Abstract
This article tries to present the most important measures that were taken by Member States in the period of the economic crisis. Since 2008, starting with the beginning of the economic crisis, the trend of increasing taxes in the European Union’s Member States is evident and has continuously grown in 2010 and 2011. Most of the EU Members States focused more on indirect taxes, but the beginning of the economic crisis, prompted each state to have its own policy regarding taxation. Fiscal changes during the global economic crisis are needed in each Member State.

Keywords: economic crisis, fiscal policy, EU Member States, fiscal burden, fiscal measures, economic solutions.
1. Introduction

Economists have seen the economic crisis both like a challenge and an opportunity to search and find the “cure” for the world economies. Beginning with 2008, most of the EU Member States were rolling in unsure fiscal policy. This situation continued in 2009, when the EU27 deficit reached 6.8% from Gross Domestic Product (GDP), while GDP declined with 4.2% compared to 2008. Since 2011, 24 of the 27 Member States were subjects of the excessive deficit procedure and have received recommendations from the Council to reduce deficit below 3%.

Most analysts believed that the causes for the emergence and the development of the current economic crisis were determined by overheating. Marek Dobrowski in ‘The Global Financial Crisis: Lessons for European Integration’ discusses that the main causes for the overheating of the crisis are due mainly to the following sectors: the real estate market both in terms of housing and commercial buildings in the U.S., Ireland, UK, Spain, Greece and the Baltic countries, the capital market and last but not least the oil market’s overheating, agriculture and food industry (Dobrowski, 2009, pp. 7-13).

EU Member States are preoccupied in dealing with the trade-offs between tax subsidiarity and fiscal neutrality – the two lodestars that should guide the tax coordination debate with respect to taxes on consumption, labor and capital. Tax subsidiarity involves/requires a large measure of tax autonomy, while fiscal neutrality appears to require a substantial degree of harmonization (Bovenberg, Cnossen and de Mooij, 2003, p. 619).

U.S. tax policymakers have become increasingly aware that significant steps must be taken in order to maintain the United States’ attractiveness as a place for investment and prevent further erosion of the U.S. tax base. The U.S. corporate tax system continues to be burdened by overwhelming complexity and one of the highest statutory rates in the world (Joe, 2009; Buchanan, 1970; Halcombe, 1996; Harvey, 2002).

Double taxation, the lack of tax harmonization, tax-related hindrance of business restructuring and enormous compliance costs are just some barriers to a more competitive and open European market (Göndör, 2011, pp. 151-158; Bank, 2010, pp. 207-232).

Most of the EU Member States recorded an increase of their public debt, the main reason being the effort to save the banking system, so that in 2010 the EU27 public debt reached 80.3% of GDP, while in 2008 the public debt was cumulated to only 62.3%. Taking a stance was necessary, so the Member States began to take some measures in order to reduce the deficit and to set the economy going. In 2009 some states such as Ireland, Lithuania, Estonia and Latvia already started to do something in order to re-launch the economy and to reduce the deficit (Buchanan, 1967; Fisher, 1987; Mikesell, 2003).

Each country started its fight against the economic crisis in its own way, some of them with discretionary measures to induce an increase of the public revenues and a decrease of public expenses, while others have chosen policies centered on fiscal
consolidation. Most of the measures regarding the increase of public revenues were focused, in the majority of Member States towards increasing the fiscal revenues. And what better way of increasing fiscal revenues than fiscal burden?

But what does it mean to increase the fiscal burden? Most of the time, the fiscal burden is seen by most people as increasing some of the tax rates. But the increase of the fiscal burden also means raising the tax base and introducing new taxes. The economic crisis was a tough test for EU Member States regarding the fiscal policies as a concern for the increase of the fiscal burden. We can also discuss the possibility of decreasing the fiscal burden in order to stimulate investors and to help the existing ones take into consideration the crisis period. It can be used also for the reduction of fiscal evasion. Tax evasion is one of the diseases of modern societies, characterized by the shadow economy, corruption and other methods. The causes of tax evasion are given primarily by excessive taxation and corruption.

2. Goal and methodology

The article outlines the main measures taken by the Member States in the EU27 economic crisis. All these items were computed by analyzing and working with Eurostat data and information. The case study focuses on the most important revenues: corporate tax, personal income tax, social contribution, value added tax between 2008 and 2011. The paper is presenting the main measures and solutions that were applied at the level of EU members. It also underlines the tax harmonization challenges at the European level, trying to answer several different questions. The study also points out different solutions in order to face the economic crisis. The studied data offer some conclusions regarding the most significant direct and indirect taxes from EU.

