Toward a Common Tax Regime for the European Union Countries*

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Abstract:

The tax burden on wages, profits, property, and goods or services has a serious impact on cross-country competiveness, something that, in turn, impinges strongly on the actual economy of common markets such as the European Union (EU). While the mobility of productive factors is directly related with country tax-regime differences, government budget funding from tax revenues and rates are the main fiscal policy tools. This article analyzes the trends, similarities and differences between the tax regimes of European Monetary Union (EMU) for the period from 1995 to 2019. The methodologies we employ include time series analysis, regression analysis and multivariate cluster analysis. The data are mainly collected from the OECD database and tax revenue departments at country level. We argue that there are significant differences among the tax regimes of EU countries and that no policy has been implemented to ensure tax homogeneity across the EU, nor is there any likelihood of such. The anarchy in fiscal policy is an obstacle for the European Integration. Budget deficits have an impact on taxation and countries, invariably, manage the recent debt crisis by selecting different taxes as fiscal policy tools. Our article presents the differences between tax regimes of EMU countries and shows that the level of economic growth affects the structure of taxes at work and alters the performance of different types of taxes; is also wishes to explain the factors that differentiate tax regimes by using multi dimensional criteria and variance analysis. Our work contributes to the debate toward a common tax regime between EU countries and our analysis is concentrated on this.

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Key Words: Taxation, European Integration, Tax Regime Structure

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1. Introduction

According to the work of Peeters Bruno (2009,2010,2011), Schwarz Peter (2007), Smith Eric and Webb J. Tracy (2001), Thalassinos and Kiriazidis, (2003), Munin Nellie, (2011), Thalassinos and Politis (2011) and Edouard-Jean Navez (2012), the tax system applied in a country has a serious impact on cross-country competiveness, something that, in turn, impinges strongly on the actual economy of common markets such as the European Union (EU) and the differences among tax regimes diversifies homogeneity⁴. From the other hand the mobility of productive factors is directly related with country tax-regime differences, government budget funding from tax revenues and rates are the main fiscal policy tools.

We argue that there are significant differences among the tax regimes of EU countries and that no policy has been implemented to ensure tax homogeneity across the EU, nor is there any likelihood of such. The anarchy in fiscal policy is an obstacle for the European Integration. Budget deficits have an impact on taxation and countries, invariably, manage the recent debt crisis by selecting different taxes as fiscal policy tools (Thalassinos *et al.* 2006 and 2012).

Our article shows that the type and the level of economic growth affects the structure of taxes at work and alters the performance of different types of taxes; is also wishes to explain the factors that differentiate tax regimes by using multi dimensional criteria and thus contribute to the debate for a common tax regime between EU countries. It presents, also, the groups of EU counties with similar tax regimes and analyze the characteristics of structure among applied tax regimes and thus contribute to debate which type of tax regime is more suitable as a common tax regime.

According to Stuckler *et al.* (2010), taxing the rich is a policy based to increase taxes against the recent financial crisis and carries a considerable populist appeal (as many hold those involved with the bank system responsible for the crisis and believe they should pay its price, though this happened only in the case of Ireland and not in other PIIGS countries).

⁴ For an analysis of tax competition in the European Union, see, for instance, Goodspeed 2002 or Zodrow 2003.

A key problem with the current debt crisis is public spending is increased less than decreased tax revenue. However, some commentators Wilkes, (2009) argue that taxing bonuses and high incomes may stifle incentives for entrepreneurship and innovation. Enforcing a more progressive tax system is politically challenging in light of the lobbying strength of the wealthy, but may most directly address the current debt crisis. While more progressive taxation is a less viable option in countries with already highly progressive systems, like Sweden, there is scope for raising revenues in the UK, Greece and other EU countries. In fact, the current governments of EU countries have adopted a quite different approach, increasing VAT - a regressive indirect tax whose burden falls disproportionately on the poor (Thalassinos and Liapis, 2013).

There are also some simple, albeit politically difficult, changes that would bring the corporate taxation in line with other countries, to yield very large sums for continued government spending. In many countries, like Ireland, the economic development policy is based on a low corporate tax and, thus, it is difficult for this tax to be in line for all EU countries. Increasing taxes on alcohol, tobacco and sugary drinks further could represent viable revenue-generating options, benefiting both health and the economy. In the short run, these options may disproportionately hurt the poor (although there are disputes about the net effect on their overall welfare), and Keynesian economists worry that such taxes will diminish aggregate demand and slow down recovery. Thus, in Roosevelt's New Deal, prohibition on alcohol was lifted not only because drinking was popular, but mainly because it would reinvigorate consumer spending and increase tax revenues. The health costs of this aspect of New Deal policy (and, in turn, subsequent downstream costs) were never assessed. Further limitations include the scope for tax evasion due to imports from other EU countries, as well as smuggling of goods such as cigarettes, an activity in which the tobacco industry has been complicit. Another option is the proposed Tobin Tax, which would take a very small percentage of capital flows. This could generate significant revenue, but would require agreement and implementation by all major countries to be effective. Finally, the excessive use of taxes against crisis causes social dissatisfaction, and, especially in the case of Greece, nobody knows whether this policy is suitable and can bring the desired effects.

