School of Economic Sciences

Department of International & European Economic Studies

Master of Science in European Economic Policy

"Structural reforms as a tool against fiscal crises"

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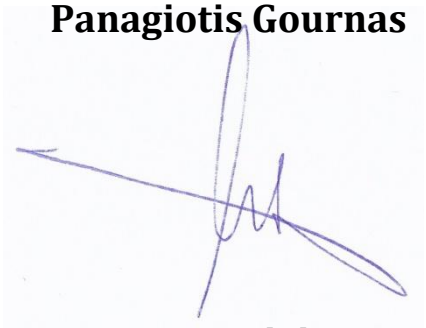

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Abstract

Structural reforms are more and more used throughout the world's economies for many reasons, namely to recover from crises and shield themselves against new ones. This thesis outlines the effect structural reforms could have on fiscal policy, taking into account the theory about fiscal multipliers and the multiplier effect, and the examples of Greece and Portugal, who both signed off bailout programs with structural reform packages, and Canada, where reforms were initiated by the government – with different outcomes, however. There is no original econometric analysis in this thesis, other than references to existing academic papers and analyses, which are listed in the appendix thereof.

Keywords: structural reforms, fiscal crisis, Greek crisis, Portuguese crisis, fiscal multipliers, multiplier effect

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Foreword

Since the collapse of Lehman Brothers on September 15th, 2008, the world's economic think-tank has undergone deep and profound changes. Several points of view needed revising, others were finally confirmed and some were discarded whatsoever. The global financial crisis that struck economies and institutions around the globe in 2008 onwards is a significant milestone in economic history. Although the world in 2016 is not the same as it was in 1930, some compare this crisis to the Great Depression that hit the United States almost a century ago.

Structural reforms are a macroeconomic tool that in the last decades has become widely "popular"; more and more economies around the world initiate them in order to regain financial stability and growth. Their common adherence is what has driven big institutions, such as the International Monetary Fund (IMF) or the World Bank (WB), to construct special programs that would help developing or crisis-stricken economies to rise, consisting mostly of structural reforms. The European Union (EU) has also become a loyal adherent thereof, especially after the 2010 EU-wide debt crisis that brought forward the innate dissimilarities of the economies.

Before applying reforms, however, one needs to estimate their outcome. There's no apparent use in changing something, if there isn't going to be a benefit. One way to do this is by estimating the fiscal multiplier; an indicator that predicts how much of an impact a certain move will have, which in structural reforms is *usually* cutting off expenses or redirecting resources to more productive sectors. This indicator is different from country to country and even the same country throughout the years, that's why structural reform programs must be specially made for each and every economy, taking into account what is profitable (in a broad sense) and what is not.

Part of this thesis is to determine whether this prerequisite holds true; in particular, the Greek and the Portuguese economies were analyzed, after their entering the crisis and getting bailout programs from the IMF, the European

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Central Bank (ECB) and the European Commission (EC). Those two countries were preferred for several reasons, mainly due to their similarity in terms of Gross Domestic Product (GDP), economic structure, population, geography, culture and many others, but also the fact that one of them was successful and the other one was not. In order to examine the efficiency of the fiscal multipliers and the multiplier effect, but also to test whether structural reforms are capable of bringing forth alterations in fiscal policy, we will try to determine whether the structural reforms proposed by those countries' creditors brought about the results predicted.

A broad variety of sources was used for this thesis, including, but not limited to: articles and papers that have been published in academic journals around the globe, university level books and/or handouts, renown blog posts by economists or professors or analysts working in relevant institutions and validated Internet pages, all of which have been properly cited throughout the text and listed in full in the appendix thereof. The entire content of the thesis was reviewed by the supervisor before it was published.

One thing that must be explicitly highlighted is that, although this thesis examines and proposes the effect of specific structural reforms to fiscal policy, and therefore broadens that perspective to all structural reforms in general, Economics can do so much as to interpret several values and induce theories and possibilities. Under no circumstances does this thesis and/or its author implicate that any of the parties involved in the cases of Greece and Portugal were insufficient or that there was foul play, unless otherwise stated by cited third parties. As well, no primitive econometric analysis was performed, so those results and recommendations are not binding whatsoever.

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Theoretical definitions

Understanding fiscal multipliers

Formulas and general theory

The commonest tool of testing the impact of government spending (or taxation) on the national income is the **fiscal multiplier**. A concept firstly proposed in 1930 by Richard Kahn, one of Keynes students, the fiscal multiplier actually belongs to a larger group of **exogenous spending multipliers**, which are generally the following ratio:

$$= \frac{change\ in\ national\ income}{autonomous\ change\ in\ spending\ (government, private\ or\ otherwise)}$$

In particular, the fiscal multiplier is a similar ratio:

$$= \frac{change\ in\ national\ income}{change\ in\ government\ spending}$$

When this ratio is higher than **1**, economists talk about **the multiplier effect**, i.e. a sequel of increases that results from an incremental amount of government spending. The mechanism behind this notion refers to basic economics: an **increase** in **government spending** should lead to an **increase** of **consumption spending**, which in turn will **increase income** and **consumption**. Overall, the **national income increases more** than the initial **increase** of **government spending**.

In reality, these figures may vary substantially throughout the multiplier effect, because an increase in consumption will almost certainly bring forth **increased tax revenue**. Be it through Value Added Tax or Income Taxation or any other kind, a government that spends $1 on a project will get some of it back in the form of taxes, so its **net spending is less than the initial** $1. In fact, a

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government could theoretically earn back **even a little bit more than the amount it originally spent**.

A government may take advantage of the multiplier effect in various ways. A main course of action is using it **as a stimulus to foster economic activity**. This is usually the case in times of **recession or economic uncertainty**, when **unemployment** rates are likely to be **high** and many **resources** are **underutilised**. The mechanics behind this use is that an increase in government spending or decrease in taxation will ultimately **increase aggregate demand** and thus business activity and income, in a virtuously endless circle, culminating in a **total increase** of **national income** much **greater** than the **original government spending**.

To use an umbrella term that covers all cases, the multiplier effect can be used to close an economy's **output gap**; the distance between the **actual GDP and the potential GDP**, estimated by taking into account the percentage of **idle resource capacity and involuntary unemployment of labour**. In these cases, additional government spending is required to lure capital owners or skilled personnel to be activated and increase production, similar to a time of recession.

Although the fiscal multiplier and the multiplier effect are frequently used by governments and financial institutions alike, some schools of economics disregard them, especially for its long-term efficacy. In addition to this, there are (few) cases of **less-than-1 fiscal multipliers**, one such case being the government-funded construction of stadiums, which more often than not has **crowd-out effects** or **reduces consumption spending** that would otherwise take place. Phenomena like this have been linked with an **increase in interest rates or price level**, resulting from the incremental amount of government spending. However, such cases are rare and even they can be used as an evaluation tool of government initiative.

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Funding additional spending and assessing results

The necessity of additional government spending brings forward a rather important issue: how will it be funded? In recent years, the powers that be choose among **reserves**, **taxes** and **debt**, each having its pros and cons. Regardless of the source chosen, however, there are two principles that advise against extra spending: the **Treasury View** and the **Ricardian Equivalent**.

The **Treasury View** supports that an increase in government spending should be accompanied by **equivalent crowding out of private spending or investment** by means of taxation or borrowing, thus having **no net impact on the level of economic activity**. This view has long been regarded fallacious by Keynesian economists, the most recent of which was **Paul Krugman**, who considers it "*one of the most basic fallacies in economics — interpreting an **accounting identity** as a **behavioural relationship***", in a 2009 blog post of his for the New York Times.

The **Ricardian Equivalent**, on the other hand, anticipates that taxpayers will be suspicious of any new government spending or borrowing (provided they are properly informed about it) and will **save up money by reducing consumption or expenditure** in order to be able to **afford the taxes to come**. This theorem is part of the **rationality** concept and takes for granted many variables that nowadays cannot be considered given, such as full transparency, proper education and understanding of the economy, normal distribution of income so as to cover basic needs only and so on.

At the end of the day, it all goes down on whether all these measures worked. The **functionality** of the multiplier effect is dependent on the **transmission channels of fiscal policy itself**, including, but not limited to, according to Abel and Bernanke:

- The rate of **unemployment of resources** (this determines whether additional production would cause an increase in prices or not).

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- The **state** of the **financial and credit markets** (who should regard the additional government spending as a low-risk security).
- The **Marginal Propensity to Consume** and **Marginal Propensity to Import** (those ratios will determine the impact of additional spending on households and producers).
- In turn, the level of **price flexibility**, the **rationality** of the individuals and the level of **uncertainty** for the economy play a key role (as they influence the individuals / households / producers behaviour).
- The accommodation of the **monetary authority**, which in most cases is a Central Bank (its ability to impose efficient monetary policy affects the necessity and the efficacy of fiscal policy and vice versa).

Norms and models for the fiscal multiplier

Much research has been conducted in order to estimate the multipliers of a variety of expenses, based on recent experience from developed and developing economies. None of them can be considered useful at all times, but they do provide a **general guideline** as to which sort of government spending should be pursued and which not.

A traditional approach to this, even fancied by the WB, consists of estimating **impulse response functions** using **vector autoregressive** (VAR) **models** and **matrices**. In a working paper for **Argentina** in 2010, the Latin American and Caribbean Policy Sector estimated the Argentine fiscal multipliers using this method: they specified a VAR model and estimated impulse response functions of shocks to both **government expenditures** and **revenues**, calculating at the same time the **cumulative response** of **private consumption** to each of these shocks by adding the first four, eight and twelve lagged quarter responses.

Their results were remarkable: not only was the multiplier **small**, but it also was **short-lived**. A shock equal to **1 million AR$** to government expenditures was estimated to increase private consumption by **0.39%** within the **same year**. The revenue multiplier was also small and close to zero. The estimates made much

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sense judging by the Argentine economy's structure (for instance the narrow tax base).

Other Latin American countries share similar small multipliers (Perry et al., 2008). More **industrialised** countries tend to range from **less than zero** to at most **three** (notably the U.S. during WWII was estimated to have a multiplier equal 0.8 and during peacetime close to zero).

Another recent (September 2009) discussion paper by Finnish economist **Juha Tervala** for the Aboa Center of Economics tests whether there are cases in which the **fiscal multiplier** can be **negative**, indirectly advising against such expenses. The researcher uses a wide range of data collected over the years and tests the value of the fiscal multiplier by this formula:

$$Y = \left(\frac{\rho - \alpha}{1 + \chi}\right) G$$

… A common reference point amongst economists, where Y denotes the **output**, G the **government spending**, ρ is a binary of whether **government spending and labour supply** are **complements or substitutes**, α is the degree of **substitutability or complementarity between government spending and private consumption** and χ is a **labour supply parameter**.

