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Effectiveness of Economic Adjustment Programmes for Debt Crises Implemented in the Southern European Union Countries

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Abstract

This article addresses the effectiveness of the economic adjustment programmes for debt crises implemented in the southern European Union countries, a rather contemporary, as well as disputable, issue. All South-European countries that faced a debt crisis had already adopted the European single currency – Euro. Our literature review depicts contemporary research work on debt crises, their economic and social implications either generally or, more relative to our work, South-European-country specific. Our research work is based on a wide range of statistical indices, in an effort to appreciate the effectiveness of the economic adjustment programmes, holistically. The countries addressed were Greece, Portugal, Spain and Cyprus. The applied statistical indices were grouped in six pillars that are considered to be essential to social prosperity. These pillars are financial prosperity, employment, healthcare, education, governance and entrepreneurship. All data were eventually incorporated in a single index, namely 'Social Prosperity Index', in an attempt to attain a holistic view on the effectiveness of these programmes. This approach contradicts the mainstream approach of pure financially oriented assessments. Portugal scores first in this appraisal – not only fully recovering but even improving social prosperity standards for its citizens – followed closely by Spain and Cyprus. Greece recorded the worst classification, albeit the index is recovering to pro-crisis levels. Our empirical results suggest that these programmes had a significant impact on the countries that were implemented. In solely financial terms, the programmes proved to be quite effective for all countries. However, their effectiveness is rather questionable if we take into consideration all pillars of social prosperity. The most problematic pillar is employment, which challenges governments and especially their citizens. European and sovereign policies must urgently address employment problems, whereas economists are already talking about a 'lost generation'.

Keywords: sovereign debt crisis, Euro, social prosperity, economic adjustment programmes, South Europe

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1. Introduction

Many developed countries are confronted with increasing levels of public debt. Public debt affects negatively economy's growth rates and potential. Many researchers stress the consequences to private capital and investments, as well as to the future generations' well-being [1, 2]. The financial crisis outbreak in the United States during year 2007 and its domino effect on other developed economies, triggered many debt crises in weak and imbalanced economies. European Union and especially Eurozone countries were seriously affected. Many countries lost access to capital markets and could not fund their budget deficits or even refinance their debt. While many European countries are challenged with incremented levels of public debt, for the purpose of this study, we consider only those that adopted Economic Adjustment Programmes and simultaneously are located in the southern Europe. Four countries, namely Greece, Portugal, Spain and Cyprus adopted Economic Adjustment Programmes administered by European and international institutions, in an effort to rebalance their economies and restore access to capital markets.

The effectiveness of these programmes is quite a disputable issue. Normally, effectiveness is assessed on the grounds of the general objectives set. Strategic objectives are specialised into concrete forecasts. Appraisals cannot be solely based on a comparison between forecasts and outcomes, as the latter were affected by unforeseen developments in the Euro-area environment [3]. If we focus strictly on financial terms, these programmes proved extremely effective and successful. Most countries –with the exception of Greece- regained access to capital markets and their macroeconomic fundamentals seem to be more balanced. However, the people living in the countries where these programmes were implemented, are still challenged by serious social problems.

Social prosperity is multivariate and this dimension is adopted in this work in order to appraise the effectiveness of these programmes.

2. Related Literature

The US crisis spill over effect influenced the globe dramatically. Investors revisited the fundamentals. Suddenly, debt levels, budget deficits and trade imbalances attracted incremented interest. Markets were nervously revaluating bank and sovereign creditworthiness. 'Debt overhang' a term adopted by Krugman [4], describing the lack of confidence in a country's ability to repay its external debt, gained popularity. Debt crises are not solely driven by external factors, but also from internal; in that case domestic lenders question their country's repaying capability causing fall in private investment, consequent financial crisis and lastly, debt crisis [5]. Real growth rates are negatively associated with incremented debt levels. Many researchers tried to estimate the threshold of debt to GDP above which, growth rates are negatively affected. This threshold is suggested to reach 90—100% of debt to GDP for Eurozone countries [6]. European Central Bank – ECB [7] notes that debt accumulation in a context of economy recession, stresses the necessity of debt sustainability evaluation for Eurozone countries. This article focuses on the south EU countries. The common characteristic of these countries is the adoption of the single currency – Euro. So, is it the Euro to blame? Many suggest that the functional framework of the Euro is incomplete [8, 9]. The absence of a banking union supported by lack of appropriate regulatory framework made the Eurozone vulnerable. The existence of a single central bank (ECB) assisted towards financial integration; on the other hand the effectiveness of a single monetary policy when only some of the Eurozone countries face difficulties, is rather questionable [10]. The lack of monetary policy as a tool to smooth imbalances proved crucial. Investors seem to adopt a different approach for single countries compared to Eurozone equivalents and for many researchers this phenomenon is a puzzle [11]. The reasoning behind this different behaviour is strongly related with the ability of an individual country to guarantee money issuance and full repayment of interest and principal for bondholders.