In our article the tax regimes of EU countries are analyzed in the following parts in order to present the current situation and to find the structure, the trends and the similarities among applied tax regimes. Our work, also, examines the

implementation fair and unfair taxes and the adequacy of each countries tax system and legislation.

2. The EU Countries

This article analyzes the trends, similarities and differences between the tax regimes of EU countries for the period 1995 till 2009. The EU countries used are on the Table1 (Countries).

	Country						Country	
ID	Code	Country	ID	Country	Luxembourg	ID	Code	Country
1	BE	Belgium	10	FR	French	19	Austria	Poland
2	BG	Bulgaria	11	IT	Italy	20	Poland	Portugal
3	CZ	Czech	12	CY	Cyprus	21	Portugal	Romania
4	DK	Denmark	13	LV	Latvia	22	Romania	Slovenia
5	DE	Germany	14	LT	Lithuania	23	Slovenia	Slovenia
6	EE	Estonia	15	Luxembourg	Hungary	24	SK	Slovakia
7	IE	Ireland	16	Hungary	Malta	25	FI	Finland
8	EL	Greece	17	Malta	Nederland	26	SE	Sweden
								United
9	ES	Spain	18	Nederland	Austria	27	UK	Kingdom

Table 1. Countries

2. The Category of Taxes

The general categories of taxes are separated in three dimensions. In the first dimension the volume of total taxes is distinguished if including or excluding Social Security Charges (SSC). In the second dimension the volume of total taxes without SSC are analyzed in the indirect and direct taxes, and in the lower level, are presented Value added Tax (VAT) and the taxes on Personal and Corporate income. In the third dimension the volume of total taxes with SSC are presented according to the tax bases in which are applied. The tax bases are divided into Labour, Consumption, and Other. In the other tax bases are included tax on gains, capital taxes, property taxes, environmental taxes, energy taxes and taxes on customs or rights. Table 2 (Taxes), shows all above dimensions and tax levels.

TAXES								
Total Taxes (excluding SSC)	Indirect Taxes	Indirect Taxes - VAT						
		Direct Taxes - Personal income						
	Direct Taxes	taxes						
		Direct Taxes - Corporate income						
		tax						
Total Taxes (including SSC)								
Taxes per Tax Bases	Taxes on Labour							
[Total Taxes (including SSC)]	Taxes on Consumption							
	Taxes on Other Bases							

Table 2. Dimensions and tax levels

3. The Data and Methodologies

The methodologies we employ include descriptive statistics, time series analysis (analyzing the trends), regression analysis (analyzing determining factors) and multivariate cluster analysis (analyzing differences and similarities).

Our data are mainly collected from the OECD and EUROSTAT database, tax revenue departments at country level and authors calculations. The databases which are used are provided at the references part and for that reason we don't provide "sources" under the tables.

The aim of our study is to present similarities between EU counties, thus we gathered a collection of samples, for tax variables, in order to group the samples into homogeneous tax regimes groups of EU countries. The most suitable method for our analysis is the Multi sample case of Cluster analysis (Mardia *et al.*, 1979). In our analysis, we used the Multi sample problem of Cluster analysis for tax variables which are analyzed as follow:

Let, \mathbf{x}_{ij} , $\mathbf{i} = \mathbf{1}_{j}$, \mathbf{n}_{j} , be the observation in the jth samples for the tax variables, j=1,2,...,m. The aim of cluster analysis is to group the m samples into g homogeneous classes where g is unknown, $g \leq m$. The clustering methods are optimization partitioning techniques since the clusters are formed by optimizing a clustering criterion. According to these hierarchical methods, once an object is allocated to a group, it cannot be reallocated as g decreases, unlike the optimization techniques. The end product of these techniques is a tree diagram (Dendrogram). In our study, we used the max similarities within groups and min similarities between

groups as hierarchal methods. These techniques operate on a matrix of distances $D = (d_{ij})$ between the points x_1, \dots, x_n rather than the points themselves. The distant matrix is the Euclidian distance:

$$d_{ij}^2 = \sum_{k=1}^{p} (x_{ik} - x_{jk})^2 = |x_i - x_j|^2$$
(1)

Where: X be an (n x p) data matrix

In the Data Matrix are included the EU of Table 1 and thus we have Cases j=27. The variables which are used for the production of similarities between countries are separated in the tax variables according to the Table 2 as percentages of Gross Domestic Product (GDP), as percentage of Public Revenues from Total Taxation, as high rate or implicit rate of each tax category and all above variables for the years 1995, 2000, 2005, 2009, and 2011 where data are available, thus we have finally, Variables p=69. For the estimation purposes we only use rates, percentages and movements in order to avoid influencing our analysis of the original sizes of variables.

