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LONG-TERM SUSTAINABILITY OF THE USE OF TAXES AS AN ECONOMIC POLICY INSTRUMENT: ON THE EXAMPLE OF EUROPEAN UNION MEMBER STATES DURING THE ECONOMIC CRISIS

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Abstract: This paper is focused on the evaluation of the tax institutes potential; respectively changes as a possible tool for economic crisis signs reducing in the case of the European Union. In fact, the crisis has affected the tax policy of the European Union as well. According to the EU summit in November 2011, stated that the need for a "pragmatic coordination of the tax policy for the fiscal consolidation and the boost of the economic growth." Currently there are set limits for individual types of taxes in the European Union, which personal income taxes remain in the competence of national governments, while indirect taxes are in the center of the attention and efforts for their harmonization. Corporate taxes should promote the Free Capital Movement and should not cause the harmful competition among individual countries, and social and pension systems should not be a barrier of free setting and investment in EU member states. The article carry out the description based on the abstraction and analysis and evaluate Commission's proposals in the field of taxes according to economic criteria (the CCCTB, financial transaction taxes, and also the so-called carbon tax and the Green Paper on the future of the VAT). The article focus on the analysis of VAT rates changes during the economic crisis and study the relationship between the growth rate of GDP and VAT parameters using statistical methods (correlation analysis especially). As a conclusion, both identification of the mediated relationship between the economic crisis and the increase of VAT rates needed for the improvement of relations between the revenue and expenditure side of public budgets, and possible ways of estimates quantification of the new tax institutes introduction into practice can contribute to the ongoing discussion about the importance of deepening of the tax policies coordination in the EU, respectively the use of taxes as an instrument of the economic policy in general, as well as the sustainability of the usage of this tool.

KEYWORDS: Tax Policy, European Union, economic crisis, Value Added Tax, Tax Policy Coordination.

Introduction

The Tax Policy has always been a symbol of the national sovereignty. This autonomy remains retained in general terms also in the European Union[1]. Nevertheless, the development of the economic integration requires from its participants relatively close cooperation in the tax area especially for the single market needs, whether it is through the information exchange, harmonization, or at least the tax systems coordination.

The cooperation in a field of the taxation has already been enshrined in the European Community establishing Treaty[2] and also in the present (e. g. James, Nobes, 2010), which taxes should help to the European Union market functioning (after the Treaty of Lisbon approval, which has been valid since 1st December 2009).

As concerned that European Union market as a single market, was established on 1st January 1993 and it is defined as an area without internal borders in which the free movement of goods, persons, services and capital is guaranteed.

[1] The Czech Republic has been the EU Member State since 2004.
[2] Article 95 – 98 of the Treaty establishing the European Economic Community signed on 25st March 1957.

The role of the EU fiscal policy can be expressed by formula (1):

$$EU = f(\alpha; \beta; \gamma; \delta) = P(TP; AP) \quad (1)$$

where α; β; γ; δ are the individual freedoms of the free movement, TP is the EU tax policy and AP are other EU policies, which determine the single market.

There are currently set limits for individual types of taxes in the European Union (Taxation Trends in the European Union, 2012): (i) personal income taxes remain in the competence of national governments, (ii) indirect taxes are in the center of the attention and efforts for their harmonization because they immediately influence functioning of the single market (iii) corporate taxes should promote the free capital movement and should not cause the harmful competition among individual countries, and (iv) social and pension systems should eliminate discrimination of individual states inhabitants and should not be a barrier of free setting and investment in EU member states (e. g. Sinn, 1990).

In November 2009 the EU Commission presented the "EU Strategy 2020" document[3] which set five key goals for the year 2020. These are the increase of employment rate, the increase of research and development investments, the reduction of energy demands of the economy, the number of graduates increase and the reduction of the number of inhabitants threatened by poverty. Hence, it is clear that the tax policy may assits to meet the criteria, respectively deepening of its coordination and harmonization.

The tax policy is also used as a tool for economic crisis signs reducing. The written output of the EU Summit indicated that in November 2011, the need for a "pragmatic coordination of the tax policy for the fiscal consolidation and the boost of the economic growth" (European Council, 2011).

The effort may assits to the economic crisis solution has led the European Commission to new proposals in the tax area (the financial sector taxation, the introduction of the so-called carbon tax), respectively to the renewal of earlier date proposals (Common Consolidated Corporate Tax Base project – CCCTB; to improve functioning of the VAT).

Methodology

This paper focuses on the evaluation of potential tax institutes, respectively enhancing as possible tools for economic crisis signs reducing. The description, based on the evaluation of EU Commission's proposals in the field of taxes according to economic criteria, is done in the first part of the paper (the CCCTB, financial transaction taxes, and also the so-called carbon tax and the Green Paper on the future of the VAT), the second part of the paper is focused on the analysis of VAT rates changes during the economic crisis.

