Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Diploma Thesis

Analysis of Austerity Measures in the European Union

Marie Křížová

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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DIPLOMA THESIS ASSIGNMENT

Křížová Marie

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Thesis title

Analysis of Austerity Measures in the EU

Objectives of thesis

The overall goal of the thesis is to list and evaluate the major austerity measures which has been used by the European Union (EU) between years 2008-2012. As a part of crisis management, these measures aim to recover and stabilize EU budget and regulations after several sovereign-debt crises have emerged in its member states.

The thesis will compare and evaluate regulatory measures which have been implemented in Ireland, Greece and Portugal in order to propose new solutions for financial crises which might occur in the future including the most recent one - Cyprus bank crisis.

Methodology

The theoretical part of the thesis will consist of literature review highlighting approaches and measures which has been implemented by the European Union so far in order to stabilize economies in Ireland, Greece and Portugal. Literature review is done using methods of synthesis, extraction, deduction and induction. In the analytical part, the measures and the results of their implementation will be compared and evaluated in order to propose refined methods of financial crisis management including its prevention measures. These conclusions will be based on comparative analyses of above mentioned and will be used to propose solutions for Cyprus bank crisis in 2013. The methods of the analytical part consist of quantitative and qualitative analysis of data including estimation of trends and evaluation of EURO currency development by means of fundamental and technical analysis.

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Keywords

austerity measures, European Union, European sovereign-debt crisis, Greece, Ireland, Portugal, Cyprus

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DEVELOPMENT, Organisation for Economic Co-operation and. Italy 2012. Paris: OECD Publishing. ISBN 978-926-4169-975.

Batini, Nicoletta, Callegari, Giovanni and Melina, Giovanni, Successful Austerity in the United States, Europe and Japan (July 2012). IMF Working Paper No. 12/190. Available at SSRN: http://ssrn.com/abstract=2169736

The Diploma Thesis Supervisor

Procházka Petr, Ing., MSc, Ph.D.

Last date for the submission

March 2014

prof. Ing. Miroslav Svatoš, CSc.
Head of the Department

prof. Ing. Jan Hron, DrSc., dr. h. c.
Dean

Prague September 30. 2013

Affirmation

I hereby declare that I have worked on my Diploma Thesis titled *“Analysis of Austerity Measures in the European Union”* solely and completely on my own and that I have marked all quotations in the text. The literature and other material I have used are mentioned in the Bibliography section of the Thesis.

Prague, 31.3. 2014 ____________________________

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Analysis of Austerity Measures in the European Union

Analýza úsporných opatření v Evropské unii

Summary

The Diploma Thesis provides empirical evaluation of fiscal policies implemented as part of austerity measure packages in the European Union member states, specifically in Ireland, Greece and Portugal. In its theoretical part, it characterises the course of each country's crisis individually and outlines the austerity measures implemented to tackle them. In analytical section, the measures of fiscal policy regarding standard value added tax rates are evaluated. This is done through data collection, qualitative and quantitative analysis using trend curves and prediction and alternate scenarios development. Based on the results, recommendations for Cypriot economy are proposed.

Keywords: Austerity measures, European Union, European sovereign-debt crisis, Ireland, Greece, Portugal, Cyprus

Souhrn

Diplomová práce zahrnuje empirickou evaluaci kroků fiskální politiky uplatněných jako součást úsporných opatření ve státech Evropské unie, a to především v Irsku, Řecku, Portugalsku a na Kypru. V teoretické části se práce zabývá charakteristikou vývoje ekonomické krize v jednotlivých zemích a úsporných opatření, která byla následně zavedena. V analytické části jsou evaluována opatření fiskální politiky zahrnující zvýšení sazeb daně z přidané hodnoty. Výsledků analýzy je docíleno sběrem dat, kvalitativní a kvantitativní analýzou za pomocí trendových křivek, predikce a vývoje alternativních scénářů. Na základě výsledků jsou vyvozena doporučení pro ekonomiku Kyperské republiky.

Klíčová slova: Úsporná opatření, Evropská unie, Evropská dluhová krize, Irsko, Řecko, Portugalsko, Kypr

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1 Introduction

The framework of the European Communities has been developing since the end of World War II when the attempts to unite and hence politically and economically strengthen the old continent began to take concrete shape. Since then, the legislation has been developing and adjusting to the quickly changing modern world, facing internally and externally emerging problems.

The existence of the third stage of Economic and Monetary Union, which has been agreed upon and legally substantiated in Maastricht Treaty on European Union in 2012, has been threatened by financial crises and following recession that emerged in 2008 and again in 2012. The crisis followed by economic recession in most of the European Union regions has forced the indebted countries to implement a variety of measures of budget austerity that has negatively influenced income poverty and inequality.

This diploma thesis offers an analysis of certain austerity measures which have been implemented in some of the most affected Eurozone countries in the years 2007-2012; namely the Republic of Ireland, Greece (officially the Hellenic Republic) and Portugal (the Portuguese Republic). These European countries were at similar stages of economic performance in the early 1960s and yet their economic development since then differed remotely. The theoretical section offers description of different approaches towards austerity tendencies accompanied with internal and external political changes.

The analysis also provides the first round of economic impacts of these measures on the level of tax revenues. Moreover, it describes the way of economic leadership that resulted into crises and evaluates decisions made by countries' political leaders. The concept of economic and monetary union of the European Union is then discussed in the context of economic crisis.

2 Aims and Methodology

The aim of the Diploma Thesis is to confront and evaluate the fiscal policies practices that were implemented during the economic crisis 2008-2010 as part of economic austerity measure packages in Ireland, Greece, and Portugal. As a result, recommendations regarding standard value added tax rates policies are proposed for Cyprus.

The Thesis is embedded in profound literature review. The theoretical part highlights the evolution of economic and monetary union of the European Union with special attention to its third stage (Eurozone) and single European currency (Euro). All of the three examined countries are then characterised individually regarding their economic development in the second half of the 20th century until the financial crisis in 2008. Furthermore, the theoretical section focuses on courses of each country's crisis individually and outlines the austerity measures implemented to tackle the situation.

In analytical section, the measures of fiscal policy regarding standard value added tax rates are being examined and evaluated. This is achieved through:

- respective data collection,
- qualitative analysis
- and quantitative analysis using trend curves and prediction.

Based on these methods, alternate scenarios of standard value added tax rates are developed for each country in order to provide an estimation of economic development in case the countries' governments would have decided for different fiscal policy strategy.

Based on the results of the analysis, recommendations for fiscal policy in Cyprus are discussed in the context of convergence towards monetary union. Additionally, the concept of the European Union's monetary union is discussed.

3 Literature Review

3.1 Economic and Monetary Union

Economic and Monetary Union (EMU) of the European Union represents a 6th and 7th stage of economic integration of the member states. It unites the currency and fiscal policy of the Union as a whole and thus strengthens the bargaining position of such currency union in the world market. The EMU is considered as one of the last steps of integration before a fully politically integrated union of states led by union government is established.

Stages of the economic integration: [1]

1. Independent economy
2. Preferential trade area
3. Free trade area
4. Customs union
5. Common market
6. Monetary union
7. Fiscal union
8. Political Union

Economic and Monetary Union (EMU) is a process which aims to harmonise the economic and monetary policies of the European Union (EU) Member States. This process comprises three phases [2]:

EMU's first phase was initiated in July 1990 and ran until December 1993, the main aims of the policy unification was the free movement of capital between Member States. In the process a surveillance body (the Council) cover all aspects of short and medium-term economic policy to apply the principles of price stability, sound public finances and monetary conditions and open, competitive markets. A special body of European Monetary Institute (EMI) based at Frankfurt am Main has been established. The target of the body was to carry out the necessary preparatory work for establishment of the European System of Central Banks (ESCB), which aim is to conduct the single monetary policy from the beginning of the third stage, and for introduction of the single currency.

The second phase started in the beginning of January 1994 and ended in the end of 1998. The main targets of the second stage were coordination Member States' monetary policies and strengthening cooperation between the Member States' national central banks. Member States must ensure that their domestic law is not in contradiction with the Maastricht Treaty and with the Statute of the ESCB, with special reference to independence of their national central bank. Their economies must also be stable enough to be able to enter convergence process of their economies, since the move to the third stage is conditional on fulfillment of the four convergence criteria. These are controlled by the Commission's annual country reports.

In 1995 a monetary turmoil occurred after a significant devaluation of US dollar which only strengthened the Member States' political determination to continue the EMU process on schedule which was described in the Treaty. The name Euro for single currency has been agreed upon.

After 2 years of intensive work and cooperation among all the EU institutions, the Dublin European Council in December 1996 announced agreement on setting framework for the single currency and presented: [2]

- the legal framework for the euro;
- the Stability and Growth Pact for ensuring strict budgetary discipline;
- the structure of the new Exchange-Rate Mechanism for those Member States not joining the euro zone.

Designs of the banknotes were presented by EMI.

The third phase of EMU initiated on 1 January 1999 and is mainly characterised by gradual introduction of the euro currency and implementation of a single monetary policy under the responsibility of the European Central Bank (ECB).

As the first two stages have been successfully completed and for Member States which fulfilled the convergence criteria and adopted the euro currency now form the "*Euro area*" also called "*Eurozone*".

According to Article 119 of the Treaty on the Functioning of the EU, all Member States (except the United Kingdom and Denmark which negotiated an opt-out) are obliged to join the Eurozone and adopt single European currency at some point of their economic and legal maturity. [3]

3.1.1 Convergence Criteria

To enter the third stage of the Economic and Monetary Union (EMU) and adopt the euro as their currency, Member states have to first fulfil a set of legal and economic criteria called "*convergence criteria*" (also known as the Maastricht criteria. The four main economic criteria, which are actually five within four points as the "*fiscal criterion*" consists of both a "*debt criterion*" and a "*deficit criterion*", are included in the Article 140 of the Treaty on the Functioning of the European Union.

Member States that have not yet fulfilled the convergence criteria are subject to derogation from the third phase of EMU. The progress of economic maturity of those states are examined periodically at least every two years when the Commission and the European Central Bank produce convergence reports on these Member States. [2] [3] [4] [5]

Table 1 Convergence Criteria of the Eurozone

What is measured:	**Price stability**	**Sound public finances**	**Sustainable public finances**	**Durability of convergence**	**Exchange rate stability**
Measured by:	Consumer price inflation rate	Government deficit as % of GDP	Government debt as % of GDP	Long-term interest rate	Deviation from a central rate
Convergence criteria:	Not more than 1.5 percentage points above the rate of the three best performing Member States	Reference value: not more than 3%	Reference value: not more than 60%	Not more than 2 percentage points above the rate of the three best performing Member States in terms of price stability	Participation in ERM II for at least 2 years without severe tensions

Data Source: European Commission

1. Price stability

Member States must demonstrate a country's price stability which is measured by harmonised index of consumer prices inflation (HICP). HICP is observed in 12-months average of yearly rates and it shall not exceed by no more than 1.5% the unweighted arithmetic average of the similar HICP inflation rates in the 3 EU member states with the lowest HICP inflation. EU member states with a HICP rate significantly below the comparable rates in other Member States, do not qualify as a benchmark country for the reference value and will be ignored, if it can be established its price developments have been strongly affected by exceptional factors (i.e. severe wage cuts and/or a strong recession). [4] [5]

2. Sound and sustainable public finances

The candidate Member State must have sustainable government finance, i.e. the Member State's budgetary position must be without a deficit that is excessive. As excessive is considered a government deficit of more than 3% of the country's GDP. Government debt of the country cannot exceed 60% of GDP. [4] [5]

3. Durability of convergence

Based on Member States' loans, long-term interest rates are calculated – i.e. when they issue bonds or equivalent instruments. The interest rates of the Member State applying for Eurozone accession are then compared to a reference value, which is obtained by calculating the average of the long-term interest rates of the 3 best performing EU Member States in terms of price stability. The interest rate of the candidate Member State must not exceed the reference value by more than 2 % to fulfil the criterion. [4] [5]

4. Exchange Rate Stability

To observe whether the Member State is qualified for entering the 3rd phase of EMU, it must at first participate in the so-called "*European exchange rate mechanism*" for at least two years. The mechanism covers rates of exchange between the euro and the domestic currencies of Member States outside the Eurozone. Its main objective is to stabilise European currency rates by avoiding excessive fluctuations between the value of the euro and those of national currencies. [2] [4] [5]

3.1.2 Economic Crisis

The Eurozone crisis (often referred to as the Euro crisis) has been influencing several countries of the Eurozone since September 2008. The crisis is a combination of sovereign debt crisis, a systematic banking crisis and a growth and competitiveness crisis. [6]

*"A **sovereign debt crisis** is generally defined as economic and financial problems caused by the (perceived) inability of a country to pay its public debt. This usually happens when a country reaches critical high debt levels and suffers from (perceived) low economic growth."* [7]

"*A **systemic banking crisis** is one where all or almost all of the banking capital in a country is wiped out. The resulting chain of bankruptcies can cause a long economic recession as domestic businesses and consumers are starved of capital as the domestic banking system shuts down."* [6]

The ongoing crisis made it difficult or impossible for some countries in the Euro area to repay or re-finance their government debt without the assistance of third parties. Moreover, banks in the Eurozone happened to be undercapitalized and have faced severe liquidity problems. Additionally, economic growth has slowed down in the whole Eurozone and was unequally distributed across the member states.

To tackle the economic stagnation, the governance of the European Union had to adopt a unified and strong stance and support the Member States which have started to fall into economic recess.

"Governments in the UK and the Eurozone were faced with a choice when the financial crisis hit in 2008. They could have followed the example of the USA and launched a fiscal stimulus using funds raised by the European Central Bank, seeking to boost growth and thus escape from recession. Instead, they engaged in austerity programmes that, in those countries most severely afflicted by the initial crisis, have choked off any growth." [8]

3.1.3 European Financial Stabilisation Mechanism

In 2010 a special fund with aim to assist Eurozone states to tackle the crisis, the European Financial Stability Facility (EFSF) and the European Financial Stability Mechanism (EFSM) were created. These mechanisms along with the International Monetary Fund provide a bailout for the EU states that find themselves falling into economic recession.

EFSM is a loan mechanism, which supports EU Member States in financial difficulties. The Commission has the authorization to borrow up to a total of €60 billion in financial markets. This act is made on behalf of the Union under an unconditional EU budget guarantee. To have no debt-servicing cost for the Union there works a lending arrangement, when the Commission on-lends the proceeds to the beneficiary Member State. The beneficiary Member State repaid all interest and loan principal via the Commission. The repayment of the bonds is guaranteed by EU budget.

The EFSM has been activated for Ireland and Portugal. In 7 April 2011 Portugal asked for financial assistance from the EU, the euro area Member States and the International Monetary Fund (IMF). In May 2011 an Economic Adjustment Programme was negotiated between the Portugal, the European Commission (EC), the European Central Bank (ECB) and the IMF.

The EFSF has a lending capacity of €440 billion and is provided only to the members of the Eurozone.

The financing sources of EFSF and EFSM were all EU countries. These two mechanisms were temporary and not even properly based in the EU Treaties. Therefore, in 2011 a much larger mechanism called European Stability Mechanism (ESM) has been established. ESM is funded only from the countries of Eurozone and it would have a permanent treaty basis. For that purpose, an amendment to Article 136 of the Treaty on Functioning of the EU, and ESM Treaty have been proposed. On 8 October 2012, a new permanent crisis mechanism, the European Stability Mechanism (ESM), was inaugurated. [2] [9]

3.2 Ireland (Republic of Ireland)

Year of EC/EU entry: 1 January 1973

Capital city: Dublin

Total area: 70 300 km²

Population: 4.6 million

Currency: Member of the Eurozone since 2001 (€)

3.2.1 Economic Development in the Second Half of the 20th Century

Since its independence in 1920s, the Free State operated with budget deficit which has struggled to recover until 1931, one of the biggest burdens of the budget being the "land annuities" which were paid to Great Britain and have been agreed upon as a part of the 1921 Anglo-Irish Treaty. In 1932 the Fianna Fáil government began a dispute with Britain over the payment of "land annuities", called The Economic War (also Anglo-Irish Trade War) which continued until 1938. The country has been implementing protectionalist market laws based on the precondition of country's self-sufficiency. [11]

In 1950s, it became clear that the laws of nationalistic economy were unsustainable in the long term. From the population of approximately 2.967 million, 400 000 people emigrated from Ireland due to the country's economic stagnation. In 1958, ground-breaking policy changes were drawn in the document called *Economic Development* led by Ken Whitaker: *"…advocating free trade, foreign investment, productive (rather than mainly social) investment, and growth rather than fiscal restraint as the prime objective of economic management."* [13]

In the beginning of 1960s, Ireland lowered import tariffs and in 1965 concluded free trade agreement with the United Kingdom. Two years later, Ireland joined the General Agreement on Tariffs. [12]

3.2.2 European Union Accession

European Economic Community (EEC) accession in 1973 has positioned Ireland among the most developed economies in the Europe and enabled access to larger markets as well as Common Agricultural Policy protection and help. That meant a lot to the country, which have been struggling with its own colonial history for centuries. On joining the EEC Ireland's average income was 63% of the EEC average. It rose to 125% and remained above the average in 2013, despite the depth of the crisis. [12] The existence of a large EC market supported a growth strategy that emphasized the expansion of the export-oriented industries. [10]

As a result, in the 1970s, the Irish population increased by 15%. The economy began to recover, slowly increasing national income and employment rate when gradually ascending the importance of public sector as employer (around 30% by 1980s). However, in addiction to rise in public expenditures (on social welfare, health and education, housing, telecommunications and other infrastructure, and administrative services), this has also led to the steep raise in public debt and budget deficit which plunged the country to deep economic crisis in the 1980s.