4. Tax Regimes and Tax Performance

In this part are analyzed the different types of taxes. The tax rates are analyzed per category and structure and volume of each tax are correlated with their contribution to public revenues as percentage of GDP and total taxation in order to find the trends, similarities and differences between tax regimes among countries.

4.1 Total Tax

The total public revenues from taxes as percentage of GDP with and without social security charges for the years from 1995 to 2009 are analysed in this part per country. According to Table 3, the total average tax decreases from 2000 to 2009.

Table 3. Total Tax													
					Total tax without SSC as % of								
	Total t	ax with S	SC as % o	of GDP	GDP				SSC as % of GDP				
	1995 2000 2005 2009				1995	2000	2005	2009	1995	2000	2005	2009	
EU countries	36,58	36,99	36,61	35,85	25,34	25,87	25,79	24,76	11,24	11,12	10,82	11,09	

The most suitable diagram to analyzing similarities is "Radar". When the line of diagram seems like cycle we have common structure of tax volumes between countries and if we have stereogram, which produced by years, that seems like "mountain", then we have decrease of Total tax. Figure 1 Total tax with SSC as % of GDP shows per country the volumes and the trends of Total taxation including SSC.

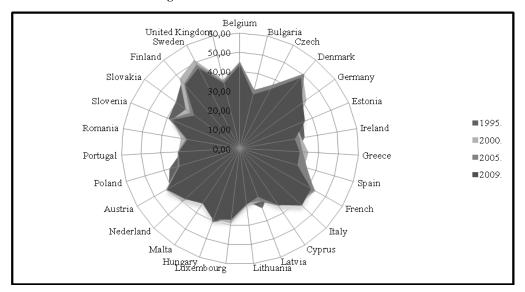


Figure 1. Total Tax with SSC as % GDP

Figure 2 Total tax per without SSC as % of GDP shows the volumes and the trends of Total tax excluding SSC per country. In Denmark the SSC direct including in taxation structure and for this reason there is no significant difference between total tax including or excluding SSC.

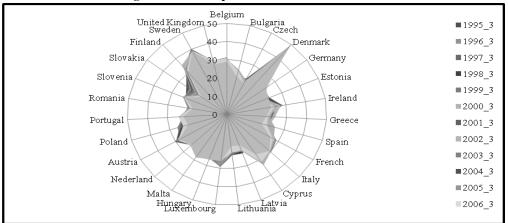


Figure 2. Total tax per without SSC as % of GDP.

The similarities of total tax burden between countries are produced using hierarchical cluster analysis. Figure 3 Similarities between countries according to volume total tax without SSC, using all available data for the years 1995 to 2009 in order to including the changes of tax burden during the time, presents the groups with similar countries (Thalassinos, Liapis and Thalassinos, 2013). According to Figure 3 three groups are produced and Finland, Denmark and Sweden stand alone in the highest level of tax burden.

Dendrogram using Average Linkage (Between Groups) Rescaled Distance Cluster Combine 25 Latvia 13 Lithuania 14 Czech 3 Estonia 6 Greece 8 Bulgaria 2 Spain 9 Poland 20 Romania 22 Slovakia 24 Cyprus 12 Malta 17 Portugal 21 Slovenia 23 Germany 5 Hungary 16 Nederland 18 Italy 11 United Kingdom 27 Austria 19 Belgium 1 French 10 Luxemboura 15 Ireland 7 Finland 25 Denmark 4

Figure 3. Similarities between countries according to volume of total tax without SSC.

The Table 4. Direct and Indirect Taxes shows the volumes of Direct and Indirect Taxes as % of GDP. According to the percentages on total revenues from taxes, significant differences are existed in the tax structure (direct and indirect taxation) between EU countries, $\pm 10\%$. The direct taxes remain at a lower level against indirect taxes in many countries and as average in EU market, as a percentage difference approximately 2%, which denotes an unfair tax regime according to tax theory.

Sweden 26

Total tax without Direct Taxes % 2009 volumes as SSC as % of GDP Indirect Taxes % GDP **GDP** % of Total Tax 2009 2000 2009 2000 2000 2009 Indirect Direct 25,87 24,76 13,7 13,4 12,2 11,5 54% 46% Average

Table 4. Direct and Indirect Taxes

The Table 5. Tax Bases, presents the breakdown of total tax including SSC, in tax on labour, consumption and on other tax bases. According to the percentages on total revenues from taxes, significant differences are existed in the tax structure

(Labour, Consumption and Other tax) between EU countries, $\pm 3\%$. The taxes on labour remain at a higher level against taxes on consumption and taxes on other tax bases in many countries and as average in EU market, thus the countries are focused on Labour for collection of public revenues.

