



## **Fiscal Policy, Growth and Competitiveness in EMU; Evidence from Portugal and Greece**

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### **ABSTRACT**

This paper aims at examining whether reforms in EU economic and fiscal governance between the period starting from 2010 and ending on 2018 have increased the Gross Domestic Product growth rate in Greece and Portugal. Reforms occurred, such as “Six Pack,” “Two Pack,” the “Fiscal Compact,” and the “Euro Plus Pact,” have focused on fiscal consolidation and competitiveness improvement; in other words, during the aforementioned time period, EMU concentrated on the improvement of internal as well as external imbalances. Moreover, the present paper assesses the international competitiveness through the prism of two main indicators: Unit Labour Cost and Current Account Balance. It seems that the literature is not crystal clear on the relationship between debt and the fiscal policy on the one side, competitiveness and growth from the other side. The findings of the paper may be of great assistance to policy makers on growth, competitiveness and fiscal policy, as they highlight the relationship between economic stability, entrepreneurship and growth. The herein below presented results demonstrate that there is, indeed, a strong relationship between fiscal consolidation and growth, while the relationship between public debt, Unit Labour Cost, Current Account Balance and growth remains blurred.

**Keywords:** Fiscal Reforms, Entrepreneurship, Competitiveness, Economic Policy in EMU

**JEL Classifications:** H30, H60, F15

### **1. INTRODUCTION**

A question arising when examining in depth the terms “fiscal policy” and “growth” is which is the nature of their relationship; indeed, many theorists have grasped the opportunity to commence discussions and participate in debates while trying to determine the connection between those economic terms. Theorists’ community has also been engaged with the identification of the relationship between “public debt” and “growth.” For various theorists the increase of public debt results in deceleration of the growth rate. The existence of a high public debt lowers the increase rate of GDP, since the process for the capital increase slows down (Woo and Kumar, Public Debt and Growth, 2015). Such GDP rate deceleration has as a consequence the realization of small investments that subsequently lead in negative effects

on per capita income (Balassone et al., 2013). Furthermore, many economists underline the improvement of the balance of current payments (hereinafter referred to as “BCP”) has positive results in the external competitiveness of an economy and subsequently such competitiveness increases growth rate (Thirlwall, 1979). Correspondingly, the existence of a BCP deficit reduces an economy’s external competitiveness and leads in the reduction of growth rate (Thirlwall and Hussain, 1982).

Considering the aforementioned theory as the “general rule” in respect of the relationship between “BCP” and “growth,” there is a variety of economists supporting the existence of additional parameters regarding the above relationship, like temporary disequilibria, capital flows and relative prices (Garcimartín et al., 2010) or other internal imbalances, like budget deficits and public

debt (Soukiazis et al., 2013). Finally, a large group of economists argue that the Unit Labour Cost (hereinafter referred to as “ULC”), in principle, constitutes a reliable indication for each economy’s productivity (Ark et al., 2005). However, in several cases the ULC, in absolute price level, is not part of the comparison criteria of an economy’s competitiveness since, for example, countries where the workforce receives low salaries, like India and Mexico, do not have an attractive industrial model of economy (Porter, 1990).

## 2. LITERATURE REVIEW

### 2.1. Fiscal Policy and Growth

According to Monetarists’ point of view, there is a negative interaction between public expenditure and inflation (Eltis, 1983); Public spending pressures upwards the inflation (Friedman and Paden, 1983) and as a result the nominal growth does not reflect the actual growth of a State’s economy. In Classical economists view the more a government spends, the lower is the rate of State’s growth. Through that perspective, a State’s growth depends on private investment initiatives; government expenditure reduces private investments (Argimon et al., 1997) (Mamatzakis, 2007) and that is the reason why the restriction of public expenditure is highly recommended by that portion of theorists. On the contrary Keynesians support the view that the increase of government expenditures improves a State’s growth (Samudram et al., 2009), since current expenditures, like capital expenditures, may boost growth, (Devarajan et al., 1996).