The causes of 1980s were: [10]

- the return of high unemployment,
- emigration, (Especially highly-educated young people; in total 200 000 people left from 1981 to 1990.)
- steady worsening of the public finances,
- and the seeming inability of any government to manage the nation's affairs and find a solution to the worsening situation.

In addition, the global conditions of 1980s were weakened by the oil shocks in the previous decade. Government attempts to turn the course of economy only led to worsening both internal and external economic situation. They tried to increase public spending (54% to 62% of GNP between 1980 and 1986), increase taxes and finance the state deficit by borrowing. [12]

In 1987 the new government implemented a 3-year plan called the *Program for National Recovery.* This plan included various austerity measures for the budget such as severe cuts in expenditure accompanied by some novel consensus-building and developmental measures all of which, however critisised in the beginning, has showed to be successful. The government's action plan included the enforcement of the middle class by slight increases in the moderate wages and reductions in income taxes.

The period of Ireland's economy boost between 1995 and 2007, the so-called *"Celtic Tiger"*, was a result of healthening of the state economy on the break of 1980s and 1990s. It bursted in the period between 1995 and 2000 when the GDP growth rate did not go under 7.8%, this steep growth slowed down in the second part ranging from 4.4 to 6.5% from 2001 to 2007. [13] (Figure 1)

3.2.3 Eurozone Accession

Ireland entered the transitional period of convergence programme in 1999 along with Austria, Belgium, Finland, France, Germany, Italy, Luxembourg, Netherlands, Portugal and Spain. After a short the dual-circulation period (both Euro and Irish pound had legal tender status), the Euro has been established as a single currency on 9 February 2002. [13]

3.2.4 Financial Crisis

In September of 2008, Ireland becomes the first state in the Euro-zone to fall into recession. The causes of economic growth during the *"Celtic Tiger"* period such as low corporate taxes or low interest rates have led to expansion of credit and a property bubble which bursted out in 2007 as the Irish banks came under pressure due to the global financial crisis. Irish banks' foreign borrowings rose from €15bn to €110bn in 2004-2008.

GDP has collapsed by over 13% a year between 2008 and 2010 (Figure 1), but the more accurate measure for Ireland (stripping out the impact of multinationals); GNP shows a much bigger fall of over 16 % in these three years. [12]

The government emergency budget of 2008 which Irish Times called "*the toughest in many years*" included proposed income levy, closure of military barracks at the land frontiers with the United Kingdom and withdrawals of public funding such as medical cards and university fees. The citizens' protests against the two latter have been invoked mainly amongst teachers, farmers, pensioners and students. [15] The controversial budget cuts have also deeply impacted the Irish government, as the several rebellion members resigned their membership due to the measures' severity. A supplementary budget was delivered in April 2009 to address a fiscal shortfall of over €4.5 billion. [16]

Between 2008 and 2011, the unemployment rate raised rapidly. First it raised from 4.4% to 4.9% 2009, the biggest leap between 2009 and 2010 to the rate of 9.5%, the same trend continued until 2012. (Figure 3)

After negotiations on a comprehensive policy package for the period of 2010-2013 in November of 2010, Ireland officially requested financial assistance from the Troika of creditors- the EU, the euro area Member States, and the International Monetary Fund (IMF).

"The Economic Adjustment Programme for Ireland includes a joint financing package of €85 billion with contributions from the EU/EFSM (€22.5 billion), euro area Member States/EFSF €17.7 billion, bilateral contributions from the United Kingdom (€3.8 billion), Sweden (€0.6 billion) and Denmark (€0.4 billion) as well as funding from the IMF (€22.5 billion). Moreover, there is an Irish contribution through the Treasury cash buffer and investments of the National Pension Reserve Funds." [18]

The objectives of the programme were set as:

- Immediate strengthening and comprehensive overhaul of the banking sector;
- Ambitious fiscal adjustment to restore fiscal sustainability, correction of excessive deficit by 2015;
- Growth-enhancing reforms, in particular on the labour market, to allow a return to a robust and sustainable growth.

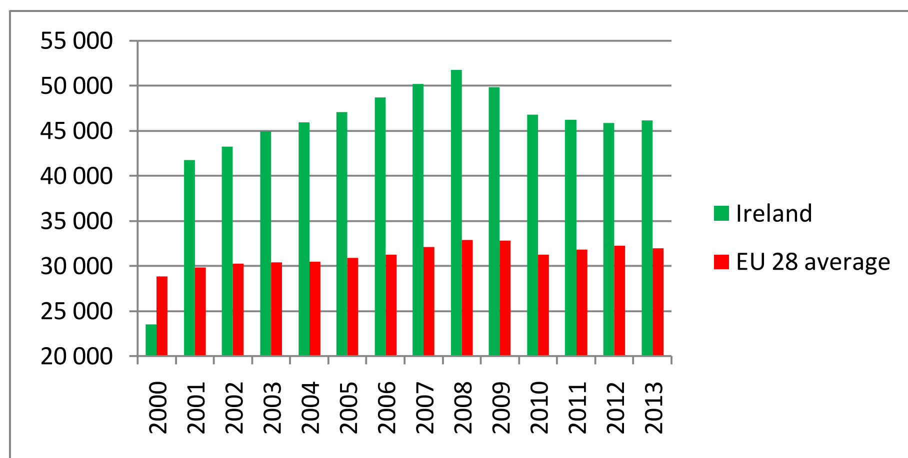
Programme disbursements are made over three years, under EFSM with an average maximum maturity of 12.5 years.

Table 2 Ireland: Overview on EFSM loan disbursements 2011-2012

Amount	Maturity	Raised on	Disbursed on
€ 5.0 bn	5 yr	05 Jan 2011	12 Jan 2011
€ 3.4 bn	7 yr	17 March 2011	24 March 2011
€ 3.0 bn	10 yr	24 May 2011	31 May 2011
€ 2.0 bn	15 yr	22 Sept 2011	29 Sept 2011
€ 0.5 bn	7 yr	29 Sept 2011	06 Oct 2011
€ 1.5 bn	30 yr	09 Jan 2012	16 Jan 2012
€ 3.0 bn	20 yr	27 Feb 2012	05 March 2012
€ 2.3 bn	15 yr	26 June 2012	03 July 2012
€ 1.0 bn	15 yr	23 Oct. 2012	30 Oct. 2012

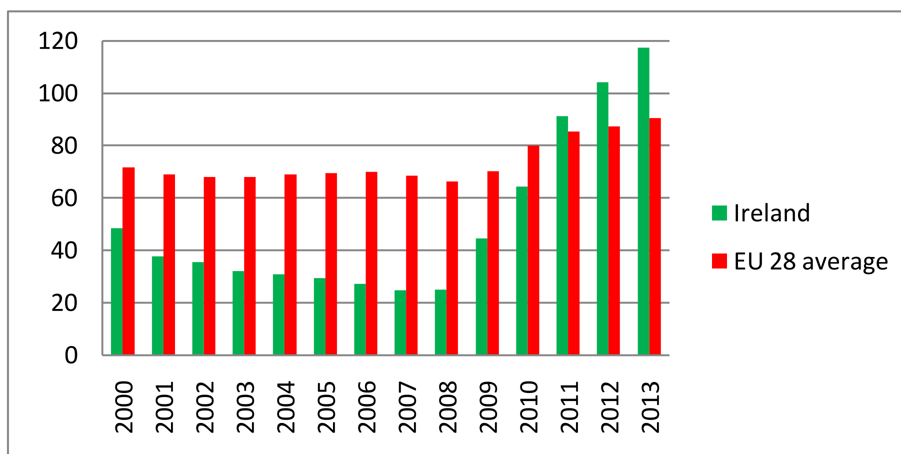
Data Source: European Commission

Figure 1 Ireland: GDP per Capita 2000-2013 [USD]



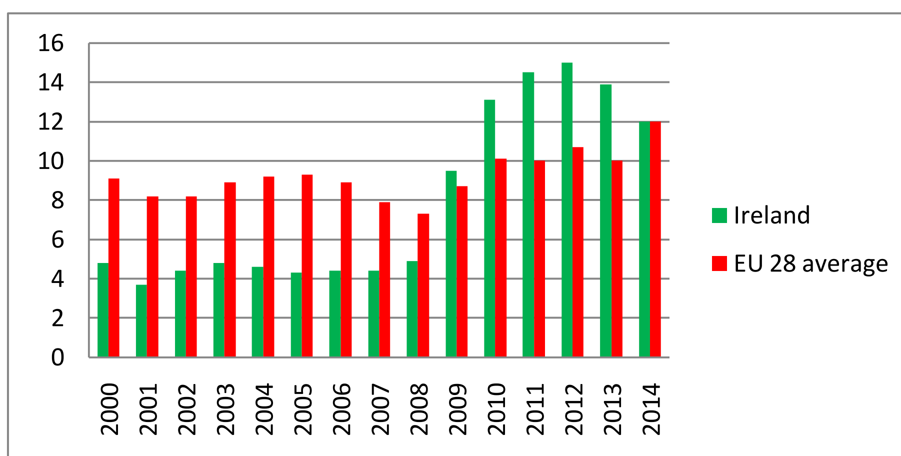
Data Source: Eurostat

Figure 2 Ireland: Government Debt to GDP Ratio 2000-2013 [%]



Data Source: Eurostat

Figure 3 Ireland: Unemployment Rate to January 2000-2013 [%]



Data Source: Eurostat

3.2.5 Austerity Measures

"The Irish government has introduced five anti-crisis budgets since 2008 which have had the effect of severely depressing domestic demand. While the exporting sector has done well, the performance of this sector cannot be taken for granted, given international economic developments. In any event, the history of countries trying to deal with fiscal crises is that exports alone will not suffice to allow a country to recover." [13]

The 4 year National Recovery Plan published in February 2010 included following measures: [22]

- €15bn correction over the period of 4 years
- Public expenditure down €10bn, tax up €5bn
- Corporation Tax will remain at 12.5%
- Social Welfare to be cut by €2.8bn by 2014
- VAT will rise to 23% by 2014
- Health spending to fall by €1.4bn over term of the plan
- Minimum wage to fall to €7.65 per hour
- Property tax in place by 2012
- Domestic water charges to be in place by 2014
- Plan includes 'full implementation of the Croke Park deal'
- New entrants to Public Service will face a 10% pay cut
- Public Service pensions to be cut by an average of 4%
- A new government could renegotiate plan - Enda Kenny

The announcement of austerity measures has been followed by protests coming from variety of age and work groups.

3.2.6 Economic Situation in 2013

The Irish economy can be characterised as small and highly open. The value of internationally exported goods and services in 2012 was equivalent to 191% of GDP, which amounted to €164 billion for the year. The most important component of the Irish economy are services which accounted for 67 % of gross value added at factor cost, while industry represented 31% and agriculture only 2% of gross value added. [21]

According to Assessment Stability Programme Report, unlike the EU as a whole is experiencing stagnant or negative growth, the Irish economy is gradually expanding at a moderate pace (Figure 1) and economic their growth is becoming more broadbased in comparison to the situation before the crisis. The market competitiveness of the country has improved in recent years, leading to a sharp rebalancing of the external accounts. There are positive developments slowly emerging on the labour market front as well. [20]

Table 3 Ireland VAT Rates in 2013

Standard VAT rate	23%
Intermediate VAT rate*	13.5%
Reduced VAT rate**	9%
Super-Reduced VAT rate***	4.8%
Null VAT Rate****	0%

Source: http://www.vatlive.com/vat-rates/european-vat-rates/eu-vat-rates/

* medical

** newspapers, admission to cultural sporting and entertainment events, hotels, restaurants

***foodstuffs

**** Basic food, children's clothing and footwear and

books

3.3 Greece (Hellenic Republic)

Year of EU entry: 1981

Capital city: Athens

Total area: 131 957 km²

Population: 11.2 million

Currency: Member of the Eurozone since 2001 (€)

As a founding member of Organisation for Economic Cooperation and Development (OECD) and the Organisation of the Black Sea Economic Cooperation (BSEC), Greece is considered as an advanced and high-income economy. Greece is also a member of the International Monetary Fund and the World Trade Organization.

Since 1975, Greece has a republican structure based on the constitution which has been acknowledged on the same year. There are 300 members in the single-chamber parliament who are elected for a period of 4 years. The country is divided into 13 administrative regions.

More than 50% of Greek industry is located in the Greater Athens area, with the main economic sectors being tourism, agriculture, construction and shipping. [22]

3.3.1 Economic Development in the Second Half of the 20th Century

After the World War II, the Greek economy has been left devastated as for most of the European countries. Furthermore, a Greek Civil War erupted between years 1945-1949. By 1950 the Greek economy relative position had dramatically regressed.

However, through 1950s-1773, their economy grew an average of 7% a year, with 2nd highest rapidity in the World losing only to the "tiger economy" of Japan during that period. This period of high rate of economic and social development in Greece has been called The Greek Economic Miracle.

Along with the Marshall Plan that aimed to help stabilise all the European states' economies, the measures, which facilitated such a rapid recovery, were: [29]

- a drastic devaluation of the drachma currency
- attraction of foreign investments
- investment into research and development (namely chemical industry)
- development of tourism and the services sector in general
- massive construction and huge city-planning infrastructure projects

The Greek economy continued to grow rapidly in comparison with the 4.7% average of EU15 countries and 4.9% of OECD countries. [22]

In a paper published in 1995, George Alogoskoufis (Professor of Economics at the Athens University of Economics and Business) described the 20 years before and 20 years after 1973 Greek economy as "the two faces of Janus" because of the magnitude of the divergence in macro economic trends between those two periods. For the 20 years thereafter, the Greek economy stagnated and inflation became high and persistent. [33]

In Table 4, see the comparison of an average GDP growth among decades in Greek history.

Table 4 Greece: Average Annual GDP Growth 1960-2011

Average GDP growth by era	
1961–1970	8.44%
1971–1980	4.70%
1981–1990	0.70%
1991–2000	2.36%
2001–2007	4.11%
2008–2011	−3.825%

Data Source: World Bank

3.3.2 European Union Accession

The Treaty of Accession of Greece to the European Communities was signed in Athens on 28 May 1979, and the country formally joined the European Community on 1 January 1981.

To evaluate the impacts of Greek EU market integration a number of economic studies have been developed since. Some of the researchers have characterised the Greek economy prior to EU accession as an already fully open one and predicted that there should be no major influence of EU accession in 1981. [25] However, Professor Tassos Giannitsis in his paper from 1993 [25] argues otherwise by citing levels of tariff and non-tariff barriers which were significantly higher in comparison to the other European countries. The level of domestic market protection has been reduced over the period of 1974-86. Above all, the EU accession also required elimination of preferential system of industrial subsidies, including export subsidies. According to Giannitis, the process of EU market integration was mishandled because the liberalisation of the Greek market worsened the Greek industries' competitive position. From this perspective, the EU market integration impacted negatively on overall economic growth.

