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The lack of consistency in budget deficit criteria in the Stability and Growth Pact

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Abstract. *European public debt crisis led to a reversal of economic strategy for the policy makers. The lack of vision when choosing the budget deficit as an important factor in SGP has allowed a discretionary fiscal behavior for the member states. The budget deficit of the member states was strongly influenced by the cyclical component of the budget between 2002-2007, the reversing of the economic cycle creating the impossibility of rapid fiscal adjustments. Selecting the structural deficit as part of the Stability and Growth Pact would have allowed an early alert of fiscal imbalances and a resetting of economic strategy in the Member States.*

Keywords: Public debt crisis; budget deficit; Nash equilibrium; fiscal policy; monetary policy.

JEL Codes: E61, E62.
REL Codes: 8K, 8M, 20G.

The creation of Euro was regarded with skepticism at the beginning because of the lack of a coherent fiscal mechanism in the currency area. In the first phase after the onset of the Euro, Member States have drafted a policy of refinancing of government bonds. The reasons are obvious, under the dome of the Euro area Member States' sovereign risk has dropped dramatically, causing lower interest rates on government bonds. The strategy in many countries were clear and defined by the refinance of maturing bonds and improvement of fiscal position by taking advantage of a stable economic climate and a favorable economic cycle. Until the current crisis many countries have experienced a downward trend on public debt slowly approaching the Maastricht criterion set. Only the explosion of public debt generated by the reversing of economic cycle and fiscal stabilizers raised questions on the functionality of the European model. The need of a fiscal mechanism that allowed countries in difficulty to refinance has appeared again in the spectrum.

The economists theses who argued that it is impossible to create an optimum currency area without having a "fiscal buffer" similar to the the American model were validated. Even if the US states have a high independent fiscal policy, their budget amount is directly adjusted through Congress by sums totaling on average between 30% and 40% of the budget of each state, so their margin of fiscal maneuver in a recessionary gap increases considerably. In this case, the Keynesian policies that support aggregate demand are not a simple theoretical argument, they help adjust the real GDP and move it closer to the potential level in case of recessionary periods.

The stated purpose of each Member State that acceded to the European Union was of achieving high growth rates to potentiate the real convergence process. For this drive it was necessary an efficient cooperation between economic policies to ensure a sustainable economic growth. Structural policies can thus help sustain non-inflationary economic growth easing the task of reducing inflation promoted by the ECB. As Nordhaus shows in a mathematical model of game theory the "economic policy incoordination leads to a Nash equilibrium with high interest rates and budget deficits. Policy coordination leads to a Pareto equilibrium with a low deficit and low interest rates."

What does this Pareto equilibrium signal? Low interest rates encourage direct investment and enhances economic restructuring. Corelated with insignificant deficits it improves spillovers on catching-up process and real convergence. The economic gain stability creates prerequisites for higher growth rates. This net wealth gain can then be redistributed through effective fiscal policy by adjusting low income levels of the population.

The analysis of economic policy coordination in game theory has been extensively studied by specialists (Tabellini, 1986, Nordhaus, 1994, Beetsma, 2001).

Monetary and fiscal policy decisions are taken separately, their following connections lead to the creation of an uncooperative game. The monetary policy with the objective of inflation targeting is more restrictive, while the fiscal policy is more expansionary influenced by social motivations shifted from political factor (high wage demands in the public sector, social transfers, unemployment benefits). The relationship between the two leads to a conflict of objectives and a suboptimal equilibrium. The resolving of these cases involve a Nash or Stackelberg equilibrium solution, the Stackelberg equilibrium going beyond Nash on the benefits slope.

Vizen (1999) states that "there is a compromise between the two policies due to the fact that the ECB encourages discordance between them in order to increase the degree of monetary policy independence." Meanwhile, the monetary policy objective of reducing inflation generates pressure on the real economy. A common monetary policy and a divergent evolution of the member states economies arise doubts concerning the functioning of the Eurozone. "It's difficult for European countries to adjust aggregate demand shocks, because, unlike the US, they do not have high labor mobility, a central fiscal mechanism or integrated financial markets" (Hishow 2007).