3. Fiscal trends in EU27 in the context of economic crisis

Both economists and economic researchers argue that raising the corporate tax, personal income tax and social contributions are the most damaging decisions that can be made during the financial and economic decline. This is explained by the fact that income tax reduction stimulates investment, while reducing income tax and social contributions leads to increased demand and labor supply with direct effects on reducing unemployment (Eggert and Goerke, 2004, pp. 137-167; Coase, 1960, pp.1-22). The solution seems to be at first sight very simple: do not increase personal income tax, corporate tax and social contributions so that the premises of economic growth are created. But what solution can be found when EU Member States simultaneously have to face on one hand the effects of the economic crisis and on the other hand excessive deficits? How can they cover their deficits? These kinds of issues had to be addressed by countries such as Greece, Spain, and Portugal which in 2011 raised their taxes: corporate tax and personal income tax. Eurostat data reveals that Greece, Portugal and Spain have raised their personal income tax rate in 2010 and 2011. In 2011, Spain reached a 45% personal income tax rate from a 43% rate in the period 2008-2010. In the same period, Greece increased its personal income tax rate to 45%
in the middle of the crisis (2010, 2011) while Portugal increased these rates from 42% in 2008 to 46.5% in 2011. In its attempt to reduce the deficit and to rise the fiscal revenues Portugal intensified its fiscal measures by increasing the corporate tax rate form 26.5% in 2008 and 2009 to 29% in 2010. Have these countries managed to reduce their deficits by increasing the fiscal burden? Apparently not. Increasing the fiscal burden does not necessarily imply reducing the deficit by collecting more fiscal revenues to the budget.

All the measures focused on reducing the budgetary deficit must be correlated with measures focused both on revenues (which does not necessarily imply increasing the fiscal burden) and also on expenditures (which does not imply only reducing the budgetary expenses). Some EU Member States strengthen their fiscal measures with measures focused on: better tax collection, fighting against fiscal fraud, redirection of public expenses towards key areas such as investments and work stimulation (Esteban and Kranich, 2002; Bagchi, Bird and Das-Gupta, 1995; Oates, 1999; Sobel and Holcombe, 1996).

Taxes on labor, more precisely social contributions, represent another category of taxes considered and used by some states as inputs for economic recovery and job creation. High rates of social contributions are detrimental to people with low incomes (Arrow, 1950, pp. 328-334). These rates can be used by each state as a tool to stimulate job creation (Siekierski, 2011, p. 3; Monterio, 2011, pp. 56-61).

However, a number of Member States such as Ireland and Latvia have increased taxes even in 2011 in terms of labor taxation, some by increasing social contributions rates, and others by increasing tax bases, namely: Bulgaria, Cyprus, Lithuania, Portugal, Slovakia and even Romania. Bulgaria chose a more complex measure in terms of labor taxation, namely reducing social contributions rates and increasing the tax base, while Hungary reduced the rates of social contributions in 2011.

As noted previously in 2010 and 2011 personal income tax was increased in multiple states by increasing tax rates or by increasing the tax base. In addition, property tax rate was higher in countries such as the Czech Republic, Germany, Greece, Portugal in 2011 compared with 2010. Some countries have increased taxes in the financial sector in 2011, namely: Austria, Denmark, Hungary, and Portugal.

The main taxes as a share of GDP are represented in most European countries by the personal income tax, corporate and among indirect taxes, value added tax. The financial crisis caused changes in tax rates among EU Member States and beyond. According to Eurostat data for the period 2008-2011 there have been some changes in the tax rates in most EU Member States so as to increase their rates and also to decline the rates in some cases.

With regard to personal income tax which was highlighted in the period 2008-201, most Member States have ensured the stability of this type of tax at least in terms of tax rate (Schmalbeck, 2010, pp. 63-93; Mehrotra, 2010, pp. 25-61). This can be seen in Figure 1 below.
Figure 1: Personal income tax rate in EU 27 between 2008 and 2011

We can highlight the fact that a few countries, such as Greece, Spain, Luxembourg, and Portugal, have used this type of tax by raising the tax rates in order to grow the budget revenues. Still, some Member States such as Lithuania, Hungary, and Poland have tried to lower personal income tax rates. Lithuania reduced personal income tax rate from 24% in 2008 to 15% over the three years, while Hungary after its attempt to increase the personal income tax rate in 2010 with 0.6 percentage points, in 2011 lowered the personal income tax from 40.6% to 16%. Poland also reduced personal income tax rate from 40% in 2008 to 32% in 2009 (it remained the same up to present).