Analyzing this formula provides a table of Y's dependency on both ρ and α, when $\chi = 1$:

	α = -0.5	**α = 0**	**α = 0.5**	**α = 1**
ρ = 0.5	0.5	0.25	0	-0.25
ρ = 1	0.75	0.5	0.25	0
ρ = 1.5	1	0.75	0.5	0.25

It is difficult to see how government consumption can be a substitute or complement for private consumption. However, assuming that taxes are non-

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distortionary, the paper concludes that **a fiscal multiplier can be negative**, if government spending is targeted to **goods that are substitutes for private consumption and complements to leisure**.

Analyzing structural reforms

Defining structural reforms

This term has been widely used during the last decades, especially after the IMF started initiating reform and stability programs, and there are many working papers and publications of various organizations and fora with economic interest about them. In fact, the *Economist* offered a brief explanation on what structural reforms are in 2014, saying that "*at its simplest, structural reforms imply changes to the way the government works*".

According to the same article, a good example of structural reforming is **post-crisis Ukraine** (crisis denoting the sudden change of regime in 2014). Ukraine, being one of the **most corrupt** countries of the world until then, has constantly been trying to change its inner infrastructure in favour of **long-term economic growth**. One such change was the **declaration of the ministers' financial interests beforehand** to prevent them from signing contracts with firms they had invested in, hopefully leading to the selection of the most effective firm which would **improve the quality** and would **lower the cost** of the project at hand. Following this example, many bizarre loopholes of **Ukrainian law were or will be changed**, such as a clause that allowed certain companies to forbid proper scrutiny by government authorities and so on – claiming that through these changes, government resources will be saved within the next years.

However, there cases of "subtler" structural reforms, such as the change of the Italian **labour market** to a **more flexible** form, under Matteo Renzi (where companies are now allowed to hire up to 20% of their workforce on fixed-term contracts of up to three years). Moreover, the Italian government has helped **reduce electricity prices** in order to increase the competitiveness of small and

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medium-sized companies. France is next in this sequel of European-wide change (mainly attempting to **open the medicine market**, **limiting the rights of labour unions** and **motivating the unemployed to actively seek employment** rather than relying on the unemployment benefits).

Overall, this can be summed up in one phrase: **structural reforms are necessary to ensure growth in the long term**. The question of course remains: how important are they, particularly in a struggling economy? There are always **conflicting interests** in this play; the real challenge is figuring out **who wins the most** (for instance, changing the form of a labour market has different impacts on employers and employees). In the short term, **more drastic action may also be required**, because the effects of a structural reform may take months, even years, before they can be translated into monetary terms.

Offset of structural reforms

The first evidence of organized structural reforms as part of a broader "package" can be traced back to the post-Cold era, when the main institutions of the global economy (the IMF, the WB and the U.S. Treasury Department) used to promote several measures to economies in order to achieve **macroeconomic stabilisation** (John Williamson, 1989). The collective of these reforms is known to this day as the **Washington Consensus**, a term coined by English economist John Williamson in 1989, referring geographically to all three of these organizations (all headquartered in Washington, D.C.).

The Washington Consensus consists of **10 economic policy prescriptions** promoted for crisis-wracked developing countries. Because of their nature, they are usually frowned upon and labelled under "market fundamentalism" or "neoliberalism"; in fact, there is a huge school of economists who feverishly argue that their application will have no results whatsoever. The term *Washington Consensus* nowadays has fallen out of use (especially because it is sometimes misinterpreted by American media to refer to U.S. Foreign Policy in the Middle East and elsewhere) and has been replaced by "*structural adjustment*

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programs" (see below); nonetheless, the core remains the same and circles around the following **recommendations**:

1. **Fiscal policy discipline** (mainly avoidance of large fiscal deficits relative to GDP);
2. Increase of **public spending** toward **pro-growth / pro-poor** causes and less toward subsidies;
3. **Tax reform** (broader tax base and moderate tax rates);
4. **Market-determined** and positive **interest rates**;
5. **Competitive exchange rates**;
6. **Trade liberalisation** (elimination of quantitative restrictions, low and uniform tariffs and so on);
7. Promotion of **inward Foreign Direct Investments** (FDIs);
8. **Privatisation** of state-held enterprises and incentives for private sector investment in such initiatives;
9. **Deregulation** (cancellation of laws or regulations that impede market entry and/or competition);
10. Legal security of **property rights**.

Williamson himself (2002) summarised the overall results of the Washington Consensus almost a decade after he coined the term, suggesting that their **limited impact** was related to three main factors:

- the Consensus did not place any emphasis on **mechanisms to avoid future economic crises**;
- the reforms were generally **incomplete**;
- the reforms were not ambitious enough to **target improvements to income distribution**.

Instead of discarding them whatsoever, Williamson and many other economists have proposed their supplementation with corrective measures, influenced by successful examples of the Washington Consensus implementation, one of which was **Chile** in the **1980s**. Other analysts still criticize it, especially those coming

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from Latin America or those who have dealt with the Chinese and Indian economies, who both achieved growth following a set of **policies completely opposite** to the ones proposed by the Washington Consensus, leading to a **paradox**.

This paradox, among other things, led to a fierce debate on the effectiveness of the Washington Consensus, with many critics arguing that underdeveloped economies could get **exploited** by **foreign companies**, **political pressure and bribery** could flourish in order for a reform program to be received and fulfilled, and that ultimately such mechanisms and techniques make Third World countries a good candidate for **labour exploitation** by larger ones, leading to overall **income inequalities** and **increased poverty**.

Following such criticism, there were several proponents who suggested incorporating some "*European model*" parts and bits and pieces of the "*Asian way*" into the Washington Consensus to make them more **effective** (M. Nicolas and J. Firzli, 2011). There proposals came from the successful cases of Norway, Singapore and China, who back then (early 1990s) followed a **pragmatist development path** of their own, investing highly in **infrastructure projects**.

Finally, a special remark needs to be made about **agriculture**. The original Washington Consensus made no specific mention about agricultural subsidies and this left room for speculation: it was not clear enough whether they constituted a public subsidy or a stimulus for increased production. To this day, agriculture remains a sensitive matter, because not all economies have a common perspective for it: it is largely dependent on **geography**, **weather** conditions, **culture** and many other **qualified factors**, which cannot be considered raw data that can generate solid measures to take.

Taking all these into account, economists in favour of the Washington Consensus and the institutions it originated from slowly created the notion of "*structural adjustment programs*", in which special effort has been made to include all

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positive aspects of previous experience and to **modify** those that led to negative results.

Modern day usage

In recent years, structural reforms have been mostly launched through **structural adjustment programs (SAPs)**, usually conducted by the **IMF** or the **WB**. SAPs are essentially **low-interest loans** administered to countries that have experienced economic crises of any kind and wish to get back on their feet. Aside from all the criticism they have received, SAPs actually require that the government receive loans to **implement certain policies** (of fiscal nature, more often than not), as a necessary prerequisite of unlocking next installments.

Similarly in notion, but under different names perhaps, the EU also requires its member states (both in and out of the Eurozone) to submit a detailed "*national reform program*" on an annual basis, in which each country explains what it plans to do to boost **growth** and **employment** in the years to come. The EC analyzes the programs, makes whichever recommendations it regards necessary and then the governments move on to integrating them to their existing legislation. This procedure, however, does not apply to countries that are **under bailout programs** (like Greece is, at the moment).

The primary goal of a reform program, in general, is to reduce a country's **fiscal imbalance**, be it in the short, medium or long term; the macro perspective is to lead the economy in question in long-term growth (Sanjaya Lall, 1995). The distinction between the borrowers is rather simplistic: the **IMF** usually deals with developed economies who wish to **recover** ("*stabilisation policies*"), whilst the **WB** focuses on **emerging countries** ("*adjustment measures*"), although this distinction is not strict.

Reform programs include policies targeted to make the economies more **market-oriented**, thus forcing them to concentrate further on trade and production. A certain "**free-market**" spirit is always present: privatisations,

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deregulations, reduction of trade barriers and so on. Many programs come with **discipline clauses**; i.e. if a government fails to implement all that was proposed, there would be ramifications (fines etc.), which are considered blackmailing by many, especially poor nations.

As with the Washington Consensus, reform programs do not go uncriticized (Adrian Leftwich, 1996); much has been said and (mostly) written about their **posing a threat to the governments** that receive them, raising issues of **compromised foreign policy** in general and focussing mainly on:

- **Loss of national sovereignty**: Many critics argue that reforms are dictated to the governments receiving the programs, thus questioning that they are in the sovereign nation's best interest and ultimately effective. This assumption held true in the cases of Sub-Saharan Africa, when political stability went hand in hand with gross economic decline.
- **Loss of prosperity in favour of privatisations**: Since there is no clear directive as to which private sector company undertakes a previously state-owned organization, it is likely that state funds are transferred to foreign corporations with political ties, thus negatively affecting developing countries (Barbara McPake, 2009), as they do not care for increasing social prosperity.
- **Social riots because of austerity measures**: Austerity measures are an inseparable part of many (but not all) programs in an effort to balance a country's budget. Social programs, which by some politicians are used to attract voters, are the first ones to be cut off (including, but not limited to, education, public health and social safety nets). Reform programs may subsequently cause social disturbance and difficulty in adhering to the whole of the package.

Connecting the two tools

The topic discussed herein aims to connect the **outcome** of **structural reforms** in a two-fold way; first, to test whether the actual result is in accordance with the

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one expected (or better or worse) by the fiscal multiplier and second, to determine whether a successful reform program could change a country's fiscal policy, having led it to more flexible markets.

In **mathematical** terms, all this can be explained much more easily (Michel Husson, 2015): assume that a country's fiscal multiplier is **0.5**. For reasons unbeknownst, the government decides to move on with **structural reforms**, which would require it to limit its public spending. The effect of such a move depends largely on the **construction of the GDP**: should public spending represent a **high percentage of GDP** (which in South European countries was the case for many decades, Greece being a primary example with more than 50% proportionality), a limitation thereof means a **direct decrease of GDP**. In other words, for every euro that is taken away from public spending, the GDP decreases by 50 cents.