The bureaucratic structure of the EU and the conflicting interests of member states posed serious delays in the decision-making, undermining an effective crisis management. European Union was unprepared to face the crisis contagion. The regulatory framework required new structures and serious amendments to existing equivalents [12]. Overwhelming research work suggests that the financial crisis in the south EU-member countries is routed in competitiveness differences, trade and capital imbalances, as well as ballooning budget deficits and debt levels [13, 14]. Growing deficits of the current account were a common characteristic for all peripheral Eurozone countries [15, 16].

Recent research addresses the effectiveness of the economic adjustment programmes applied in the European Union countries. The assessment regularly suggests positive, as well as adverse aspects [3]. There is also research that concludes negatively on the assessment of the programmes [17] suggesting as influential factors the structural defects of the Euro, as well as the institutional framework of the countries.

3. Assessment of the Economic Adjustment Programmes

European Union (EU) was challenged in 2010, for the first time in its history, to propose and implement an economic adjustment programme to combat a debt crisis in a member state, Greece. EU was rather unprepared and did not have the necessary expertise to administer such a task, therefore International Monetary Fund (IMF) was asked to participate in the endeavour. The implementation of the economic adjustment programme within a currency union posed many particularities that even IMF was facing for the first time. The first characteristic was the irrevocable parities of the domestic currencies to the Euro. IMF usually run programmes that suggest national currency depreciation [18], whereas this could not be the case for the Eurozone. The second special feature was the free and full capital mobility within the EU. Lastly, the implementation of the monetary policy is undertaken by European Central Bank (ECB), which is obliged to adopt a 'fit-to-all' policy for all single currency member states.

The general objectives of the programmes as stated in the relevant EU texts, are summarised in the restoration of a climate of confidence, the maintenance of economic stability, the improvement of the public finances, the improvement of competitiveness and lastly, the recording of economic growth. Especially for Cyprus the programme focused on the restructuring of the banking sector, whereas in the case of Spain the programme had as a sole target to support the domestic banking system.

The accomplishment of the aforementioned objectives is generally assessed on the grounds of macroeconomic indices, such as GDP changes and Balance of Payments deficits or surpluses. Nevertheless, the assessment should not only focus on financial indices. Alternatively a holistic approach should be applied, especially when these programmes attract incremented criticism on their adverse social implications. The purpose of this article is to appraise the social prosperity levels on both ex ante and ex post basis, in an effort to assess the effectiveness of the economic adjustment programmes implemented in the region of the South Europe.

3.1. Methodology

This research work is based on a wide range of statistical indices, in an effort to appreciate the effectiveness of the economic adjustment programmes, holistically. The countries addressed were Greece, Portugal, Spain and Cyprus. The applied statistical indices were grouped in six pillars that are considered to be essential to social prosperity. These pillars are financial prosperity, employment, healthcare, education,

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governance and entrepreneurship. All data were eventually incorporated in a single index, namely 'Social Prosperity Index' (SPI), in an attempt to attain a holistic view on the effectiveness of these programmes. This approach contradicts the mainstream approach of pure financially oriented assessments.

The data were extracted from OECD, World Bank, Eurostat and Transparency International. The structure of each pillar is presented in Tables 1 and 2. All indices are expressed in percentage points and were equally weighted, according to the sign of their effect, in the formulation of the SPI. The period stretched from year 2009 (year before the existence of the programmes) to year 2016 (year when most of the programmes ended –with the exception of Greece).

Table 1: Pillars of social prosperity.