There is also another opinion, being in the middle between the two aforementioned views, arguing that public expenditure should concentrate on infrastructure and networks investments (Aschauer, 1989) along with other types of investments such as government spending on capital formation (Alexiou, 2009), rather than allocating public funds on consumption expenditure (Butkiewicz and Yanikkaya, 2011). There is a variety of tax nature policies and expenditures that may contribute in the increase of employment, private investments and productivity. Nevertheless, there is no “one size fits all” policy; the optimal mix of policies depends on each country’s specific conditions, preferences and administrative capacities (OECD and IMF, 2015); indeed, for example, the type of applicable taxation and the kind of public expenditure determine growth rate (Barro, 1990).

Furthermore, it seems that consumption expenditures does not lead in growth while investment expenditures, like the program of public investment (“PPI”), constitute valuable tools towards financial improvement (Kneller et al., 1999); the positive impact of PPI on a State’s growth has also been demonstrated by another recent study, claiming that productive forms of expenditure are associated with higher levels of growth (Chu et al., 2020). In addition, another interesting study has pointed out that public expenditure dedicated on consumer spending may have a short-term positive impact on Gross Domestic Product (hereinafter referred to as “GDP”), while the long-term impact on GDP is considered to be rather negative (Lin, 2006).

While trying to determine the relationship between “fiscal policy” and “growth,” another study depicts the existence of an interaction

between the effectiveness of public expenditure and a State’s level of corruption, affirming that the fight against corruption increases the effectiveness of public funds allocated for growth purposes (Agostino et al., 2016).

Finally, the implementation of the Golden Rule of Fiscal Policy for balanced budgets by a government (Zeyneloglu, 2018), leads in positive results in economy, growth (Creel and Saraceno, 2010) and governance (Robinson, 2005)

### 2.2. Public Debt and Growth

According to a separate study, a negative relationship is developed between “public debt” and “growth” across countries; it seems though that the debt threshold constitutes the main factor determining how much negative the above relationship may be (Eberhardt and Presbitero, 2015). Further to another study, the negative effects of public debt’s increase on growth crucially depend on the saving rate as well as on the population growth rate, while that study also underlines that the deceleration rate of growth due to public debt is lower in developed economies (Dombi and Dedák, 2019).

In addition, the existence of a high public debt slows down the realization of private investments, especially in the field of industry (Huang et al., 2018), while reduces public investments too (Picarelli et al., 2019).

Moreover, taking into consideration the findings of a study examining the relationship between “public debt” and “growth” in countries of Eurozone, the increase of public debt seems to have positive short-term effects on growth rate for some of the countries under examination, while long-term results of such increase are considered to be rather negative for the growth rate of all countries of Eurozone (Gómez-Puig and Sosvilla-Rivero, 2018).

On the other hand, there are economists supporting the view that the increase of public debt does not affect in any way growth. Indeed, for some economists there is no causal link between the increase of public debt and the deceleration rate of growth, while the relationship between public debt and growth varies between countries and different time periods (Panizza and Presbitero, 2013).

Finally, according to another study the increase of public debt does not negatively affect growth (Herndon et al., 2014). On the contrary, it seems that the growth may benefit from the increase of public debt (Saungweme and Odhiambo, 2018) and that the increase of public debt may support private sector (Angeletos et al., 2016), because the government may play the role of the private collateral and may guarantee private investments, since economic units being liquidity constrained may benefit from the government’s increased borrowing ability (Woodford, 1990). Nevertheless, for some theorists the above opinion is considered as suboptimal, since the existence of a high public debt loosens private borrowing limits (Yared, 2013), while according to another study when the external debt reaches the limit of 60% of GDP, then the growth rate declines by 2% per year (Reinhart and Rogoff, 2010).