Although this model refers to fiscal policy itself, structural reforms are partly similar to this; in order to change a part of the economy, a government should cut off some of its spending (for instance, opening up the energy market of a government monopoly requires the government to decrease its subsidy to the previously state-owned company and so on). In this sense, structural reforms and restricting fiscal policy are similar in use; therefore, the fiscal multiplier can be used to determine the effect of a reform.

Ricardian economists would strongly disagree that cutting off expenditure may affect the GDP, however recent experience (Alberto Alesina, 2010) suggests that it holds quite true. In fact, the IMF itself (in a 2010 statement) was cautious enough to expect a **contractionary effect** on **output** by **fiscal consolidation**, in regards to the Greek case. Later on (2012), IMF's chief economists Olivier Blanchard and Daniel Leigh suggested that the failure of the Greek program was due to **underestimated fiscal multipliers** and not the theory in its core, as other economists did. They used an equation to correlate the forecast error with the forecasts of fiscal consolidation, which was the following:

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Forecast error of growth = α + β x *forecast of fiscal consolidation* + ε.

If the fiscal multipliers were accurate, the β coefficient should be **zero**. Regressing data from the Greek economy in 2010 and 2011 (when undoubtedly some reforms were implemented) using this method proved that "*the actual fiscal multipliers were larger than forecasters assumed*", a point which is now used in literature to contradict all those arguments against the multiplier effect and the necessity of structural reforms.

This study, along with many others conducted by prestigious institutions about the Euro area, suggests that the theory behind fiscal multipliers actually holds true nowadays, at least for the Western economies, which follow a similar pattern. This, of course, does not mean that a result may not be as expected because of **other factors** (rigidness of markets, fears of political cost, and other non-economic obstacles).

On the other hand, a successful reform program should make the economies markets more flexible in the medium term, as in the case of Portugal, whose IMF-led program was based on (Mussa and Savastano, 1999):

i. securing external financing,
ii. adopting domestic demand-restraining measures consistent with available financing, and
iii. proceeding with structural reforms to promote growth and adjust in the medium term.

Portugal adopted a total of **189 reforms** in only **three years** (Alessio Terzi, 2015) and was able to loosen its fiscal policy afterwards, because the economy was sufficiently **secured against shocks** and funds could be easily redirected to profitable and productive sectors instead of financing the public debt. This is consistent with the theory around structural reforms (Barku et al, 2012), which suggests that, although several **reforms take time** to materialise and have evident results (setting this timeline between three and five years), their output

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on growth is actually very important, as can be seen in Chart 1, particularly in the tradable sector.

Keeping all this in mind, the specifics of the Greek and Portuguese programs will be tested next, as to the accordance of the expectation and the actual results, as well as the reasons for any abnormalities, and their overall effect on fiscal policy.

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Structural reforms in effect

Why Portugal and Greece?

Structural reforms are not universal for all economies; they can vary according to the **sociocultural traits** of each country, but also in relevance to the structure of the GDP. For example, structural reforms in an economy whose GDP primarily consists of public spending needs to focus on cutting this spending, whereas an economy that makes the most out of the private sector should implement changes that would facilitate employment or other such procedures.

Another aspect that needs to be taken into account is the country's in question overall policy, business and institutional framework (IMF, 2013). Different productivity levels or growth or labour utilisation demand **different approaches** and require distinct prioritisation. Policy advice must then be tailored according to several indicators, one of each is **income**:

- **Low-income** countries are in a more dire need of trade barriers reduction, reformation of subsidies, and price control, as well as restructuring of the banking sector.
- **Lower-middle income** countries could maintain their productivity levels by allowing for more foreign investment, competition in product markets and improvement of the quality of secondary and tertiary sectors.
- **Upper-middle income** countries can move a step forward and deepen into the capital markets, develop more flexible product/labour markets and invest in research and development.

In order to successfully assess the impact of structural reforms, one would need to evaluate their results in similar environments. It would be naïve, for instance, to compare their effects on France and Canada, two completely different countries in terms of **currency**, **fiscal policy**, **culture**, **demographics**, **labour concentration**, and **political administration**. On the other hand, comparing Greece and Portugal provides safer results because of their pre-existing

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similarities in terms of geography, demographics, common monetary policy, culture, fiscal status, and all other statistical values (better analyzed in Table 1).

A quick scan of these data should be enough to prove that Greece and Portugal shared a great deal in common up to 2014. In fact, by using a simple mathematical formula to calculate the similarity between each indicator, we could see that for the years in question (2010 – 2014), the two countries are **82.57%** similar and if we remove the sole variable for 2012 (which is a qualitative indicator after all), their similarity percentage rises to **91.08%**. What's even more fascinating is that for 2015 and 2016, values tend to be much lower, which can be justified by the different impact the programs had on each country (meaning that it worked in Portugal, but not in Greece).

The formula used is based on simple calculus. Assume **A** is an economic indicator for country 1 and **B** is the same indicator for country 2, **A** being higher or equal to **B**. To test whether these indicators are similar, one could **divide B to A** and the result shows how similar these countries are, in regards to this indicator:

$$similarity\ index = \frac{B}{A}$$

If **B** was higher than **A**, then the similarity could be calculated with the fraction reversed upside down. In essence, this number shows how much of the same value the lower country has (i.e. Portugal has 96% of Greece's income, thereof their incomes are 96% similar). Summarising all similarity indexes, according to relevant WB data, gives us an overall similarity index of Greece and Portugal. Tables 3 through 5 (see Appendix) also show how much of an effect the programs had on each country and on each indicator to further support the differences of the two economies. Further on, both cases are thoroughly analyzed.

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The specifics of the cases

General information

Greece and Portugal were part of a South-led **overconsumption** model that followed the introduction of the Euro, with **trade costs** being **reduced** to minimum and **labour costs increasing** much more than in the North. Thus, their exports became **less competitive** and the **current account deficit** rose to extreme figures, at certain points 10% higher than a decade ago. On the other hand, their EU membership meant that yields and government bonds were very low, leading to a two-fold situation: although considered **credit risky**, Greece received a great deal of loan money from investors and capital markets, because the latter took for granted a **Euro-led salvage** in case of a Greek default (something that was utterly forbidden by then-EU directives).

Greece has been facing a government debt crisis for the past 6 years, caused primarily by a long tradition of **successive deficits** and **foreign loans**, amongst other things. In late 2009, it was the first European country that was expected to be hit by the global financial crisis due to its **weak economic structure** and **corruptive system**, which had already forged statistical reports multiple times (even in order to enter the Eurozone in 2001; in fact it was the last country to adopt the common currency and the only one to enter the zone after a two-year delay). Although later on, the collective of national debt crises has been referred to as a *European* debt crisis, Greece continues to be a separate problem that has been tried to solve many times, effectively leading to a **credibility crisis**. As part of the original "PIIGS" pun, Greece is the last of the crisis-stricken countries that has yet to show some defining progress.

Throughout these years, Greece has managed to "pioneer" in many different rankings, such as having the **largest sovereign debt default** in history (in 2012) and being the first developed country to **fail to pay an IMF installment** (in 2015). All those have been accompanied by many **snap elections**, intermediate Euro parliament elections (which, in Greece, are more of a political statement of

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the people than actually selecting representatives at the highest European level), and **social** and **political** changes, such as the insofar permanent election of a far-right party in the Parliament and the victory of a radically-left party. As well, 2015 was the first time the country enacted a **referendum on fiscal matters**, deciding against a then-nonexistent creditors' proposal. In today's terms, the Greek debt is about **€323 billion**.

In early 2010, Greece had reached a point when it was faced with the very real possibility of **not being able to pay back a ten-year bond**. After many discussions and workshops and Euro-working groups, the EU, along with the IMF and the ECB, decided to activate the newly established European support mechanism and grant Greece its first bailout loan. This program consisted of many austerity measures, as well structural reforms, which had been believed to have helped Greece reimburse by 2011. This of course never happened, leading to **two new programs** (in 2012 and 2015), **reduced GDP**, **shrunk wages** of up to 20%, **loss of competiveness**, **deflation**, and an all-time high **unemployment** of 25%.

Portugal underwent a similar crisis in late 2010, better known as its "Great Recession" in bibliography, when it was **unable to repay its government debt** (which was much less in nominal terms than Greece's). Then-socialist government went on and signed a **bailout program** of about €80 billion with the Troika. As part of the "PIIGS", it received much criticism about **mishandlings of the past**, but also a great deal of support from analysts like Robert Fishman (New York Times), who called this memorandum "*unnecessary*" and believed that Portugal was actually the victim of pressure from rating agencies and bond traders. It must be noted that up to Q1/2010, Portugal was one of the **best recovering EU economies** and several indicators (industry, exports, innovation etc.) were close or above many other Western EU countries.

Almost a year after Greece, in May 2011, Portugal signed a "*Memorandum of Understanding*" with its creditors, agreeing to a set of austerity measures and reforms. Its timeline was up to 2014, a curfew that was actually met, with the last

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installment of €0.4 billion being released in **November 2014**. There were many comments about the country not being able to stand up again and requesting a second bailout, something that did not happen though.

Background information

To this day, numerous analysts and experts have traced back the causes of the Greek crisis and found many culprits, to be sure, but no extensive research has been conducted to estimate their exact contribution to the problem. In 2010, literally less than 100 days before the first memorandum, the Greek Ministry of Finance issued the Stability and Growth Program, as required by the EC, listing **five main reasons** behind the government-debt crisis:

- The less than expected **GDP growth rates**: the Greek authorities had failed to estimate successfully the growth of the GDP and by 2010 there was a need to improve competitiveness by reducing salaries, but also red tape, as well as redirecting government spending to more productive sectors (leaving aside military, for instance).
- The increasing budget **deficit**: it was clear, after the 2004 Olympic Games that Greece had been walking down a path where it could not reach the finish line on its own. The **output had** increased by almost 40% (in nominal terms), **public spending** had reached a surprising 87% whilst **tax revenue** had increased only by 31%. There were also miscalculations for the inflation and the necessary cuts, leading to an overall **ineffective fiscal policy** with no sufficient tax collection system to implement it.
- The **debt** stock: with no declining deficit, debt had been increasing dramatically over the years. It was then believed that that level of debt was a **hindrance for structural reforms**, because their effects would arise much later, when the debt would have been **unsustainable**, thus choosing to implement austerity measures that limited consumption and growth. This was predicted to result in the baseline deficit, which of course never happened.