The existence of a single currency prevents the states to exert tools in order to control an adjustment in the trade balance. The obsessive repetition of the concept of competitiveness gain in only validated in theoretical universe, because the reality shows that after 2000 many states began to suffer from disparities in competitiveness. The recovery of these differences cannot be achieved through exchange rate adjustments, so the only opportunity of the Member States is the increase of real competitiveness. Analyzing Eurostat data, we observed that countries like Greece, Spain, Ireland and Portugal were marked by a common phenomenon. Low interest rates after joining the Euro area led to a considerable increase in aggregate demand. Rigid and less flexible labor markets ran to an increase of nominal wages. Meanwhile, productivity could not keep the pace with these increases causing imbalances within the system. Germany was also crossed by this phenomenon after the reunification in the early '90s, but tough reforms undertaken by the political factor led to the resolving of the problem. This phenomenon was hidden by the positive slope of the economic cycle, the budget deficit is far from being a strong tool in reporting early structural imbalances. In most Member States, the structural deficits were offset by surpluses on the side in the cyclical component. The reversing of the economic cycle with the advent of the economic crisis has only served to reveal the existing bleak fiscal landscape in the Eurozone.

The lack of the exchange rate mechanism made impossible a fiscal rebalancing in many countries such as Greece and Spain, the only available

solution being the adjustment of prices and wages. This kind of correction is extremely difficult because of the rigidity of prices and wages. The monetary policy expansion has not led to a significant positive reaction as shown by Marinas (2010).

Even so, any adjustment of nominal wages and prices would lead to a short term decline in GDP. The problem that arises is the following: public debt as a share of GDP will be higher, creating premises for a low level of credibility in financial markets. The sharp decline in GDP for Latvia and Ireland during the economic crisis has brought an additional burden on the national budget that had to manage with less money and even greater debt service. It's a real trap for the peripheral countries in the Eurozone. They need to become more competitive in exports in order to sustain their public debt claims, but as prices and wages will be lower, the debt burden will be higher.

Public debt crisis was fueled in the initial phase through the uncertainty and the increase of information asymmetry. The lack of coordination by the authorities and the inconsistency in decision-making process led to a negative response from the financial markets. So as uncertainty grew bigger, and the negative effects in the meber states have enlarged in intensity.

Analysing the Eurozone states we observe that all the clues indicated the persistence of real problems in manycountries. The detailing the causes of this deep economic crisis must begin by analyzing the economic indicators in these countries. The analysis will be directed to four countries Greece, Ireland, Portugal and Spain in order to understand the current situation substrate.

Table 1

Percentage change in GDP during 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
EU	1.2	1.3	2.5	2	3.2	2.9	0.7	- 4.2
Eurozone	0.9	0.8	2.2	1.7	3	2.8	0.6	- 4.1
Greece	3.4	5.9	4.6	2.2	4.5	4.5	2	- 2
Ireland	6.5	4.4	4.6	6.2	5.4	6	- 3	- 7.1
Spain	2.7	3.1	3.3	3.6	4	3.6	0.9	- 3.6
Portugal	0.8	- 0.8	1.5	0.9	1.4	1.9	0	-2.7

From this table we can remark the problem in Portugal, who registered during this period insignificant growth rates. In fact, its competitive advantages (cheap labor force, growing manufacture sector) began to disappear with the inclusion of ten new Member States after 2004. Throughout this period, there is a rather profound stagnation that reveals real problems in the economic structure. We must not forget that throughout 2003-2008 we had to deal with a

remarcable expansionary cycle, which generated higher global growth rates among emerging markets.

Ireland and Spain progress is to confirm this, the two countries were driven by construction and services sectors. Greece also benefited from the favorable economic cycle, the major problem is that it failed to benefit from this growth in order to restructure its economy and to improve the spreading of public debt. Still, analyzing these tables cannot grasp any clear indication of what was to come for these states. Unfortunately, the singular analysis of GDP growth does not provide a real support for deeper economic analysis. Therefore, we will review another table provided by Eurostat for 2009 that will dissect the components of added value generated by the economic growth at the end of expansionary cycle.