### 2.3. Current Account Balance and Growth

Fostering the economy's competitiveness through the improvement of the BCP was a major objective set under the Economic Adjustment Programs (hereinafter referred to as "EAPs"), in Greece (Liargovas and Psychalis, 2019) and Portugal (OECD, 2011). In case of Greece, the most efficient policy to gain higher growth is to reduce external imbalances (Soukiazis et al., 2018), while for the improvement of internal imbalances lower rates of growth are considered to be necessary prerequisites. Accordingly, in case of Portugal, a relevant study supports the view that the improvement of BCP in conjunction with competitive devaluations and lower costs for financing the economy are also important stimulus to growth.

Finally, another research goes a step forward and asserts that a country's growth rate of per capita income is directly proportional to the growth rate of its exports (Araujo and Lima, 2007).

On the other hand, a study taking into consideration the case of Turkey and using the tools of Granger causality and VAR analysis, supports that the growth rate affects BCP, but, in contradiction with Thirlwall's theory, BCP does not affect growth's rate (Yurdakul and Ucar, 2015). At this point, it should be mentioned that for the same country, i.e. Turkey, another study has affirmed Thirlwall's theory and, therefore, has supported that the BCP deficit reduction improves growth's rate as well (Halicioglu, 2012).

Furthermore, according to a separate research, BCP does not constitute a measure for assessing competitiveness (Collignon and Esposito, 2013), whereas BCP disequilibrium does not relate to the Euro crisis (Collignon, 2013).

### 2.4. Unit Labour Cost and Growth

As long as Europe is concerned, after the euro was launched, ULC has more rapidly increased in regional EU countries than the core EU countries, mainly due to commercial and financial integration and not due public expenditure. Particularly, in Greece and in Portugal the 30% of the detected total increase of the ULC is considered to be related to the promotion of the economic convergence (Piton, 2018). Moreover, according to another study, the ULC increase has been associated with declining profitability, investment reduction and deceleration of productivity (Bedau, 1997).

Another paper supports the view that high ULC and low productivity are not responsible for trade deficit of EMU countries (Parry, 1994). On the contrary, EMU officially states that differences in ULC were found to be the most significant reasons in competitiveness gap among the EMU countries (Barbosa and Alves, 2011), in the sense that fostering growth needs a lower ULC (Ioannides and Pissarides, 2015).

## 3. METHODOLOGY AND DATA

Descriptive statistics, panel data analysis and ordinary least squares (hereinafter referred to as "OLS") were employed to examine relationships between the main objectives of the present study in respect of the case of Greece and Portugal. Descriptive statistics illustrate an overview of the indicators' development.

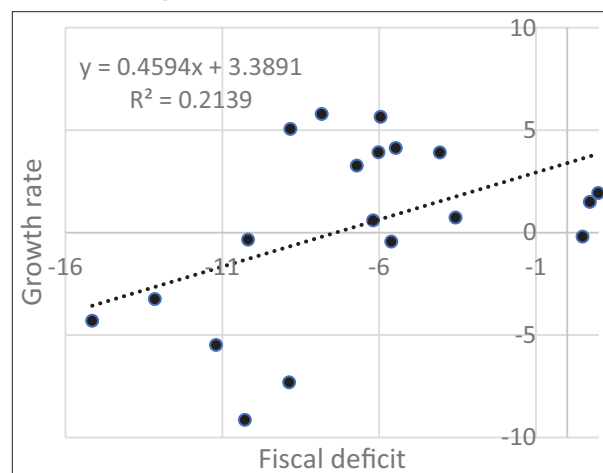
Moreover, through the panel data analysis the present study examines the correlation between the variables under examination; the correlation between the variables reflects the degree of linear relationship between two variables. Lastly, OLS were employed to examine the relationships between the independent variables and the dependent variable, under examination, in order to monitor whether independent variables affect dependent variables.