Total tax with SSC % Tax on Other 2009 volumes as % of total tax Tax on Tax on GDP labour % gdp consumption%gdp Bases %gdp with SSC 2000 2009 2000 2009 2000 2009 2000 2009 Labour Consumption Other 11,7 Average 37,0 35,8 17,8 17,5 12,0 7,2 6,6 49% 33% 18%

Table 5.Tax Bases

4.2 Total Tax

Table 6 Indirect Taxes and VAT, provide, the VAT high rates, the VAT as % GDP, the VAT as % of total public revenues from taxes, and the VAT as % of Indirect Taxes.

Table 6. Indirect Taxes and VAT

		VAT I	nigh ratio	os	VAT9	6GDP	VAT%	Г.ТАХ.	VAT % IND.T	
Country / Year	2000 2009 2011 dif00-11		2000	2009	2000	2009	2009			
Average	19,2	19,8	20,7	1,5	7,3	7,4	20,1	21,0	56%	

Figure 3. Indirect taxes as % of GDP per country, shows the trends and the similarities of indirect taxation between EU countries for the years from 1995 till 2009.

■1995 5 Belgium United Kingdom 20 Sweden Bulgaria Czech ■1996 5 Finland, Slovakia Germany 10 Slovenia Estonia **2000** 5 Romania Ireland ■2002 5 0 Portugal Greece ■2003 5 **2004_5** Poland Spain **2005_5** Austria French =2006_5 Nederland Italy ■2007_5 Cvprus =2008_5 Lithuania ia Hungary Luxembourg ■2009 5

Figure 3. Indirect taxes as % of GDP per country

Figure 4. Value Added Tax as % of GDP per country, shows the high tax ratio and the volume of VAT as percentage of GDP between EU countries for the year 2009.

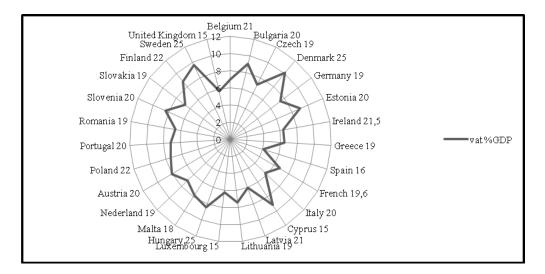


Figure 4. Value Added Tax as % of GDP per country

Nowadays a debate exists if there is positive correlation between VAT tax rates with volume of VAT as percentage of GDP. Is obvious, Musgrave *et al.* (1973) that the tax rate affects direct the amount of tax revenue. Deviations from this rule or instability in performance among countries indicates the existence in the countries tax legislation, Tax Free amounts, Tax deductible amounts, Tax exempt amounts, and differences in tax rates per incremental level of tax basis, or exist tax evasion or failure of tax authorities in collecting taxes. Figure 5 VAT tax rate and volume, shows that exists positive correlation between tax ratio and volume for VAT but exists also volatility according to the scatter diagram and the price of R squared. This volatility shows that exists significant difference in performance between EU countries collection of VAT especially in the low level of tax rate. The cross section data are used for the year 2009.

8,3

Average

8,0

21,4

21,2

4.3 Direct Taxes and Tax on Personal and Corporate Income

Table 7 Direct Taxes on Personal, Corporate and Other Income, presents the breakdown of Direct taxes into Personal, Corporate and Other Income. According to this breakdown significant differences are existed in the tax structure on income (Personal, Corporate and Other) between EU countries. The corporate and other income taxes remains at a lower level against Personal income taxes in many countries and as average in EU market which denotes that personal income remains as the main income bases for the direct taxation.

Tax on Tax on Tax on Personal Tax on Corporate Income % of Income % of Personal Corporate Total Income % Tax on Income % Direct Taxes Income % Total **GDP** Taxation **GDP** Taxation for 2009 Other 2000 2009 2000 2009 2000 2009 2000 2009 Personal Corporate Income

8,6

7,8

70%

24%

7%

Table 7. Direct Taxes on Personal, Corporate and Other Income

Figure 6 Direct taxes as % of GDP per country, shows the trends and the similarities of direct taxation between EU countries for the years from 1995 till 2009.

