

Keeping in mind the high unemployment rate in a majority of the regions of the EU which resulted from the ‘Great Recession’ that began in 2009, quantitative labour market shortages are not considered a dire issue throughout a majority of the EU countries. However, the European Commission (2015) hypothesises that quantitative labour shortages have the potential to become
an issue in the future, if the labour force begins to diminish as a result of demographic changes while labour demand at the same time increases as the economy of each country begins to recover.

The decline of the labour supply in the EU-15 member states and Greece as a whole can be explained by demographic developments, by specifically analysing the decline in population of the working age and decline in the participation rate of the working-age population.

According to Zimmermann et al. (2007) it is not easy to measure labour shortages and the basic labour market indicators for identification of labour shortages are rooted in economic theory and ambiguities affect the practical application of those indicators. Labour shortages, or job vacancies, or excess demand are similar in terms that mean open positions. Each of these are viewed as opposite to unemployment or excess supply. There is a chance for excess demand and excess supply to exist simultaneously. This may come from the fact that the labour skills that certain employers may want are not satisfied by the available supply thus resulting in positions being left vacant. According to OECD (2003) the discrepancy between labour demand (available jobs) and labour supply (skills of the unemployed) is defined as structural unemployment.

Firstly, it is necessary to examine the demand side of the labour market. Demand for labour is often recognised as a classic early indicator of the vigour and well-being of the labour market. At a time when an economy is health, employers hire workers who as a result produce goods and services that the employers are able to sell the goods in the markets and earn a profit. Hiring workers increases the costs of employers and employers often want to hire workers at lower wages. Based on the law of demand for labour, an inverse relationship between demand for labour and the price of labour is established and represented in a downward sloping curve. Employers are only willing to hire extra workers when marginal revenue product of labour
exceeds nominal wages. Based on the use of cost benefits, this allows to keep profits high. At the
time that marginal revenue product of labour equals nominal wages, the business will have
reached its maximum profits and then take the decision to no longer higher.

According to projections by Eurostat (1997) there are four discrete characteristics that will
exemplify the years between 1996 to 2020. They are as follows;

1. The number of young people under 20 will fall by 11 per cent (9.5 million)
2. Adults of working age will decline by 6.4 per cent (13 million).
3. Retired adults will increase by 50 per cent to more than 37 million
4. Most rapid expansion within retired adults will be mostly be those individuals aged over
   80.

Based on these characteristics it is evident that the ratio of elderly to the young will increase
dramatically resulting in dramatic changes within the population. Based on these assumptions, the
median age will increase from 36 to 45 years older and the proportions of those individuals aged
under 20 years and over 65 years will be revered by the year 2020. The three major groups of
children/students, active population and retired adults are to witness a dramatic change in both
their numbers and proportions which is gives it a larger chance for a shortage in labour within
the Greece.

A decrease in the population of the working-age individuals can be caused by a common output
of the working age population that is greater than the input caused by factors of ageing and low
fertility rate as evident in sections 2.2 and 2.3. Another factor that impacts this trend is from net
emigration.
Due to the low and decreasing fertility rate in the last fifteen years, the inflow of young people into the labour force is smaller than the outflow of older workers who retire. If activity rates remain the same, this will result in a decrease of the labour force causing a constricted labour market in which labour demand surpasses labour supply. According to OECD (2003) towards the middle term of the projection, the ever increasing number of “baby-boomers” that are scheduled to retire will in some occupations will lead to a replacement demand that will be more difficult to fill from the domestic labour supplies in the EU.
Table 2 illustrates the correlations between the time series of the changes in total fertility rate and a selection of economic indicators of an economic crisis in each selected European country. The main point of this test was to look for potential connections between economic conditions and the changes that are taking place in fertility behaviour. The correlations were calculated by also considering a lag in total fertility rate from 0 to 3 years. Thus, four correlations were calculated for each country and indicator. The table above, thus represents the highest values of the correlations either it being negative or positive, coupled with the lag at which each of those computations were found. To place an emphasis and remained focused on
the effect of economic crisis, data from years 2000 to 2011 was used in order to calculate the annual data obtained from Eurostat databases. Based on the correlations it was found that the usual economic indicator of economic growth based on the GDP of each country there is an expected relationship of negative changes in GDP corresponding to negative changes in TFR, with a delay, resulting in a high positive correlation at specific lags as highlighted in the table.