By studying the levels of export and import balances in the period and taking into account the previously developed theories, another study has been developed in 2001 by Tryphon Kollintzas and Barry Bosworth. *"There are large discrepancies in the various measures of imports; in particular, the revised national accounts indicate a much higher level of imports in the late 1970s and early 1980s than was previously reported in the customs series."* [24] They concluded that the evidence of a large trade shock is rather mixed and that the EU accession did not in fact have a negative impact on the Greece's competitiveness. What they see as a much more important finding is that *„...the industrial sector of the Greek economy is very weak, and the country lacks clear areas of competitive advantage."* [24]

3.3.3 Eurozone Accession

The successful implementation of the Convergence Programme has allowed the participation of the drachma in the Exchange Rate Mechanism (ERM) in March 1998. [32]

On 19 June of 2000, Greece has been accepted into the Economic and Monetary Union of the European Union by the decree of the European Council. The decision was based on a number of state economy data (state deficits, inflation, monetary stability, interest rates) using 1999 as the reference year.

On 1 January 2001 Greece entered the 3rd stage of EMU and adopted the euro as its currency, replacing the Greek drachma and thus entered the euro area after having been for two years, subject to an economic diet and sanitation. The economic indicators were found to be consistent with the thresholds at the Maastricht agreements (1992). [28]

However, the obstacles which emerged for the economy in order to change its currency have become. In their publication from 2001, Boutillier and Uzunidis summarised these obstacles into three main ones:

- privatization,
- financialization,
- and unemployment.

As a result, above its economic practices Boutillier and Uzunidis questioned also the validity of social and political structure of the country. [38]

From the 1990s, the reliability of Greek deficit and debt statistics were observed with more attention by Eurostat. Statistical issues in this field were debated with the Greek statistical authorities far more frequently than with any other Member State. After an audit commissioned in 2004, Eurostat revealed that the statistics for the budget deficit had been under-reported.

"Data revisions of such a scale have given rise to questions about the reliability of the Greek statistics on public finances. The ECOFIN Council of 21 October 2004 took note of the Commission's information note on the fiscal notification of

Greece, and welcomed the Commission's initiative to present a detailed analysis of Greece's deficit and debt data back to 1997. The present document provides the progress of such analysis, based on the rules applicable at that time." [28]

The deficit figures for the period 1997-1999 are of the following magnitude

- 1997: 6,6 % of GDP instead of 4,0 %;
- 1998: 4,3 % of GDP instead of 2,5 %;
- 1999: 3,4 % of GDP instead of 1,8 %

The debt figures for the period 1997-1999 are of the following magnitude:

- 1997: 114,0 % of GDP instead of 108,2 %;
- 1998: 112,4 % of GDP instead of 105,8 %;
- 1999: 112,3 % of GDP instead of 105,2 %

The accounting issues which caused the data discrepancies were identified as:

- recording for military expenditures of equipment goods
- recording of capital injections and EU grants- partly caused by the change from European System of National and Regional Accounts in the Community 79 (ESA 79) 1999 to the new ESA 95 guidelines in 1999 [28]

3.3.4 Financial Crisis

In the early 2000s, Greece's rapid GDP growth exceeded the EU average, peaking at 5.9% in 2003. In the middle of 2000s, Greece's economy was one of the fastest growing in the Eurozone and was associated with a large structural deficit. However, the GDP per capita values were still far from the EU member states average. [29] (Figure 4)

As the world economy was hit by the global financial crisis in the late 2000s, Greece was one of the highly influenced economies because its main industries — shipping and tourism — were especially sensitive to changes in the business cycle. The government spent heavily on subsidies to keep the economy functioning and so the country's debt increased steeply. In November 2009, the Greek government led by the Prime Minister Georgios A. Papandreou announces that they aim to cut the budget deficit to 8.7% of GDP in 2010 to show EU partners that they are serious about restoring fiscal health of the country.

Furthermore, Papandreou pledges to a 10% cut in social security spending in 2010, abolishing bonuses at state banks and slap a 90% tax on private bankers' bonuses. He also promises to lead a fight against corruption and tax evasion are being which he considers the main reasons of country's economic situation. Despite the promises, the country's credibility keeps falling. [34]

On January 14 2010 Greek government unveils a stability programme with an aim to cut their budget gap to 2.8% of GDP in 2012 from 12.7% in 2009. Labour unions threaten with protest strikes against the austerity plan. The EU Commission says it backs Greece's plan to reduce its budget and urges Greece to cut its overall wage bill.

In 2010, Greece is obliged to refinance 54 billion EUR in debt, with a crunch in the second quarter as 20 billion EUR becomes due. A five-year bond issue in January is oversubscribed 5 times but the government has to additionally pay a hefty premium. As a one-day general strike on 24 February breaks out, the country is contemporarily crippled by non-functioning public transport and services. Finance ministry official anticipated that additional economy measures worth 4.8 billion EUR would cut the deficit by about 2% in place of the previous target of a 4% cut.

March 2010- first package of austerity measures is passed by the government (see Chapter 3.3.5). As a result, public and private sector workers go on strike on March 11. [29]

1. First Economic Adjustment Programme for Greece

In May 2010, Greece is becoming a part of Economic Adjustment Programme (EAP) developed by the euro area Member States and the International Monetary Fund (IMF) and in the context of a sharp deterioration in its financing conditions it is being provided a financial support in exchange for necessary but long-delayed austerity measures. Each of the agreed disbursement must be agreed upon between the Euro group and IMF's Executive Board. The Adjustment Programme is supported through financing by euro area Member States and the IMF. The financing by the euro area Member States is provided by the European Financial Stabilisation

Facility, whilst the IMF financing is channelled through the Extended-Fund Facility (EFF). [32]

"On 2 May 2010, the Eurogroup agreed to provide bilateral loans pooled by the European Commission (so-called "Greek Loan Facility" – GLF) for a total amount of €80 billion to be disbursed over the period May 2010 through June 2013. (This amount was eventually reduced by €2.7 billion, because Slovakia decided not to participate in the Greek Loan Facility Agreement while Ireland and Portugal stepped down from the facility as they requested financial assistance themselves)." [32]

However, there were 3 main conditions for the bailout: [33]

- Implementation of austerity measures, to restore the fiscal balance.
- Privatization of government assets worth €50bn by the end of 2015, to keep the debt pile sustainable.
- Implementation of outlined structural reforms, to improve competitiveness and growth prospects.

Table 5 Greece: Overview of the First Economic Adjustment Programme of Disbursements [EUR billion]

Disbursement	Date	Euro area	IMF	Total
1	May 2010	14.5	5.5	20.0
2	Sept 2010	6.5	2.6	9.1
3	Dec 10 / Jan 11	6.5	2.5	9.0
4	March 2011	10.9	4.1	15.0
5	July 2011	8.7	3.2	11.9
6	December 2011	5.8	2.2	8.0
	Total	52.9	20.1	73.0

Data Source: European Commission

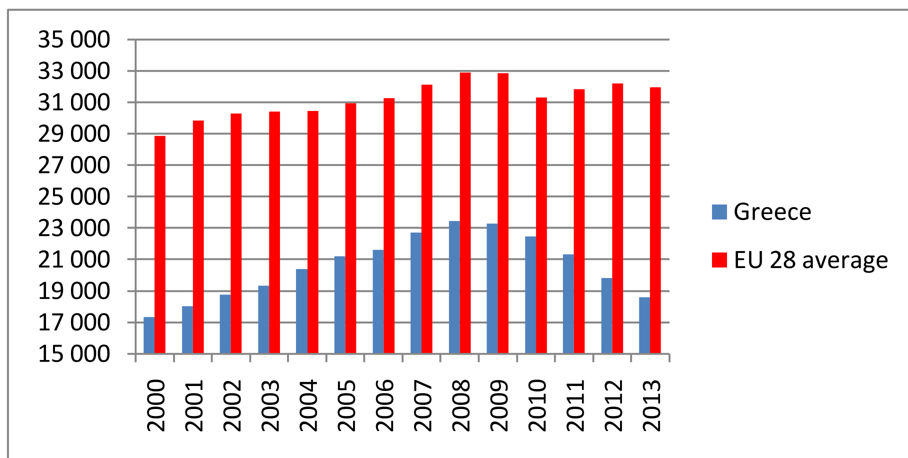
Despite the financial aid of almost 30 billion EUR from the EAP, the overall 2010 debt rises to 129.7% of GDP from the ratio of 112.9% in 2009. (Figure 5)

In 2011, after a series of violent protests, the government collapsed. A limited-responsibility caretaker government is formed in November 2011. When elections in May 2012 failed to produce a government, new elections in June 2012 led to

formation of a government based on “pro-Euro” coalition led by the center-right party along with the center-left parties. By that time, Greece’s economy suffers from recession for 19 straight quarters. [30] GDP per capita continues to drop to the value of 21 310.2 USD per capita and the overall debt has grown to 148.3% of country’s GDP. [31]

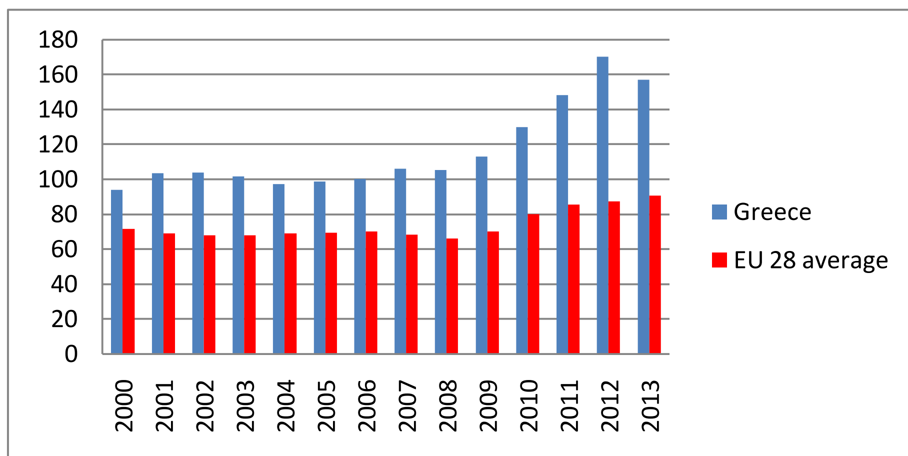
In 2013, Greece's total tax to GDP ratio remains at 32.4% well below the EU-27 average (38.8%).

Figure 4 Greece: GDP per Capita 2000-2013 [USD]



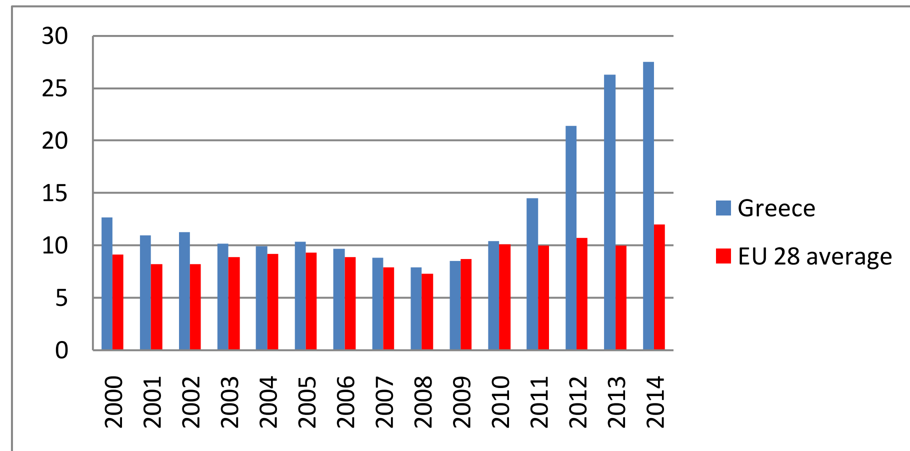
Data Source: Eurostat

Figure 5 Greece: Government Debt to GDP Ratio 2000-2013 [%]



Data Source: Eurostat

Figure 6 Greece: Unemployment Rate to January 2000-2013 [%]



Data Source: Eurostat

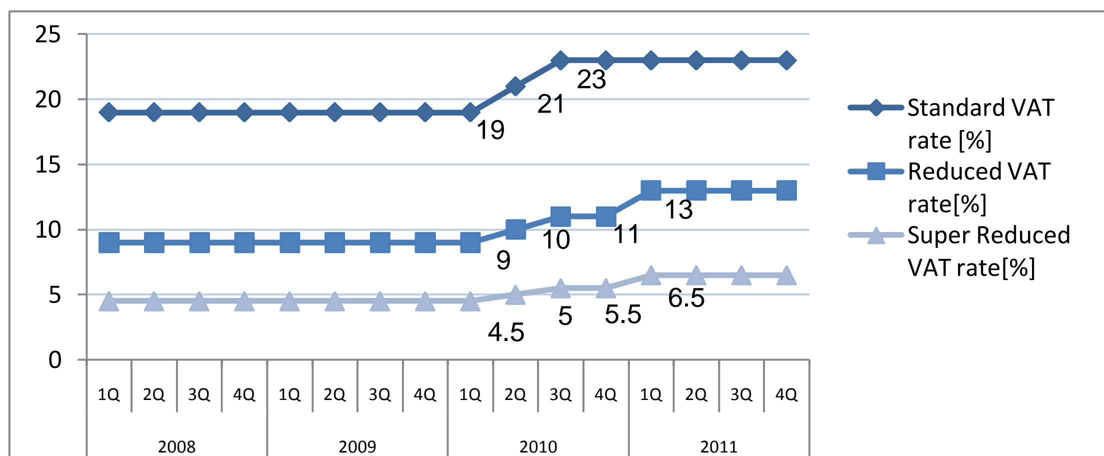
3.3.5 Austerity Measures

The first economic crisis-related package of austerity measures in Greece has been completed in March 2010 after EU Economic Affairs Commissioner Olli Rehn asked the Greek government on March 1 to announce measures to tackle their budget crisis. The package aims to save an extra 4.8 billion EUR and includes:

- Standard rate of Value Added Tax (VAT) rise from 19% to 21% (in the second quarter it has risen again to 23%)
- Cutting public sector salary bonuses by 30%
- Increases in tax on fuel, tobacco and alcohol
- Freezing state-funded pensions in 2010. [31]

In 2010, changes in the taxation have been implemented several times. The standard rate of VAT has gone up from 21% to 23% in the second quarter. A tax rate of 13% has been gradually changed from 9% to 13%, this applies to foodstuffs, pharmaceuticals, medical and admission to cultural sporting and entertainment events. The lowest VAT rate (implied for the purchase of books, newspapers and for hotel service) also changed to the final 6.5%. (Figure 7)

Figure 7 Greece: Growth of VAT Rates 2008-2011 [%]



Data Source: Eurostat, Full Data in Supplement

A comprehensive income tax reform was passed on 11 January 2013 that broadens the tax base and will share more equally the tax burden. The new rules will take effect from 1 January 2013, although the full budgetary impact will only be felt in 2014. [29]

3.3.6 Economic Situation 2012-2013

2. Second Economic Adjustment Programme for Greece

The second bailout plan, the so-called Economic Adjustment Programme, was designed and agreed upon by all parties in February 2012 and became active one month later. The aim of the Troika of creditors was to cover all Greek financial needs from 2012-14 and aimed for Greece to resume using the private capital markets for debt refinance by 2015. [29]

Countries of the Eurozone request all private creditors holding Greek government bonds to sign a deal accepting lower interest rates and a 53.5% face value loss. The aim of this is to reduce the public debt which is from 58% held by private creditors. [29]

In 2012, debt is peaking at the historic values of 170.3% and in 2012 declines to 156.9% in 2013 (Figure 5). The decline between 2012 and 2013 is partly caused by the disbursements of the Second EAP of total from March 2012 to December 2013. (Table 6)

Table 6 Greece: Overview of the Second Economic Adjustment Programme of Disbursements [EUR billion]

Disbursement	Date	EFSF	IMF	Total
1	March – June 2012 / 1	74	1.6	75.6
2.1	December 2012 / 2	34.3	-	34.3
2.2	January 2013 / 3	7.2	-	7.2
2.3	January 2013	2	3.24	5.24
2.4	February 2013	2.8	-	2.8
2.5	May 2013	2.8	-	2.8
3.1	May 2013 / 4	4.2	1.74	5.94
3.2	June 2013	3.3	-	3.3
4.1	July 2013 / 5	2.5	1.8	4.3
4.2	December 2013	0.5	-	0.5

Data Source: European Commission

In May 2012 the Greece's critical situation and the impossibility to form a new coalition government after elections, led to strong speculation (internal and external) about country's participation in the 3rd phase of Economic and Monetary Union – the Eurozone. Luckily, the second round of elections in June succeeded in formatting a new government which continued in the adherence to the bailout conditions. However, the government was due to the worsened economic recession forced to ask the Troika of creditors to reschedule the deadline for reforms and also develop a 3rd bailout package.