3,1

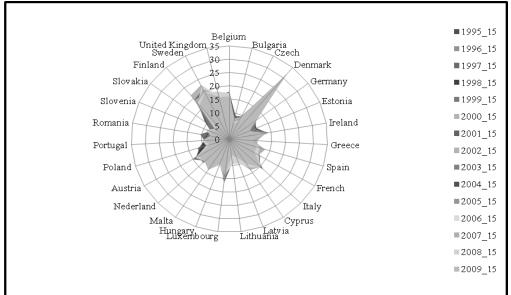


Figure 6. Direct taxes as % of GDP per country

Table 8 Tax Rates on Personal and Corporate Income, presents the tax rates for the years 200,2009 and 2011, and the differences of tax rates from 2000 to 2011, significant decreases are existed in the tax rates of direct taxes for all EU countries. The decrease of tax rates on corporate income remains at a higher level from tax rates on personal income.

Tax high Ratio on Tax high Ratio on difference personal income difference corporate income 2000 2009 2011 00 - 112000 2009 2011 00-11 Average 44,7 37,6 37,1 -7,6 31,9 23,3 23,2 -8,7

Table 8. Tax Rates on Personal and Corporate Income

Figure 7 Tax on Personal Income as % of GDP per country, shows the high tax ratio and the volume of tax as percentage of GDP between EU countries for the year 2009. According to the diagram low homogeneity exists for the volumes of personal income between EU countries.

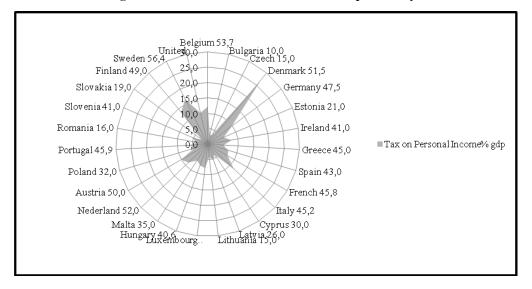


Figure 7. Tax on Personal Income as % of GDP per country

Figure 8 Tax on Personal Income, shows that exists positive correlation between tax ratio and volume of personal income tax but exists also volatility according to the scatter diagram and the price of R squared. This volatility shows that significant difference in performance between EU countries collection of taxes on personal income especially in the high level of tax rate exists. The cross section data are used for the year 2009.

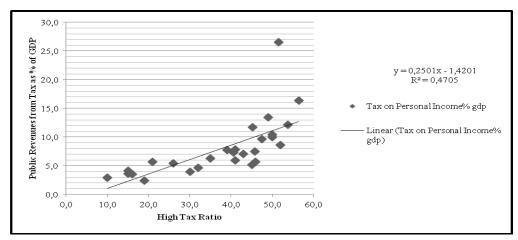


Figure 8. Tax on Personal Income

Figure 9 Tax on Corporate Income as % of GDP per country, shows the high tax ratio and the volume of tax as percentage of GDP between EU countries for the year 2009. According to the diagram low homogeneity exist for the volumes of corporate income between EU countries. Cyprus, Malta and Luxembourg as international corporate centers have high level of volumes and from the other hand Germany has the lowest volume as % of GDP form all other countries.

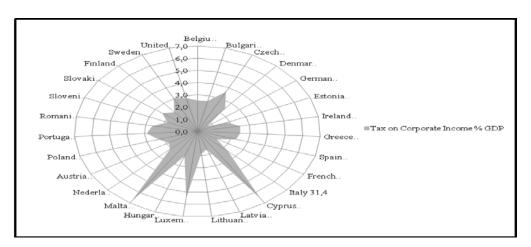


Figure 9. Tax on Corporate Income as % of GDP per country

Figure 10 Tax on Corporate Income, shows that does not exist any correlation between tax ratio and volume of corporate income tax according to the scatter diagram and the price of R squared. This volatility shows that high or low level of tax rate has same volumes of tax as percentage of GDP. The general rule (strongly positive correlation between tax rate and tax revenue) is not followed by the countries indicating significant differences in tax legislations and problems in collecting taxes. The cross section data are used for the year 2009.

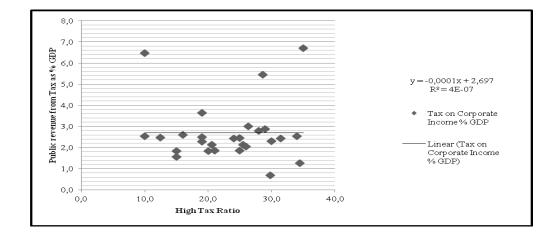
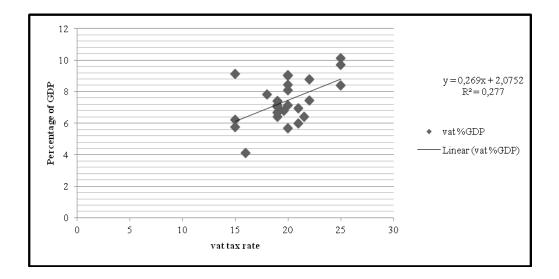


Figure 10. Tax on Corporate Income

Figure 5. VAT tax rate and volume



4.4 Taxes on Labor, Consumption and Other

Table 9 Implicit Taxes Rates on Labour, Consumption and Other Bases, provides from another point of view a breakdown Public revenues from taxation for EU countries. According to this breakdown there are no significant differences during

the time for implicit tax rates for labour and consumption (decrease of implicit tax rate for labour and stabile for consumption).