With regard to the corporate tax, we can say that it was quite stable in most of EU Member States in the period 2008-2011 with a slight decrease in some states. Just nine Member States had decreased the corporate tax rate; the most significant reduction being in the UK (from 30% in 2008 to 27% in 2011), Czech Republic (from 21% in 2008 to 19% in 2011) and Sweden (from 28% in 2008 to 26%, 3% in 2011).

These studies indicate that the potential efficiency gains from corporate tax rate harmonization, although positive, are fairly modest. The distribution of the welfare gains, moreover, is highly uneven across the EU, which suggests that tax harmonization is likely to be difficult from a political standpoint (Zodrow, 2003, pp. 653-657; Stiglitz, 2000; Stillman, 1994).

The corporate income tax coordination is likely to cause different effects on the Member States in terms of growth rate of GDP and the level of corporate income tax receipts, but these effects cannot be estimated with certainty (Pirvu, Banica and Hagiu, 2011, pp. 91-102; McLure Jr., 2010, pp. 327-339; Ryan, 2010, pp. 275-326). As seen in Figure 2 below, the only EU country which raised corporate tax rate during the economic crisis is Portugal: from 26.5% in 2008-2009 it reached 29% in 2010-2011.
If tax rates of the most significant direct taxes did not register fluctuations in the European Union, except for some countries, in terms of indirect taxes and especially taxes on consumption, their evolution is more oscillatory. Watching over the most significant tax on consumption, value added tax, in terms of share of GDP, we can say that more than a half of the EU Member States have changed VAT tax rates during the economic crisis.

Mintz and Weiner described two methods of consolidated base taxation with formula allocation under consideration in the European Union. The first method, common (consolidated) base taxation (CCBT), would allow companies to choose a single tax base for their EU wide operations. This tax base would be common throughout the participating Member States. The second method, Home State taxation (HST), would also allow companies to choose a single tax base for their EU-wide operations. But, unlike with CCBT, the tax base would be defined according to the rules in the company’s residence, or “home” state. The conclusion is that common base taxation, either under CCBT or HST, is fraught with economic uncertainties and administrative pitfalls (Mintz and Weiner, 2003, pp. 695; de Mooij and Nicodème, 2006; Genser and Haufler, 1996, pp. 411-433).

Changes have mostly focused on increases in VAT rates even though some states have tried for a relatively short period to decrease VAT rates and then increase them again. Thus Great Britain in 2009 decreased the rate of VAT to 15%, in 2010 returned to 17.5% (the level from 2008), and in 2011 increased the VAT rate to 20%. The most impressive growth of VAT rates was registered in Hungary, Greece, Portugal, Romania, Lithuania, and Latvia. Hungary has already increased the VAT rate since 2009 from 20% to 25% and then to 27% which would result in the highest VAT rate in the EU Member States. Greece increased VAT rate in 2010 from 19% to 23%. Lithuania and Latvia have increased the VAT rate from 18% in 2008 to 21% in 2001. Romania has also raised the VAT rate in 2010 from 19% to 24%. Evolution of VAT rates in the period 2008-2011 is shown in Figure 3 below.
Tax changes during the global economic crisis are needed in each Member State. This does not necessarily mean that every country needs to change tax rates or to introduce new taxes. As was previously shown, tax changes should be made, especially in periods of economic crisis. Such changes should be added to fiscal consolidation measures, efficiency and effectiveness of the fiscal status, the creation of new jobs, investments and finally adding value to the economy and increase GDP (Keen and Ligthart, 2005, pp. 81-110; Carone and Schmidt, 2007).

Eurostat analysis of the data available can offer some conclusions regarding the most significant direct and indirect taxes as share of GDP for the period 2007-2009. We will focus more on developments in 2009 compared to 2008, years of economic crisis and to ensure comparability of data.