Financial Prosperity	**Employment**	**Healthcare**
Real GDP Growth Rate	Unemployment	Healthcare Expenditure (% of Public to Total Spending)
Government Deficit/Surplus (% of GDP)	Employment	
Balance of Payments. Deficit/Surplus (% GDP)		

Table 2: Pillars of social prosperity (cont.)

Education	**Governance**	**Entrepreneurship**
Total Expenditure to Public Spending	Transparency Index	Access to Funding ("Access to Funding" is a survey administered by the European Commission to assess funding conditions in the member states from year 2013 and onwards) Foreign Direct Investment as % GDP
	Government Effectiveness (WGI) (WGI - Worldwide Governance Indicators, the survey is administered by World Bank)	
	Political Stability and Absence of Violence (WGI)	
Source: Authors' own work.		

The 'Access to Funding' variable, under Entrepreneurship pillar, is available from year 2013 and onwards. Therefore the estimation of the SPI index was performed twice; once for the whole period 2009–2016 and once for the period 2013–2016 incorporating the latter index. The pillar Education was not eventually included in the calculus, since there was no data availability for Greece.

The calculus of the SPI index is quite straightforward and presented as follows:

$$SPI = \sum_{i=1}^{n} w_i * index_i \tag{1}$$

The weighting was equal for all indices and the index derives from the algebraic sum of the indices (eleven or twelve, depending on the availability of data for the Access to Funding index). The effect of each index is either positive (e.g., Employment) or negative (e.g., Unemployment). Consequently, the higher the value of the index is, the better the attained classification. While some indices have the virtue of a maximum value, like employment (since it cannot exceed the threshold value of 100%), there are others that could theoretically expand beyond the threshold value of 100 in a percentage scale (e.g., Foreign Direct Investment as % GDP). This fact has a consequence that SPI index can only be applied on a comparability mode among sovereigns without possessing a maximum value.

4. Pillars of Social Prosperity – Social Prosperity Index

4.1. Financial prosperity pillar

Economic growth is rather important for the society, since it is interrelated to income and employment. Traditionally growth is expressed by GDP changes. This approach should not have an exclusive character, since GDP is not shared equally between citizens. Many times growth, as captured by GDP changes, is not tangible for the society. All economic programmes incorporate Real GDP changes criterion to assess economic growth. The development of the relevant index for years 2009–2016, is presented in Table 3.

Table 3: Real GDP growth rate.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	−4,30%	−5,50%	−9,10%	−7,30%	−3,20%	0,40%	−0,20%	0,00%
Portugal	−3,00%	1,90%	−1,80%	−4,00%	−1,10%	0,90%	1,60%	1,40%
Spain	−3,60%	0,00%	−1,00%	−2,90%	−1,70%	1,40%	3,40%	3,30%
Cyprus	−1,80%	1,30%	0,30%	−3,20%	−6,00%	−1,50%	1,70%	2,80%
Source: Eurostat								

Spain outperforms all other countries with significant growth figures after the 2009–2013 depression period. Cyprus follows closely after the sharp decline in year 2013.

Portugal records positive figures, whereas the exception of Greece is noticeable, since it was the first country to implement an economic adjustment programme.

Debt crisis occurred in EU countries is attributed to a great extent to constant budgetary fiscal deficits. The primary goal of economic adjustment programmes was the attainment of public budget surpluses, in an effort to hinder the accumulation of new debt. Table 4 depicts a rather satisfactory improvement for all countries involved.

Table 4: Budget deficit or surplus as percent of GDP.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	−15,10%	−11,20%	−10,30%	−8,90%	−13,10%	−3,70%	−5,90%	0,70%
Portugal	−9,80%	−11,20%	−7,40%	−5,70%	−4,80%	−7,20%	−4,40%	−2,00%
Spain	−11,00%	−9,40%	−9,60%	−10,50%	−7,00%	−6,00%	−5,10%	−4,50%
Cyprus	−5,40%	−4,70%	−5,70%	−5,60%	−5,10%	−8,80%	−1,20%	0,40%
Source: Eurostat								

Greece rebounded impressively to positive (surplus) levels. Cyprus follows with a positive figure in the last year of the evaluation. Portugal and Spain still record deficits, albeit significantly lower than the beginning years. The programmes proved quite effective also to this respect.