Share of value added by industry as a percentage of 100% (2009)

	Agriculture Fishing	Total industries excluding constructions	Constructions	Commerce Transport Comunications	Financial services	Other services
EU	1.7	18.1	6.3	20.8	29.1	24
Eurozone	1.6	17.8	6.4	20.7	29.3	24.2
Greece	3.8	11.8	4.5	33.5	19.8	26.6
Ireland	1.4	23.9	8.5	17.5	28.7	20
Spain	2.4	15.1	10.7	25	23.7	22.9
Portugal	2.3	16.7	5.6	24	22.9	28.6

Source: Eurostat 2011.

The analysis of these indicators in 2009 is extremely useful because it emphasizes the economic behavior of these states in the first year of the recessionary cycle. It is valuable to note tthe economic response of these states before the change of the economic spectrum. The use the share of value added by industry shows how the economy reacted to an exogenous economic shock, we must not forget that the economic crisis was transmitted in the Eurozone from the American continent. The origin and its initial causes were generated overseas, therefore we considered it as an exogenous shock to countries exemplified in the analysis.

Greece reacted pretty bad in front of this external shock; we observe that the share of added value in financial services fell well below the Eurozone average. It is obvious that before the crisis the share was lower, only that this decrease showed a declining power of the financial sector. This decrease generated liquidity problems in the financial market and a potential threat in refinancing the maturing government bonds. Greece, like many other emerging countries, is dependent of the domestic banking sector, given that many bonds are absorbed there. Also, we observe an abrupt drop of constructions that

caused high social costs, because this sector is labor intensive. It is a problem faced by Spain during the current economic crisis. It is surprising the high percentage of the average Euro area trade, transport and communications, but this is not necessarily good. Historical records have shown over time that in case of prolonged recessions, international trade is suffering a serious imbalance. Thus, exposure to this sector can become very problematic in these periods.

Portugal also experienced decreases in industries and construction which engrossed a large share of the labor force. As in Spain or Greece, commerce remained above average, but financial services suffered a big drop. We note that the three countries except Ireland have suffered on this sector, which generated a vulnerability for the future sustainability of budget deficits. There is a better evolution in Ireland which showed optimum distribution. Thus, industries and constructions recorded weights over the Eurozone average, while financial services remained close to average. Basically, the Irish economy has shown a solid foundation for a more balanced behavior in the first year of the economic crisis.

And yet, what caused the drastic worsening of the situation in Europe? As the economic crisis has shown the effects in Eurozone were redistributed into two groups. A group of states prepared to face strong external shocks, whose restructuring was done in advance through many years. Of these, there is Germany for which the economic crisis was an opportunity to show that it is the dominant force in the European system. On the other hand, countries such as Spain and Ireland were affected by the globally collapse of the housing market. Ireland suffered an even greater imbalance generated by the banking sector heavily exposed to mortgages and various derivative products from US. Spain's housing boom left serious consequences with a very strong impact. Thus, the unemployment rate exploded reaching over 25% and so the real estate developers found themselves trapped in an illiquid market. Portugal, whose development depended largely on the Spanish economy has entered a forced adjustment influenced by external factors. With a stagnant economy even before the crisis, Portugal was forced to confront a harsh reality in the crisis.

Table 3

Budgetary balance

	2002	2003	2004	2005	2006	2007	2008	2009
EU	-2.5	-3.1	-2.9	-2.5	-1.4	-0.8	-2.3	-6.8
Eurozone	-2.6	-3.1	-2.9	-2.5	-1.3	-0.6	-2.0	-6.3
Greece	-4.8	-5.6	-7.5	-5.2	-3.6	-5.1	-7.7	-13.6
Ireland	-0.3	0.4	1.4	1.6	3.0	0.1	-7.3	- 14.3
Spain	-0.5	-0.2	-0.3	1.0	2.0	1.9	- 4.1	-11.2
Portugal	-2.8	-2.9	-3.4	-6.1	-3.9	-2.6	-2.8	-9.4