We can see from Figure 4 below that in 2009 the personal income tax as share of GDP has registered significant differences from state to state. The country with the lowest rate of personal income tax is Slovakia – 2.4%. Simultaneously it has the highest share of GDP for the personal income tax with 26.5% well above the European average of 8% registered in 2009. This is somewhat understandable given that Denmark like other Nordic countries (Sweden, Finland) are known as countries with the highest tax rates. We note however, that although these countries have not increased their personal income tax rate they still recorded in 2009 an increase as share of GDP, namely: in Denmark the share of personal income tax to GDP rose from 25.3% in 2008 to 26.5% in 2009, while Finland, despite the fact that it slightly decreased the personal income tax rate from 50.1% in 2008 to 49.1% in 2009, still recorded an increased personal income tax as share of GDP from 13.3% of GDP to 13.4% in 2009. In contrast to these states is Italy. In 2009 Italy raised the personal income tax rate with 0.3 percentage points from 44.9% in 2008 to 45.2% in 2009 while in the same period it registered a decrease of personal income tax as share of GDP from 11.8% in 2008 to 11.7% in 2009. The decrease is not significant but shows that an increase in tax rates for certain taxes does not necessarily mean an increase of that tax increase as a share of GDP.
Regarding the decreasing evolution as a share of GDP of personal income tax we can say that in countries such as Latvia, Lithuania, Poland, which decreased the tax rates of personal income tax in 2009 there was also a decrease of personal income tax as share of GDP. Lithuania registered a significant decrease in tax rates of personal income tax from 24% in 2008 to 15% in 2009 which determined a decrease of personal income tax as share of GDP from 6.6% in 2008 to 4.1% in 2009. A country with a decreasing trend of personal income tax as share of GDP is Cyprus which has not changed the tax rates but registered a drop in GDP from 5% in 2008 to 3.9% in 2009.

We conclude therefore that only Finland had found “the right formula” on changing tax rates in respect to personal income tax and has also taken the correlative and appropriate related measures by decreasing the personal income tax rate. It still registered an increase of personal income tax as share of GDP. Meanwhile Denmark and Netherlands, by maintaining personal income tax rates constant, also succeeded in raising their share of GDP.

The evolution of the personal income tax as share of GDP in the EU Member States can be analyzed in the Figure 4 below:

![Figure 4: Personal income tax as share of GDP](image)

The evolution of corporate tax as share of GDP in the years 2007-2009 shows the economic crisis and economic downturn manifested in the bankruptcy dynamics registered in the time of the full crisis. Looking at Figure 5 below, we can say that most EU Member States have registered a decrease of corporate tax as share in GDP except for two states: Malta and Estonia. Malta by maintaining the corporate tax rate at 35% in 2008 and 2009 has also maintained the corporate tax as share of GDP for the same period at 6.7%. But Estonia and Luxemburg recorded the best results among the EU Member States, in terms of corporate tax as share of GDP. Estonia, during a period of full economic crisis, maintained the corporate tax rate at 21%, but has increased the corporate tax as share of GDP from 1.7% in 2008 to 1.8% in 2009. Meanwhile Luxemburg reduced the corporate tax rate in 2009 with a percentage,
and has registered an increase of corporate tax as share of GDP from 5.1% in 2008 to 5.5% in 2009.

At the opposite end of the spectrum a series of countries such as France, Latvia, Finland, Slovenia, the Netherlands have registered the largest decrease of corporate tax as share of GDP in 2009: France from 2.8% to 1.3%, Latvia from 3.2% to 1.6%, Finland from 3.5% to 2%, Netherlands from 3.4% to 2.1% and Slovenia from 2.5% to 1.8%. From all these countries only Slovenia has lowered the corporate tax rate in 2009 by one percent, the others have maintained the rates from the previous years. With regard to the corporate tax, we can conclude that only Luxembourg has succeeded to increase the corporate tax as share of GDP in 2009 by decreasing the corporate tax rate in the same period. The evolution of corporate tax as share of GDP can be analyzed in Figure 5 below.

![Figure 5: Corporate tax as share of GDP in EU 27 between 2007 and 2009](image)

Evolution of VAT as a share of GDP shows once again that the economic crisis is lowering consumption. So there is a tendency for decrease of VAT as share of GDP in 2009 in most of the EU Member States with a few exceptions such as Germany, Estonia, Luxembourg, Hungary, Austria, Finland and Sweden (Terra and Wattel, 2008; Ebrill, Keen, Bodin and Summers, 2001; Godwin, 1998, pp. 541-545).