Two goals of the paper can be schematically described by relations (2) and (3).

$$ECRISIS \rightarrow SEC\ (CCCTB; FTT; CART; GPVAT) \rightarrow BEU; BC; BR; AEU; AE, \quad (2)$$

where ECRISIS is the economic crisis influence, SEC - European Commission proposals, CCCTB - common consolidated corporate tax base, FTT - taxation of the financial sector, CART - implementation of the carbon tax, GPVAT - improvement of the VAT system functioning, BEU - impact on the EU budget, BC - impact on the member states budgets, BR - impact on the increase of bureaucracy, AEU - possibility of all EU member states acceptance and AE - acceptance only by the euro area states (BE, DE, EE, EL, ES, FR, IE, IT, CY, LU, MT, NL, AT, PT, SI, SK and FI).

$$ECRISIS \rightarrow \Delta VAT\ EU\ (i), \quad (3)$$

where ECRISIS is the economic crisis influence, ΔVAT EU (i) are changes in EU rates and (i) is the examined period of 2008 – 2012.

3 The Approved by the European Council on 17. 6. 2010.

Material

Consequences of the Economic Crisis in the European Union

The economic crisis, that began to manifest in the EU in 2008, led to a significant reduction of the economic growth in all EU Member States and to deepening of national budget deficits in most cases. Specific values are shown in Table 1.

Project of Common Consolidated Corporate Tax Base (CCCTB)

The CCCTB project is described in the document of COM (2011) 121, which is a proposal for a Council Directive on a common consolidated Corporate Tax Base (CCCTB). According to this proposal, the CCCTB should solve the problem of fiscal regulations that restrict the single market growth. The interaction between national tax systems often result in the excessive taxation and the double taxation in conditions of no common tax rules for legal persons, while the businesses face the high administrative burden and high costs of a compliance with tax regulations.

The ambition of the CCCTB project shows the list of problem areas it should solve: to set the basic rules for the Tax Base determining (what will be exempt from the taxation; what expenses are not tax deductible), rules for valuation and depreciation, the possibility of incurred losses inclusion and also a mechanism including the criteria for the tax base apportionment among particular states in which the multinational operates. The most discussed issue is the apportionment of the tax base among individual Member States. The proposal for a directive assumes that the consolidated tax base shall be shared between the group members in each tax year on the basis of a formula for the apportionment.

In determining the apportioned share of a group member marked as "A", the formula shall take the following form (4), giving equal weight to the factors of sales, labour and assets:

Share A = [1/3 of the sales of A as its numerator and the sales of group as its denominator+ 1/3 (of one half of the payroll of A as its numerator and the payroll of the group as its denominator + one half of the number of employees of A as its numerator and the number of employees of the group as its denominator) + 1/3 of assets of A as its numerator and assets of the group as its denominator] multiplied consolidated tax base

(4).

The sales factor shall consist of the total sales of a group member (including a permanent establishment) as its numerator and the total sales of the group as its denominator. Sales include the proceeds of all sales of goods and supplies of services after discounts and returns, excluding value added tax, other taxes and duties.

The labour factor shall consist, as to one half, of the total amount of the payroll of a group member as its numerator and the total amount of the payroll of the group as its denominator, and as to the other half, of the number of employees of a group member as its numerator and the number of employees of the group as its denominator. Where an individual employee is included in the labour factor of a group member, the amount of payroll relating to that employee shall also be allocated to the labour factor of that group member. The number of employees shall be measured at the end of the tax year.

The asset factor shall consist of the average value of all fixed tangible assets owned, rented or leased by a group member as its numerator and the average value of all fixed tangible assets owned, rented or leased by the group as its denominator.

Taxation of the Financial Sector

On 7th October 2010, the Commission published the document of COM(2010)549[4]: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and

Table 1: Consequences of the EU Economic Crisis.