Table 4

Public debt/GDP

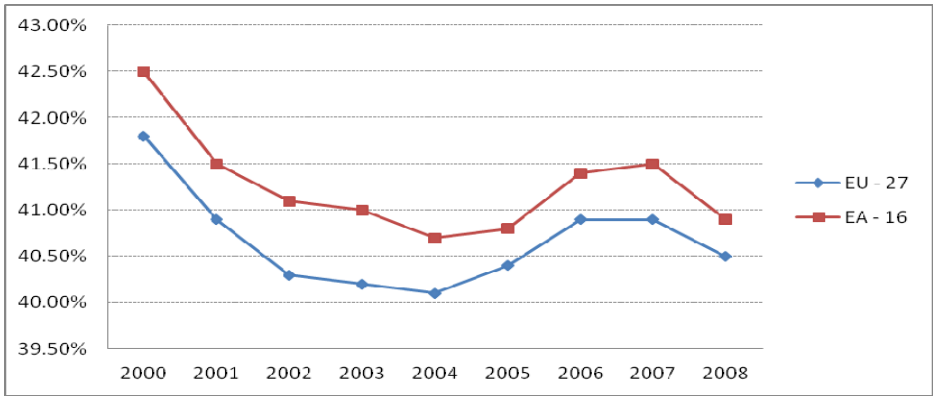
	2002	2003	2004	2005	2006	2007	2008	2009
EU	60.4	61.9	62.2	62.7	61.4	58.8	61.6	73.6
Eurozone	68.0	69.1	69.5	70.1	68.3	66.0	69.4	78.7
Greece	101.7	97.4	98.6	100.0	97.8	95.7	99.2	115.1
Ireland	30.7	31.0	29.5	27.3	24.9	25.0	43.9	64.0
Spain	52.5	48.7	46.2	43.0	39.6	36.2	39.7	53.2
Portugal	55.6	56.9	58.3	63.6	64.7	63.6	66.3	76.8

Source: Eurostat 2011.

Even so, Greece has shown that solutions imposed by reality may differ significantly from the theoretical ones. Currently, the public debt problem in the Eurozone has become extremely serious and can bring great damage to the system functionality in the future. The fault could be that the SGP does not have enough strength to adjust budgetary criterion and cannot be an effective punitive mechanism for the budgetary slippages of Member States.

Reversing cycle and falling budgetary revenues

At EU level, the total revenues through tax amounted to 40.5% of GDP, down 0.4 percentage points compared to 2007. This correction has come from an increase in the level of 0.8 pp from 2004 to 2007. The level of tax revenues in the Eurozone followed the same trend, but were at a higher percentage. However, the correction incurred in 2008 compared to 2007 stated that this indicator was found to be more consistent in the Eurozone, where the percentage of tax revenues to GDP decreasing year on year by 0.6 percentage points (see chart below).



Source: Eurostat, 2011.

Figure 1. *Total revenues by tax as a GDP percentage in 2000-2008*

To decompose the charging system on a more detailed level, however, we should specify in terms of segmental level of taxation in the European Union. For the purposes of ESA 95, income taxes sovereign of the aggregate is composed of:

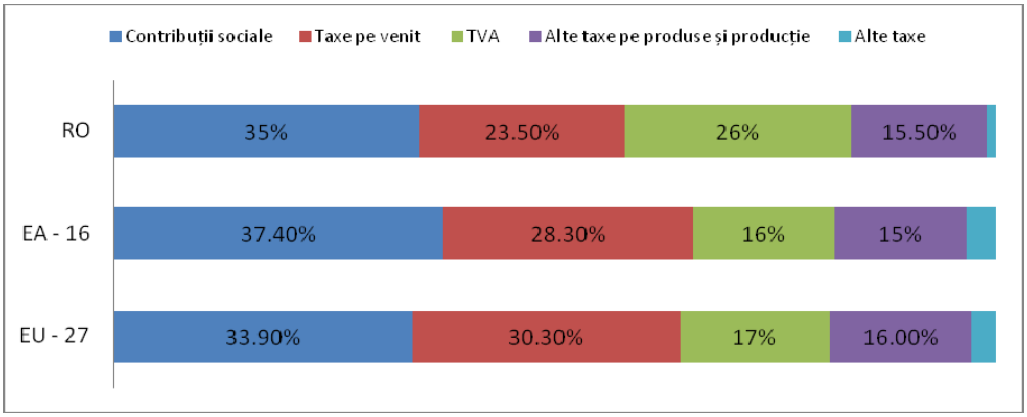
- Taxes on production and imports (indirect taxes). For example, VAT, customs duties, export duties and consumption taxes, stamp taxes, taxes on pollution, etc.
- Current taxes on income and wealth. For example, taxes on profits of legal entities and individual income, taxes on the right of use or ownership of an automobile, taxes fishing and hunting or a number of other current taxes on capital (Direct taxes).
- Taxes on capital. Inheritance taxes, death duties, taxes on gifts etc.
- Actual social contributions. These are paid either mandatory or optional for employees and employers, but also by entrepreneurs, for insurance against social risks (risk of illness, disability, aging, inheritance rights).
- Implicit social contributions (for example: there are situations in which employers pay social benefits to former employees or independent special reserve created for this purpose).