Assessment of the 2013 National Reform Programme for Greece, developed by European Commission in May 2013 state, that *"Leading conjunctural and financial market indicators are showing improving confidence in Greece's recovery..."* [22]

Finally, the deadline of country's independent financing sit has been moved to the period of 2015-2017 with the ongoing negotiations with the Troika about the content of the conditional *"Labour market reform"* and *"Midterm fiscal plan 2013-16"* which aimed to restore country's adherence to the bailout programme.

The key issues and challenges which Greek economy faces according to European Commission stated in this document are:

Implementation risks and full commitment of authorities,

- Further reforms to tax system,

- Public administration reform
- Increase competition in products and services market
- Improvement of energy and transport sectors
- Improvement of business environment

According to the document, the authorities should also focus on education system, employment to improve overall social safety. [39]

Table 7 Greece VAT Rates in 2013

Standard VAT rate	23%
Intermediate VAT rate*	13%
Reduced VAT rate**	6.5%

Data Source: http://www.vatlive.com/vat-rates/european-vat-rates/eu-vat-rates/

*foodstuffs, pharmaceuticals, medical, admission to cultural sporting and entertainment events
**books, newspapers, hotels

3.4 Portugal (Portuguese Republic)

Year of EU entry: 1986

Capital city: Lisbon

Total area: 91 910 km²

Population: 10 631 800 (Eurostat 2009)

Currency: Euro since 1 January 1999 (formerly Portuguese escudo, PTE)

3.4.1 20th Century Development

In 1932, at the threshold of the Great Depression, Premier António de Oliveira Salazar laid the foundations for *Estado Novo*, the *"New State"* Since then, the economy can be described as a halfway-through between communist and capitalist economies, the so called quasi-traditional economy. Combining features of both economic schemes (extensive state regulation and predominantly private ownership of the means of production).

"By restoring equilibrium both in the fiscal budget and in the balance of international payments, Salazar succeeded in restoring Portugal's credit worthiness at home and abroad. Because Portugal's fiscal accounts from the 1930s until the early 1960s almost always had a surplus in the current account, the state had the wherewithal to finance public infrastructure projects without resorting either to inflationary financing or to borrowing abroad." [41]

The period between the 1950s and 1970s, can be characterised as a huge economic transformation in Portugal. The economic nature of the country moved from low-growth and low-opened economy based on agriculture to industry-based one which boosted the economy among the fastest growing economies in Western Europe. The openness of trade has also been caused by European Free Trade Area (EFTA) in 1960. [41]

After democratization of the country in 1974, the economy suffered from loss of the colonies' market and nationalization of major companies. The economy grew at lower-rate as the country started to shift to democracy and free market-based

economy. As a part of Portuguese democratisation struggle, participation in the European Communities became a necessity. [42]

3.4.2 European Communities Accession

In March 1977, the Prime Minister of the first constitutional government, Mário Soares, formally submitted Portugal's application for accession to the European Community. The process was slow and complex, however, and was affected over a number of years by a variety of events, including some setbacks.

On 12 June 1985, the officials signed the Treaty of Accession to the EEC. Portugal formally became a member of the European Community on 1 January 1986.

Although a big part of country's industrialization already occurred back in the late 1950s, in the first decades of a democratic Portugal economy's trends from 1986 and 1998; an era of European integration and the introduction of liberalization, economic and institutional; show the economic convergence with EC members accompanied with relatively fast economic growth. [42]

As Baer and concluded in their empirical study of Portuguese economy between 1990 and 2002, in the aftermath Portugal has greatly benefited from the EU accession. The competition growth in open market has forced the economic means to rapidly modernize, and the state to involve in economic activities again. [44]

3.4.3 Eurozone Accession

Gradually declining Portuguese levels of inflation in 1990s, caused by above-EU-average interest levels helped the economy to match the convergence criteria and to enter European Monetary Union in 1990s. "*In 1992 Portugal joined the European exchange rate mechanism, pegging the Escudo to the D-Mark. It was not easy to maintain this anchor and the Escudo had to be devalued again in November 1992 and again in May 1993. After that, however, credibility grew as it became clear that Portugal was determined to join the EU's new single currency, the Euro."* [43]

Portugal entered the transitional period of convergence programme in 1999 along with Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands and Spain. After a short the dual-circulation period (both Euro and Irish pound had legal tender status), the Euro has been established as a single currency on 9 February 2002.

3.4.4 Financial Crisis

Portuguese economy fell into crisis in 2007 which has led to rapid increases in both budget deficit and government debt (Figure 9). According to a report by the Diário de Notícias journal from 2012 [44], the causes lied in the malpractices in democratization process which started in 1974. These were:

- Recruitment policies which led to redundant public service vacancies
- Risky credit, public debt creation,
- Mismanagement of European structural and cohesion funds

According to the same journal, Prime Minister Sócrates's cabinet mismanaged the first crisis symptoms which emerged already in 2005, and was later incapable of doing anything to avoid the situation when the country was on the edge of bankruptcy in 2011.

In April 2011 Portugal officially requested financial assistance from the EU, the euro area Member States and the International Monetary Fund (IMF). In May of the same year an Economic Adjustment Programme for Portugal was negotiated between Portugal and Troika of creditors.

The Economic Adjustment Programme which has been formally adopted on May 17 2011 covers a joint financing package of €78 billion and includes:

- **Overall structural reforms** with aims of boosting potential growth, creating jobs, and improving competitiveness;
- **Development of new fiscal consolidation strategy**, supported by structural fiscal measures and better fiscal control over public-private-partnerships and state-owned enterprises, aimed at putting the gross public

debt-to-GDP ratio on a firm downward path in the medium term and reducing the deficit below 3 % of GDP by 2014 (original plan which has been regulated several times due to country's economic situation);

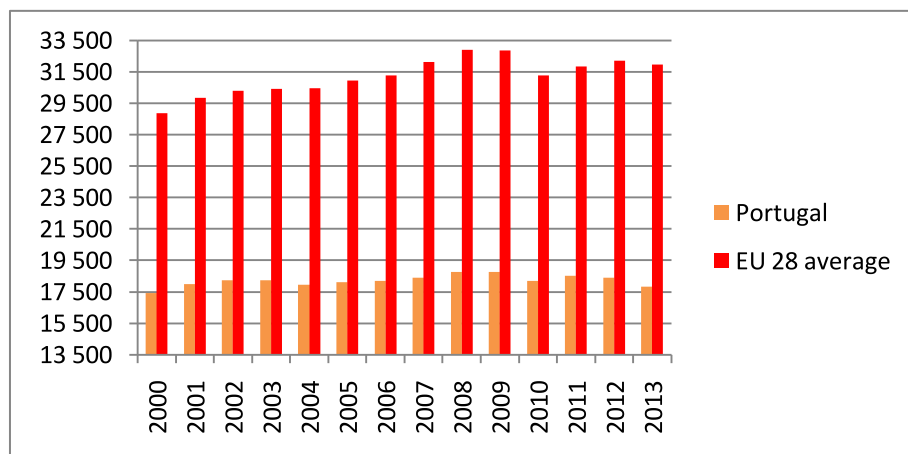
- and a **financial sector strategy** which is based on recapitalisation and deleveraging, with efforts to safeguard the financial sector against disorderly deleveraging through market based mechanisms supported by backstop facilities. [45]

Table 8 Portugal: Overview of EFSM Loan Disbursements

Amount	Maturity	Raised on	Disbursed on
€ 1.75 bn	10 yr	24 May 2011	31 May 2011
€ 4.75 bn	5 yr	25 May 2011	01 June 2011
€ 5.0 bn	10 yr	14 Sept 2011	21 Sept 2011
€ 2.0 bn	15 yr	22 Sept 2011	29 Sept 2011
€ 0.6 bn	7 yr	29 Sept 2011	06 Oct 2011
€ 1.5 bn	30 yr	09 Jan 2012	16 Jan 2012
€ 1.8 bn	26 yr	17 Mar 2012	24 Apr 2012
€ 2.7 bn	10 yr	26 Apr 2012	04 May 2012
€ 2.0 bn	15 yr	23 Oct 2012	30 Oct 2012

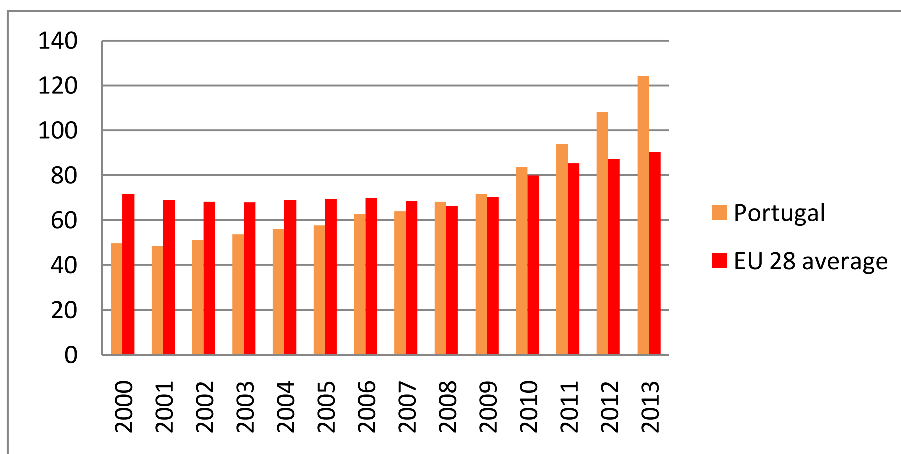
Data Source: European Commission

Figure 8 Portugal: GDP per Capita 2000-2013 [USD]



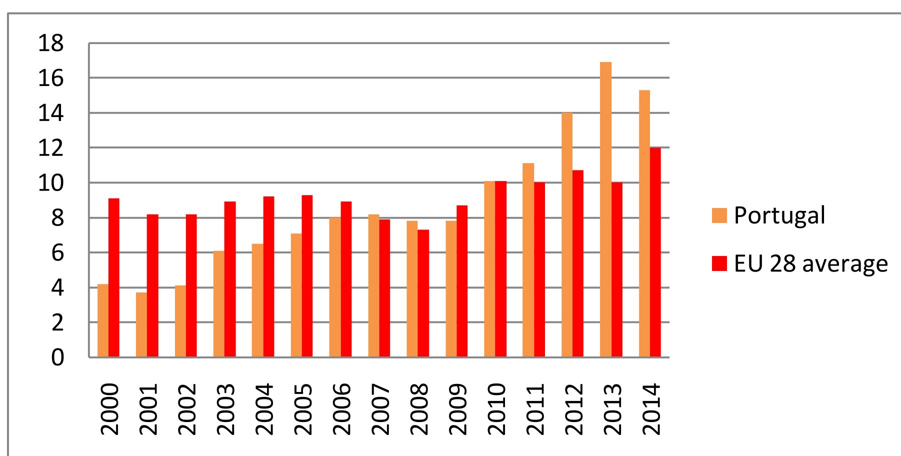
Data Source: Eurostat

Figure 9 Portugal: Government Debt to GDP Ratio 2000-2013 [%]



Data Source: Eurostat

Figure 10 Portugal: Unemployment Rate to January 2000-2013 [%]



Data Source: Eurostat

3.4.5 Austerity Measures

In the first years of the crisis emergence in Portugal, 2007 and 2008, there were several efforts to support the labour market by reductions in non-wage costs, expansions in job search and short-time working opportunities as well as training and income support for the unemployed (OECD 2012). However, most of these measures were withdrawn during the following years by the same cabinet.

New cabinet led by Prime Minister Passos Coelho elected in June 2011 presented a set of austerity measures to restore the economy. [47]

Increases in Direct Taxes:

- Tax rates were increased by 1 and 1.5 percentage points depending on income level.
- A new bracket for incomes above 153,300 EUR was introduced, raising the highest tax rate from
- 42 to 46.5%.

Increases in Indirect Taxes:

- In January 2011, the standard VAT rate was increased from 20% to 23%.
- At the same time the reduced VAT rate was increased from 12% to 13% and the base rate from
- 5% to 6%.

Reductions in Tax Credits and Tax Allowances:

- The reference indicator for tax credits was reduced by replacing the 2011 minimum wage of 485
- EUR with the 2010 minimum wage of 475 EUR or the 2011 social benefit index of 419.22 EUR.
- The pension tax allowance was reduced.

Reductions in Social Benefits:

- The nominal value of the social benefit index used for most social benefits was frozen at the 2009 level.
- The nominal value of benefits not linked the social benefit index (such as pensions) was frozen from 2010 to 2011.
- The social assistance benefit was frozen from 2010 to 2011.
- Family benefit was frozen and eligibility conditions tightened.

Public Sector Pay

- Public sector pay was cut by 10%. [47]

The shift from initial stimulus by Socrates' cabinet to austerity implemented by Coelho as well as the shifting European economic outlook led to significant variation in Portuguese GDP growth rates during the crisis. (Figure 8)

Table 9 Portugal VAT in 2013

Standard VAT rate	23%
Intermediate VAT rate*	13%
Reduced VAT rate**	6.5%

Source: http://www.vatlive.com/vat-rates/european-vat-rates/eu-vat-rates/

* foodstuffs, agricultural supplies

** books, pharmaceutical, medical, newspapers, hotels, passenger transport

3.4.6 Economic Situation in 2013

The recession for Portuguese economy is still a present issue as their GDP contracted by 3.2%% in 2012, more than previously expected.

Portuguese unemployment rates are growing steeply and are forecasted to peak in 2014 at the level of 18.5%. The main reason is growing youth unemployment (Figure 10 Portugal: Unemployment Rate to January 2000-2013). These numbers call for deep structural reforms.

Meanwhile, Portuguese economy is trying to rebalance towards more export-oriented one. Export growth continues at a good pace and the current account is projected to be balanced in 2013 for the first time in more than 40 years.

"The implementation of the Economic Adjustment Programme is broadly on track. Significant fiscal consolidation has been achieved since the start of the programme, the stabilisation of the banking sector is progressing according to schedule and major structural reforms are being implemented." [46]

Nevertheless, there are crucial challenges for the economy which remain:

- rapid increase unemployment (specifically youth and elder groups)
- Households and the corporate sector need to continue the ongoing process of deleveraging.

There is a need for structural reforms in:

- Reduction of excessive cost in energy sector

- Lowering administrative and licensing barriers to heal the business environment.

4 Practical Part- Analysis of Austerity Measures

For the purposes of the analysis, data from Eurostat have been used. The analysis of austerity measures is done through comparative analysis of countries' economic developments in the years of 2005 to 2012. Data for each country is examined individually as their economies vary.

To compare the impacts of austerity measures on the purchasing power of households and the overall living standards of an average household, the standard rate of Value Added Tax (VAT) has been chosen as a tool of prediction of the future development in chosen state economies.

Assumptions for using the changes in values of standard VAT are:

- The standard VAT changes have been implemented in all the examined countries as a part of austerity measures packages and they are expected to directly impact the overall consumption of goods and services.
- The standard rate is used for most of the goods and services, excluding the concessionary ones such as e.g. foodstuff and medical care (Table 3, Table 7, and Table 9), therefore the expenses are more likely to be influenced by the VAT rate change.

The aim of the analysis is to measure the actual economic efficiency of already implemented VAT austerity measures for the state budgets and to propose an appropriate VAT policy for handling of the banking crisis in Cyprus.

The comparative analysis is performed in 3 steps:

1. <u>Standard Value Added Tax Rate Change Impact on Household Expenditures</u>

First, the signature of VAT rate and average household expenditures per capita from the period are drawn separately with the description of fluctuations and possible causes for data spikes. These two are then put together to find a possible correlation between the data and thus prove the significance of fiscal policies considering VAT rates. For this part of the analysis, data from the three examined countries (Ireland, Greece, and Portugal) are analysed.

2. Standard VAT Rate Change Scenarios

Second part of comparative analysis includes the signature of government income from value added taxes and prediction of future development in three years (12 year quarters) consecutive to the rate change. To compare the results, an alternate scenario assuming no change in VAT rate is developed and appropriate income data are predicted based on the trend curve equation. By comparing the two scenarios, the realised elevation impacts are evaluated.