			Implicit tax							
	Implicit tax		rate		labour %		Consumption			
	rate Labour		Consumption		gdp		% gdp		Other % gdp	
	2000 2009		2000	2009	2000	2009	2000	2009	2000	2009
Average	35,7	32,9	20,8	20,9	17,8	17,5	12,0	11,7	7,2	6,6

Table 9. Implicit tax rates on Labour and Consumption and Other Bases

Our study in order to testing if there is positive correlation between labour implicit tax rates with volume of tax as percentage of GDP, provides the Figure 11. Taxes on Labour Bases, which shows that exists strongly positive correlation between implicit tax ratio and volume of tax on labour according to the scatter diagram and the price of R squared. The cross section data are used for the year 2009.

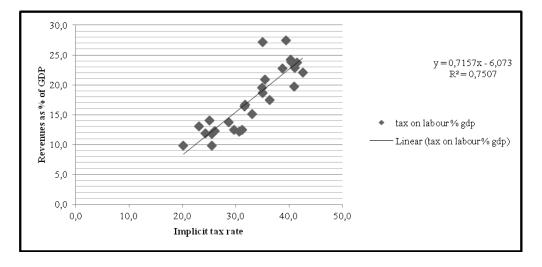


Figure 11. Taxes on Labour Bases

In order to test if there is positive correlation between consumption implicit tax rates with volume of tax as percentage of GDP. Figure 12. Taxes on Consumption Bases, shows that exists positive correlation between implicit tax ratio and volume of tax on consumption, there is also volatility according to the scatter diagram and the

price of R squared. Nowadays proposed by the EU authorities to substitutes tax revenues from labour with tax revenues from consumption, but this still does not seem to happen. The cross section data are used for the year 2009.

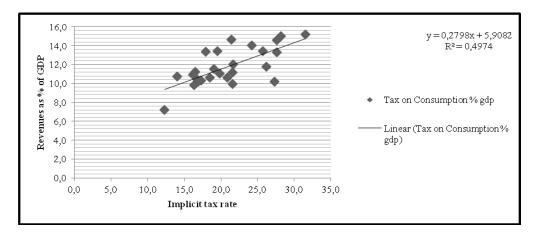


Figure 12. Taxes on Consumption Bases

All other tax volumes as % of GDP from other tax bases include taxes such as capital gains and property taxes, provide for the year 2009 in the Figure 13. Taxes from other tax bases.

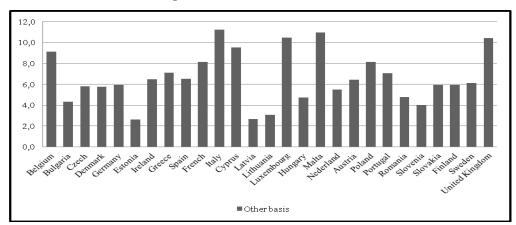
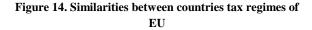
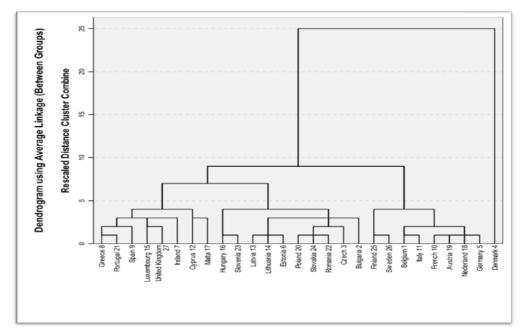


Figure 13. Taxes from other tax bases

5. The Similarities of Tax Regimes between EU Countries

Using Euclidian Distance and average linkage between groups, is produced the cluster of similarities between countries using criteria from above mentioned fields of taxation. These similarities are presented in Figure 14. Similarities between countries tax regimes of EU.





According to our estimations EU countries are grouped in 3 main separate groups, with obvious evidence that in the classification exists a spatial character.

The first large group consists of three subgroups; In the first subgroup including the Greece, Portugal and Spain old members of EU at the Southern Europe which face Debt Crisis and characterized by problems in tax performance; the second subgroup is consisted by Luxembourg, United Kingdom, and Ireland old members with developed financial sector, face Financial Crisis and characterized by similar tax regimes; the third subgroup is consisted by Cyprus and Malta the newest from old members of EU with International corporate sector, and characterized by similar tax regimes.