Balance of payments is another index of financial prosperity. It divulges the relationships of a country with the rest of the world. If a country has intense and efficient production of products and services the balance of payments will have a surplus, since exports surpass imports' value. A common characteristic for all south European countries was the vast deficits in their balance of payments. This actually implied incremented demand for imported goods that could effortlessly be bought due to cheap and easy funding. Table 5 presents the imbalances for all countries.

Table 5: Balance of payments – deficits or surpluses as % of GDP.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	−12,30%	−11,40%	−10,00%	−3,80%	−2,00%	−1,60%	0,10%	−0,60%
Portugal	−10,40%	−10,10%	−6,00%	−1,80%	1,60%	0,10%	0,10%	0,80%
Spain	−4,30%	−3,90%	−3,20%	−0,20%	1,50%	1,10%	1,40%	2,00%
Cyprus	−7,70%	−11,30%	−4,10%	−6,00%	−4,90%	−4,30%	−2,90%	−5,30%
Source: Eurostat								

Cyprus is the only country with limited effect, despite the implementation of the programme. Portugal and Greece covered a long way to achieve surpluses, whereas Spain records first in this classification.

4.2. Employment pillar

This pillar exhibits the most adverse developments. The policies adopted in order to achieve the macroeconomic goals described in the previous section, affected labour market severely. Table 6 presents unemployment figures for the period 2009–2016.

Table 6: Unemployment.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	9,60%	12,70%	17,90%	24,50%	27,50%	26,50%	24,90%	23,60%
Portugal	10,70%	12,00%	12,90%	15,80%	16,40%	14,10%	12,60%	11,20%
Spain	17,90%	19,90%	21,40%	24,80%	26,10%	24,50%	22,10%	19,60%
Cyprus	5,40%	6,30%	7,90%	11,90%	15,90%	16,10%	15,00%	13,00%
Source: Eurostat								

The implementation of the programmes, in conjunction with economic conditions, fostered unemployment to double digit figures. Greece and Spain suffer from excessive unemployment, whereas Cyprus and Portugal follow closely. The trend might be downwards, but all countries surmount the Eurozone average (10% for year 2016, Eurostat). Youth unemployment is another aspect of the problem. Greece and Spain record the impressive 50% of total population aged below 25 years old (Eurostat).

Internal devaluation policies suppressed wages and pushed away workforce from employment. Table 7 presents employment figures for the countries involved.

Table 7: Employment (age 20–64).

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	65,60%	63,80%	59,60%	55,00%	52,90%	53,30%	54,90%	56,20%
Portugal	71,10%	70,30%	68,80%	66,30%	65,40%	67,60%	69,10%	70,60%
Spain	64,00%	62,80%	62,00%	59,60%	58,60%	59,90%	62,00%	63,90%
Cyprus	75,30%	75,00%	73,40%	70,20%	67,20%	67,60%	67,90%	68,80%
Source: Eurostat								

Employment levels start to revive after year 2013 lowest levels. The addition of new members in workforce derives from unemployment, as well as inactive individuals that had ceased efforts to work. Greece presents the lowest level of employment while Portugal the highest. The exclusion of many individuals from employment poses serious problems for the economy and its recovering process.

4.3. Healthcare pillar

Healthcare is a vital pillar comprising healthcare services offered by the state and influences, to a great extent, the quality of life. Welfare policies, a distinctive characteristic of Europe, were severely challenged during the financial crisis. The absolute figures spent by European member states for healthcare reduced gradually. This reduction was a result of cost minimization and improvement in procurement procedures.

The increased participation of the public sector to total healthcare expenditure usually reveals satisfactory benefits to all citizens, irrespective of their economic status. In such a case the citizens do not have to spend additional amounts of money to healthcare services with adverse impact on their disposable income. The aforementioned suggestion is reinforced by the fact that countries with reliable healthcare systems such as Sweden (a country with intense public sector interference) and UK (perhaps the most liberated economy Europe) record a share of public spending to the sector of 83.89% and 79.19%, respectively (Year 2016, Eurostat).