		2008		2009		2010		2011		2012	
		A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
BE	**Belgium**	1.0	-1.0	-2.8	-5.6	2.2	-3.8	1.9	-3.7	0.0	-3.7
BG	**Bulgaria**	6.2	1.7	-5.5	-4.3	0.4	-3.1	1.7	-2.1	0.5	-2.0
CZ	**Czech Republic**	3.1	-2.2	-4.7	-5.8	2.7	-4.8	1.7	-3.1	0.0	-3.1
DK	**Denmark**	-0.8	3.2	-5.8	-2.7	1.3	-2.5	0.8	-1.8	1.1	-1.7
DE	**Germany**	1.1	-0.1	-5.1	-3.2	3.7	-4.3	3.0	-1.0	0.7	-1.1
EE	**Estonia**	3.7	-2.9	-14.3	-2.0	2.3	0.2	7.6	1.0	1.6	1.1
EL	**Greece**	-0.2	-9.8	-3.3	-15.6	-3.5	-10.3	-6.9	-9.1	-4.7	-10.1
ES	**Spain**	0.9	-4.5	-3.7	-11.2	-0.1	-9.3	0.7	-8.5	-1.8	-8.6
FR	**France**	-0.1	-3.3	-3.1	-7.5	1.7	-7.1	1.7	-5.2	0.0	-5.2
IE	**Ireland**	-3.0	-7.3	-7.0	-14.0	-0.4	-31.2	0.7	-13.1	0.5	-10.8
IT	**Italy**	-1.2	-2.7	-5.5	-5.4	1.8	-4.6	0.4	-3.9	-1.4	-4.2
CY	**Cyprus**	3.6	0.9	-1.9	-6.1	1.1	-5.3	0.5	-6.3	-0.8	-6.3
LV	**Latvia**	-3.3	-4.2	-17.7	-9.8	-0.3	-8.2	5.5	-3.5	2.2	-3.6
LT	**Lithuania**	2.9	-3.3	-14.8	-9.4	1.4	-7.2	5.9	-5.5	2.4	-4.9
LU	**Luxembourg**	0.8	3.0	-5.3	-0.8	2.7	-0.9	1.6	-0.6	1.1	-0.5
HU	**Hungary**	0.9	-3.7	-6.8	-4.6	1.3	-4.2	1.6	4.3	-0.3	4.1
MT	**Malta**	4.1	-4.6	-2.6	-3.8	2.5	-3.7	2.1	-2.7	1.2	-2.6
NL	**Netherlands**	1.8	0.5	-3.5	-5.6	1.7	-5.1	1.2	-4.7	-0.9	-4.8
AT	**Austria**	1.4	-0.9	-3.8	-4.1	2.1	-4.5	2.7	-2.6	0.8	-2.5
PL	**Poland**	5.1	-3.7	1.6	-7.4	3.9	-7.8	4.3	-5.1	2.7	-5.0
PT	**Portugal**	0.0	-3.6	-2.9	-10.2	1.4	-9.8	-1.6	-4.2	-3.3	-4.7
RO	**Romania**	7.3	-5.7	-6.6	-9.0	-1.6	-6.8	2.5	-5.2	1.4	-5.1
SI	**Slovenia**	3.6	-1.9	-8.0	-6.1	1.4	-6.0	-0.2	-6.4	-1.4	-6.5
SK	**Slovakia**	5.8	-2.1	-4.9	-8.0	4.2	-7.7	3.3	-4.8	1.8	-4.6
FI	**Finland**	0.3	4.3	-8.5	-2.5	3.3	-2.5	2.7	-0.5	0.8	-0.5
SE	**Sweden**	-0.6	2.2	-5.0	-0.7	6.2	0.3	3.9	0.3	0.0	0.3
UK	**United Kingdom**	-1.0	-5.0	-4.0	-11.5	1.8	-10.3	0.8	-8.3	0.5	-8.2
EU-27	**European Union**	0.3	-2.4	-4.3	-6.9	2.0	-6.5	1.5	-4.5	0.0	-4.3

A - Real GDP growth rate (Percentage change on previous year)
B - General government deficit/surplus

Source: Eurostat + own investigation, 2012.

the Committee of the Regions about the taxation of the financial sector.

The reason for enhancing based on three main factors for the implementation of these taxes: (i) to complement the extensive financial sector reforms underway, taxes could contribute to enhancing the efficiency and stability of financial markets and reducing their volatility

[4] Link to the full text is given in references.

as well as the harmful effects of excessive risk-taking and moral hazard; (ii) the financial sector "payment" for the considerable responsibility of the occurrence and scale of the crisis and its negative effects on government debt levels worldwide, and moreover some governments provided substantial support to the sector during the crisis and it should hence make a fair contribution in return; (iii) most financial services are exempt from the value added taxation in the EU, because the major part of the financial services' income is margin based and therefore not easily taxable under the current VAT; therefore new taxes could partially compensate the VAT absence.

Cited COM(2010)549 defines two options of possible "bank" taxes: the financial activities tax and the financial transactions tax (FTT). The Commission comprehensively elaborates the FTT and on 28th September 2011 presented a concrete proposal for its implementation, which is contained in COM(2011) 594 and which is in relation to the continuing resolving economic crisis and the deepening debt crisis in the Euro Zone and the negotiation about a new financial perspective for years 2014-2020. Hence, this tax would be able imposed on all transactions with financial instruments between financial institutions, provided that at least one party of the transaction is settled in the EU.

The exchange of stocks and bonds would be taxable at a rate of 0.1% and derivatives would be taxable at a rate of 0.01%. The Commission proposes so that the tax is used from 1st January 2014. The tax revenues would be divided among the EU and Member States. One part of the tax would be used as the EU own source, which would partially reduce the Member States contributions. Member States could decide to increase this part of revenues by increasing the financial transactions tax rate. The aim of the financial transactions tax is to impose a tax on 85% of financial transactions taking place among financial institutions. This tax would not apply to citizens and businesses. The scope of the proposed FTT would not include mortgages, bank loans, insurance policies and other routine financial activities of individuals or small businesses.