## 4. EMPIRICAL RESULTS

### 4.1. Fiscal Deficit and GDP Growth Rate

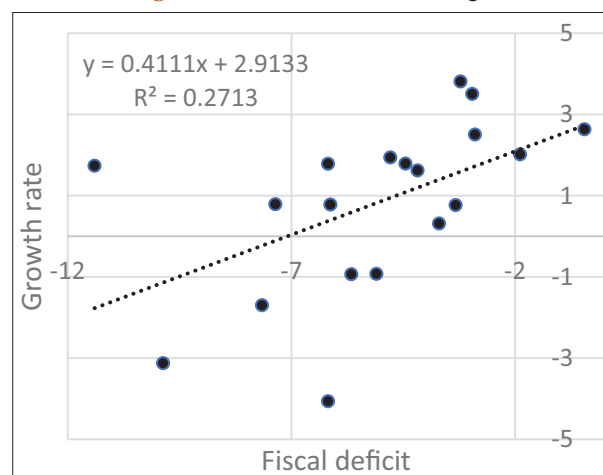
Figures 1 and 2 demonstrate that for both Greece and Portugal the fiscal deficit detected during the period between 2000 and 2018 is negatively related with the growth rate in the sense that the increase of fiscal deficit has as a consequence the reduction of the growth rate for both countries. As per Figures 1 and 2, it seems though that the relationship between fiscal deficit and growth is more negative in Portugal than in case of Greece. All reforms occurred for the promotion of Eurozone's fiscal policy governance, i.e. reforms like the Six Pack, the Two Pack and the European Fiscal Compact, were oriented to the Member States' fiscal deficit decrease. The results of such reforms were positive for

Figure 1: GDP and deficit in Greece



Source: OECD

Figure 2: GDP and deficit in Portugal



Source: OECD

the growth of both Greek and Portuguese economies. Moreover, according to data collected during the period under examination, i.e. between 2010 and 2018, both Greece and Portugal have drastically restricted their fiscal deficit, while Greece has also generated a primary and fiscal surplus.

Precisely, Regressions 1 and 2 confirm that the improvement of the fiscal balance by one unit may lead in the GDP rate increase; such rate increase may fluctuate between 0.4% and 0.45%. Moreover, the fiscal balance may constitute an indicator regarding the course of development of the GDP growth rate. Indeed, according to below regressions, such development may be expressed at around 21% to 27% by the fiscal balance. Therefore, taking into consideration the above, it is crystal clear that the improvement of the fiscal balance leads in positive effects on the growth rate in the long-term.

**Regression 1: GDP and growth in Greece**

Dependent variable: GDP Growth rate in Greece				
Sample: 2000*2018 - Included observations: 19 after adjustments				
Variable	Coefficient	SE	t-Statistic	Prob.
C	3.337	1.701	1.983	0.063
Fiscal balance	0.456	0.213	2.134	0.047
R-squared	0.211	Mean dependent var.		0.326
Ad. R-squared	0.165	SD dependent var.		4.411
SE of regression	4.031	Akaike info criterion		5725
Sum squared resid.	276.261	Schwarz criterion		5.824
F-statistic	4.557	Durbin-Watson stat		0.541
Prob. (F-statistic)	0.047			

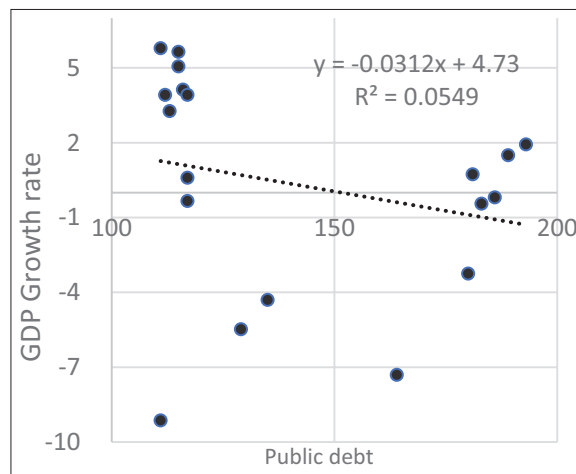
**Regression 2: GDP and growth in Portugal**

