

FACTORS AFFECTING VALUE ADDED TAX REVENUE

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Abstract:

This article examines the concept of value added tax, the notion of the tax, the EU directives governing the tax rate base as well as the change of standard rate in European Union countries. The paper also analyses the relationship between the VAT revenue and macroeconomic indicators: gross domestic product, gross domestic product per capita, consumption expenditure, household consumption expenditure, government consumption expenditure, export, import and unemployment in the country in an attempt to construct a model that describes the significance of VAT revenue collected. The article aims to analyse the key factors influencing value-added tax collection in the European Union countries.

Key Words: Value added tax, VAT rate, VAT revenue and macroeconomic indicator

Introduction

The state revenue that consists primarily of tax revenue is the main mechanism for ensuring economic development. Fiscal policy not only controls the global factors affecting the national market and the economy but also it becomes the interior guarantee ensuring social development of each particular state.

One of the most important elements of the tax system is a value added tax. Value-added tax compared to the other taxes in terms of the part of budget revenue is one of the major taxes comprising the largest part of tax revenue of the state budget. In case of cyclical fluctuations of the economy, it is the system of value added tax that is primarily used to stabilize state revenue and to ensure the performance of public functions. This is confirmed by the recent economic and financial downturn. Value added tax burden triggered by the pricing system is transferred to all consumers, regardless of their legal status, solvency possibilities or other factors. It is an important factor influencing the state competitiveness. Value added tax efficiency that involves the collection of the biggest possible revenue for public budgets without significantly affecting the economy or one of the industries or groups of consumers is supported by the fact that the VAT is widely spread among different countries. Given the fact that this tax affects the development of the internal market without borders, the procedure of charging this tax is strictly regulated in the European Union. In addition, in order to avoid price differences to consumers and opportunities to provide exceptional advantages to a single national market, value-added tax is given special attention.

The scientific literature provides various analyses of tax systems. The significance of value-added tax to the economy is recognised, yet this tax is usually analysed only in terms of the tax rate, the tax exemptions and VAT thresholds. Also, the literature presents the value added tax analyses of individual countries and VAT comparison to other taxes, but the value added tax that is functioning in the European Union has not yet been analysed or comparison of value added tax systems of different European Union Member States has been conducted, though a great focus on VAT harmonisation is visible. Value added tax harmonisation process started on establishing the European Community and is still going on. This is a long and complicated process. So, it is important to reveal the differences of the impact of value added tax systems of the European Union Member States on collected revenues as well as the factors that affect them. The calculations were made with Microsoft Excel software using CORREL, TINV, FINV and Data Analysis functions.

The concept of Value Added Tax (VAT) in the European Union

VAT - an indirect tax levied on the public and private consumption. This tax is paid by corporations even though the tax burden is shifted to consumers (Bendikienė, Šaparnis, 2006), as manufacturers and service providers include it in the price (Dilius, Kareivaitė, 2010).

Goods and services are commonly charged with VAT aiming to collect as much funds into the state budget as possible. The VAT administration is not complex and relatively cheap. VAT is a key element of the tax system, which is a significant and important source of revenue in many states. According to the VAT scheme, the added value is created in each phase of the manufacturing process, so that each phase brings revenue to the state budget (Bendikienė, Šaparnis, 2006). VAT is introduced at the beginning of manufacturing process and is counted in each phase of product or service production and marketing until it reaches the consumer, who pays this tax (Štreimikienė, Mikalauskienė, 2006).

Value-added tax is collected after the final consumer prices are imposed, but does not affect the production or distribution (Dilius, Kareivaitė, 2010). On the other hand, VAT is a regressive tax, because in terms of the same consumption, people with lower income spend a larger part of their income rather than those with higher income (Jenkins et al., 2006).

The European Economic Community first regulated this tax in 1970 by the First and Second Directives. In 1977, the introduction of the Sixth Directive paved the ground for VAT harmonisation in the EU Member States (Marian, 2008). The objective of VAT regulation in the Community was to create an internal market in which the import and export taxation was abolished for intra-Community trade as well as the cumulative effect was eliminated which is defined as production and consumption taxes between Member States.

The EU countries apply a standard VAT rate which is imposed by each Member State as a percentage of the taxable value and which must be equal to the supply of goods and services. The Council's Directives state that "seeking that the increasing differences of the standard VAT rates applied by the Member States do not affect the EU structural balance and to avoid distortions of competition disruptions of some activities, in the area of indirect tax minimum rates are adopted", (Council's Directive 2010/88/EU). This minimum rate principle is also applied to the value added tax, as the most significant indirect tax. On 28 November 2006 the Council adopted Directive 2006/112/EC that regulated a common system of value added tax and determined that the standard VAT rate may not be less than 15 percent. At this point, according to the Directive 2010/88/ES adopted by the Council on 7 December 2010, this rate regulation is valid until 31 December 2015.

The minimum permissible EU VAT rate over the period of 2004 – January 2013 was applied in three states: in Luxembourg – the entire period, in Cyprus - until 2012 when the standard rate of 17 per cent was adopted, and in the United Kingdom, where the standard VAT rate of 15 per cent was applied only in 2009. Apart from these states, the lowest VAT rates in the European Union were applied in Spain and Germany (until 2007, when the standard rate was increased to 19 per cent). The United Kingdom lost its status as one of the countries with the lowest VAT rates in the EU, by increasing the standard VAT rate to 20 per cent in 2011, and as well as Spain – in January 2013 – by increasing the standard VAT rate to 21 percent (Table 1).