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- Budget **compliance**: Greek legislature lacks fiscal laws; instead, it offers many **loopholes** that can be used to sign off **unrealistic budgets** and extreme deficits. Election years are the worst in terms of budget compliance and the monitoring **system**, as well as the tax collection system, was (and still is) highly **corrupt** and **inflexible to change**.
- **Credibility**: Although it was not the first country to do so, Greece had proven **untrustworthy** with providing statistics since its entry in the Eurozone in 1999. Reports were usually **forged** and figures were much **worse than anticipated** and all this made it extremely difficult for the EU institutions to produce reliable tools and policies for the Greek case (mainly regarding growth, deficit and debt).

Traditionally, Greece has been producing **budget deficits** since the restoration of democracy in 1973. Deficits were generally kept low, around 3% of the GDP up to 1981 and then they began to rise. Even at times of fast growth, like the period 2000 – 2007, when Greece had an annual rate of 4.2% growth, **budget deficits were always present**.

Many speculations can be made for the reason for these constant deficits, primarily of **political and national significance** – military expenditure (second highest in NATO, after the States), public sector salaries and pensions, malfunctioning insurance funds and corrupt public organizations – but it is not this thesis' aim to analyze them. The bottom line is that **the Greek society had learnt to live with more than it made** for far too long and the bubble was expected to burst anytime, given the always rising debt-to-GDP ratio.

Others traced the root of the problem in the **current account balance**. Paul Krugman had written in 2012 that *"[we are looking at] a balance of payments problem, in which capital flooded the south after the creation of the euro, leading to overvaluation in southern Europe.*" More recently (June 2015), he went as far as to characterize this crisis not as a fiscal one, but as a "*balance of payments crisis that manifests itself in budget problems, which have been pushed onto the centre of the stage by ideology.*" This transformation (i.e. of trade deficits to

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budget ones) is feasible through **sectoral balances**: a trade deficit is funded by capital inflow (borrowing), increasing government debt (because the private sector maintains even amounts of savings and investment).

Last but not least, the corruptive and insufficient monitoring system of Greece is responsible for the loss of much revenue. Latest estimations accuse **tax evasion of almost $20 billion per year**. Greece ranked as the most corrupt country in the EU in 2012 and two years later not much had changed. Prior to the 2015 referendum, most tax evaded money flooded **foreign banks** (mainly Swiss), but also **black economy**; lately, however, after fears about a bail in were raised, **cash** has been stocked in **houses**.

As for Portugal, what triggered anxiety on the financial markets was the **exposure risk of two Portuguese banks** (BPN and BPP), which had been accumulating **losses** for many years after failed investments, embezzlement and fraud. They both had large market shares and political connections that further tightened the situation. The government then decided to **bail them out** in 2009.

Before that, there were almost **four decades** of **risky credit**, **excessive debt** and increased number of **redundant public servants** that complicated things even more. In the summer of 2010, Moody's had already rated Portugal down and forecast that it would **not be able to handle its short-term finances**, because its debt-to-GDP ratio had risen dramatically, in addition to an already heavily bureaucratic economy that did not foster economic growth and entrepreneurship.

The Portuguese **political stage** was a little bit **different** than the Greek one, meaning that it did not change so many times; after a no-confidence vote in 2011, then-PM resigned and the country actually went through a **three-year period of political cooperation**, when all five parties sponsored the adherence to the austerity measures and structural reforms.

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Suggested solutions

Greece has received the **largest bailout loans in history** (more than €200 billion euros in the last five years) accompanied with a series of austerity measures and proposed structural reforms. There were many debates and consultations before the final drafts were tabled for consideration, as well as protests and riots. Although most austerity measures were implemented, the deficit was restricted to lower levels and the debt was cut off by around 50%, the Greek economy **was deepened into recession**, because of the parallel internal devaluation. The GDP had shrunk and unemployment had reached an all-time high.

The final papers from the Troika stressed a great deal of emphasis on structural reforms that should be conducted in Greece, many of which were **long-due awaited directives** since its entry to the European Economic Community. Such reforms were the following:

- **Insurance funds reform**: Greece had had a long tradition of **non-reciprocate** funds that would allow for high pensions that had never been paid for, therefore leading to an increasing need for higher fees from employees and the self-employed.
- **Pension reform**: It was pretty easy to go on an early pension in Greece without having paid the slightest amount of the pension one was entitled to and literary from the ages of 30 and 40 under certain conditions.
- **Public administration**: Public services were outdated and hindered socioeconomic growth. A need for a more flexible, selective and efficient public sector was apparent, with employees that were not tenured that easily and paid so much more than private sector employees.
- **Labour and product markets**: To this day, the labour market in Greece is characterized by the high presence of syndicalism and disruptive rights thereof that do not allow the market forces to work.
- **Red tape reduction**: It was strongly recommended that the bureaucratic hindrances be alleviated so as to foster economic growth and investment.

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It is characteristic to say that a start-up company needs a lot of money and time just to open up, let alone work and hire employees.

- **Health sector**: Greek politicians themselves have admitted that the health sector suffers from obsolete information systems and lack of modernised functionality, extreme pharmaceutical costs and extensive prescribing.
- **Tax reform**: There were many tax reliefs and exceptions that need to be abolished in order to broaden the tax base and increase tax revenue, as well as tax evasion that not only was not fought, but supported at some points.

The IMF had calculated a **fiscal multiplier of 0.5**, which later admitted itself that was erroneous and lacked realistic basis; were it true, it would mean that the national income would be decreased by **half of the amount** that public spending would be cut. Suffice to say that only about 20% of those reforms actually made it till the end (the establishment of the Hellenic Financial Stability Fund being one of them), but **the rest are still demanded** by creditors and their delay is caused by the extreme political cost that comes with their implementation. The Greek society unfortunately is not ready to accept many changes and there are tons of lobbies that are working feverishly against them, mainly syndicates that do not wish to alleviate **restrictions in the labour markets** (something that both Memorandum I and II pose as a requirement). Therefore, it is easy to understand why the Greek indicators (Table 1) have not changed much since the signoff of all three programs.

The Portuguese program bore a lot in similar with the Greek one, with an estimated **fiscal multiplier of 0.65** (close to the EU average). Some of the reforms it included (in almost the same timeline as the Greek) were the following:

- Restructure of the **public sector**: it was perceived that the number of public servants was redundant and that administrative bodies needed to be closed or merged for a more fast-track environment.

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- Stimuli for **human capital**: Portugal was one of the countries that produced the least highly skilled employees, so innovation and research were left aside for a long time.
- Changing the **labour market**: there were many hindrances in hiring personnel and generally making it to the labour market, especially under the then legislation and contracts.
- **Competition**: Portugal was characterized by an evident absence of competitiveness in many markets, mainly network ones.
- **Unstable financial sector**: the aforementioned banks had caused a ground-moving shock to the Portuguese banking system that needed to be restored and recapitalised.
- **Health care reform**: as with Greece, health care in Portugal had not kept up with the latest trends and extreme amounts of money were spent in virtually non-existing services.
- **Judicial administration**: it was required that the entire judicial sector, along with the legal professions, suffered by limitations that needed to be laid off.
- **Housing market**: the housing market was actually a large malfunction of the Portuguese economy that required restructuring.

Comparing and contrasting

It is evident from Table 1 that both economies share a great deal in common in terms of all socioeconomic aspects. This explains why their respective reform programs were similar in content and timeline. Prof. Iain Begg used (Hellenic Foundation for European & Foreign Policy Conference, 2015) the **Kubler-Ross** model of the **five stages of grief** (denial, anger, bargaining, depression, and acceptance) as a tool to parallelize the reaction of societies to adjustment programs.

Although political initiative had a major role in the adjustment process (seeing how many elections Greece held throughout the years), one can see the exact results of those reforms by several indicators, namely concerning bank capitals

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and assets, costs of exports and imports, taxes and consumption, FDIs, GDP, government expenditure, employment and salaries, as well as others, that could signify the change that took place.

Tables 3 and 4 show all these variables calculated for each country **twice**: once between 2005 and 2009 and again between 2010 and 2014. Table 5 contains the **difference of the two values for each country** in percentage points. It is easily seen that Greece's top 15 increased indicators include among others the nonperforming bank loans, unemployment, central government debt, and cost to export, whilst Portugal is quite different, including reserves and related items, Gross National Income growth, net inflows of FDIs, and service and goods exports.

Although there are some indicators (for instance, alternative energy usage) that go hand in hand in both countries, this can be attributed to their **common policies deriving from EU regulation**. During this time framework, the "PIIGS" phenomenon did not exclude countries under crisis from implementing other kinds of policies that did not have further financial burdens. On the other hand, the effectiveness of the pacts that each country made with its creditors can be seen by indicators that **result from structural reforms**, such as the cost for start-up procedures (-60% in Portugal compared to -30% in Greece), as well as import cost (which in Greece was reduced and allowed for imports with reduced income, whilst in Portugal it was actually slightly raised, thus fostering home production).

Attention should also be paid to the fact that the **first** and the **second Greek program** are quite **different** in targeting reforms. It was admitted (Alessio Terzi, 2015) that too few measures were taken to reorient Greece towards a new growth model and this, coupled with the already rigid markets, led to **slower and weaker** (if any) **effects** than in Portugal. A great deal of administrative capacity also hindered Greece's forecast growth, whilst Portugal performed much better. The possible causes for the differences and the effectiveness of the programs are further analyzed herein.

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Conclusion

Why is there such a difference?

The initial assumption that Greece and Portugal should share an almost identical memorandum because of their previous similarities actually proved mistaken in due course. No IMF or ECB analyst took into account that fact that the Greek society was actually not willing to change at all; there still is huge market inflexibility in all levels (prices, labour, wages, consumption and so on), largely due to **social unrest** and **unwillingness to change**. One could attribute Greece's failure to recover from the recession in the following main points:

- **Political status quo**: The Greek political scene has been distinguished for successive scandals from all sides, usually ending with public money embezzlement. From 2009 onwards, there was a lot of effort to hide all those past inadequacies and put the blame on the party that was most likely to win the next elections, whenever those were held and the latter concluded that they had received "*burnt land*". This habit kept on up to late 2011, when the first **caretaker coalition government** was formed to carry out the **Private Sector Involvement**, to negotiate the **second bailout program** and to pave the way for **snap elections in late 2012**. Even then, however, a large portion of the electorate was not in compliance with everything that had been going on and a radical left party started rising in power, culminating in its victory in early 2015. Since then, Greece has been going through a total **turmoil of changes and negotiations**, embroidered with snap elections again in 2015 and a referendum during the summer that by many was perceived as "*yes or no*" to the Euro, instead of the deal in question (which by the time of voting was out of the question whatsoever). On the contrary, Portugal did not share such a status; **all five main political parties sponsored the initial approval** of the bailout program and elections were held again only after the program had been successfully implemented and the economy was out in the markets again. This coalition culture was not typical of the

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south and that's what cost the most in terms of money, but also **credibility**. This reason bears more significance, if one takes into account that both countries share the same **PM-centric regime**, where the President of State has a limited and sometimes ceremonial role only.