The second large group consists of Eastern European countries, new members of EU, characterized by problems or instability in tax performance and consists of two subgroups; in the first subgroup including Latvia, Lithuania and Estonia; the second subgroup is consisted by Poland, Slovakia, Romania, and slightly Bulgaria.

The third large group consists of Central European countries, old members of EU, characterized by stabile, balanced or high tax performance and consists of three subgroups; in the first subgroup including Finland and Sweden, the North European countries; the second subgroup is consisted by Belgium and Italy; the third subgroup is consisted by France, Austria, Nederland, Germany, the central and more developed EU countries: at the end with a different tax regime from all other countries Denmark stand alone.

The differences and the imbalances between EU countries reflect different tax regimes structures and this problem seems to have also a spatial character and will pose a serious regional problem for the EU, and especially EMU countries, which already have a common currency and monetary policy.

6. Conclusions

We argue that there are significant differences among the tax regimes of EU countries and that no policy has been implemented to ensure tax homogeneity across the EU, nor is there any likelihood of such. The anarchy in fiscal policy is an obstacle for the European Integration. Budget deficits have an impact on taxation and countries, invariably, manage the recent debt crisis by selecting different taxes as fiscal policy tools.

According to the evidence of our study total average tax revenues as % of GDP decrease into EU market from 2000 to 2009. Into the market other countries remained stable while, several decrease their tax revenues as % of GDP. Significant differences are existed in the tax structure (direct and indirect taxation) between EU countries. The direct taxes remains at a lower level against indirect taxes in many countries and as average in EU market which denotes an unfair tax regime according to tax theory. Significant differences are existed in the tax structure (Labour, Consumption and Other tax) between EU countries. The taxes on labour remain at a higher level against taxes on consumption and taxes on other tax bases in many

countries and as average in EU market, thus the countries are focused on Labour for public revenues collection.

A positive correlation exists between tax ratio and volume for VAT but exists also volatility. Deviations from the rule of proportional change, between tax rate and volume of tax revenues, shows: instability in tax performance among countries; indicates the existence in the countries problematic tax legislation (tax Free amounts, tax deductible amounts, tax exempt amounts, and differences in tax rates per incremental level of tax base); exists tax evasion or failure of tax authorities in collecting taxes or replacement taxable amounts with tax exempt income or with income classified to other tax base with lower tax rate. This volatility shows that significant difference in performance between EU countries collection of VAT especially in the low level of tax rate exists.

Significant differences are existed in the tax structure on income (Personal, Corporate and Other) between EU countries. The corporate and other income taxes remains at a lower level against Personal income taxes in many countries and as average in EU market which denotes that personal income remains as the main income base for the direct taxation. Significant decreases are existed in the tax rates of direct taxes for all EU countries. The decreases of tax rates on corporate income remains at a higher level compared to tax rates on personal income. Low homogeneity exists for the volumes of personal income between EU countries; also, positive correlation between tax ratio and volume of personal income tax and volatility also exists. This volatility shows that significant difference in performance between EU countries collection of taxes on personal income especially in the high level of tax rate is present. Low homogeneity is also present for the volumes of corporate income between EU countries. Cyprus, Malta and Luxembourg as international corporate centers have high level of volumes and from the other hand Germany has the lowest volume as % of GDP form all other countries. Tax ratio and volume are not correlated for corporate income tax. This high volatility shows that high or low level of tax rate has same volumes of tax as percentage of GDP. The general rule (strongly positive correlation between tax rate and tax revenue) is not followed by the countries indicating significant differences in tax legislations and problems in collecting taxes from companies.

There are no significant differences during the time for implicit tax rates on labour and consumption (decrease of implicit tax rate for labour and stabile for consumption). Exists strongly positive correlation between implicit tax ratio and volume of tax on labour. Exists positive correlation between implicit tax ratio and volume of tax on consumption, there is, also, volatility. Nowadays, proposed by the EU authorities to substitutes tax revenues from labour with tax revenues from consumption, but this still does not seem to happen. All other tax volumes as % of GDP from other tax bases include taxes such as capital gains and property taxes varied widely between countries (from 2% to 11%).

The tax regimes of EU countries are grouped in 3 main separate groups. The differences and the imbalances between EU countries reflect different tax regimes structures and this problem seems to have also a spatial character and will pose a serious regional problem for the EU, and especially EMU countries, which already have a common currency and monetary policy. Movements of Tax Revenues, GDP and Government Debt and Balance of payment for the years 2000 to 2009 shows, great anarchy among countries based on the movements of their fundamentals in relation of the movements of their tax revenues.