The most significant growth of VAT as a share of GDP took place in Estonia, Hungary, Finland and Sweden. While Estonia and Hungary have registered increases of VAT in GDP because they have increased their VAT rate in 2009 (in Estonia from 18% to 20%, in Hungary from 22% to 25%) Finland and Sweden have registered significant increases of VAT as share of GDP in 2009 (Finland from 8.4% in 2008 to 8.8%, in 2009 and Sweden from 9.3% to 9.7%) by maintaining constant the VAT rates. Moreover Austria, Germany and Luxembourg have also registered a slight increase of VAT in GDP while maintaining the rate of VAT from 2009. Bulgaria, Ireland, Greece, Portugal, Spain, Latvia, Lithuania, Cyprus and Romania are the countries that in 2009 have registered the most significant decreases of VAT as share of GDP. The most significant decrease was in Cyprus from 11.3% share of VAT in GDP in 2008 to 9.1% in 2009, while the
country did not alter the rate of VAT. The situation was actually more difficult for other countries, namely Latvia and Lithuania which have increased the VAT rate in 2009 from 18% to 21% and from 18% to 19%; however they are still among the states that in 2009 recorded the largest decreases of VAT as share of GDP. The other states mentioned above (Bulgaria, Ireland, Greece, Romania) with significant declines of VAT as a share of GDP had this development while maintaining the VAT rates in 2009. Britain is the only country among EU Member States which in 2009 decreased the VAT rate from 17.5% to 15% and has registered a quite small decrease of VAT as share of GDP in that year (from 6.4% to 5.8% VAT in GDP). This did not last for a long time because in 2010 Great Britain returned to original VAT rate of 17.5%.

The evolution of VAT as share of GDP across EU Member States can be analyzed in Figure 6 below:

![Figure 6: Value Added Tax as a share of GDP between 2007 and 2009](image)

Regarding Romania we can see from the Eurostat data that our country has maintained tax rates for personal income tax and corporate tax and only in 2010 has changed the VAT rate from 19% to 24%. But the effect of the VAT rate change on GDP cannot be analyzed yet because of the lack of availability of Eurostat data. The position of our country can be compared with the EU Member States so that we can say that Romania’s position regarding tax rates is below the EU average, at least for personal income tax corporate tax and income and VAT. With regard to the tax share of GDP, in 2009 Romania, ranked on position no. 20 among the EU Member States regarding VAT, place 25 regarding personal income tax, and eight place regarding corporate tax with reference to their share of GDP. A short analysis regarding the share of GDP of VAT and personal income tax compared to the European average for 2007-2009 shows us that Romania was slightly above the European average in terms of share of GDP excluding VAT in 2009 when Romania was slightly below the European average in terms of GDP share for corporate tax and well below European average (about 5 percentage points) in terms of personal income tax. This is somewhat understandable because in these cases, personal
income tax, and corporate tax, Romania is well below the European average (by about 7 percentage points for corporate tax and over 20 percentage points for personal income tax) regarding the tax rates. In case of VAT rates, Romania has a VAT tax system close to the EU average.

Although increasing tax rates should be reflected in the increase in GDP share of those taxes, this has not happened in the case of countries such as Latvia and Lithuania which increased their VAT rates in 2009 and have registered a decline as a share in GDP. For example Italy has increased the personal income tax rate in 2009 by 0.3% while it registered a decrease of this tax as a share in GDP from 11.8% in 2008 to 11.7% in 2009. Countries such as France, Latvia, Finland, Netherlands have registered the largest decreases among EU Member States in reference to the share of corporate tax in GDP in 2009, in the same period in which they did not change the corporate tax rates. Examples such as Italy, Latvia, Lithuania, and France show us once again that the increase of fiscal burden in these cases by increasing the tax rates does not necessarily lead to increases in GDP. Therefore, increasing revenues is not achieved or at least not only achieved by increasing taxation. Instead, the examples of states such as Denmark, Finland prove to us that with a decrease in tax rates growth in GDP of those taxes can still be achieved. For example in 2009 although Finland had a slight decrease of VAT rate with one percentage it still registered in the same year a slight increase of VAT as a share of GDP. Denmark managed to increase the personal income tax and corporate tax in GDP while maintaining tax rates. That shows that these countries have managed to take some measures in terms of fiscal revenue to increase tax shares in GDP, having a more efficient effect than increasing taxation.

4. Conclusions

The issue of taxation in EU Member States reflects tax diversity among these countries. Nordic countries have high shares of direct taxes, while Portugal and Greece predominantly focused on indirect taxation. It is therefore natural that the reactions of these states to fiscal trends are different. Achieving and sustaining a healthy situation of public finances is essential to cope with the economic crisis and ensure a stable economic recovery. Reducing public debt and budget deficits is a requirement for all EU Member States, leading to lower inflation and encouraging investments. European Union has a number of documents (Maastricht Treaty, the Stability and Growth Pact) which are focused on financial stability to prevent new financial crises and aimed for actions to ensure fiscal discipline among Member States. With these requirements, a particularly important concern of each Member State on the political agenda should be a strong and healthy fiscal policy. Fiscal policy of each Member State must ensure on one hand public services funding, and it must also assume its economic leverage ability to influence the functioning of the real economy by encouraging employment, and investments.
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