- **The general inflexibility**: Hand in hand with the unwilling politicians, the people of Greece (or at least a big part thereof) were also not in the mood of changing. After the military junta of 1967-1974, the country had undergone many successive and radical changes to **blend in the Western world**, the first and foremost being its EEC entry in mid-1980s. After that and years of mismanaged European funds, Greece got accustomed to **living beyond its strengths**: tax evasion was evident in all levels, subsidies were administered indiscriminately and production had fallen, whilst inflation flourished. In late 1990s and close to the Euro's adoption, a large part of the Greek manpower moved from productive sectors, like mechanics and engineers, to **money-distributive professions**, mostly stock exchange brokers. This was made at the expense of the GDP, but this was not pointed out at the time, as the country was moving closer to hosting the 2004 Olympic Games and the economy was blossoming in such a way that **nothing was noticed**. Capital flooded from abroad in low interest rates, due to the common currency and the perception that a possible default would be sustained by the ECB; ergo, **no moral hazard**. On the other hand, all these happened in a country that had a pre-existing, tight structure in all aspects: syndicates ran the place for decades, allowing for **no free adjustment of wages** (at some points requesting – and getting – increases that were incompatible with the inflation or the economic status), lobbies had their share of responsibilities for the inflexible prices and the reluctance to adopt new, low-cost ways of production and the public sector consumed **more than half of the GDP annually**, with always growing organizations and institutes, defunct services and inexplicably high increasing salaries of public servants. This hindered entrepreneurship and did not allow for many FDIs that would enhance employment and human capital expansion.

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- **The faulty program**: The program designed for Greece was already faulty and not all of its flaws are attributed to the Greek side. Forged statistics and political cost were always the case; however the other side had not understood the extent of the Greek problem in full. The fiscal multiplier was erroneously calculated, as the IMF itself stated much later, and the timeline was rather tight for the Greek idiosyncrasy. The **internal devaluation** that was attempted did not take place as planned and that deepened the recession even further, leading to haircuts and social riots that prevented the slightest adjustment. Creditors were ready to accept any "easy equivalent" the Greek side proposed and did not push hard enough towards reforms that solve the problems in the long run. The indicators took a lot of time to show some improvement, one of them being employment in late 2014, when it was **the first time that it was not decreased** (nevertheless, this improvement was short-lived, due to snap elections caused by the inability of the Parliament to elect a President of State). As well, many accused the Troika of using Greece as an example to be avoided, imposing harsh measures **that would prevent other countries** (like Spain or Italy) from following the same path, with no consideration of the economy to save at hand.

Is this a universal phenomenon?

Looking back in history, **European countries are not the only ones** to have suffered recessions and debt crises. Almost three decades ago, Canada went into recession because of its increased government debt. Canada can be considered a completely different case than both Greece and Portugal because:

- It is a **federation**, comprised of ten provinces and ten territories.
- It is part of the Commonwealth of Nations, meaning that it has **a geographically absent Head of State**.
- It has the privilege to **print money** (Canadian dollars), a currency that is not tied to any else.

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- It has a **completely different social structure** than what Europe is accustomed to; diversification and multiculturalism are central traits of Canadianism.

Canada is also different than the United States with regards to the following:

- It has some **regional ministries**, like education, which is handled and funded locally.
- It only has **three programs for financial aid** to its provinces, instead of thousands US similar ones.
- Local taxation is **not deductible** from the national one.

Canada had had a long standing tradition of **liberal acting** since 1896; low taxation and civil rights were distinctive in its policies. It also shares the **largest unprotected border** in the world with the United States, making them each other's biggest trader. Up to the 1960s, Canada had witnessed an **economic boom for 16 successive years** – it was then that a shift in politics and a more socialist approach changed the status (Chris Edwards, 2013).

The economic policy followed by then-government led to **high inflation** in the 1970s and 1980s, among others. It was in the 1980s when Canada, after re-establishing its relations with the Crown, decided to **change its monetary policy** as well, making price stability a key objective for its Central Bank. That decision led to a **moderate inflation** in the coming years and the tax cuts and privatisations (which came next) reduced debt and fostered economic growth. The tip of the iceberg was the sign off of a **Free Trade Area** with the United States.

However, even after these moves, federal spending was still rather high and caused **financial instability**. Serious cuts in the mid-90s followed up and reduced government spending to 15.6% from 22% of GDP, as of 2012 (see Chart 9). Also, government debt plunged from 68% to 34%, while the United States at the time remained worryingly worse. The **insurance** and **pension systems** were

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also **reformed** to be more sustainable and corporate taxes were ultimately cut from 29% to 15% with a simultaneous **increase in tax revenue**.

All this experience came **in contrast** with the Keynesian notion that cutting expenses would cause a recession. Those reforms helped Canada witness another **15-year boom** up to 2009, when it was dragged into a recession from the United States (and even then, its reforms **had structured** it well enough to minimize the effects). Amidst regular political changes through all these years, the Canadian governments managed to secure a reforming path that nowadays makes the country a business paradise by many.

What is to be learnt?

Suffice to say that the success of a reform program ultimately depends on whether the proposed structural reforms **were implemented or not** (Alessio Terzi, 2015). Chart 3 gives a pretty clear image of what **happened**: Greece and Portugal both implemented a great deal of reforms (more than 75%, accumulating in 166 for Greece over 5 years and 189 for Portugal in 3 years). The difference rests, however, on what did **not** happen: Greece left 10% of the reforms undone, whilst Portugal implemented some **15% with delay** and **less than 3%** was not implemented at all. From an econometric view and taking into account where each country stands today, this could be summed up in one phrase: ***the positive effect of an implemented reform is less than the negative effect of a reform that was not implemented***.

Furthermore, we can safely say that the pace of implementation matters as well. Chart 4 shows rather obviously that Portugal was far **more adoptive** of reforms than Greece, with the exception of the fourth review; this comes in hand with the evident reluctance of the Greek system to change and reform. It has been estimated (Alessio Terzi, 2015) that Greece was in fact implementing more reforms in total than Portugal by the time of its last review, over **a one-year period**, whilst the Portuguese government had managed to do the same repeatedly **every two to three months**.

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Moreover, the **kind** of the reforms proposed also bears significance. The first Greek program gave priority to **restructuring the governmental operations** and the civil service, which are all positive measures, but very demanding for a country such as Greece, whose bureaucratic effectiveness has gone down the drain for more than half a century, as Chart 8 shows. Putting pressure on Greece for such reforms was not efficient, as it turned out, because **it suffered deterioration in its administrative capacity** (Alessio Terzi, 2015). Charts 5 to 7 show that the composition of each program was different and, in the case of Greece, it changed to **better reflect the capabilities of the economy and its institutions**.

All this information results in one conclusion: **no bad can come from structural reforms**. Unless there has been a miscalculation or wrongful targeting throughout the implementation thereof, structural reforms prove to be a useful tool for economies that went through recessions and fiscal crises in a twofold way: they help them **recover** and **build up defenses** for future crises, but also lead to **more loose fiscal policy**, after the markets have become more flexible. This is evident by the course of the Portuguese economy after 2014, which has been expanding continuously, with a GDP growth of 0.4% quarterly and 1.5% yearly in Q2/2015, a continuous fall in unemployment rate (11.9% in Q2/2015, compared with 13.9% in the end of 2014) and a government budget deficit reduced from 11.2% of GDP in 2010 to 4.8% in 2014 (Focus Economy, 2015). The time frame may depend on the form of the economy, but all in all political initiative is a necessary prerequisite.

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Appendix

Tables

Table 1: General indicators of Greece and Portugal

Data obtained from *Country Economy* (http://countryeconomy.com/countries/compare/greece/Portugal).

Indicator	Year	Greece	Portugal	Similarity
Government				
GDP (millions $)	2014	237.970,00	229.948,00	96,63%
GDP per capita ($)	2014	21.648,00	22.123,00	97,85%
Debt (millions $)	2014	421.290,00	299.931,00	71,19%
Debt (% GDP)	2014	178,60%	130,20%	72,90%
Debt Per Capita ($)	2014	38.664,00	28.804,00	74,50%
Deficit (millions $)	2014	-9.315,00	-10.255,00	110,09%
Deficit (% GDP)	2014	-3,60%	-7,20%	200,00%
Expenditure (millions $)	2014	117.792,80	119.135,80	98,87%
Education Expenditure (millions $)	2005	10.359,10	12.567,80	82,43%
Education Expenditure (% Budget)	2005	9,17%	10,25%	89,46%
Health Expenditure (millions $)	2013	16.979,10	14.565,60	85,79%
Health Expenditure (% Budget)	2013	11,66%	12,90%	90,39%
Defence Expenditure (millions $)	2014	5.283,00	4.216,20	79,81%
Defence Expenditure (% Budget)	2014	4,49%	3,54%	78,84%
Expenditure (% GDP)	2014	49,90%	51,70%	96,52%
Expenditure Per Capita ($)	2014	10.715,00	11.462,00	93,48%
Education Expenditure Per Capita ($)	2005	941,00	1.192,00	78,94%
Health Expenditure Per Capita ($)	2013	1.554,00	1.397,00	89,90%
Defence Expenditure Per Capita ($)	2014	481,00	406,00	84,41%
Corruption Index	2014	43	63	68,25%
Competitiveness Ranking	2016	81	38	46,91%
Fragile States Index	2014	52,1	33,1	63,53%
RTI Ranking	2013	83	68	81,93%
Labour				
Unemployed (millions)	2015	1.180,00	619,00	52,46%
Human Capital Ranking	2015	40	38	95,00%
NMW ($)	2015	830,00	715,00	86,14%
Unemployment (%)	2015	24,60%	12,40%	50,41%
Unemployment rate (%)	2015	24,60%	12,10%	49,19%