Table 8: Public spending to total healthcare expenditure.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	68,53%	69,05%	65,97%	66,04%	61,78%	57,99%	59,09%	59,25%
Portugal	69,92%	69,77%	67,69%	65,57%	66,92%	66,08%	66,22%	66,24%
Spain	75,40%	74,78%	73,79%	72,20%	71,08%	70,01%	71,03%	70,60%
Cyprus	44,73%	47,35%	46,53%	45,86%	46,53%	45,22%	– (No available data)	–
Source: Eurostat								

Table 8 presents the index of public spending to total healthcare expenditure. The most impressive shift was observed in Greece, where the public expenditure decreased substantially, despite the decline in average disposable income. This unveils deterioration in quality of public healthcare services. Spain follows with relatively smaller decrease, whereas Portugal managed to maintain a high share of public spending. Cyprus exhibits a stable trend. For purposes of ease, we estimated an annual average for years 2015–2016, which was incorporated in the calculus.

4.4. Education pillar

Education is an important contributor to social prosperity. Most EU countries offer education services via public entities. Education level affects sovereign growth potential.

The proportion of public funds absorbed by education, to total public spending is used as a proxy for assessing the performance of this pillar.

Table 9: Education spending to total public expenditure (percent).

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	– (No available data)	–	–	–	–	–	–	–
Portugal	11,07%	10,43%	10,24%	10,19%	10,57%	9,89%	–	–
Spain	10,64%	10,56%	10,63%	9,22%	9,54%	9,59%	–	–
Cyprus	17,20%	15,73%	15,58%	0,00%	15,37%	15,53%	–	–
Source: World Bank								

The problem encountered is obvious and presented in Table 9. There is no data availability for Greece, whereas there is no recent data for the rest of the countries. It was decided to omit this pillar from the calculus, despite its importance, in an effort to achieve comparability of performance between the four countries. However, the data presented earlier do not suggest any important shift in public spending. The absolute changes are smoothly evolved throughout years 2009–2014.

4.5. Governance pillar

Governance is another variable, closely related to social prosperity. The indices selected involve transparency levels, governance effectiveness and political stability. The aforementioned dimensions are crucial for social tranquillity and economic prosperity.

A composing ingredient of governance quality is weak corruption. Corruption levels cannot be estimated easily. The organization 'Transparency International', having presence in 90 countries, has as a founding purpose to assess corruption levels in worldwide scale. Transparency index presented for our sample in Table 10, classifies 180 countries according to perceived corruption levels by their citizens. The surveys are conducted by specialists with contemporary methodology. For classification purposes score 100 defines no level of (perceived) corruption.

Two trends are depicted in Table 10. Greece and Portugal present improved figures after the implementation of the programmes. This may be a result of empowerment of e-governance and e-procurement initiatives. Greece scores last in the classification, despite the improvement. The opposite trend is observed in the cases of Spain and Cyprus. The trend is downwards for these countries. Nevertheless, their citizens perceive relatively increased levels of transparency in their countries.

Table 10: Transparency index.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	38	35	34	36	40	43	46	44
Portugal	58	60	61	63	62	63	64	62
Spain	61	61	62	65	59	60	58	58
Cyprus	66	63	63	66	63	63	61	55
Source: Transparency International.								

The governance effectiveness and political stability are approximated by two directly relevant indices published by the World Bank. The two indices are components of the General Worldwide Governance Indicator (WGI). These indices assess governance level in 200 countries, since 1996. The international repute of the World Bank acts as a safeguard for the validity of the survey and the indices reliability. The governance effectiveness index assesses the ability of the state authorities to offer public services of acknowledged quality, unbiased from political pressures and exhibit effectiveness in public policies adopted. Table 11 presents the figures for the four countries. The superiority of the countries in the Iberian Peninsula is remarkable.

Table 11: Government effectiveness index.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	71,29%	69,38%	68,25%	63,03%	67,77%	69,23%	64,42%	62,50%
Portugal	83,25%	80,38%	78,20%	81,52%	85,31%	79,33%	86,06%	85,58%
Spain	77,99%	78,95%	81,52%	82,46%	82,94%	84,13%	85,10%	83,17%
Cyprus	88,04%	90,91%	92,42%	88,15%	88,15%	83,65%	81,25%	78,37%
Source: World Bank								

The possible causes for the significant fall in the case of Greece and Cyprus are closely related to negative publicity placed on institutional representatives that managed the programmes. Many times the legislative acts were presented as strictly imposed from the institutions (EU and IMF) without the national authorities' actual consent. This attitude downgraded the perceived ability of national authorities to rule, based solely on the needs of their citizens.