Implementation of the So-Called Carbon Tax (CART)

In 2010 the European Commission presented a comprehensive proposal for the so-called Carbon Tax, which would be levied not only for the CO_2-emissons from factory chimneys, but also for any use of oil, gas or coal for heating or the engine propulsion, including automobile engines.

The proposal is contained in the COM(2011)169[5] material from 13th April 2011. The Commission proposes with the effect from 2013: to introduce an explicit distinction between energy taxation specifically linked to CO_2-emissions attributable to the consumption of the products concerned (CO_2 -related taxation) and the energy taxation based on the energy content of the products (general energy consumption taxation).

Therefore the taxation of energy products and electricity should have two components from 1st January 2013: the CO_2-emissions taxation and the consumption taxation. The first component should be fixed at the level of 20 €/ t CO_2, the second part should be dependent on the fuel type and it could also be increased according to the fuel type with the effect from 1st January 2015 and 1st January 2018, e. g. it should be 9.6 EUR/GJ for petrol (during the whole period), 8.2 EUR/GJ for gas oil (from 2013), 8.8 EUR/GJ (from 2015) and 9.6 EUR/GJ (from 2018), 1.5 EUR/GJ for natural gas (from 2013), 5.5 EUR/GJ (from 2015) and 9.6 EUR/GJ (from 2018).

In general, the taxation of energy products and electricity should not be discriminating against various energy sources. This should be achieved by the taxation of the particular fuel energy content, not by the taxation of its volume.

[5] Link to the full text is given in references.

Improvement of VAT System Functioning (GPVAT)

The complexity of the VAT system was reflected in the release of COM(2010)695 material from 1st December 2010, the "Green Paper" on the future of VAT. Towards a simpler, more robust and efficient VAT system states, that by 2008 VAT receipts accounted for 21.4% of the national tax revenues of EU Member States and therefore it is an important source of state budgets' revenue and it is the main source in many Member States.

The Green Paper states that, "… after some 40 years, the time has come to have a critical look at the VAT system with a view to strengthening its coherence with the single market, its capacity as a revenue raiser by improving its economic efficiency and robustness, and its contribution to other policies whilst reducing the cost of compliance and of collection". The simplification of the VAT system could also result in lower administrative costs especially for businesses, because the costs of complying with tax laws are the major administrative burden for businesses in the EU.

Rates of the Value Added Tax in the EU

The VAT is characterized as a general indirect turnover non-duplicate tax on the final consumption of goods and services, which is the only permitted general tax on consumption in the European Union. Its development is highly specific and very difficult to compare with the history of other taxes (Tait, 1988 or Cnossen, 1998). The area, that is not clearly resolved in the theory or in the application practice, is the existence of different VAT rates, or the existence of a different number of VAT rates. The usual, or rather expected practice of the only non-zero rate of the VAT (Schenk, Oldman, 2007) is accompanied by the existence of other reduced rates in all EU countries, with the exception of Denmark.

After difficult discussions, a model with two types of tax rates such as the standard and reduced ones, is considered as the fundamental VAT model in the EU. However, conclusions of the European Commission emphasize the need for further harmonization of Member States' approaches to tax rates and tax base, so that the mutual relations between the countries could be considered as transparent and flexible. VAT rates are considered to be highly diverse and relatively very difficult at the present (Bogetić, Hassan, 1993).

However, the basic principles of VAT rates are simple: goods and services, that are subject to the VAT, are taxed with a rate at least 15 %, and individual Member States may apply a reduced rate of the VAT on goods and services listed in the Directive of 2006/112/EC[6], on the common system of value added tax, while this rate is not lower than 5%.

Results and Discussion

The European Commission's Proposals for the EU Tax Policy

The European Commission makes efforts to implement new tax policy institutes in the period of the economic crisis. There were illustrated four proposals in this paper: CCCTB, the taxation of the financial sector, the so-called Carbon Tax implementation and to improve functioning of the common system of the VAT.

The text assesses their implementation in terms of five criteria: a potential contribution to the European Union budget, a potential contribution to the budgets of EU Member States, the possibility of the administrative burden increasing or reducing and the assumption of the individual proposals implementation in all EU Member States or at least in the euro area countries. The assessment is given in Table 2.

Changes in VAT Rates in the Period of 2008 – 2012

The development of VAT rates in all EU Member States is in the table of this paper in the appendix.

6 Link to the full text is given in references.

Table 2: The Evaluation of Proposals of the European Commission in the Tax Area.

Commision's proposal	EU Budget	Member States Budgets	Bureaucracy	All EU Member State acceptance	Acceptace only by the Euro Area State
CCCTB	0	+ / -	↓	-	+
FTT	+	+	↑	-	+
CART	-	+	↑	+	+
GPVAT	+	+	↓	+	+

Source: Own calculation, 2012.