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Average Wage	2014	26.793,00	23.163,00	86,45%
Markets				
10-Year Bond Yield (%)	2015	8,07%	2,53%	31,35%
Risk Premium	2015	746	192	25,74%
Stock Exchange YTD (%)	2015	-27,23%	8,64%	-315,16%
Prices				
CPI (overall index %)	2015	-0,70%	0,60%	-116,67%
HICP (%)	2015	-0,10%	0,60%	-16,67%
PPI Year on Year (%)	2015	-8,00%	-3,80%	210,53%
Money Market				
Key rates (%)	2014	0,05%	0,05%	100,00%
Business				
Passengers vehicles Year	2015	74.499,00	175.542,00	42,44%
Vehicles/ 1,000 p. Annual	2015	7,34	20,22	36,30%
Doing Business Ranking	2016	60	23	38,33%
IPI Year on Year (%)	2014	3,40%	0,30%	8,82%
Taxes				
Standard VAT (%)	2011	23,00%	23,00%	100,00%
Trade				
Exports (million $)	2014	35.966,60	63.991,30	56,21%
Exports (% GDP)	2014	15,33%	27,77%	55,20%
Imports (millions $)	2014	63.399,10	77.994,50	81,29%
Imports (% GDP)	2014	27,04%	33,93%	79,69%
Trade balance (millions $)	2014	-27.432,50	-14.003,20	195,90%
Trade balance (% GDP)	2014	-11,71%	-6,16%	190,10%
Retail Sales YoY (%)	2015	-3,20%	3,60%	-88,89%
Socio-Demography				
Population	2014	10.993.000	10.394.000	94,55%
Surface Area (square kilometres)	2014	131,96	92,21	69,88%
Density	2014	83	113	73,45%
Global Peace Ranking	2015	61	11	18,03%
Gender Gap Ranking	2015	87	39	44,83%
Ranking	2015	79	38	48,10%
Birth Rate (‰)	2014	8,50	7,90	92,94%
Fertility Rate	2013	1,30	1,21	93,08%
Crude death rate (‰)	2014	10,50	10,10	96,19%
Life expectancy	2013	81,40	80,90	99,39%
Crude marriage rate (‰)	2013	4,70	3,10	65,96%
Crude divorce rate (‰)	2012	1,30	2,20	59,09%
Number of homicides	2013	153	144	94,12%
Rate Homicides per 100.000	2013	1,37	1,34	97,81%

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Table 2: Average similarities by year

Calculated as sums and averages of data from Table 1.

Total Similarity per year						
2005	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
83,61%	100,00%	48,57%	88,71%	91,98%	14,89%	42,62%
2005 - 2014					82,57%	
2005 - 2011, 2013 - 2014					91,08%	

Table 3: Greek economic indicators

Data obtained from the WB. Distance calculated by Excel formula.

Indicator Name	**Greece**		
Year	*2005-2009*	*2010-2014*	*Distance*
Bank nonperforming loans to total gross loans (%)	5,59	22,50	302,81%
Unemployment, total (% of total labor force)	8,84	21,58	144,12%
Alternative and nuclear energy (% of total energy use)	2,35	4,23	80,06%
Communications, computer, etc. (% of service exports, BoP)	9,00	12,04	33,78%
Computer, communications and other (% of commercial service exports)	8,78	11,52	31,23%
Other expense (% of expense)	8,03	10,45	30,19%
Exports of goods and services (% of GDP)	21,47	27,92	30,04%
Part time employment, total (% of total employment)	7,58	9,80	29,29%
Cash surplus/deficit (% of GDP)	-8,44	-9,93	17,64%
Trade (% of GDP)	53,67	60,88	13,44%
Revenue, excluding grants (% of GDP)	36,93	41,08	11,25%
Central government debt, total (% of GDP)	123,01	134,08	9,00%
Tax revenue (% of GDP)	19,61	21,30	8,64%
Cost to export (US$ per container)	985,00	1.055,20	7,13%
Vulnerable employment, total (% of total employment)	27,42	29,16	6,35%
Subsidies and other transfers (% of expense)	45,90	48,21	5,03%
Final consumption expenditure, etc. (% of GDP)	87,08	91,31	4,85%
Services, etc., value added (% of GDP)	76,84	80,52	4,78%
Computer, communications and other (% of commercial service imports)	21,53	22,29	3,54%
Taxes on goods and services (% of revenue)	29,28	30,26	3,33%
Travel services (% of commercial service exports)	37,72	38,94	3,25%
Bank capital to assets ratio (%)	6,79	7,01	3,22%

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Urban population (% of total)	75,20	76,99	2,39%
Imports of goods and services (% of GDP)	32,20	32,96	2,36%
Self-employed, total (% of total employed)	35,52	36,28	2,14%
General government final consumption expenditure (% of GDP)	20,95	21,22	1,29%
Wage and salaried workers, total (% of total employed)	64,48	63,72	-1,18%
Communications, computer, etc. (% of service imports, BoP)	23,50	23,22	-1,19%
Fossil fuel energy consumption (% of total)	92,89	89,78	-3,35%
Social contributions (% of revenue)	33,64	32,39	-3,74%
Transport services (% of commercial service imports)	53,44	50,85	-4,85%
Service exports (BoP, bn current US$)	40,4	38.4	-5,03%
Secondary income, other sectors, payments (BoP, bn current US$)	1,59	1,51	-5,16%
Cost to import (US$ per container)	1.253,00	1.187,00	-5,27%
Total tax rate (% of commercial profits)	49,16	46,28	-5,86%
Taxes on income, profits and capital gains (% of total taxes)	37,65	34,85	-7,45%
Transport services (% of commercial service exports)	52,26	47,70	-8,73%
Travel services (% of commercial service imports)	17,88	16,05	-10,20%
Service imports (BoP, bn current US$)	19,57	17,23	-11,95%
New businesses registered (number)	6.781,60	5.761,00	-15,05%
Cost of business start-up procedures (% of GNI per capita)	21,50	15,12	-29,67%
Foreign direct investment, net inflows (% of GDP)	1,07	0,64	-40,32%
Inflation, consumer prices (annual %)	3,00	1,46	-51,26%
Secondary income receipts (BoP, bn current US$)	8,04	3,67	-54,33%
Customs and other import duties (% of tax revenue)	0,01	0,00	-56,18%
Taxes on international trade (% of revenue)	0,00	0,00	-57,41%
Stocks traded, total value (% of GDP)	28,40	10,89	-61,65%
Current account balance (% of GDP)	-11,51	-4,21	-63,45%
Foreign direct investment, net outflows (% of GDP)	1,09	0,31	-71,67%
GDP growth (annual %)	0,98	-4,89	-600,19%
GDP per capita growth (annual %)	0,74	-4,49	-710,06%
GNI growth (annual %)	0,59	-5,72	-1073,46%
Reserves and related items (BoP, mn current US$)	376	-8,9	-2480,25%

Table 4: Portuguese economic indicators

Indicator Name	**Portugal**		
Year	*2005-2009*	*2010-2014*	*Distance*
Reserves and related items (BoP, bn current US$)	-0,769	-8.2	970,82%
GNI growth (annual %)	-0,05	-0,36	652,62%
Bank nonperforming loans to total gross loans (%)	2,81	9,01	220,35%
Other expense (% of expense)	4,31	9,44	118,99%
Alternative and nuclear energy (% of total energy use)	4,99	9,51	90,54%

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Foreign direct investment, net inflows (% of GDP)	3,27	5,69	73,95%
Unemployment, total (% of total labor force)	8,08	13,96	72,77%
Central government debt, total (% of GDP)	72,89	101,76	39,60%
Cash surplus/deficit (% of GDP)	-4,75	-6,45	35,97%
Customs and other import duties (% of tax revenue)	0,00	0,00	33,71%
Service exports (BoP, bn current US$)	21,06	26,92	27,80%
Taxes on international trade (% of revenue)	0,00	0,00	26,04%
Exports of goods and services (% of GDP)	29,17	36,29	24,39%
Secondary income receipts (BoP, bn current US$)	6,15	7,27	18,29%
Service imports (BoP, bn current US$)	12,67	14,8	16,85%
Foreign direct investment, net outflows (% of GDP)	2,52	2,89	14,52%
Part time employment, total (% of total employment)	9,58	10,78	12,53%
Cost to export (US$ per container)	667,00	750,00	12,44%
Trade (% of GDP)	66,67	74,77	12,15%
Subsidies and other transfers (% of expense)	49,05	54,74	11,59%
Transport services (% of commercial service exports)	25,76	28,35	10,04%
Secondary income, other sectors, payments (BoP, bn current US$)	2,62	2,88	9,76%
Bank capital to assets ratio (%)	6,32	6,67	5,42%
Urban population (% of total)	58,75	61,75	5,11%
Revenue, excluding grants (% of GDP)	34,57	36,24	4,83%
Wage and salaried workers, total (% of total employed)	75,28	78,34	4,06%
Services, etc., value added (% of GDP)	73,73	75,86	2,89%
Imports of goods and services (% of GDP)	37,50	38,48	2,62%
Taxes on income, profits and capital gains (% of total taxes)	38,51	39,48	2,54%
Computer, communications and other (% of commercial service imports)	32,62	33,44	2,54%
Communications, computer, etc. (% of service exports, BoP)	28,55	29,01	1,58%
Cost to import (US$ per container)	896,00	909,40	1,50%
Tax revenue (% of GDP)	20,21	20,20	-0,02%
Final consumption expenditure, etc. (% of GDP)	85,46	85,16	-0,35%
New businesses registered (number)	28.927,80	28.808,50	-0,41%
Communications, computer, etc. (% of service imports, BoP)	36,51	36,07	-1,22%
Total tax rate (% of commercial profits)	43,06	42,42	-1,49%
Travel services (% of commercial service imports)	29,41	28,68	-2,49%
Computer, communications and other (% of commercial service exports)	25,54	24,88	-2,61%
Travel services (% of commercial service exports)	46,76	45,13	-3,49%
Social contributions (% of revenue)	32,08	30,66	-4,43%
Transport services (% of commercial service imports)	33,73	32,09	-4,86%
General government final consumption expenditure (% of GDP)	20,53	19,34	-5,78%
Fossil fuel energy consumption (% of total)	80,18	75,03	-6,42%
Taxes on goods and services (% of revenue)	33,31	30,96	-7,06%
Self-employed, total (% of total employed)	24,72	21,66	-12,38%

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Vulnerable employment, total (% of total employment)	19,18	16,52	-13,87%
Inflation, consumer prices (annual %)	1,92	1,57	-18,46%
Stocks traded, total value (% of GDP)	31,02	17,51	-43,55%
Cost of business start-up procedures (% of GNI per capita)	8,18	3,16	-61,37%
Current account balance (% of GDP)	-10,60	-3,27	-69,17%
GDP growth (annual %)	0,41	-0,84	-305,64%
GDP per capita growth (annual %)	0,25	-0,51	-309,53%