3. Cyprus Banking Crisis

Third part of the analysis proposes possible solutions for the banking crisis which emerged in Cyprus between 2012 and 2013. It first highlights the main characteristics of the economic crisis and then it compares it to the three examined economies. The aim is to propose a suitable fiscal policy strategy that could help the country restore their economy.

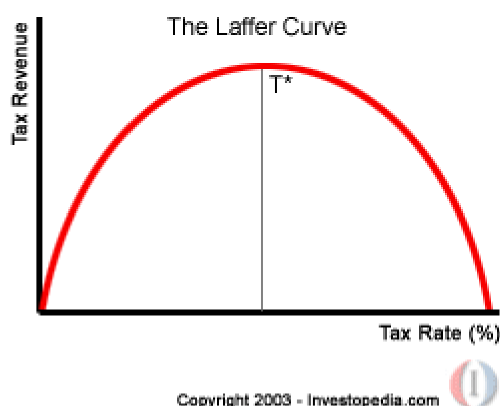
4.1 Value Added Tax Rate Change Impact on Expenditures

In this part of analysis, each country is examined individually in order to assess correlation between the signatures of value added tax rates and quarterly average household expenditures.

Aim of this section is verification of theory of Laffer curve and approximation to the breaking point T* after which the tax revenues start to decline as the consumption (work moral) is discouraged by high tax rates. (Figure 11)

"The curve suggests that, as taxes increase from low levels, tax revenue collected by the government also increases. It also shows that tax rates increasing after a certain point (T) would cause people not to work as hard or not at all, thereby reducing tax revenue. Eventually, if tax rates reached 100% (the far right of the curve), then all people would choose not to work because everything they earned would go to the government."[49]*

Figure 11 Laffer Curve



Data Source: Investopedia

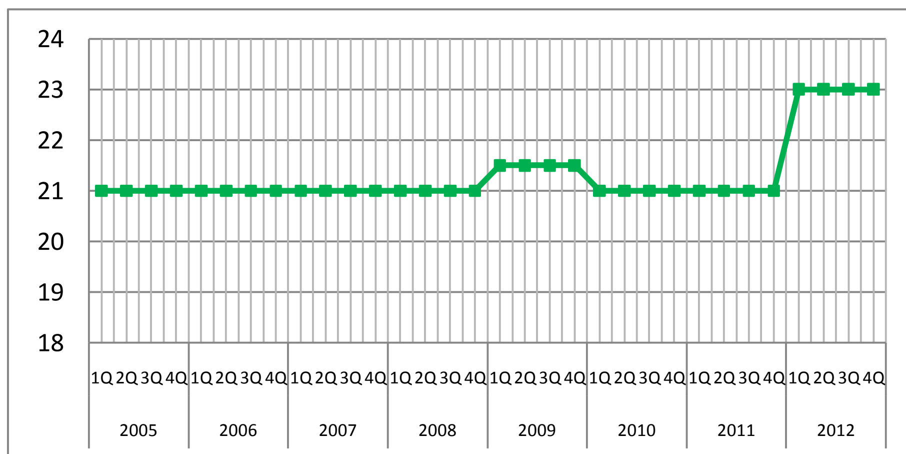
4.1.1 Ireland

1. **VAT Rate Impact on Expenditures**

Since 2005, the rates of Value Added Tax in Ireland have been changed several times. As for the standard rate, in 2005 the level initiated at the rate of 21%. A change of only 0.5% has been implemented in 2009, declining back to the initial level a year later.

To assure the country's creditors and to restore the balance to its fiscal position, in 2010 a plan to raise VAT rate to 23% by 2014 was announced. The target has been set to reduce the GDP deficit from over 10% to below 3% by 2015. In December 2011, Irish government announced a 2% increase to the level of 23%, meeting their pledges 2 years in advance (Figure 12).

Figure 12 Ireland: Standard VAT Rate Signature 2005-2012 [%]



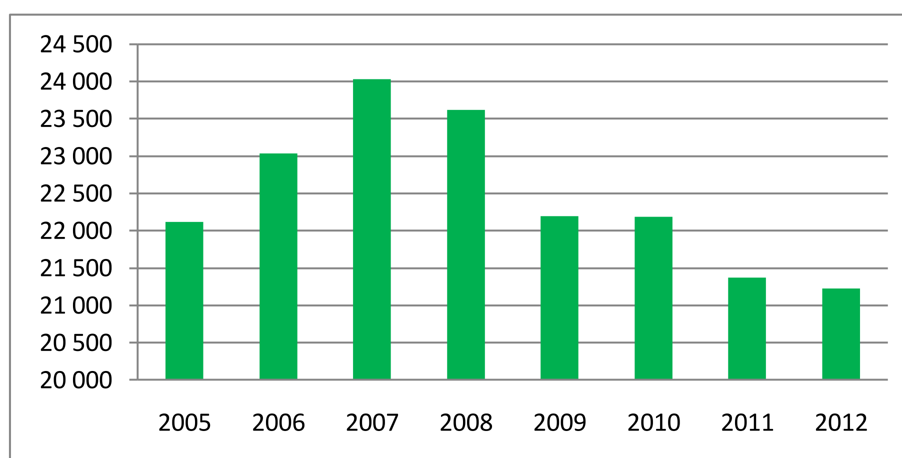
Data Source: Eurostat; Table in Supplement 1

Ireland's household expenditures have been growing steadily in the early 2000s, as their economic boost of years 1995-1997 called the *"Celtic Tiger"* occurred. However, the financial crisis burst in 2008 and its consequences impacted the expenditures significantly. The crisis austerity measures (Chapter 3.2.5) deeply impacted all the age and work groups of the citizens which forced them to save more and thus slow the money flow.

From 2005, the trend of household expenditures in Ireland grew steadily to its peak in 2007 with the average value of 24 029 USD per capita. After the financial

crisis strikes in September 2008, a steep decline occurred between 2008 and 2009. After the value in 2010 remained approximately the same, second drop in expenditures occurred in 2011 when the average value declined to the level of 21 368 USD per capita. (Figure 13)

Figure 13 Ireland: Household Expenditures per Capita 2005-2012 [USD]



Data Source: Eurostat; Full table in Supplement 2

The economic assumption is that standard VAT rate impacts the household expenditure as people tend to save more from their disposal income.

To prove the link between VAT rate signature and expenditures per capita.

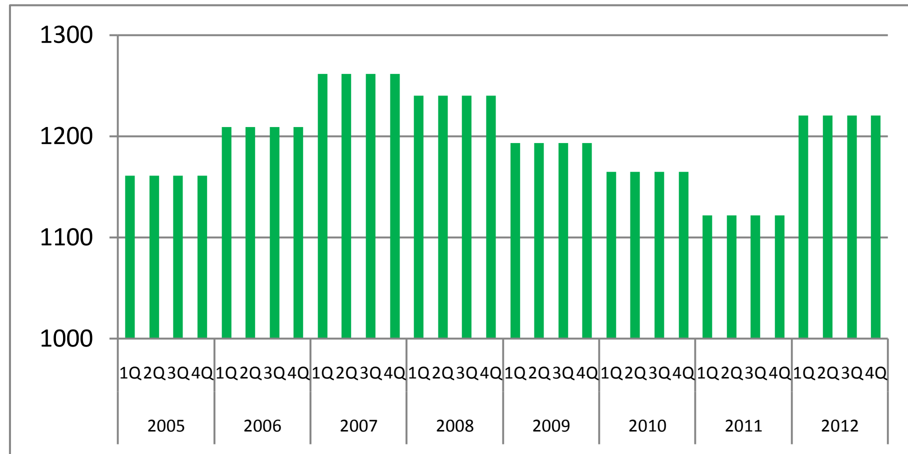
In Figure 12, it is shown that the spike of 0.5% in 2009 correlates with the decline in household expenditures which, however, is also influenced by the state of the economy which has gone in to recess. The 2% increase to rate of 23% in January 2012, the consumption has not been reduced significantly in comparison to 2011.

2. Government Income from VAT

As the economic boost from the 1990s continued, the state budget revenues from standard value added taxes have been rising steadily until 2007. From that point, a significant decline every year occurred. The trend is highly influenced by the decreasing values in recession years 2008-2011. The change of standard VAT rate of only 0.5% did not reflect significantly in the time series. However, a significant turn has been shown in 2012 when the tax rate rose by 2%. The state

revenues from this source of direct taxes boosted to a comparable level with year 2006, the last year of *"Celtic Tiger"* economic growth. (Figure 14)

Figure 14 Ireland: Income from Standard VAT per capita [USD]



Data Source: Eurostat; Full table in Supplement 3

3. Brief Conclusion

The standard VAT rate was in comparison to other EU economies (and especially to those which have found themselves in recess during 2008-2011) relatively high at the beginning of 2005. Thus, to restore balance to the state budget of the country, VAT rates appeared not to be the best tool to use. That is why the Irish government hesitated with a significant VAT rate changes until 2012 despite the fact that their economy has been in recess since 2008.

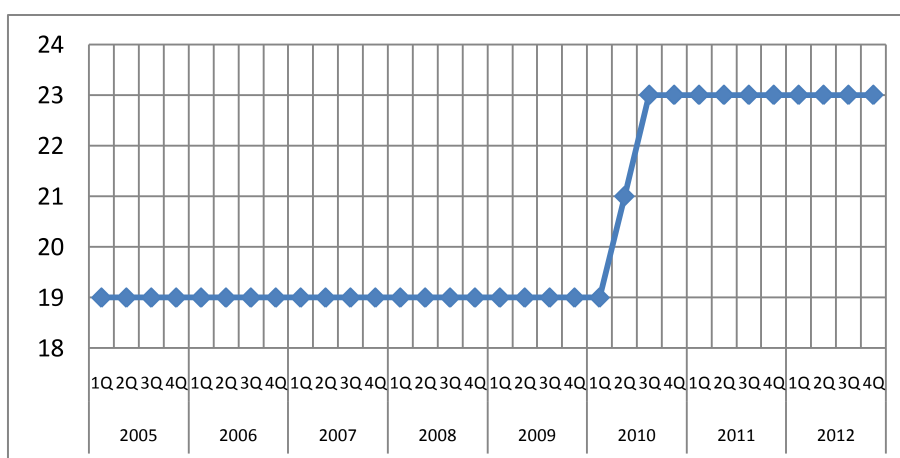
In 2012, a change in the fiscal policy, raising the standard VAT rate by 2%, has initially lowered the level of household expenditures and at the same time raised more money to the state budget. The revenues are expected to drop by 2013 as the shock from tax rate increase fades away which can be seen in the case of Portugal between years 2011 and 2012. (Figure 20)

4.1.2 Greece

1. **VAT Rate Impact on Expenditures**

In Greece, the standard VAT rate has been changed twice by 2% in only one year time in 2010 as a part of rescue package for the economy in recess. First, it has been changed in the second quarter and then again in the third quarter to the final level of 23%. Since then, the taxation policies have not been changed in this area. (Figure 15)

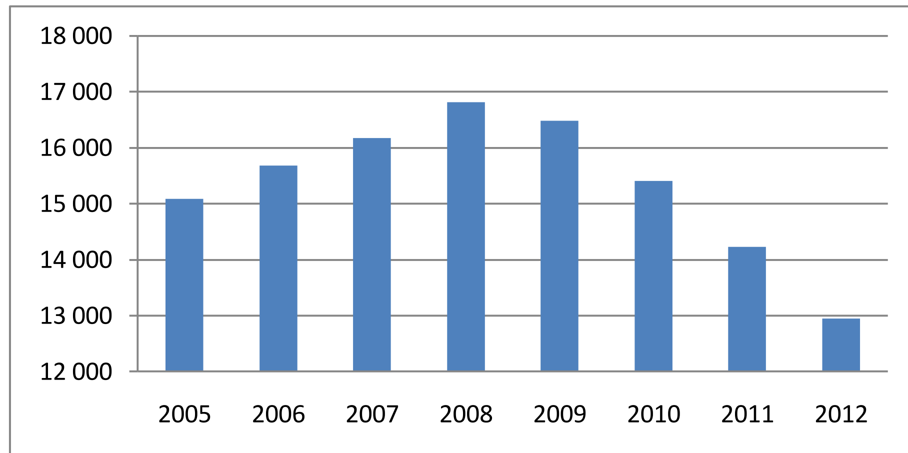
Figure 15 Greece: Standard VAT Rate Signature 2005-2012 [%]



Data Source: Eurostat; Full table in Supplement 1

Despite the economic crisis, the average household expenditures have been rising even in 2008. The decline in expenditures reflected in 2009 and the trend has been descending since, declining each year by 860 USD in average. These numbers are alarming to the economy which is currently struggling with their economy on several levels including fiscal policies and labour market reforms. (Chapter 3.3.6) (Figure 16)

Figure 16 Greece: Household Expenditures per Capita 2005-2012 [USD]

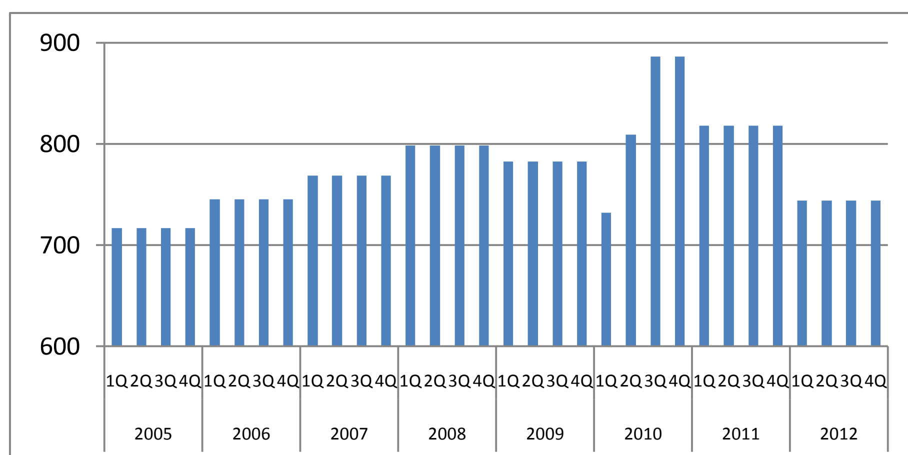


Data Source: Eurostat; Full table in Supplement 2

2. Government Income from VAT

The signature of government income from standard VAT has been ascending steadily until 2008. In 2009, the Greek government has been forced to raise the rates to help stabilising the budget and regain creditors' trust (Chapter). The income has experienced fluctuations in 2010 as three rounds of tax reforms have been implemented, growing to its highest point of 886.13 USD per capita. In 2011 and 2012 a decline occurred again as the country suffered from deep unemployment and overall depopulation (Chapter).

Figure 17 Greece: Income from Standard VAT per capita [USD]



Data Source: Eurostat; Full table in Supplement 3

3. Brief Conclusion

As for Greece, the fiscal policies changes implemented in 2010 succeeded only temporarily. The economy is still in deep recession and in serious need for structural changes not only in their tax reforms.

Further reforms are needed to be performed in the areas of public administration, improvement of energy and transport sectors, increasing overall competitiveness of goods and services and overall improvement of business environment (Chapter 3.3.6).

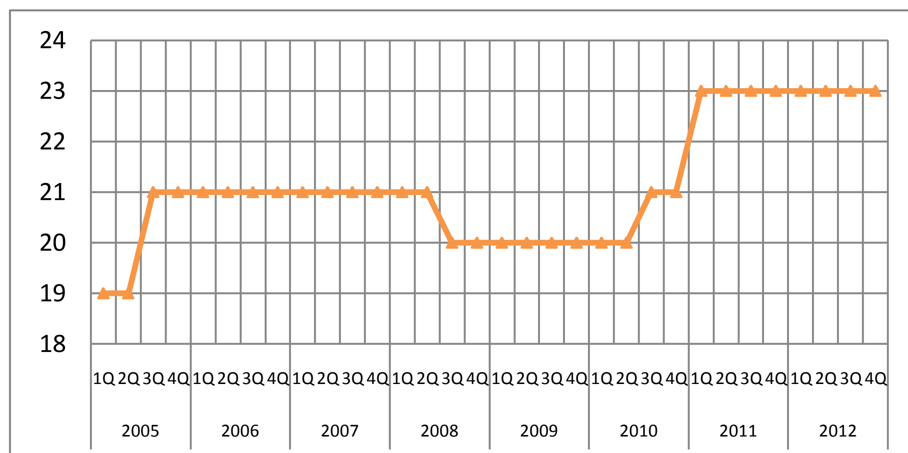
4.1.3 Portugal

1. VAT Rate Impact on Expenditures

In mid 2005 standard VAT rate increased from 19 to the level of 21% with the fiscal programme aiming at reducing the general government deficit.