The formula (3), showed in the methodology, was further studied according to changes both in the standard rate (s) and in the reduced rate (r) according to formula (5).

$$ECRISIS \rightarrow \Delta \mathrm{DPH}^{s}\ EU\ (i) + \Delta \mathrm{DPH\ EU}^{r}\ (i) \quad (5)$$

With these achieved results:

A - 23 amendments in the standard VAT rate were done altogether in the examined period: ΔDPH^s EU (0; 5; 6; 9; 3) = 23; and these changes took place in 15 EU Member States. The highest increase of the standard rate is recorded in Hungary (7 percentage points) and Romania (5 percentage points), on the contrary the standard rate has not changed in 12 countries (BE, BG, DK, DE, FR, LU, CY, MT, NL, AT, SI and SE). Changes in the standard VAT rates are illustrated in Table 3 and Figure 1.

B - 12 amendments in the reduced VAT rate were done altogether in the examined period: ΔDPH^r EU (1; 1; 2; 7; 1) = 12, and these changes took place in 9 EU countries. The highest increase of the reduced rate is recorded in the Czech Republic (9 percentage points) and Latvia (7 percentage points), on the contrary the reduced tax rate has not changed in 17 countries (DK has the uniform rate).

Changes in reduced VAT rates are illustrated in Table 4 and in Figure 2.

C - 35 amendments in VAT rates were done altogether in the examined period: ΔDPH EU (1; 6; 8; 16; 4) = 35, while it was a reduction of the rate in three cases and an increase of the VAT rate in 32 cases. Changes have taken place in 16 EU Member States and led to an increase of VAT rates (compared with the beginning and the end of the examined period, see Figure 1 and Figure 2).

It is obvious that changes, respectively an increase of VAT rates are related to the economic crisis, according to the given assumption showed in formula (6), where GGR is the GDP growth rate; D/S is the General government deficit or surplus.

$$ECRISIS \rightarrow \Delta \mathrm{GGR} \rightarrow \Delta D/S \rightarrow \Delta \mathrm{VAT}\ EU\ (i) \quad (6)$$

The average values development of examined variables in all EU Member States is shown in Figure 3.

This relationship was also tested statistically by the correlation analysis with regard to the fact that 11 states did not make any changes in VAT rates (BE, DK, DE, FR, CY, LU, MT, NL, AT, SI and SE) and therefore their data cannot be used for the correlation analysis. The criterion of the significant dependence is 0.8783 at the significance level of 0.05 and 5 numbers of measurements (analysed years).

The attained values range between the interval of <0.5808, 0.9659>, which clearly does not confirm the assumption adopted in formula (6), but it simultaneously does not reject it.

However, it should be noted that the authors have not examined the consequences of the government VAT increase. There is no clear correlation between the increase in VAT rates and increase in revenues of public budgets. Another consequence of the economic crisis and

Table 3: Changes in the Standard VAT Rates.

		2008		2009		2010		2011		2012	
		A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
BE	**Belgium**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BG	**Bulgaria**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZ	**Czech Republic**	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0
DK	**Denmark**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	**Germany**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EE	**Estonia**	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0
EL	**Greece**	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0
ES	**Spain**	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0
FR	**France**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	**Ireland**	0.0	0.0	0.5	0.5	-0.5	0.0	0.0	0.0	2.0	2.0
IT	**Italy**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
CY	**Cyprus**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	**Latvia**	0.0	0.0	3.0	3.0	0.0	3.0	1.0	4.0	0.0	4.0
LT	**Lithuania**	0.0	0.0	1.0	1.0	2.0	3.0	0.0	3.0	0.0	3.0
LU	**Luxembourg**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HU	**Hungary**	0.0	0.0	0.0	0.0	5.0	5.0	0.0	5.0	2.0	7.0
MT	**Malta**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	**Netherlands**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	**Austria**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PL	**Poland**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
PT	**Portugal**	0.0	0.0	-1.0	-1.0	0.0	-1.0	3.0	2.0	0.0	2.0
RO	**Romania**	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	0.0	5.0
SI	**Slovenia**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	**Slovakia**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
FI	**Finland**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
SE	**Sweden**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UK	**United Kingdom**	0.0	0.0	-1.5	-1.5	1.5	0.0	2.5	1.5	0.0	1.5

A - Standard Rate of VAT (Percentage point change on previous year)
B - Standard Rate of VAT (Percentage point change on 31st December 2007)

Source: Own calculation, 2012.

the reduction of available resources (including middle-income strata of the population – Bye *et al.*, 2012) are changes in consumer habits of households, usage of savings and new changes in the marginal propensity to save, respectively consumption. For these reasons in some EU countries, there has not been such an increase in VAT revenues, which the government expected (Široký *et al.*, 2012). These impacts can - considering the level of VAT rates in the EU - have different consequences than increasing of rates in ASEAN countries, where tax rates are generally lower (e. g. Nur Azura Sanusi et al.). These experiences also illustrate barriers of the