Political stability assesses apart from the obvious political tranquillity, the possibility of extremist and terrorist actions, as well as politically driven social unrest. Table 12 presents the figures for the relevant index.

Portugal manages to come first, probably as a result of the two main political parties prevailing in the political status quo. Greece, on the other hand, records last mainly due to fragmentation of major political parties and the inability to provide full term political governance. Spain and Cyprus stabilise in percentage points above 60%. Spain

Table 12: Political stability index.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	37,91%	40,76%	41,71%	39,34%	40,28%	40,48%	38,57%	41,90%
Portugal	72,99%	71,09%	69,67%	70,62%	68,72%	74,29%	78,10%	88,10%
Spain	30,33%	33,65%	48,34%	42,65%	46,92%	55,24%	55,71%	61,90%
Cyprus	57,82%	61,61%	66,82%	66,82%	64,93%	63,81%	62,86%	65,71%
Source: World Bank.								

recorded an impressive improvement. This may be attributed to the disarming of ETA (Basque Nationalist Terrorist Group) and the consequent absence of domestic terrorist actions.

4.6. Entrepreneurship pillar

All EU countries have committed to shape a unified market with equal access to all European enterprises. One of the founding principles of EU is the free circulation of goods, services and capital between member states. Consequently, private sector prosperity and entrepreneurship are variables of vital importance for all EU countries that heavily influence social prosperity.

Taking into account the observed problems in the operation of the EU banking system, the 'Access to Funding' index, managed from the European Commission, is considered to act as a proper proxy for assessing entrepreneurship conditions. SAFE survey (Survey on the Access to Finance of Enterprises) index was used in this pillar (Table 13). Nevertheless, the availability of data commences from year 2013 and onwards. This resulted in measuring the proposed Social Prosperity Index (SPI) twice, as already explained in the relevant section (3.1).

Table 13: Access to funding – SAFE survey.

Country	2013	2014	2015	2016
Greece	32,4%	32%	30%	24%
Portugal	19,2%	17%	11%	11%
Spain	23,4%	17%	11%	9%
Cyprus	40,20%	45%	25%	24%
Source: European Commission.				

The percentage points divulge the proportion of the companies that consider funding as problematic or hard to get. The commencing year 2013 finds Greece and Cyprus recording the worse classification. At this point it must be noted that the two countries had capital controls imposed and this fact directly influenced index figures. Spain made a significant step towards normality; the index improved significantly from 19.2 percent to just 9%. Surely, this indicates normalization of banking system conditions. Portugal also exhibits an improved status at year end, 2016.

The foreign direct investment as a percentage of GDP could not be missing from the pillar entrepreneurship, since it describes the attractiveness of domestic business environment. If the environment gains attractiveness, countries host foreign investments that further boost economy's growth. Table 14 presents FDI figures (as a percentage of GDP) for the countries involved.

Table 14: Foreign direct investment (FDI) percentage of GDP.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	0,80%	0,20%	0,40%	0,70%	1,20%	1,10%	0,60%	1,60%
Portugal	2,30%	3,50%	4,00%	10,10%	4,70%	5,70%	1,10%	4,10%
Spain	0,90%	2,80%	2,20%	1,80%	3,80%	2,50%	2,10%	2,50%
Cyprus	10,80%	53,30%	-43,50%	30,50%	-25,00%	-2,20%	41,0%	25,00%
Source: Eurostat								

The improvement of the business environment is obvious in the case of Portugal. Spain and Greece follow at lower pace. Cyprus has increased variability throughout the years, probably as a result of the deposits' haircut and the consolidation of the banking system.

4.7. Social prosperity index (SPI)

The methodology applied to calculate SPI figures is presented in the relevant 3.1 section. The results for the whole period 2009–2016 are presented in Table 15.

Table 15: Social prosperity index 2009–2016.