Table 5: Comparison of economic indicators pre- and after-program

Indicator Name	Greece	Portugal
Alternative and nuclear energy (% of total energy use)	80,06%	90,54%
Bank capital to assets ratio (%)	3,22%	5,42%
Bank nonperforming loans to total gross loans (%)	302,81%	220,35%
Cash surplus/deficit (% of GDP)	17,64%	35,97%
Central government debt, total (% of GDP)	9,00%	39,60%
Communications, computer, etc. (% of service exports, BoP)	33,78%	1,58%
Communications, computer, etc. (% of service imports, BoP)	-1,19%	-1,22%
Computer, communications and other (% of commercial service exports)	31,23%	-2,61%
Computer, communications and other (% of commercial service imports)	3,54%	2,54%
Cost of business start-up procedures (% of GNI per capita)	-29,67%	-61,37%
Cost to export (US$ per container)	7,13%	12,44%
Cost to import (US$ per container)	-5,27%	1,50%
Current account balance (% of GDP)	-63,45%	-69,17%
Customs and other import duties (% of tax revenue)	-56,18%	33,71%
Exports of goods and services (% of GDP)	30,04%	24,39%
Final consumption expenditure, etc. (% of GDP)	4,85%	-0,35%
Foreign direct investment, net inflows (% of GDP)	-40,32%	73,95%
Foreign direct investment, net outflows (% of GDP)	-71,67%	14,52%
Fossil fuel energy consumption (% of total)	-3,35%	-6,42%
GDP growth (annual %)	-600,19%	-305,64%
GDP per capita growth (annual %)	-710,06%	-309,53%
General government final consumption expenditure (% of GDP)	1,29%	-5,78%
GNI growth (annual %)	-1073,46%	652,62%
Imports of goods and services (% of GDP)	2,36%	2,62%
Inflation, consumer prices (annual %)	-51,26%	-18,46%
New businesses registered (number)	-15,05%	-0,41%
Other expense (% of expense)	30,19%	118,99%
Part time employment, total (% of total employment)	29,29%	12,53%
Reserves and related items (BoP, current US$)	-2480,25%	970,82%
Revenue, excluding grants (% of GDP)	11,25%	4,83%

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Secondary income receipts (BoP, current US$)	-54,33%	18,29%
Secondary income, other sectors, payments (BoP, current US$)	-5,16%	9,76%
Self-employed, total (% of total employed)	2,14%	-12,38%
Service exports (BoP, current US$)	-5,03%	27,80%
Service imports (BoP, current US$)	-11,95%	16,85%
Services, etc., value added (% of GDP)	4,78%	2,89%
Social contributions (% of revenue)	-3,74%	-4,43%
Stocks traded, total value (% of GDP)	-61,65%	-43,55%
Subsidies and other transfers (% of expense)	5,03%	11,59%
Tax revenue (% of GDP)	8,64%	-0,02%
Taxes on goods and services (% of revenue)	3,33%	-7,06%
Taxes on income, profits and capital gains (% of total taxes)	-7,45%	2,54%
Taxes on international trade (% of revenue)	-57,41%	26,04%
Total tax rate (% of commercial profits)	-5,86%	-1,49%
Trade (% of GDP)	13,44%	12,15%
Transport services (% of commercial service exports)	-8,73%	10,04%
Transport services (% of commercial service imports)	-4,85%	-4,86%
Travel services (% of commercial service exports)	3,25%	-3,49%
Travel services (% of commercial service imports)	-10,20%	-2,49%
Unemployment, total (% of total labor force)	144,12%	72,77%
Urban population (% of total)	2,39%	5,11%
Vulnerable employment, total (% of total employment)	6,35%	-13,87%
Wage and salaried workers, total (% of total employed)	-1,18%	4,06%

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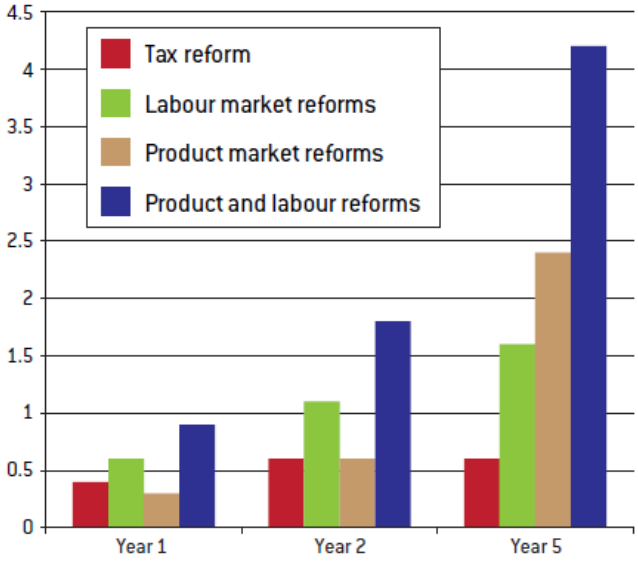
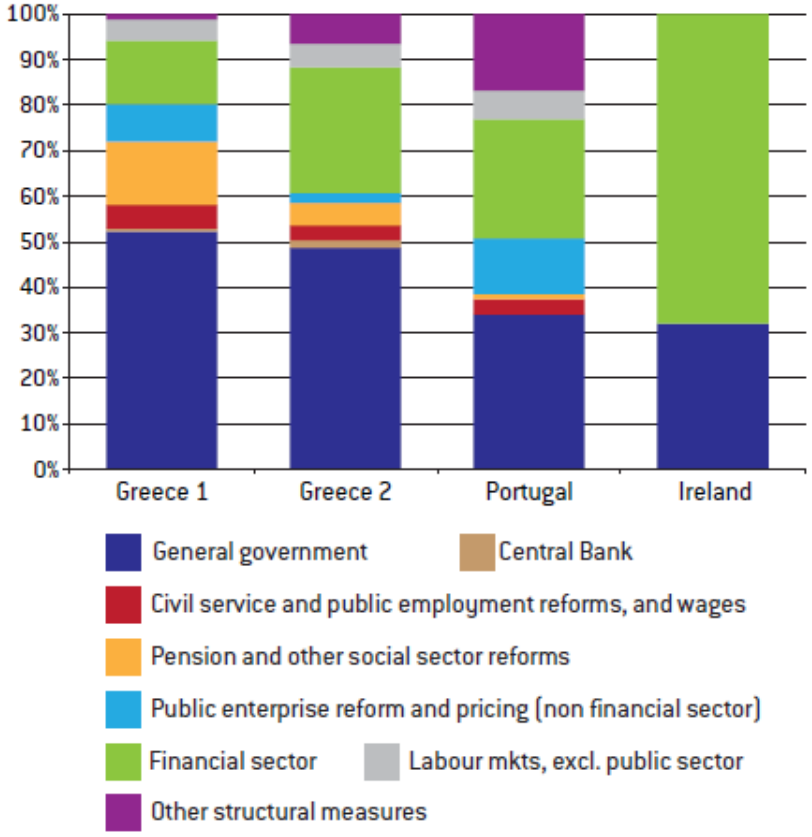
Charts

Chart 1: GDP effect of selected structural reforms in the euro-area periphery, percentage point deviation from baseline