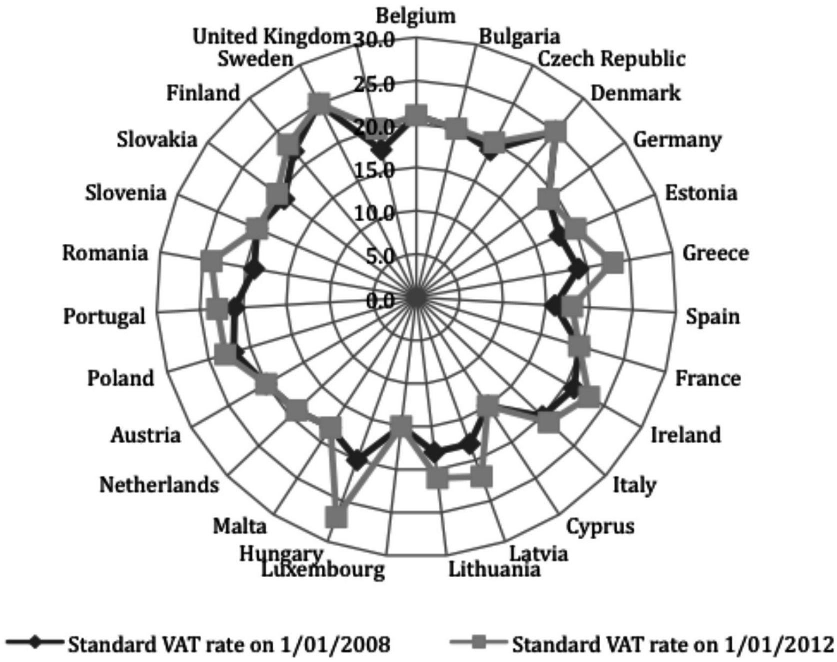

Figure 1: Changes in the Standard VAT Rate at the Beginning and at the End of the Analysed Period.
Source: Own work, 2012.

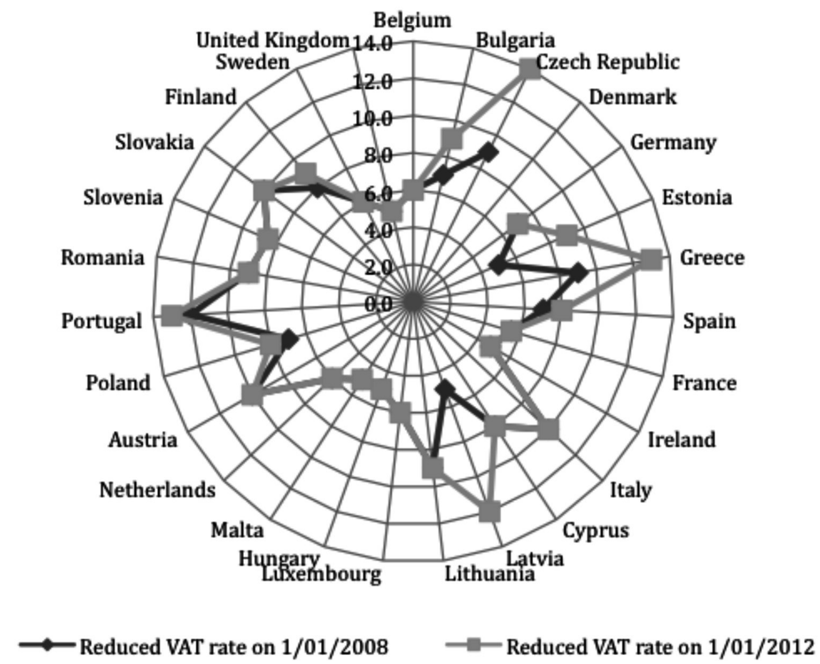

Figure 2: Changes in the Reduced VAT Rate at the Beginning and at the End of the Analysed Period.
Source: Own work, 2012.

Table 4: Changes in Reduced VAT Rates.

		2008		2009		2010		2011		2012	
		A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
BE	**Belgium**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BG	**Bulgaria**	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0
CZ	**Czech Republic**	4.0	4.0	0.0	4.0	1.0	5.0	0.0	5.0	4.0	9.0
DK	**Denmark**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	**Germany**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EE	**Estonia**	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0	4.0
EL	**Greece**	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0
ES	**Spain**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
FR	**France**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	**Ireland**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IT	**Italy**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CY	**Cyprus**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	**Latvia**	0.0	0.0	5.0	5.0	0.0	5.0	2.0	7.0	0.0	7.0
LT	**Lithuania**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LU	**Luxembourg**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HU	**Hungary**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MT	**Malta**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	**Netherlands**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	**Austria**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PL	**Poland**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
PT	**Portugal**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
RO	**Romania**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SI	**Slovenia**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	**Slovakia**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FI	**Finland**	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
SE	**Sweden**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UK	**United Kingdom**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

A - Reduced Rate of VAT (Percentage point change on previous year)
B- Reduced Rate of VAT (Percentage point change on 31st December 2007)

Source: own calculation, 2012.

long-term sustainability of the tax instruments use for managing of public budgets deficits.