Country	2009	2010	2011	2012	2013	2014	2015	2016
Greece	240,83	237,39	222,63	215,61	218,13	233,70	232,68	241,95
Portugal	323,66	323,64	321,26	329,81	332,35	335,70	349,28	365,62
Spain	272,82	280,78	294,65	285,31	289,04	303,78	311,54	321,27
Cyprus	322,39	370,17	281,27	340,83	272,91	290,38	342,65	323,82
Source: Authors' own work.								

The worst classification according to SPI is recorded by Greece. The country's index presents a downwards trend between years 2009–2013. Year 2014 witnessed a significant rebound, whereas the following years present a steady drift. This finding is also validated by other research work, suggesting limited effectiveness of the programme in Greece and relatively ineffectiveness compared to other countries.

Portugal outperforms all countries in the SPI classification. The SPI index surpasses 2009 levels. This reflects an effective debt crisis management. This is an interesting finding, especially if we take into account that Portugal's and Greece's financial crises shared common characteristics. Spain also presents an improved status, presented in increased SPI levels that outperform year 2009 equivalent. Lastly, Cyprus after adopting the economic adjustment programme in year 2013 (unveiled by the sharp decline in the SPI index) managed to restore initial SPI levels rather fast, offering improved social prosperity to the Cypriot citizens and scoring just second place in the relevant classification.

In Table 16, we present the SPI index for the period 2013–2016, after incorporating 'Access to Funding' variable.

Table 16: Social prosperity index 2013–2016.

Country	2013	2014	2015	2016
Greece	185,73	201,70	202,68	217,95
Portugal	313,15	318,70	338,28	354,62
Spain	265,64	286,78	300,54	312,27
Cyprus	232,71	245,38	317,49	299,66
Source: Authors' own work				

The addition of the extra variable alters the countries classification. While Portugal remains first, now is followed by Spain. Cyprus falls one position, whereas Greece still records last. It is obvious that the last two countries were influenced by the capital controls imposed in their banking systems. These controls are an important impediment to the improvement of the corporate funding opportunities. An important observation is that SPI improves radically for all countries, suggesting that financial conditions improved by the implementation of the programmes.

5. Conclusion

Debt crisis seemed to be inevitable for all countries studied. Public debt was increasing on a steady basis and by fast pace. Four countries in the South Europe region, Greece Portugal Spain and Cyprus, faced crucial financial problems and were forced to adopt Economic Adjustment Programmes run by the EU and the IMF. The crisis had similar characteristics for Portugal and Greece, rooted mainly to imbalances and inefficiencies of the public sector. On the contrary, financial crisis faced by Spain and Cyprus was mainly caused by imbalances of the private sector and the domestic banking system.

Financial crisis could be attributed to three main sources. Firstly, the world financial crisis and the spill over effect to the European economy; secondly, the macroeconomic imbalances of the Eurozone member states. Finally, the regulatory framework proved insufficient and the European banking system weak. The programmes facilitated the re-gain of access to capital markets for Portugal and Cyprus. So the main objective of the programmes was accomplished. Normality in baking conditions recouped in almost all countries –only Greece is still straggling to abandon the capital controls regime.

If we focus solely on the indices of the financial prosperity pillar we get the impression of a successful implementation of the programmes. Real GDP growth rates reappeared, budgetary deficits dwindled or even expunged, whereas balance of payments presents no significant discrepancies. However, as already pointed out, the assessment should not focus on solely financial criteria. The programmes had severe implications to labour market. Unemployment reached record highs; simultaneously Greece and Spain suffer from excessive youth unemployment, which downgrades the potential of their economies. Internal devaluation policies suppressed wages and pushed many individuals out of employment. Healthcare pillar exhibited no significant changes with the exception of Greece. The latter country experienced an important shift to private spending, despite declining disposable income levels. This development unveils lack of confidence in the public scheme or/and decline in the levels of quality in public healthcare services. Education pillar is only partially affected by the implementation of the programmes (for the countries that supplied relevant data).

Governance pillar exhibited contradicting developments. Greece and Portugal recorded improvement in the transparency index. The programmes were coupled by institutional guidance and twinning services, transmitting valuable expertise towards the improvement of public sector services. The two countries suffered from public services inefficiencies. Spain and Cyprus recorded a downward trend in the relevant pillar probably owed to internal affairs issues; however their scores are higher from the two other rivals. Entrepreneurship pillar unveiled an improvement in the investment climate nearly for all countries –Greece omitted, and smoothing of financing conditions. Export orientation rebounded.