In 2008, the standard rate has been lowered to the level of 20% to help the economy to recover from financial crisis. Two years later, however, the government decided to raise the level again to 21 and in January 2011 to 23%. (Figure 18)

Figure 18 Portugal: Standard VAT Rate Signature 2005-2012 [%]

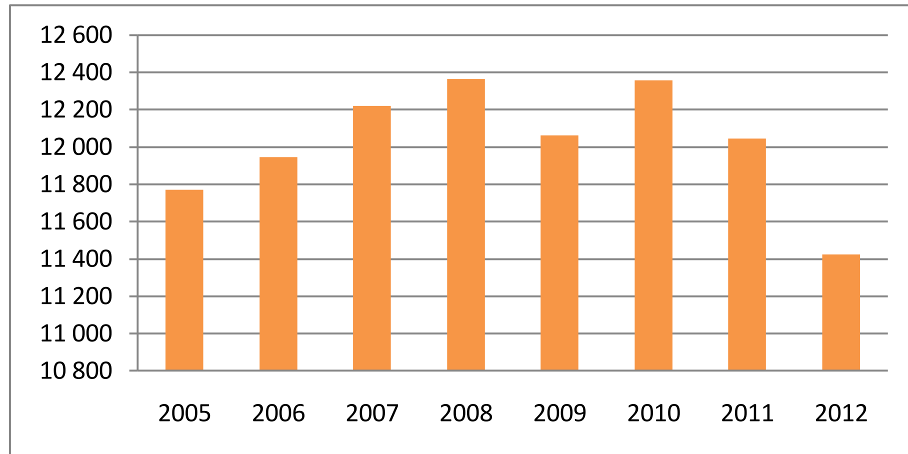


Data Source: Eurostat; Full table in Supplement 1

In the third quarter of 2008, the reduction of standard VAT rate reflected in a positive way and helped to keep the average household expenditures in the

growing trend from previous years. However, the expenditures steeply declined in 2009 falling from the average of 12 364 to 12 062 USD per capita. (Figure 19)

Figure 19 Portugal: Household Expenditures per Capita 2005-2012 [USD]



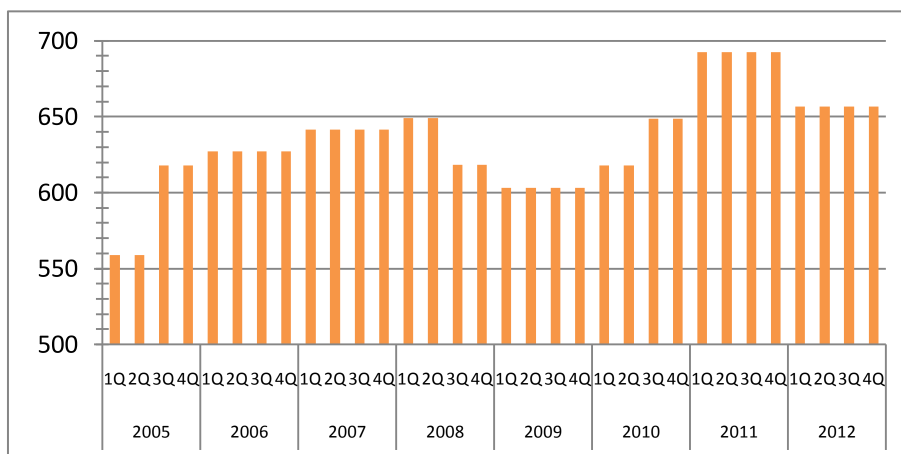
Data Source: Eurostat; Full table in Supplement 2

2. Government Income from VAT

Portuguese government income from value added taxes have grown rapidly since the third quarter of 2005 when the government implemented elevation of standard VAT rate from 19 to 21%. Surprisingly, the ascending trend persisted until the second quarter of 2008 with not a single decline in that period. The expenditures shock did not occur in this case.

The VAT change in 2010 has positively influenced state budget revenues from standard VAT in 2011. However, from the drop in 2012 revenues, it can be expected further decline. (Figure 20)

Figure 20 Portugal: Income from Standard VAT per capita [USD]



Data Source: Eurostat; Full table in Supplement 3

3. Brief Conclusion

The budget revenue of Portugal relies relatively heavily on indirect taxation. In 2006 the share of VAT over GDP was nearly one percentage point higher than the EU-27 average. Important role is represented by taxes on consumption which represent more than 38 % of total tax revenue. [54]

In years 2005-2012 tax rates were a frequently used tool to the government in their targets to restore the government deficit.

4.2 Standard VAT Change Alternate Scenarios

All the examined countries have implemented elevations of standard value added taxes as a part of crisis austerity measures and these rate elevations already impacted the household expenditures and government tax revenues (Chapter 0). This case scenario is referred to as Scenario I in this chapter.

To resolve whether the elevations of standard VAT rates implemented in Ireland, Greece and Portugal were successful in their attempt to restore the budget, an alternate scenario for each country is developed in this section.

Scenario II uses trend analysis to predict an alternate development of government income from standard VAT assuming that the standard VAT rate remains unchanged. The prediction is done for the following 3 years (12 quarters) and is compared to actual recorded development from Scenario I.

In Ireland, fiscal policy regarding standard VAT rate was changed at the end of 2012, therefore, in order to develop a comparison, the first 3 years after the standard VAT rate change have to be predicted based on trend analysis represented by polynomial equation. In the cases of Greece and Portugal, the VAT elevations already occurred in 2010; respective data have been used in order to compare the scenarios.

The trend line types vary and are chosen observing the value of coefficient of determination. The coefficient ranges from 0 to 1 according to how well data fit a chosen statistical model. [51]

4.2.1 Ireland

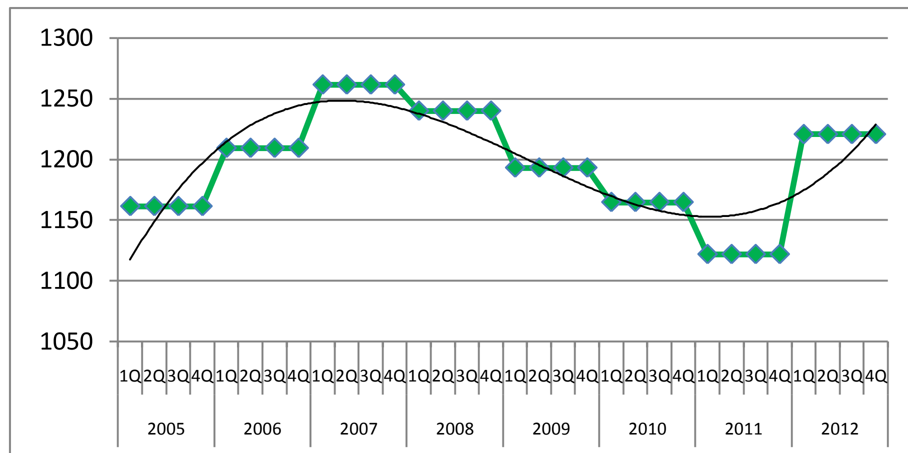
1. **Scenario I**

Ireland's government earns the highest income from the standard value added taxes collection out of the 3 examined countries, earning not less than 1220 USD per capita since 2005. Significant changes in fiscal policies regarding standard VAT rates have not been implemented during the crisis until 2012. However, as the standard VAT rate changed by 2% in 2012, the income rose steeply and may refer to the u-turn in country's strategy in restoring their economy.

In order to predict the future development of the fiscal policy results, in this case scenario a polynomial trend line of third order has been derived (Figure 21):

$y = 0.0534x^3 - 2.7931x^2 + 39.349x + 1080.9$
$R^2 = 0.7102$

Figure 21 Ireland: Trend Curve for Scenario I 2005-2012 [USD per capita]



Data Source: Eurostat, Table in Supplement 4

The data from 2012 have already been recorded by the Eurostat and are included for comparison. In accordance to the polynomial equation which was based on 8 years period (32 quarters), the data for the 2 following years are predicted. (

Table 10 Ireland Scenario I Data Prediction 2012-2014)

Table 10 Ireland Scenario I Data Prediction 2012-2014

Year	Quarter	Income from standard VAT/cap [USD]
*201	1Q	1220.668
	2Q	1220.668
	3Q	1220.668
	4Q	1220.668
2013	1Q	1256.767
	2Q	1288.776
	3Q	1326.093
	4Q	1369.037
2014	1Q	1417.929
	2Q	1473.09
	3Q	1534.841
	4Q	1603.5

2. Scenario II

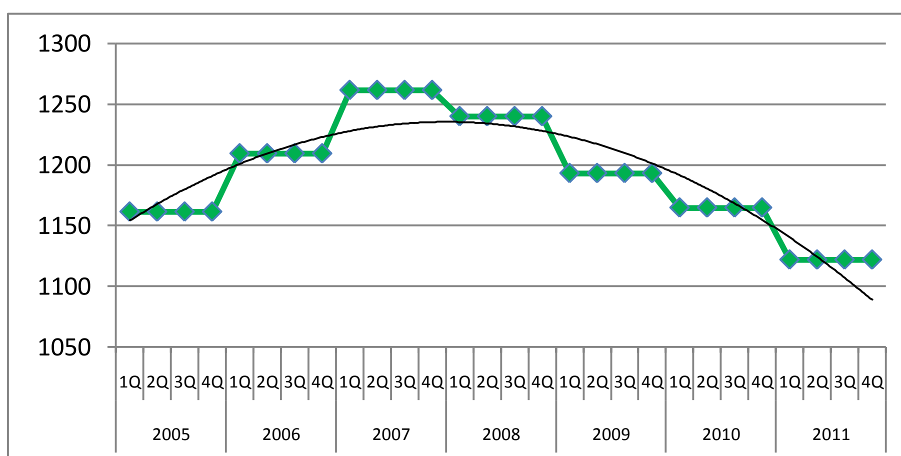
In an alternate scenario, the fiscal policy regarding standard VAT rates remains unchanged in 2012 as the government attempts to encourage consumption. Therefore, the values of expenditures from 2012 are not included as they are already influenced by the VAT rate change.

The resulting trend equation describes the trend line in Figure 22:

$y = -0.6115x^2 + 15.314x + 1139$

$R^2 = 0.8234$

Figure 22 Ireland: Trend Curve for Scenario II 2005-2012 [USD per capita]



Data Source: Eurostat, Table in Supplement 4

Based on the equation, an alternate development of the budget injections would differ as follows in Table 11 Ireland Scenario II Data Prediction.

Table 11 Ireland Scenario II Data Prediction 2012-2014

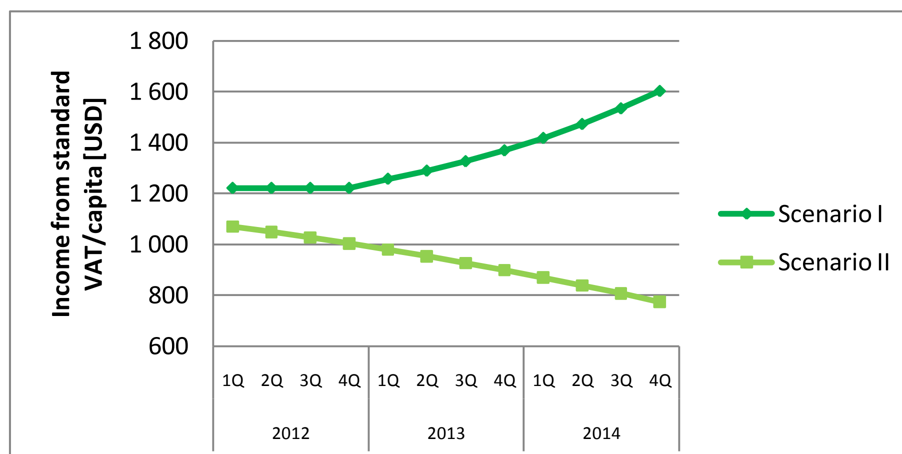
Year	Quarter	Income from standard VAT/cap [USD]
2012	1Q	1069.335
	2Q	1048.57
	3Q	1026.583
	4Q	1003.372
2013	1Q	978.9385
	2Q	953.282
	3Q	926.4025
	4Q	898.3
2014	1Q	868.9745
	2Q	838.426
	3Q	806.6545
	4Q	773.66

Data Source: Eurostat

3. Brief Conclusion

According to the predictions for the alternate scenario II, the government revenues from standard VATs would have been declining in the following 3 if the fiscal policy would not have changed in the beginning of 2012. Therefore, it can be concluded that the tax policy change has been well timed, bringing into budget in average 413.35 USD per capita each year in comparison to the Scenario II figures. (Figure 23 Ireland: Scenario I and II Comparison 2012-2014)

Figure 23 Ireland: Scenario I and II Comparison 2012-2014



Data Source: Eurostat, Own results, Table in Supplement 4

4.2.2 Greece

1. Scenario I

Greece's budget contributions from the standard VATs in the examined period did not exceed 886.13 USD per capita. This peak occurred in 2010, because of the radical fiscal policy changes and high elevations in the referred year. After the initial shock, the income started to decline gradually as the households tended to spend less. (

Table 12, column Scenario I)

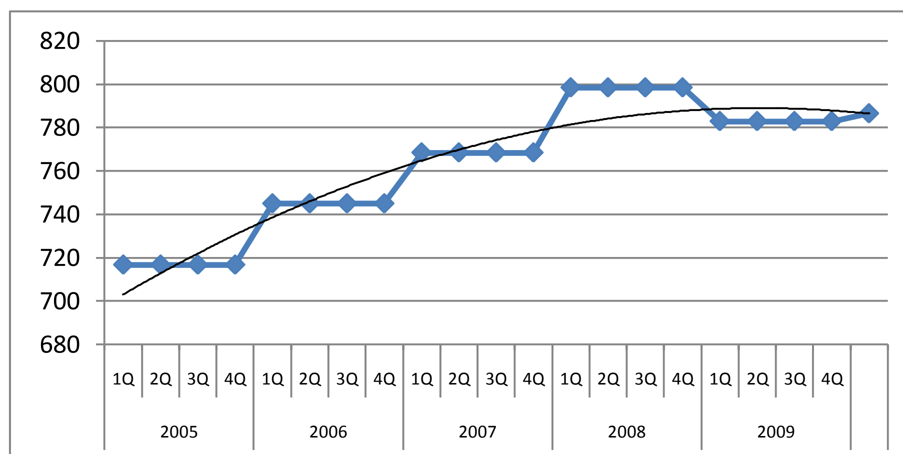
2. Scenario II

In the second scenario, the fiscal policy changes of 2010 have not been implemented an the curve of government tax revenues from VAT remain uninfluenced. Based on the data from 1st quarter of 2005 to 1st quarter of 2010 when the standard VAT rate remained at the level of 19%, a polynomial equation of the curve development is derived: (Figure 24)

$y = -0.2952x^2 + 10.667x + 692.62$

$R^2 = 0.8974$

Figure 24 Greece: Trend Curve for Scenario II 2010-2012 [USD per capita]



Data Source: Eurostat, Table in Supplement 4

According to the prescription of derived trend curve, a prediction of future development is calculated. (

Table 12, column Scenario II)

Table 12 Greece: Scenario I and II Comparison 2010-2012

Year	Q	Gov. Income from standard VAT per capita [USD]	
		Scenario I	Scenario II
2010	1Q	732.0225	786.44
	2Q	809.0775	784.42
	3Q	886.1325	781.80
	4Q	886.1325	778.59
2011	1Q	818.1675	774.80
	2Q	818.1675	770.41
	3Q	818.1675	765.43
	4Q	818.1675	759.86
2012	1Q	744.28	753.70
	2Q	744.28	746.95
	3Q	744.28	739.61
	4Q	744.28	731.68

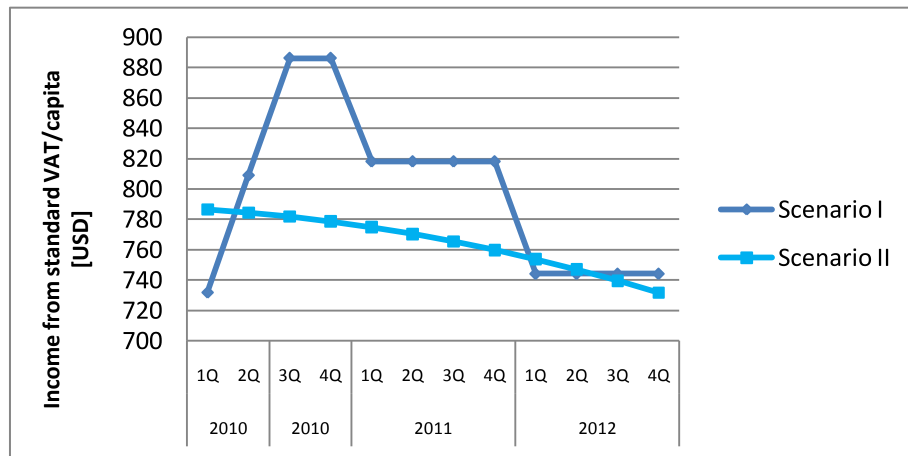
Data Source: Eurostat; own results

3. Brief Conclusion

The predicted trend line of the alternate Scenario II continues in the gradual decline from previous years. The fiscal policy change and the standard VAT rate

change of 2010 shows up as a necessary and successful austerity measure in Greece's case. By elevating the standard VAT rate from 19 to 23%, the government accomplished to raise their annual tax revenues by 32.46 USD per capita in average in comparison to the alternate Scenario.