Conclusion

The VAT is the only permissible general consumption tax in the European Union Member States. Although it is the most harmonized tax, primarily for the reason of ensuring the free movement of goods and services, Member States have flexibility in certain areas of national VAT rules, which also concerns the VAT rate. As the upper limit of the VAT rate is not given, this fact gives Member States a possibility to follow their own fiscal interests, as it is shown in the period of economic crisis.

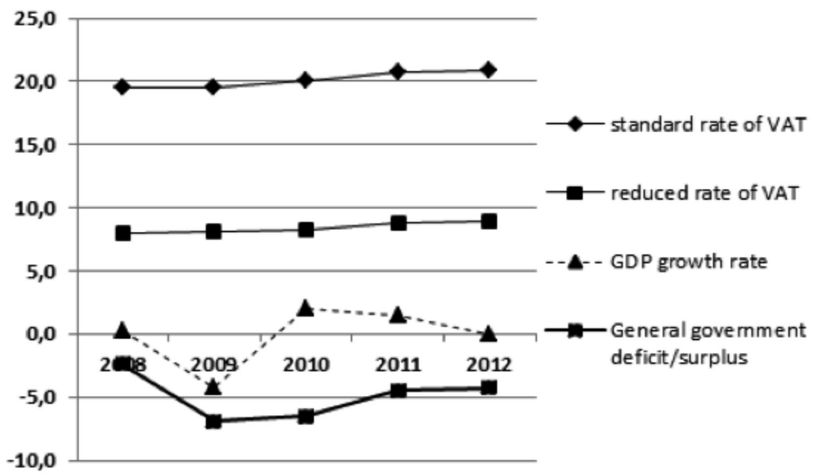

Figure 3: The Development of Analysed Indicators.
Source: Own work, 2012.

The tax instruments have not been omitted while searching for economic policy instruments to mitigate impacts of the economic crisis. The most visible change, in the area of the VAT, is the increase of VAT rates, which helps states to saturate the public budget revenue shortfalls, respectively to decrease (not increase) budget deficits. In the period of 2008 - 2012, 16 EU countries increased the VAT rate.

In times of the financial and economic crisis, the European Commission is also looking for new institutes of the Common Tax Policy. It will be interesting to observe which of these proposals (or whether any of them) will be finally a part of the European Union tax policy in the area of the direct and indirect taxation. However, it is obvious that all efforts should help to the single market functioning and to ensure four freedoms of free movement within the EU, it also reflects the economic crisis.

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References

Boeijen-Ostaszewska, O., & Schellekens, M. (eds). (2012). *European Tax Handbook 2012*. Amsterdam: IBFD, 2012. 974.

Bogetić, Ž., & Hassan, F. (1993). *Determinants of Value-added Tax Revenue*. Washington: The World Bank. 14.

Bye, B., Strøm, B., & Åvitsland, T. (2012). Welfare Effects of VAT reforms: A General Equilibrium Analysis. *International Tax and Public Finance.* 19(3): 368-392.

Cnossen, S. (1998). Global Trends and Issues in Value Added Taxation. *International Tax and Public Finance.* 5(3): 399-428.

Eurolex. (2006). Council Directive 2006/112/EC of 28 November 2006 on the Common System of Value Added Tax. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:347:0001:0118:EN:PDF

Eurolex. (2010). COM(2010)549: Communication from Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions – Taxation of the Financial Sector. Retrieved from http://eur-lex.europa.eu/Result.do?T1=V5&T2=2010&T3=549&RechType=RECH_naturel&Submit=Search

Eurolex. (2010). COM(2010)695: Green Paper. On the Future of VAT towards a Simpler, More Robust and Efficient VAT System. Retrieved from http://eur-lex.europa.eu/Result.do?T1=V5&T2=2010&T3=695&RechType=RECH_naturel&Submit=Search

Eurolex. (2011). COM(2011)121: Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB). Retrieved from http://eur-lex.europa.eu/Result.do?T1=V5&T2=2011&T3=121&RechType=RECH_naturel&Submit=Search

Eurolex. (2011). COM(2011)169: Proposal for a Council Directive amending Directive 2003/96/EC Restructuring the Community Framework for the Taxation of Energy Products and Electricity. Retrieved from http://eur-lex.europa.eu/Result.do?T1=V5&T2=2011&T3=169&RechType=RECH_naturel&Submit=Search

European Commission. (2012). *VAT Rates Applied in the Member States of the European Union*. Retrieved from http://ec.europa.eu/taxation_customs/resources/documents/taxation/vat/how_vat_works/rates/vat_rates_en.pdf

European Council. (2011). *Euro Summit Statement*. Retrieved from http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/125644.pdf .