Dependent Variable: GDP Growth rate in Portugal				
Sample: 2000-2018 - Included observations: 19 after adjustments				
Variable	Coefficient	SE	t-Statistic	Prob.
C	2.900	0.937	3.093	0.006
Fiscal balance	0.409	0.163	2.512	0.022
R-squared	0.270	Mean dependent var.		0.800
Ad. R-squared	0.227	SD dependent var.		2.108
SE of regression	1.852	Akaike info criterion		4.170
Sum squared resid.	58.346	Schwarz criterion		4.269
F-statistic	6.314	Durbin-Watson stat		1.791
Prob (F-statistic)	0.022			

**4.2. Public Debt and GDP Growth Rate**

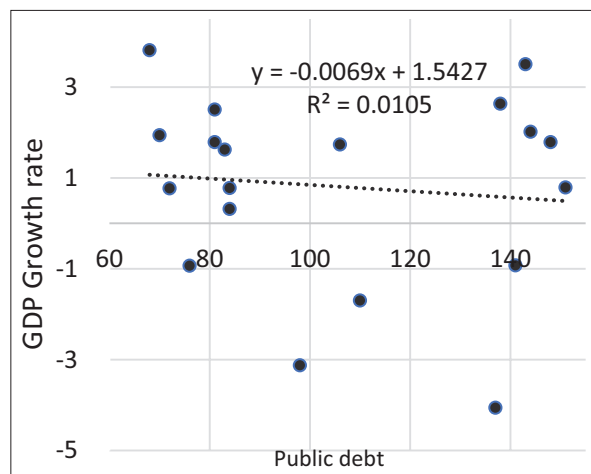
Figures 3 and 4 prove the existence of a small or a rather difficultly detected negative relationship between the public debt's increase and growth rate. Particularly, it seems that the raise of the public debt does not constitute a major factor for the slowdown of the growth rate. Nevertheless, the comparison between the respective Figures 3 and 4 indicates that public debt affects more the growth rate of Greece than the one of Portugal. All reforms occurred on the EU fiscal governance mainly concentrated on the public debt's limitation; such orientation though does not seem to affect the growth rate of both Greece and Portugal. To elaborate more on that statement, the public debt being part of the GDP is not treated as a reference indicator regarding the fiscal sustainability of Member States, while the Gross Finance Needs (hereinafter referred to as "GFN") indicator seems to be more reliable (Gabriele et al., 2017), (Bouabdallah

**Figure 3: GDP and debt in Greece**



Source: OECD

**Figure 4: GDP and debt in Portugal**



Source: OECD

et al., 2017), (IMF, 2019), (Monokroussos et al., 2016), even though the GFN indicator has not been officially included within Eurozone's reforms' reports.

**4.3. ULC and Growth Rate**

Figures 5 and 6 demonstrate the existence of a positive relationship between ULC and growth rate for both Greece and Portugal. Indeed, the ULC increase does not decrease the growth rate but, on the contrary, it seems that the ULC increase subsequently leads in growth rate raise. Moreover, it is noted that Portugal's growth rate is more affected by the ULC increase in contradiction with Greece where the country's growth rate is less affected by such increase. The "Euro Plus Pact" along with all EAPs targeted on the ULC reduction; however, taking into account Figures 5 and 6, the ULC reduction does not positively affect the growth rate for both countries under examination.

The following Regression 3 shows that the ULC increase by one unit may raise the GDP growth rate about 0.44%. Moreover, the ULC corresponds only to 12% of the alteration of the growth rate of Portugal; for Greece, the relevant results are quite the same, but since the "Probability" is around 0.1887, i.e. above the upper limit



of 0.05, such results may be not reliable and that is the reason why a separate regression figure for Greece is not included.