Figure 25 Greece: Scenario I and II Comparison 2010-2012



Data Source: Eurostat, Own results, Table in Supplement 4

4.2.3 Portugal

1. **Scenario I**

Portuguese government has decided to raise the standard VAT rates already in 2005 from 19 to 21% which has brought positive results in the following years as the government income from respective taxes grew steadily for the following 12 quarters. The fact that expenditures shock did not occur in the period signifies that the fiscal policy change has been implemented successfully.

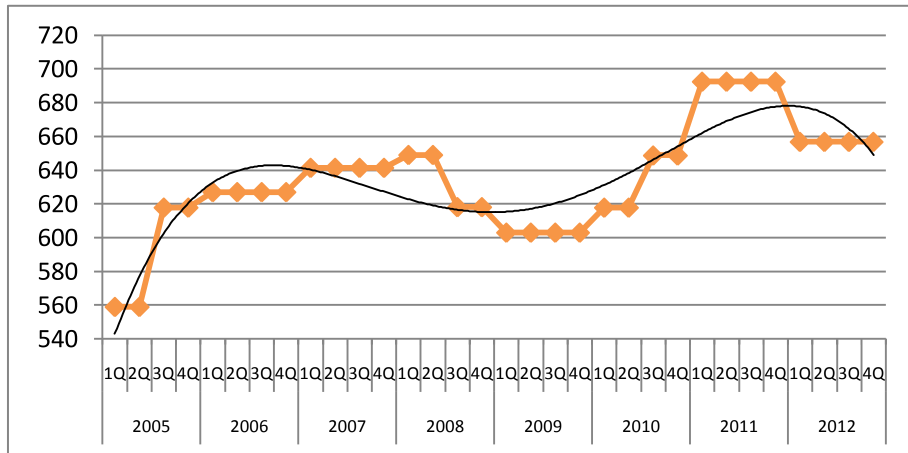
In 2008, the government decided to lower the standard tax rate by 1% to encourage expenditures but had to be raised again in 2010 as an austerity measure to deal with crisis. This has positively influenced state budget revenues from standard VAT in 2011 and a slight decline occurred in 2012. The data for the first and second quarter of 2013 have been estimated based on trend curve equation: (Figure 26) (

Table 13 Portugal: Scenario I and II Comparison 2010-2013)

$y = -0.0035x^4 + 0.2468x^3 - 5.6739x^2 + 49.326x + 499.15$

$R^2 = 0.7614$

Figure 26 Portugal: Scenario I Trend Curve 2005-2012 [USD per capita]



Data Source: Eurostat, Table in Supplement 4

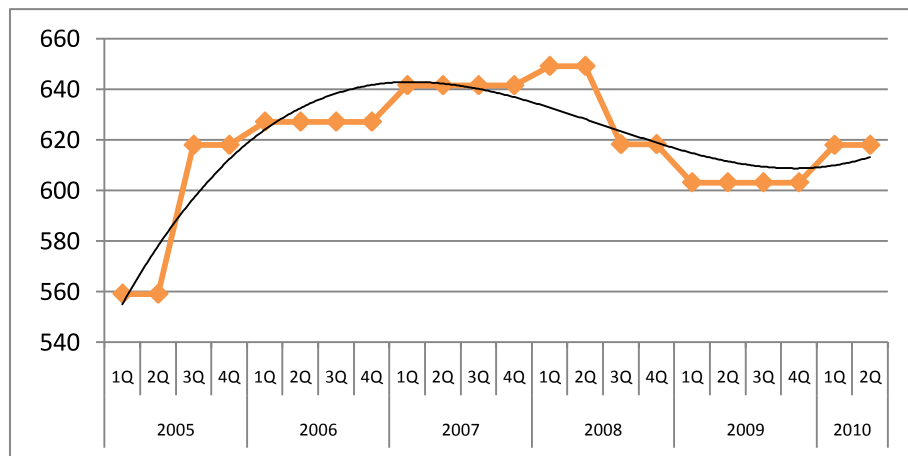
2. Scenario II

An alternate scenario develops a prediction of government income from standard VAT signature assuming that the rate has not been changed in 2010. According to the development until the second quarter of 2010 a trend curve has been estimated: (Figure 27 Portugal: Scenario II

$y = 0.0548x^3 - 2.3861x^2 + 29.856x + 527.44$

$R^2 = 0.8093$

Figure 27 Portugal: Scenario II Trend Curve 2005-2010 [USD per capita]



Data Source: Eurostat, Table in Supplement 4

Based on the equation, an estimated development of government income from standard VAT has been calculated. (

Table 13)

Table 13 Portugal: Scenario I and II Comparison 2010-2013

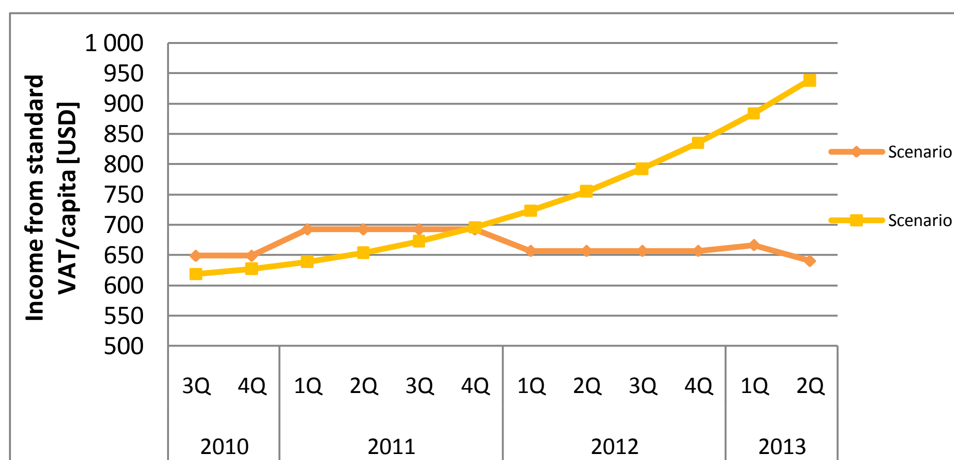
Year	Q	Gov. Income from standard VAT per capita [USD]	
		Scenario I	Scenario II
2010	3	648.80	618.63
	4	648.80	627.15
2011	1	692.53	638.78
	2	692.53	653.86
	3	692.53	672.71
	4	692.53	695.68
2012	1	656.88	723.07
	2	656.88	755.23
	3	656.88	792.48
	4	656.88	835.15
2013	1	666.56	883.57
	2	640.26	938.07

Data Source: Eurostat; own results

3. Brief Conclusion

The estimation of the second scenario development have shown significantly different signature of the government income. In average, Scenario II would bring almost 70 USD per capita annually with an increasing trend. (Figure 28)

Figure 28 Portugal Scenario I and II Comparison 2010-2013



Data Source: Eurostat; Own results, Table in Supplement 4

4.3 Cyprus Banking Crisis

In years 2003-2013, the economy of Cyprus has been facing seriousl challenges in terms of unsustainable external and internal macroeconomic imbalances. While some have only emerged following the sharp recession and the collapse of the domestic credit boom in 2012, other imbalances have been building up over the past decade.

Cypriot economy has enjoyed strong growth in the first decade of the millennium, twice that of the euro area. The conditions of almost full employment, low inflation and rising real disposable income resulted into economic growth. The disposable income increase has largely benefited from average wage increases which were significantly higher than in the rest of the Eurozone. Other factors influencing economic performance during this period was mainly buoyant domestic demand, which was supported by a rush in credit growth. The credit expansion was a result of fall in risk premia, financial integration, capital liberalisation and excess liquidity in the banking sector, which was linked to large inflows of foreign deposits.

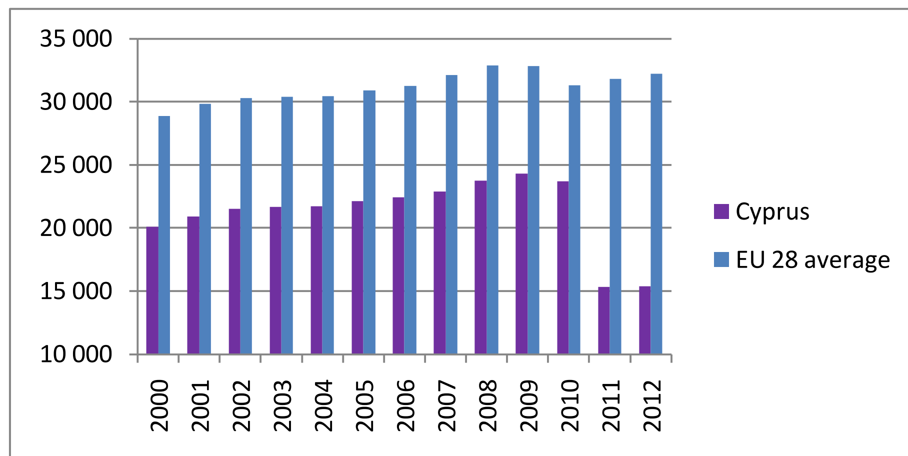
The positive overall asset development based on dynamic activity in the real estate sector and asset re-pricing, particularly of land, have coupled with the EU accession in 2004 and Euro currency adoption in 2007. At the same time, persistently high current account deficits were recorded. Lagging exports went hand in hand with significant losses of price/cost and non-price/cost competitiveness. The both corporate and household sectors have both recorded rapid increase in indebtedness which resulted into more favourable financing conditions and it increased the housing prices. A strong inflow of foreign capital (mainly deposits) allowed the current account deficit to keep growing, while further fuelling credit growth in the domestic economy.

The indicators of financial soundness for Cypriot banks started to deteriorate in 2010. These deteriorations revealed vulnerabilities with respect to their capital buffers and liquidity positions. The banking service sector was increasingly cut off from international market funding. Furthermore, substantial capital shortfalls were recorded by major financial institutions against the backdrop of the exposure to the

Greek economy and deteriorating loan quality in Cyprus. The causes for imbalances were defined as bank credit policy, poor risk management practices and insufficient.

"On the fiscal front, the policy stance was found to have been insufficiently prudent during the economic boom years, while the subsequent counter-cyclical policy action to mitigate the effects of the global economic crisis produced a back-loaded fiscal consolidation strategy that was ineffective in correcting the excessive budget deficit. Amidst consecutive downgradings of Cypriot sovereign bonds by credit rating agencies, the country became unable in mid-2011 to refinance itself at rates compatible with long-term fiscal sustainability." [53]

Figure 29 Cyprus: GDP per Capita Signature 2000-2012 [USD]



Data Source: Eurostat

The Cyprus banking crisis occurred between 2012 and 2013 as a result of several factors. Cypriot banks had a high level of lending in Greece and invested heavily in Greek government bonds. Consequently, when the Greek government-debt crisis occurred, the Greek bondholders were forced to give up substantial sums owed to them by the Greek government under the terms of a bailout package agreed in 2012.

As a result, the Cypriot banks were exposed to overleveraged local property companies, the Cypriot government's bond credit rating downgraded to junk status. The country became unable to refund its state expenses from the international markets.

On 25 June 2012, the government of Cyprus requested a bailout from Troika. In April 2013 the European Commission (EC), the European Central Bank (ECB) and the International Monetary Fund (IMF) agreed an Economic Adjustment Programme. The Programme covers the period 2013-2016 and the financial package covers up to 10 billion EUR.

To conclude recommendations for Cypriot fiscal policies, the data from literature review as well as the results of the first two analytical sections are used. The main data are summarized in Table 14 Cyprus Banking Crisis Comparative Analysis 2012.

Table 14 Cyprus Banking Crisis Comparative Analysis 2012

Data 2012	Ireland	Greece	Portugal	Cyprus
Economy Structure	service-based (70% of GDP in 2009)	service-based (78.3% of GDP in 2011)	service-based (74.8% of GDP in 2011)	service-based (80.5% of GDP in 2011)
GDP/capita [USD]	45 866.9	19 809.3	18 385.8	15 378.2
Unemployment Rate [%]	15.0	21.4	14.0	9.9
Inflation Rate [%]*	2.5	2.4	3.5	3.1
Risk of Poverty**	15.2	23.1	17.9	14.7
Standard VAT Rate [%]	23.0	23.0	23.0	17.0
Gov. Income from standard VAT [USD]	1220.66	744.28	656.88	653.53

Data Source: Eurostat, World Bank, own results

* to January 2012

** "*The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers.*" [55]

The Cypriot economy is by its characteristics relatively close to all of the three examined economies. All of them are highly dependent on services and thus volatile to the changes in global markets. When comparing gross domestic product per capita, Cyprus is well below the levels of other economies with the closest one being the Portuguese economy. On the other hand, the unemployment rate is in comparison to the others significantly lower, only 9.9%. The risk of poverty rate is

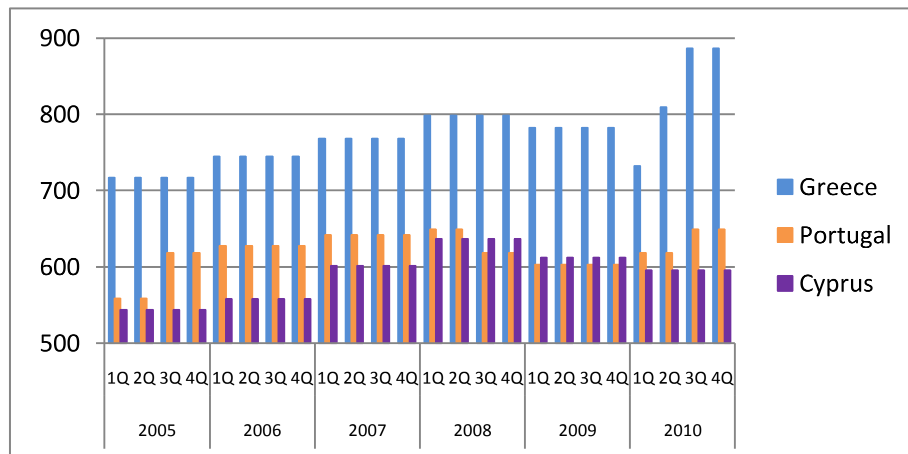
also relatively low as poverty is a threat to 14.7% of Cypriot population. The standard value added tax rate is significantly lower, only 17% in comparison to the rate of 23 in other economies. The rate has been increased in the first quarter of 2013 to 18%. However, it is still not balanced within the European Union average rates.

According to the economy indicators summarized in Table 14 comparison, the economy of Cyprus is most approximate to the Portuguese one by its:

- Structure (mostly service-based)
- Unemployment rate
- Inflation rate
- and Government income from standard value added taxes

Despite the low VAT rates, the Cypriot government tax revenues levels between 2005 and 2010 were also best comparable to Portugal. (Figure 30) Ireland's revenues in this period did not leveled under 1160 USD per capita and so it can be hardly compared to levels of southern European economies.