Eurostat. (2012). *Real GDP Growth Rate. General Government deficit/surplus*. Retrieved from http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/.

Fantini, M., ed. (2012). *Taxation Trends in the European Union. 2012 Edition.* Luxembourg: Publications Office of the European Union. 274.

James, S., & Nobes, Ch. (2010). *The Economics of Taxation. Principles, Policy and Practice. 10th Edition. 2010/2011.* Birmingham: Fiscal Publications. 324.

Nur Azura Sanusi *et al.*, (2012). The sustainability of Terengganu Fiscal Adjustment and Dynamic Economics Performance. *Journal of Sustainability Science and Management.* 7(1): 94-102.

Schenk, A., & Oldman, O. (2007). *Value Added Tax. A Comparative Approach.* New York: Cambridge University Press. 532.

Sinn, H. (1990). Tax Harmonization and Tax Competition in Europe. *European Economic Review.* 34: 489-504.

Široký J., Kovářová, A. & Randová, K. (2012). The Role of the Value Added Tax on Foodstuffs in the Consumer Basket. *Agricultural Economics*. 58(8): 387-395.

Tait, A. (1988) *Value Added Tax. International Practice and Problems.* Washington, D.C.: International Monetary Fund. 396.

Appendix

Table: The Development of VAT Rates in the EU in the Examined Period[7].

	on 1/01/2008	on 1/01/2009	on 1/01/2010	on 1/01/2011	on 1/01/2012
BE	6; 12; 21	6; 12; 21	6; 12; 21	6; 12; 21	6; 12; 21
BG	7; 20	7; 20	7; 20	**9**; 20	9; 20
CZ	9; 19	9; 19	**10; 20**	10; 20	14; 20
DK	25	25	25	25	25
DE	7; 19	7; 19	7; 19	7; 19	7; 19
EE	5; 18	5; 18	**9; 20**	9; 20	9; 20
EL	4.5; 9; 19	4.5; 9; 19	4.5; 9; 19	6, 6.5; 13; 23	6.5; 13; 23
ES	4; 7; 16	4; 7; 16	4; 7; 16	4; **8; 18**	4; 8; 18
FR	2.1; 5.5; 19.6	2.1; 5.5; 19.6	2.1; 5.5; 19.6	2.1; 5.5; 19.6	2.1; 5.5; 7; 19.6
IE	4.8; 13.5; 21	4.8; 13.5; **21.5**	4.8; 13.5; **21**	4.8; 13.5; 21	4.8; 13.5; **23**
IT	4; 10; 20	4; 10; 20	4; 10; 20	4; 10; 20	4; 10; 21
CY	5; 8; 15	5; 8; 15	5; 8; 15	5; 8; 15	5; 8; 15
LV	5; 18	**10; 21**	10; 21	12; 22	12; 22
LT	5; 9; 18	5; 9; **19**	5; 9; **21**	5; 9; 21	5; 9; 21
LU	3; 6; 12; 15	3; 6; 12; 15	3; 6; 12; 15	3; 6; 12; 15	3; 6; 12; 15
HU	5; 20	5; 20	**5; 18; 25**	5; 18; 25	5; 18; 277
MT	5; 18	5; 18	5; 18	5; 7; 18	5; 7; 18
NL	6; 19	6; 19	6; 19	6; 19	6; 19
AT	10; 12; 20	10; 12; 20	10; 12; 20	10; 12; 20	10; 12; 20
PL	3; 7; 22	3; 7; 22	3; 7; 22	**5; 8; 23**	5; 8; 23
PT	5; 12; 21	5; 12; **20**	5; 12; 20	**66; 13; 23**	6; 13; 23
RO	9; 19	9; 19	9; 19	5; 9; **24**	5; 9; 24
SI	8.5; 20	8.5; 20	8.5; 20	8.5; 20	8.5; 20
SK	10; 19	10; 19	10; 19	10; **20**	10; 20
FI	8; 17; 22	8; 17; 22	8; **12**; 22	**9; 13; 23**	9; 13; 23
SE	6; 12; 25	6; 12; 25	6; 12; 25	6; 12; 25	6; 12; 25
UK	5; 17,5	5; **15**	5; **17.5**	5; **20**	5; 20

Source: European Commission, 2012, and BOEIJEN-OSTASZEWSKA, O., & SCHELLEKENS, M., 2012

6 Changes in year 2012: Cyprus - 17 % rate from 1. 3. 2012 (instead of 15 %), Latvia - 21 % from 1. 7. 2012 (instead of 22 %).