The consolidation of the individual observations, sometimes contradicting, derived from different indices, in a single index eases the assessment of the programmes' effectiveness. SPI managed to provide a comprehensive review for the period 2009–2016. In the relevant classification Portugal records first place, indicating the most effective implementation of the programme. Spain and Cyprus follow, whereas Greece remains in the last position. The second and third place in the classification changes, depending on the inclusion of the 'Access to Funding' index in the calculus. The most problematic pillar is employment, which challenges governments and especially their citizens. European and sovereign policies must urgently address employment problems, whereas economists are already talking about a 'lost generation'.

The methodology applied might be plain, albeit swiftly provides a comprehensive view on the effectiveness of the programmes. The SPI could further evolve, incorporating more indices or even substantiating benchmark levels for future assessments' procedures.

References

[1] Modigliani, F. (1961). Long-run implications of alternative fiscal policies and the burden of the national debt. *The Economic Journal*, vol. 71, no. 284, pp. 730–755.

[2] Diamond, P. (1965). National debt in a neoclassical growth model. *American Economic Review*, vol. 55, no. 5, pp. 1126–1150.

[3] Pisani-Ferry, J., Sapir, A., and Wolff, G. (2013). EU-IMF Assistance to Euro area countries: An early assessment. *Bruegel Blueprint Series,* vol. XIX.

[4] Krugman, P. (1988). Financing vs. Forgiving a debt overhang. *Journal of Development Economics*, vol. 29, no. 3, pp. 253–268.

[5] Cole, H. L. and Kehoe, T. (2000). Self-fulfilling debt crises. *Review of Economic Studies*, vol. 67, no. 1, pp. 91–116.

[6] Checherita, C. and Rother, P. (2010). The Impact of High and Growing Government Debt on Economic Growth an Empirical Investigation for the Euro Area. *Working Paper Series, European Central Bank*, 1237.

[7] ECB. (2012). Analysing government debt sustainability in the Euro area. *Monthly Bulletin*, April.

[8] Lane, P. R. (2012). The European sovereign debt crisis., *Journal of Economic Perspectives*, vol. 26, no. 3, pp. 49–68.

[9] Detlef, A. (2012). Causes of the Sovereign Debt Crisis. Retrieved from http://www.e-ir.info/2012/04/16/causes-of-thesovereign-debt-crisis/ (accessed on 21 October 2015).

[10] Laopodis, N. T. (2004). Monetary policy implications of co-movements among long-term interest rates. *SSRN Electronic Journal*, vol.14, pp. 135–164.

[11] De Grauwe, P. and Ji, Y. (2013). Self-fulfilling crises in the Eurozone: An empirical test. *Journal of International Money and Finance*, vol. 34, pp. 15–36.

[12] European Commission. (2014). A comprehensive EU response to the financial crisis: Substantial progress towards a strong financial framework for Europe and a banking union for the eurozone. MEMO 14/244/28-03-2014.

[13] Blundell-Wignall, A. (2012). Solving the financial and sovereign debt crisis in Europe. *OECD Journal: Financial Market Trends*, no. 2, pp. 201–224.

[14] Hallet, H. A. and Oliva, J. C. M. (2015). The importance of trade and capital imbalances in the European debt crisis. *Journal of Policy Modeling*, vol. 37, pp. 229–252.

[15] Sklias P., Spyros, R., and Georgios, M. (2014). Keynes and the Eurozone's crisis: Towards a fiscal union. *Elsevier, Procedia Economics and Finance*, vol. 9, pp. 66–73.

[16] Guerreiro, D. (2014). Is the European debt crisis a mere balance of payments crisis? *Economic Modelling*, vol. 44, pp. S50–S56.

[17] Hassel, A. (2014). Adjustments in the Eurozone: Varieties of capitalism and the crisis in southern Europe, *LEQS Paper*, no. 76.

[18] Laeven, L. and Valencia, F. (2012). Systemic Banking Crises Database: An Update. *IMF Working Paper* 12/163.