Figure 30 Cyprus: Government Income from Standard VAT 2005-2010 [USD]

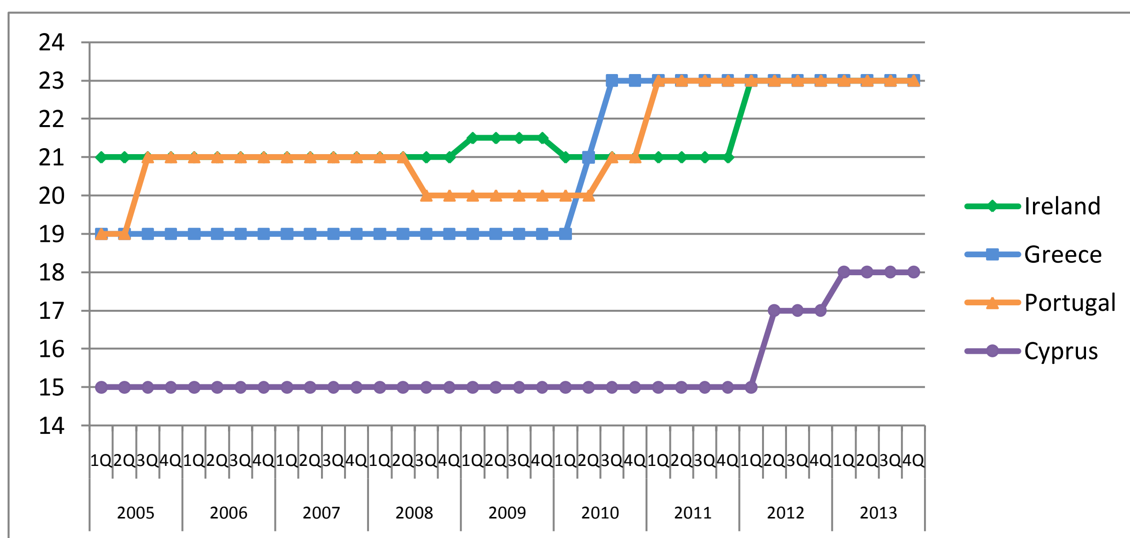


Data Source: Eurostat, Table in Supplement 3

The gradual elevation of standard VAT rates which has been chosen by Portuguese government as a part of austerity measures package has been evaluated in Chapter 4.2.3 as non-beneficial in long-term. Therefore, the recommendation of keeping the same rates could be perceived as an optimal

strategy at first glance. However, as it can be seen from Figure 31, the situation of fiscal policy regarding VAT rates is remotely different from all the examined economies. Therefore, it is difficult to impose the same or even similar fiscal policy strategies.

Figure 31 Cyprus: Standard VAT Rates Comparison 2005-2013 [%]



Data Source: Eurostat, Table in Supplement 1

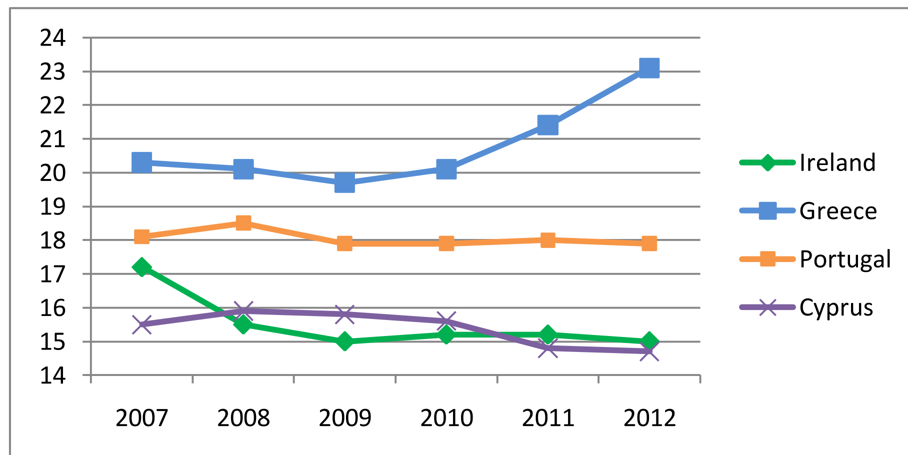
5 Results and Discussion

5.1 Austerity Measures Evaluation

Austerity measures regarding standard value added tax rates in examined countries as part of financial crisis administration were performed at different stages of economic maturity and therefore the impacts are discussed individually.

Additionally, to see the crisis and austerity impacts in different perspective, the Risk of poverty rate signatures for all of the four examined countries are shown in Figure 32 and then discussed for each country.

Figure 32 Risk of Poverty Rate Signature 2007-2012 [%]



Data Source: Eurostat

5.1.1 Ireland

In Ireland, the initial standard VAT rate in 2005 was in comparison to other EU economies (and especially to those which have found themselves in debt crisis during 2008-2011) relatively high. Although their economy has been in recess since 2008, the government hesitated with the VAT rates alterations until 2012. Subsequently, their government income from standard VAT rate rose steeply in that year and helped the budget.

According to the analyses' results, Ireland has been implementing successful VAT policies, which have been greatly beneficial to the state budget. As a result,

the government income from standard VAT was the far highest out of the three examined countries, earning not less than 1220 USD per capita since 2005.

The development and evaluation of the Irish fiscal policy alternate scenario has shown far worse results of government income from standard VATs. Therefore, it can be concluded that the government has been implementing the tax rates elevation at the right point of economic cycle and that the tax rates increases have been beneficial to the economy in long-term.

Ironically, the risk of poverty rate has been decreasing almost every year since the beginning of the crisis. In 2007, the risk of poverty threatened 17% of Irish citizens and by 2012, the risk declined to 15%.

5.1.2 Greece

As for Greece, the fiscal policies changes implemented in 2010 succeeded only temporarily. The rates of standard value added taxes have appeared to be too steep considering the depth of the economic crisis. However, in the long-term perspective, the overall results of used fiscal policies have shown success. The prediction of data calculated based on the trend curve of an alternate scenario indicated even steeper drop of the government revenues from standard value added taxes. Despite the right choice of fiscal policy strategy, the country is still in deep crisis and the overall state of the economy calls for in-depth structural reforms.

An alternate scenario that predicted development of standard value added tax revenues without the increase in 2010 has shown lower results in three subsequent years period.

The risk of poverty rate was already relatively high before the economic crisis at the level of 20.3% in 2007 and has been increasing since. In 2012, 23.1% of Greek citizens remain in poverty risky situation.

5.1.3 Portugal

During the economic crisis, Portuguese governments have been operating with the standard VAT rates far more often than Ireland and Greece while avoiding steep spikes. The standard VAT rate has been increased already in 2005 by 2%. Then it was lowered between 2008 and 2010 to help to pump up the economy and strengthen purchasing power of citizens. As the country struggled with the crisis even after two years of Troika bailouts, the rate has been increased again in the last quarter of 2010 to the level of 23%.

The provided alternate scenario has shown slightly better results for tax revenues in between third quarter of 2010 and second quarter of 2013.

So far, the actual government tax revenues trend is positively increasing. However, the economy continues to struggle with crucial structural issues such as unemployment rate, especially among young people.

The signature of poverty rate among Portuguese citizens has remained more or less constant between 2007 and 2012, levelling at approximately 18% of population. The proportion is close to the European Union average.

5.2 Cyprus Banking Crisis

To make a recommendation for specific fiscal policy strategy aiming at restoration of the Cypriot national economy is a task for further analysis. First, even though there are many economic indicators which are similar to other examined state economies', there is also a number of factors influencing economic nature of the country (population nationality composition, political structure, etc.), which are hardly comparable.

Secondly, the crisis impacts have been harsher to Cypriot economy as the Eurozone group changed their attitude towards member states funding. Instead of solidarity and support, the Troika decisions and following financial restrictions happened to result in much worse state of the economy, pushing it from recession to depression.

As it is argued by Andreas Theophanous (President of the Cyprus Center for European and International Affairs at University of Nicosia), exit from crisis will be very difficult to find for Cypriot economy considering philosophical framework of the Memorandum of understanding and the current architecture of the Euro area.

Reasons for this are:

- A huge fiscal cliff;
- A great negative wealth effect;
- Serious internal and external restrictions to capital flows imposed on a crippled financial sector.

Theophanous sees the only possibility of addressing the crisis within Eurozone in fundamental changes in its philosophy. This would have to involve a generous economy-restoration plan, temporary discretionary fiscal policy, unconditional access to Emergency liquidity assistance (ELA) and a relaxation of the internal financial controls. Otherwise, he argues, Cypriot crisis is best to be resolved by exiting the Eurozone and re-adoption of national currency. The strategy should also involve an expansionary fiscal policy and tax decreases. [55]

6 Conclusion

In 2008, global markets have been shaken by the Eurozone's first sovereign debt crisis. In response to the financial crisis, the area's most troubled countries have adopted wide-ranging austerity measure packages focusing on short- and medium-term adjustment. The first interventions in form of programmes and fiscal reforms in the Euro area were performed by International Monetary Fund in Ireland and Greece. For those two countries and several others, yields on sovereign bonds have increased sharply. However, the divergences between the yields highlight the differences between state economies and question the countries' possibilities to repay their debts.

The Republic of Ireland, Greece (Hellenic Republic) and Portugal (Portuguese Republic) were at similar stages of their economic performance in the early 1960s and their economic development since then differed remotely. To perform an analysis of austerity measures implemented in examined countries of the Eurozone a number of quantitative and qualitative input data were processed. All the examined economies have used alterations in value added tax rate as a tool to tackle the crisis and to restore their government budget. The strategies and timing of those tools differed in both scale and rapidity, and were customised according to the needs and characteristics of individual economy.

The first round of economic impacts of referred measures on the level of tax revenues vary immensely. These distinctions depend on variety of factors like economic profile but also political and social structure of the Eurozone member country. The crisis made it obvious, that the benefits of common currency are coming with the costs of unified fiscal policy and setting macroeconomic goals under monetary union standards. Due to the disparities in macroeconomic fundamentals across the area a question of whether the Eurozone is sustainable in long-term has been raised. It can be concluded that in order to achieve fiscal stability of the monetary union, the European Union must directly address the conspicuous disparities in fiscal positions of its member states. Disagreements about how to set these fiscal standards are presumable. In order to effectively

address the European debt crisis and promote further integration, a new European paradigm is required to be developed.

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8 Annex

Supplement 1 Standard VAT Rates [%]

Standard VAT rate [%]		Greece	Ireland	Portugal	Cyprus
2005	1Q	19	21	19	15
	2Q	19	21	19	15
	3Q	19	21	21	15
	4Q	19	21	21	15
2006	1Q	19	21	21	15
	2Q	19	21	21	15
	3Q	19	21	21	15
	4Q	19	21	21	15
2007	1Q	19	21	21	15
	2Q	19	21	21	15
	3Q	19	21	21	15
	4Q	19	21	21	15
2008	1Q	19	21	21	15
	2Q	19	21	21	15
	3Q	19	21	20	15
	4Q	19	21	20	15
2009	1Q	19	21.5	20	15
	2Q	19	21.5	20	15
	3Q	19	21.5	20	15
	4Q	19	21.5	20	15
2010	1Q	19	21	20	15
	2Q	21	21	20	15
	3Q	23	21	21	15
	4Q	23	21	21	15
2011	1Q	23	21	23	15
	2Q	23	21	23	15
	3Q	23	21	23	15
	4Q	23	21	23	15
2012	1Q	23	23	23	15
	2Q	23	23	23	17
	3Q	23	23	23	17
	4Q	23	23	23	17
2013	1Q	23	23	23	18
	2Q	23	23	23	18
	3Q	23	23	23	18
	4Q	23	23	23	18

Data Source: Eurostat

Supplement 2 Household Consumption Expenditure per capita [USD]

Household	Greece	Ireland	Portugal	Cyprus
2005	15 089	22 121	11 770	14 494
2006	15 683	23 035	11 945	14 878
2007	16 177	24 029	12 219	16 035
2008	16 808	23 618	12 364	16 975
2009	16 481	22 197	12 062	16 338
2010	15 411	22 185	12 358	15 882
2011	14 229	21 368	12 044	-
2012	12944	21 229	11 424	-

Data Source: Eurostat

Supplement 3 Government Income from Standard VATs 2005-2012 [USD/cap]

		Greece	Ireland	Portugal	Cyprus
2005	1Q	716.7275	1161.353	559.075	543.525
	2Q	716.7275	1161.353	559.075	543.525
	3Q	716.7275	1161.353	617.925	543.525
	4Q	716.7275	1161.353	617.925	543.525
2006	1Q	744.9425	1209.338	627.1125	557.925
	2Q	744.9425	1209.338	627.1125	557.925
	3Q	744.9425	1209.338	627.1125	557.925
	4Q	744.9425	1209.338	627.1125	557.925
2007	1Q	768.4075	1261.523	641.4975	601.3125
	2Q	768.4075	1261.523	641.4975	601.3125
	3Q	768.4075	1261.523	641.4975	601.3125
	4Q	768.4075	1261.523	641.4975	601.3125
2008	1Q	798.38	1239.945	649.11	636.5625
	2Q	798.38	1239.945	649.11	636.5625
	3Q	798.38	1239.945	618.2	636.5625
	4Q	798.38	1239.945	618.2	636.5625
2009	1Q	782.8475	1193.089	603.1	612.675
	2Q	782.8475	1193.089	603.1	612.675
	3Q	782.8475	1193.089	603.1	612.675
	4Q	782.8475	1193.089	603.1	612.675
2010	1Q	732.0225	1164.713	617.9	595.575
	2Q	809.0775	1164.713	617.9	595.575
	3Q	886.1325	1164.713	648.795	595.575
	4Q	886.1325	1164.713	648.795	595.575
2011	1Q	818.1675	1121.82	692.53	N/A
	2Q	818.1675	1121.82	692.53	N/A
	3Q	818.1675	1121.82	692.53	N/A
	4Q	818.1675	1121.82	692.53	N/A
2012	1Q	744.28	1220.668	656.88	N/A
	2Q	744.28	1220.668	656.88	N/A
	3Q	744.28	1220.668	656.88	N/A
	4Q	744.28	1220.668	656.88	N/A

Data Source: Eurostat

Supplement 4 Government Income from Standard VAT Scenarios Comparison [USD/cap]

		Ireland I	Ireland II	Greece I	Greece II	Portugal I	Portugal II
2008	1Q	1 239.95	1 239.95	798.38	798.38	649.11	649.11
	2Q	1 239.95	1 239.95	798.38	798.38	649.11	649.11
	3Q	1 239.95	1 239.95	798.38	798.38	618.20	618.20
	4Q	1 239.95	1 239.95	798.38	798.38	618.20	618.20
2009	1Q	1 193.09	1 193.09	782.85	782.85	603.10	603.10
	2Q	1 193.09	1 193.09	782.85	782.85	603.10	603.10
	3Q	1 193.09	1 193.09	782.85	782.85	603.10	603.10
	4Q	1 193.09	1 193.09	782.85	782.85	603.10	603.10
2010	1Q	1 164.71	1 164.71	732.02	786.44	617.90	617.90
	2Q	1 164.71	1 164.71	809.08	784.42	617.90	617.90
	3Q	1 164.71	1 164.71	886.13	781.80	648.80	618.63
	4Q	1 164.71	1 164.71	886.13	778.59	648.80	627.15
2011	1Q	1 121.82	1 121.82	818.17	774.80	692.53	638.78
	2Q	1 121.82	1 121.82	818.17	770.41	692.53	653.86
	3Q	1 121.82	1 121.82	818.17	765.43	692.53	672.71
	4Q	1 121.82	1 121.82	818.17	759.86	692.53	695.68
2012	1Q	1 220.67	1 069.33	744.28	753.70	656.88	723.07
	2Q	1 220.67	1 048.57	744.28	746.95	656.88	755.23
	3Q	1 220.67	1 026.58	744.28	739.61	656.88	792.48
	4Q	1 220.67	1 003.37	744.28	731.68	656.88	835.15
2013	1Q	1 256.77	978.94			666.56	883.57
	2Q	1 288.78	953.28			640.26	938.07
	3Q	1 326.09	926.40				
	4Q	1 369.04	898.30				
2014	1Q	1 417.93	868.97				
	2Q	1 473.09	838.43				
	3Q	1 534.84	806.65				
	4Q	1 603.50	773.66				

Data Source: Eurostat