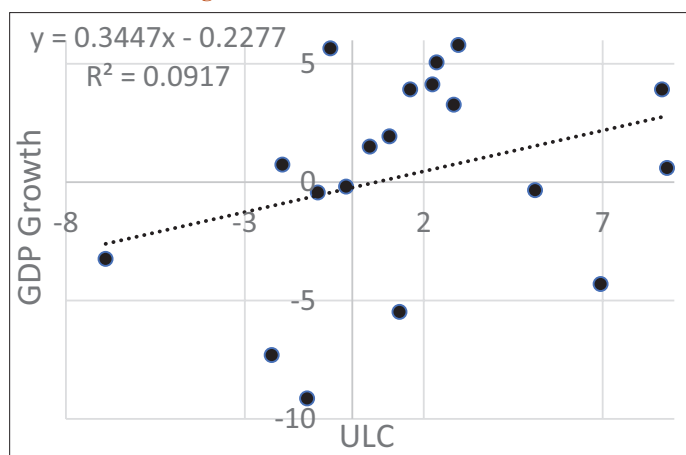
**Regression 3: GDP and ULC in Portugal**

Dependent variable: GDP Growth rate in Greece				
Sample: 2000-2018 - Included observations: 19 after adjustments				
Variable	Coefficient	SE	t-Statistic	Prob.
ULC	0.455	0.185	2.400	0.800
R-squared	1.27	Mean dependent var.		0.800
Ad. R-squared	0.127	SD dependent var.		2.108
SE of regression	1.969	Akaike info criterion		4.244
Sum squared resid.	69.822	Schwarz criterion		4.294
Log likelihood	-39.324	Durbin-Watson stat		1.698
Hannan-Quinn crit.	4.2530			

**4.4. Current Account Balance and Growth Rate**

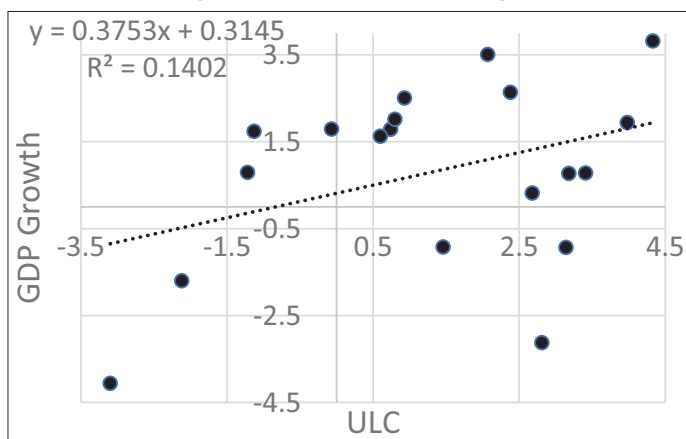
According to Figures 7 and 8, there is a relationship between BCP and growth rate. In case of Greece, the decrease of BCP may increase the growth rate, while on the contrary in case of Portugal, the raise of the growth rate seems to constitute a positive consequence of the BCP improvement. The decrease of twin deficits of Member States constitutes one of the main EU policies. According to relevant theory, twin deficits, i.e. fiscal and BCP deficit, negatively interact with competitiveness and growth.

**Figure 5: GDP and ULC in Greece**



Source: OECD

**Figure 6: GDP and ULC in Portugal**



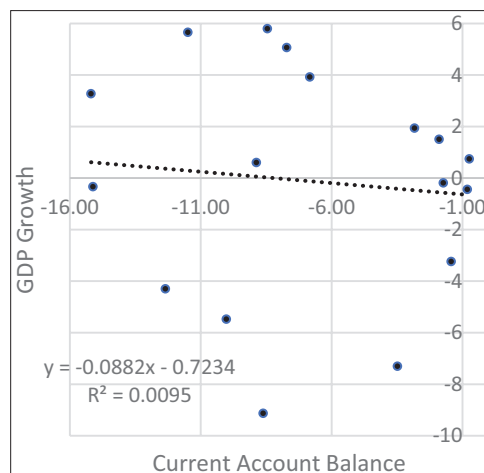
Source: OECD

However, in reality, it's difficult to determine a crystal clear and strong relationship between BCP and growth rate.