Reported but the economic functions concerned, the charges can be segmented as follows:

- Taxes on consumption. These are considered as taxes applicable on transactions between final consumers and producers and final goods consumption such as VAT, import duties or taxes excluding VAT, stamp duty, tax or capital tax on financial transactions, taxes on international transactions, tax pollution, under-compensation of VAT, taxes on a number of charges.
- Taxes on labor. These include employment taxes, duties directly related to salaries and most of them are applicable to the source, and taxes applicable to persons engaged us in the form of unemployment insurance health funds.
- Taxes on capital. These are defined as taxes on capital and corporate income that they earn economic or receive local or foreign tax and capital stocks including themselves and wealth taxes (taxes on capital, taxes on immovable property, taxes on use of fixed assets, professional licenses or Coorporate, along with a other taxes on products).

Thus, in a more detailed and structural level, social contributions in 2008 proved to be the most important source of income in the European Union, with a proportion of 33.9% of the total, followed by income tax (30 3%), VAT (17%) and other taxes on products and production (16%). In the Eurozone, the

proportion of social security contributions were by 3.5 pp higher than in the EU (see chart below).



Source: Eurostat 2011.

Figure 2. *The structure of revenues in tax by source (2008)*

During 2000-2008, the major components of tax revenue have fluctutated depending on economic circumstances. Between 2000 and 2003 income taxes to GDP decreased by 1.3 pp in the EU-27, after recording an upward trend from 2005 to 2007, with a new correction in 2008, by the international financial and economic conditions. VAT revenue to GDP in the EU-27 remained stable during the period from 2001 to 2004, then increased to 2007 by 0.1 percentage points each year, with a substantial correction in 2008 under heavy braking and unequivocally consumption among all Member States that influenced the trend, with a time lag, and all the other components structure at European level. Tax revenues dropped, this correction was controlled by some states through increasing taxation or supplementary braking price of economic activity. The solutions were left freer to Member States that counterbalanced through the reduction in government spending levels.

At EU level, the labor market currently supports 50% of the tax burden. Consumption taxes represent 27.4% of the total level of taxation and capital market supports 22.8% of that charge. In the Eurozone, however, the level of taxation on employment is up 2.2 pp higher than in the EU, and the capital market and consumption supports a slightly lower level of taxation. Regarding the dynamics of this structure, fluctuations in period 2001-2008 are not immediate. Labor charges incurred decreased by one percentage point from 2000 to 2007 due to sustained correction of social security contributions and personal income taxes, but in 2008 will grow by 0.28 pp. Taxes on capital fell

from a level of 8.9% of GDP in 2000 to a level of 8% of GDP in 2003, after recording an upward trend and a peak in 2007 of 9.5% of GDP. In 2008, however they suffered a correction of 0.5 pp of GDP. Taxes on consumption remained relatively stable over the period 2000-2007, thereafter suffering a series of natural patches under the impact of market conditions.

The recessionary gap caused a sharp drop in revenues, which resulted in a narrowing space for fiscal policy maneuver. Some Member States were consistently forced to cut budget spending in order to cope with rising budget deficits. These negative trends have boosted public debt and created a stalemate for some states that had to refinance their maturing short-term debt. The criticism of theorists on the budget deficit inability to report early signals of fiscal shocks proved correct. Undoubtedly, the analysis of structural deficits would have highlighted the dangers of discretionary fiscal policies applied by some countries in the Eurozone.

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