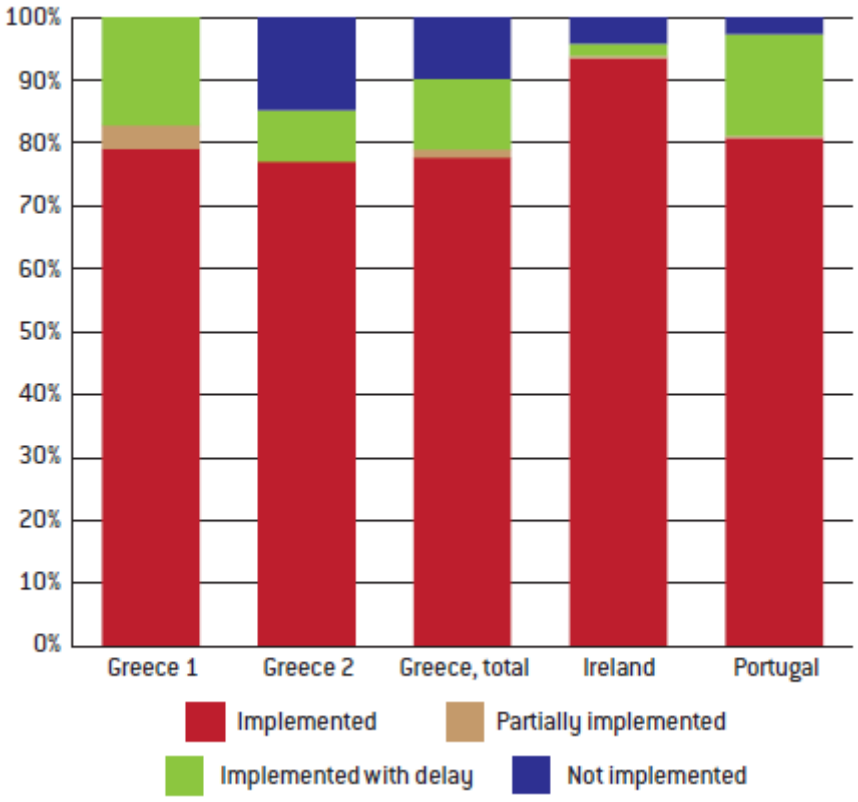
Anderson et al., 2013

Chart 2: Conditionality by reform headings, euro-area country programs



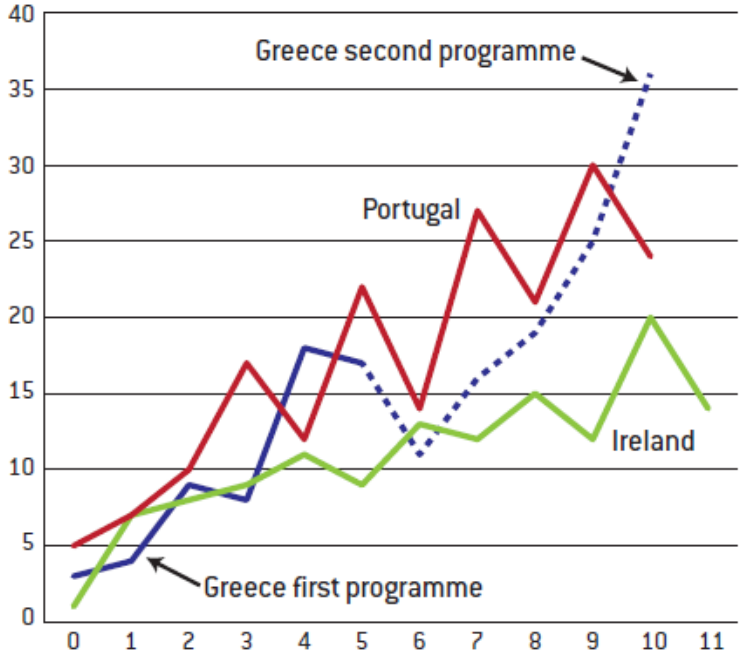
Bruegel based on IMF MONA database

Chart 3: Breakdown of conditionality by implementation record



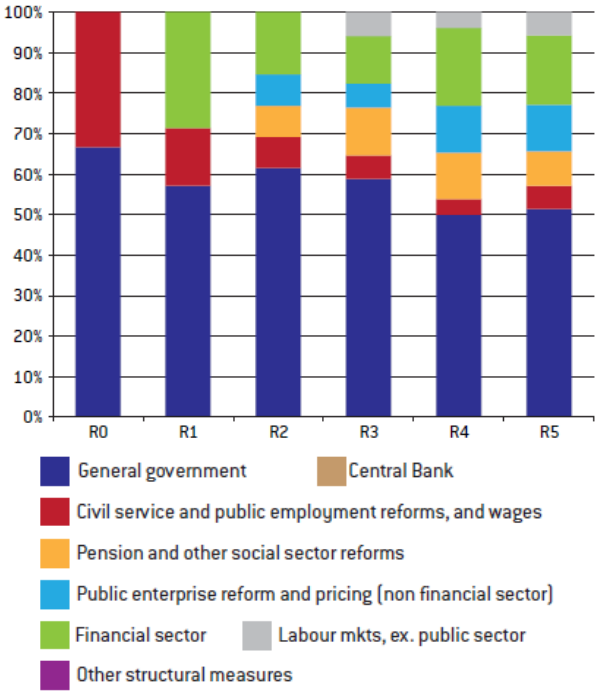
Bruegel based on IMF MONA database.

Chart 4: Number of reforms implemented by each review



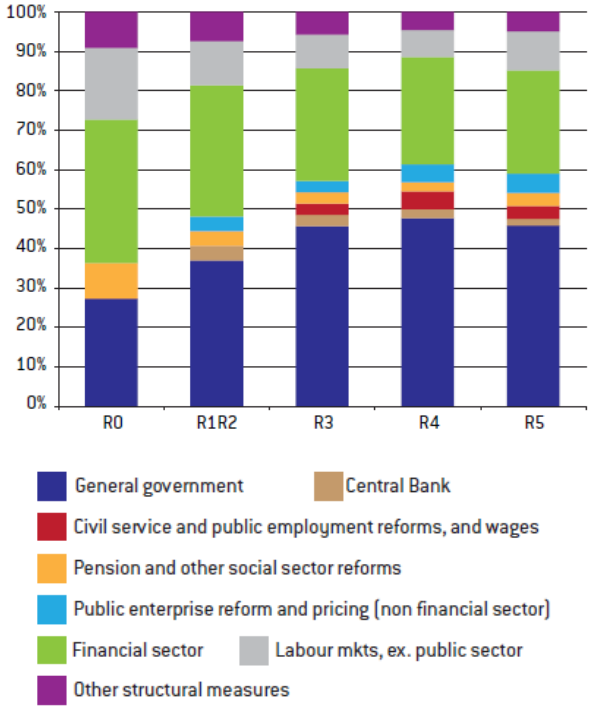
Bruegel based on IMF MONA database.

Chart 5: Composition of implemented reforms in the first Greek program, breakdown by review



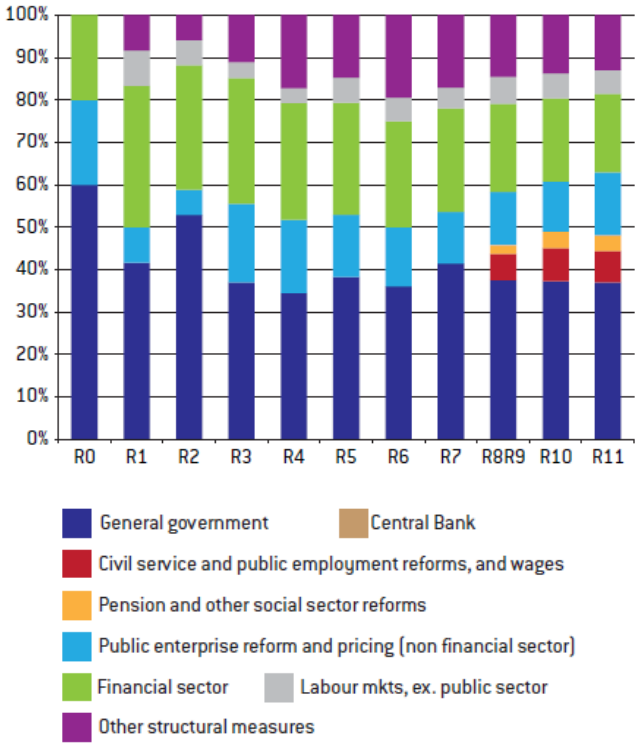
Bruegel based on IMF MONA database.

Chart 6: Composition of implemented reforms in the 2nd Greek program, breakdown by review



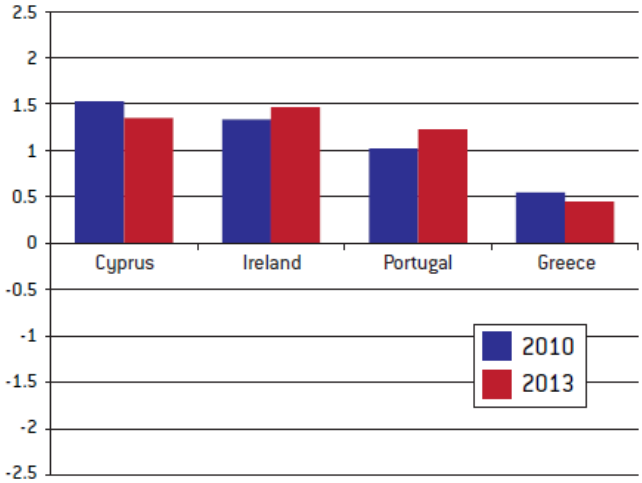
Bruegel based on IMF MONA database.

Chart 7: Composition of implemented reforms in the Portuguese program, breakdown by review



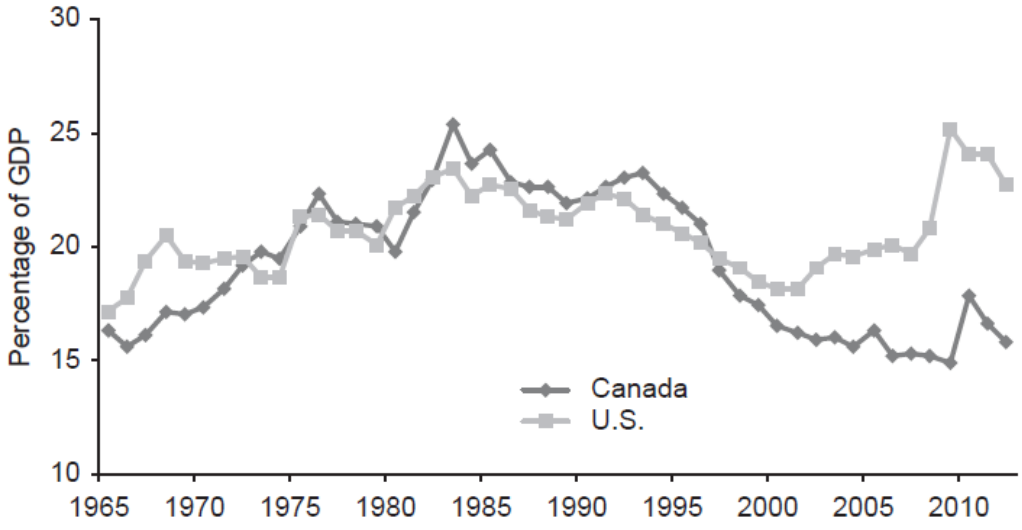
Bruegel based on IMF MONA database.

Chart 8: Government effectiveness indicator



WB Governance Indicators.

Chart 9: Canada and U.S. government spending as part of the GDP



Canada Department of Finance (2012)

Reference List

- Anos-Casero, P.; Cerdeiro, D.; Trezzi, R. (2010), "Estimating the fiscal multiplier in Argentina", *The World Bank Latin America and the Caribbean Economic Policy Sector*, Policy Research Working Paper 5220.
- Dabla-Norris, E.; Ho, G., Kochhar, K.; Kyobe, A.; Tchaidze, R. (2013), "Anchoring Growth: The Importance of Productivity - Enhancing Reforms in Emerging Market and Developing Economies", *IMF Staff Discussion Note*, SDN/13/08.
- Edwards, C. (2013), "Canada's Fiscal Reforms", *Cato Journal*, Vol. 33, No 2.
- Euro Summit (2015), "Euro Summit Statement Brussels, 12 July 2015", *European Union*.
- European Commission (2010), "The Economic Adjustment of Greece", *Occasional Papers*, No 61.
- European Commission (2011), "The Economic Adjustment of Portugal", *Occasional Papers*, No 79.
- European Commission (2012), "The Second Economic Adjustment of Greece", *Occasional Papers*, No 94.
- European Commission (2016), "EU economic governance", *Stability and Growth Pact*.
- Hughes, David W. (2003), "Policy Uses of Economic Multiplier and Impact Analysis", *Choices*, Vol. 18, No 2.
- Husson, M. (2015), "Notes for the Truth Committee on Public Debt", *Hellenic Parliament*, April 4th.
- Sanjaya, L. (1995), "Structural adjustment and African industry", *World Development*, Vol. 23, No 12.
- Terzi, A. (2015), "Reform Momentum and Its Impact on Greek Growth", *Bruegel Policy Contribution*, Issue 2015/12.
- W.C. (2014), "What structural reform is and why it is important", *The Economist*, December 9th.
- Williamson, J. (2002), "What Washington Means by Policy Reform", *Peterson Institute for International Economics*, Latin American Adjustment: How Much Has Happened?, Chapter 2.

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