**4.5. Data Matrix Correlation and Equation**

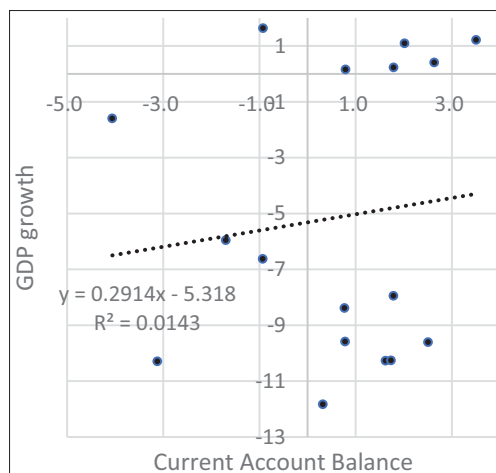
Table 1 indicates the correlation as well as the equation of growth rate with BCP, ULC, public debt and fiscal result; for both Greece and Portugal, growth rate is the dependent variable, while BCP, ULC, public debt and fiscal result are the independent variables. According to that table, the only one independent variable whose improvement is negatively related to the growth rate of Greece and, at the same time, positively related to the growth rate of Portugal, is the one of BCP. The correlation co-efficient of the remaining independent variables present the same sign as the one of the dependent variable, i.e. growth rate, for both countries under discussion. Particularly, the ULC increase positively affects the raise of the growth rate of both countries; such correlation seems to be in contradiction with the main view of literature, according to which the ULC increase is considered to have a negative impact on a country's growth rate. On the contrary, as per relevant bibliographic theory, the public debt's increase is negatively related to the growth rate raise for both countries, and the improvement of the fiscal result leads in the amelioration of the growth rate for

**Figure 7: GDP and CAB in Greece**



Source: OECD

**Figure 8: GDP and CAB in Portugal**



Source: OECD

**Table 1: Matrix correlation and equation**

Greece matrix correlation and equation				
	Current account balance	Unit labour cost	Public debt	Fiscal deficit
GDP growth	-0.10	+0.30	-0.23	+0.46
Equation	$y = -0.0882x - 0.72$	$y = 0.3447x - 0.28$	$y = -0.0312x + 4.73$	$y = 0.4594x + 3.39$
R <sup>2</sup>	R <sup>2</sup> =0.0095	R <sup>2</sup> =0.0917	R <sup>2</sup> =0.0549	R <sup>2</sup> =0.2139
Portugal matrix correlation and equation				
GDP Growth	+0.12	+0.37	-0.10	+0.52
Equation	$y = 0.2914x - 5.32$	$y = 0.3753x + 0.31$	$y = -0.0069x + 1.54$	$y = 0.4111x + 2.91$
R <sup>2</sup>	R <sup>2</sup> =0.0143	R <sup>2</sup> =0.1402	R <sup>2</sup> =0.0105	R <sup>2</sup> =0.2713

both countries as well. At this point, it should be also noted that the fiscal balance presents a strong and at the same time positive correlation with the growth rate, while on the other hand the regressions created for the remaining independent variables did not reach reliable results of causal connection.

## 5. CONCLUSION

EU made efforts to reform Eurozone's fiscal governance in order to foster its Member States' economic growth. All reforms occurred were focused on the improvement of the fiscal result and the stabilization of public debt's level aiming at fiscal balance. At the same time, all reforms also tried to promote the ULC decrease and the BCP improvement having as target the amelioration of Member States' international competitiveness. The results of all the Figures 7 and 8 indicate that the aforementioned EU targets do not necessarily positively relate to the increase of growth rate, since the raise of public debt and the ULC increase do not seem to negatively affect the growth rate, while the BCP improvement does not present similar results between Greece and Portugal. The fiscal result is the only independent variable clearly and positively associated with the increase of growth rate, since the improvement of the fiscal result about 1% may raise the growth rate at about 0.4%.

To conclude, further to the EU efforts focused on public debt's stabilization in conjunction with price competitiveness and balanced BCP, it seems that those efforts, at least for Greece and Portugal, do not inevitably lead in the increase of growth rate.

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