Aside from GDP, another indicator chosen was actual individual consumption (AIC) as it provides a more resolute measure for material welfare conditions of households since it refers to goods and services consumed by individuals regardless of if those goods were purchased by the individuals, or governments, non-profit organisations. By correlating the changes in AIC to TFR, the study was able to analyse the impact of changing material situations of households on fertility behaviour; rather than the living standards of a country, which is measured instead using GDP. Next, the annual unemployment rate of age group of 15-49 was used as an indicator represented with (UNE). The relationship that was anticipated is those with a negative sign as they mean that a positive change of the UNE are correlated with a negative change of the lagged total fertility rate. Lastly, the indicator used in Table 6 was the annual average consumer’s confidence index represented by (CCI). This meant for the indicator to compute the mawkishness of economic uncertainty. The correlation between changes in CCI and lagged changes in TFR were expected to be positive.

4.3 Labour market participation and unemployment rate of young people

By 2000, more than 20 million people were unemployed in 28 countries of the European Union, which corresponds to an approximate of 9.2 per cent of the total labour force. Unemployment in Greece also follows about the same trends as that of EU-28. Nonetheless, between 200 and the
start of 2004 the unemployment rate in Greece was above that recorded in EU-28. During the economic crisis that took place in 2009, unemployment increased at a rapid pace with the exception of the years 2010 and 2011 where it only declined temporarily. The unemployment level peaked at 19.2 million in the second quarter of the year 2013 before it began to decrease in the second part of 2013 and the beginning of 2014 all the way towards the end of the year. The trends described have been illustrated in the figure below.

Youth (ages 15-35) unemployment rates are seen as being higher, considerably more than double, than compared to unemployment rates of all ages as illustrated in figure 18 below. The economic crisis had severely impacted the youth with the second quarter of 2008 seeing youth unemployment rate taking an upward trend to peak at 23.8 per cent in the first quarter of 2013 before beginning to decrease to 21.4 per cent towards the end of 2014.
Employment rates are seen to be generally lower for both women and older worker. Based on our findings for 2014, the employment rate for men was at 70.1 per cent in the EU-28 than compared to 59.6 per cent for women which is evident from figure 20. Also, male employment rates were seen to be unswervingly larger than those for women throughout all EU-15 member states in 2014. Based on figure 20, Italy and Greece had recounted gender differences of 16 to 18 percentage points for statistics detaining employment rates. For both these countries this shows the fact they stated the nethermost and second nethermost female employment rates. However, in countries such as Finland and Sweden, there is very little difference between the employment rates of both genders. Just as with female employment, there is also evidence that suggests employment rate for older workers grouped in ages 55-64 has increased at a rapid pace, even though the countries were facing a financial and economic crisis. Based on figure 19, in 2014 there were 11 EU-28 member states that had higher employment rates for older workers that
were between 50 per cent and 66 per cent. However, for the EU-15 countries the highest employment rate for older workers were found in Sweden, have 74.0 per cent employment.

![Figure 8: Employment rates (%) by age group, 2014 (Source, Eurostat)](image)

![Figure 9: Employment rates by gender and age group 15-64, 2014 (Source; Eurostat)](image)
The Greece Debt Crisis has caused a great deal of upheaval throughout Greece and the European Union. There were several other countries that had faced the same deteriorating economic conditions as the Greek government. Greece has seen an increase in its unemployment rate and labour shortages due to many factors that are far from the immediate economic impacts of the crisis. The Greek government had played a direct role in producing the crisis which is evident from its deceptiveness of understating its economic figures. This led to Greece being in a fragile position and eventually led to the country being closed down from receiving further international funding and investment.

The Greece debt crisis has the potential of improving if the Greek government agrees to the aid packages that have been suggested by the “Troika” which is composed of organisation International Monetary Fund, European Commission, and European Central Bank. However, the European Union as a whole will need to once again revise various treaties and requirements that it has made in the Union. The German dominated European Central Bank has provided the remainder of the European Union a monetary policy that is adequate and workable for Germany but it places countries such as Greece into a tight spot and depression. Greece has been squeezed into a crushing debt burden of 177 per cent of GDP and a deep depression making it difficult for the country to raise the funds needed to make timely debt payments. Therefore, EU’s economic policies need to change in order to accommodate poorer countries to grow and prosper
REFERENCES