The contribution of this article is, in addition to presenting the current situation, to identify and clustering the differences and discrepancies between the tax regimes so that policies to standardize the tax regimes of EU countries to be targeted and feasible.

References

Authorities electronic Publications and Databases

Edouard-Jean, N. (2012), 'The Influence of EU Law on Inheritance Taxation: Is the Intensification of Negative Integration Enough to Eliminate Obstacles Preventing EU Citizens from Crossing Borders within the Single Market?", EC Tax Review, Vol. 21 (2) pp. 84–97.

Goodspeed, T.J. (2002), 'Tax competition and tax structure in open federal economies: Evidence from OECD countries with implications for the European Union', *European Economic Review*, Vol. 46, pp. 357-374.

Mardia, V.K., Kent J.T, and Bibby J.M (1979), "Multivariate Analysis", Academic Press; London.

Munin, N. (2011), 'Tax in Troubled Time: Is It the Time for A Common Corporate Tax Base in the EU?' EC Tax Review, Vol. 20 (4), pp. 121–133.

Musgrave, A.R. and Musgrave, B. P. (1973), "Public Finance in Theory and Practice, McGraw-Hill", New York.

OECD (2011), "Revenue statistics: Comparative tables", OECD Tax Statistics (database). http://www.oecd.org/statsportal/

Peeters, B. (2009), "European Guidelines for Federal Member States Granting Fiscal Competences c.q. Tax Autonomy to Sub-national Authorities", *EC Tax Review*, Vol.18 (6) pp. 50–52.

- Peeters, B. (2010), 'Tax Sovereignty of EU Member States in View of the Global Financial and Economic Crisis' *EC Tax Review*, Vol.19 (3) pp. 236–237.
- Peeters, B. (2012), 'Tackling Cross-Border Inheritance Tax Obstacles within the EU' *EC Tax Review*, Vol.21 (2) pp. 54–56.
- Publication Office of the European Communities, Eurostat, http://publications.europa.eu/index_en.htm, http://ec.europa.eu/taxtrends, http://ec.europa.eu/eurostat.
- Schwarz, P. (2007), "Does capital mobility reduce the corporate-labour tax ratio?", *Public Choice*, Vol. 130, (3-4), pp. 363-380.
- Smith, E. and Webb, J., T. (2001), "Tax Competition, Income Differentials and Local Public Services", *International Tax and Public Finance*, Vol. 8, (5-6), pp.675-691.
- Stuckler, D., Basu, S., McKee, M. and Suhrcke, M. (2010), "Responding to the economic crisis: a primer for public health professionals", *Journal of Public Health* Vol. 32, No. 3, pp. 298–306.
- Thalassinos, E., Kyriazidis, Th. and Thalassinos, J. (2006), "The Greek Capital Market: Caught in Between Poor Corporate Governance and Market Inefficiency", European Research Studies Journal, Vol. IX, Issue 1-2, 3-24.
- Thalassinos, I.E., Liapis, J.K., Thalassinos, E.J. (2013), "The Role of the Rating Companies in the Recent Financial Crisis in the Balkan and Black Sea Area", in Karasavvoglou, A. and Polychronidou, P. (eds.), Economic Crisis in Europe and the Balkans, Contributions to Economics, *Springer International Publishing Switzerland*, DOI IO.1007/978-3-319-00494-5_6.
- Thalassinos, I.E., D. Maditinos and A. Paschalidis (2012), "Observing Evidence of Insider Trading in the Athens Stock Exchange (ASE)", *Journal of Economic Structures*, 1:8, 52-67.
- Thalassinos, E., Liapis, K. (2013), "A Comparative Analysis for the Accounting Reporting of Employee Benefits between IFRS and other Accounting Standards: A Case Study for the Biggest Listed Entities in Greece", *International Journal of Economics and Business Administration*, Vol. I (1), .99-124.
- Thalassinos, E. and Kiriazidis, Th. (2003), "Degrees of Integration in International Portfolio Diversification: Effective Systemic Risk", *European Research Studies Journal* Vol. VI, Issue 1-2, pp. 111-122.
- Thalassinos, I.E. and Politis, E.D. (2011), "International Stock Markets: A Co-integration Analysis," *European Research Studies Journal*, Vol. XIV, (4), pages 113-130.
- Vyncke, K. (2009), "EU VAT Grouping from a Comparative Tax Law Perspective", EC Tax Review, Vol.18 (3) pp. 299–309.
- Wilkes, G.A. (2009), "Balancing Act: Fair Solutions to a Modern Debt Crisis", *London: Centre Forum*. Wilkes, G.S. and G. (2009), "Spending Cuts and Economic Recovery", *London: Centre Forum*.
- Zodrow, G.R. (2003), "Tax Competition and Tax Coordination in the European Union", *International Tax and Public Finance*, Vol. 10, pp. 651–671