Table 1. The change of the standard VAT rate in European Union countries

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013 January
Ireland	21	21	21	21	21	21,5	21	21	23	23
Austria	20	20	20	20	20	20	20	20	20	20
Belgium	21	21	21	21	21	21	21	21	21	21
Bulgaria	20	20	20	20	20	20	20	20	20	20
Czech	19	19	19	19	19	19	20	20	20	21
Denmark	25	25	25	25	25	25	25	25	25	25
Estonia	18	18	18	18	18	20	20	20	20	20
Greece	18	19	19	19	19	19	23	23	23	23
Spain	16	16	16	16	16	16	18	18	18	21
Italy	20	20	20	20	20	20	20	20	21	21

Great Britain	17,5	17,5	17,5	17,5	17,5	15	17,5	20	20	20
Cyprus	15	15	15	15	15	15	15	15	17	18
Latvia	18	18	18	18	18	21	21	22	22	21
Poland	22	22	22	22	22	22	22	23	23	23
Lithuania	18	18	18	18	18	19	21	21	21	21
Luxemburg	15	15	15	15	15	15	15	15	15	15
Malta	18	18	18	18	18	18	18	18	18	18
Netherlands	19	19	19	19	19	19	19	19	19	21
Portugal	19	21	21	21	20	20	21	23	23	23
France	19,6	19,6	19,6	19,6	19,6	19,6	19,6	19,6	19,6	19,6
Romania	19	19	19	19	19	19	24	24	24	24
Slovak	19	19	19	19	19	19	19	20	20	20
Slovenia	20	20	20	20	20	20	20	20	20	20
Finland	22	22	22	22	22	22	23	23	23	24
Sweden	25	25	25	25	25	25	25	25	25	25
Hungary	25	25	20	20	20	25	25	25	27	27
Germany	16	16	16	19	19	19	19	19	19	19
EU	19,4	19,6	19,4	19,5	19,4	19,8	20,4	20,7	21,0	21,2

Source: compiled from Taxation trends in the European Union, 2012, p. 28 and the VAT Rates in the Member States of the European Union, 2013, p. 3

Over a period of 2004 – January 2013, the unchanged rate remained in only nine member states of the European Union - Austria, Belgium, Bulgaria, Denmark, Luxembourg, Malta, France, Slovenia and Sweden. In other countries the rate varied from 1 to 4 times (Portugal). In Lithuania the standard rate of VAT changed twice from 2004: in 2009 it was increased from 18 per cent to 19 per cent and in 2010 it was increased to 21 per cent.

It should be noted that over the period of 2004 – 2008, the average EU standard VAT rate was almost stable (ranging from 0.2 percentage points), but in 2008 in the onset of the global economic and financial crisis, the standard VAT rate began to grow and from 2004 to January 2013 it increased by 1.8 percentage points (from 19.4 per cent to 21.2 per cent). The growth trend is visible until this year (Fig.1).

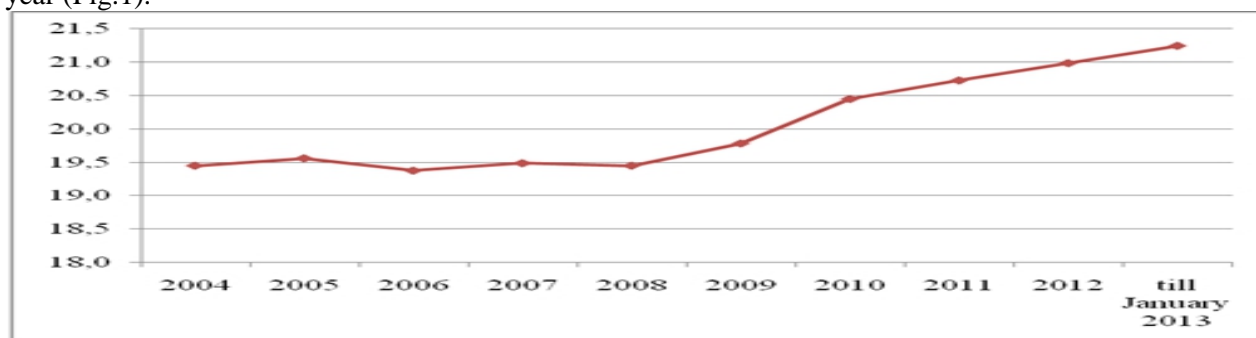


Figure 1. The change of the average EU standard VAT rate. Source: compiled from Taxation trends in the European Union, 2012, p. 28 ir VAT Rates in the Member States of the European Union, 2013, p. 3

Since 2009 the standard rate of VAT was changed immediately in many countries: in 2009 – in six member states, in 2010 - in nine states, in 2011 and 2012 – in four states, in January 2013 – in five states, while in the previous periods, the immediate change was introduced only in one (2006 - 2008) or two states (2005).

The maximum VAT rate changes during the examined period were observed in Hungary when in 2006 the standard VAT rate was reduced by 5 percentage points and in 2009 when the rate was restored increasing it by 5 percentage points. Also, VAT standard rate increased by 5 percentage points (from 19 per cent to 24 per cent) per year in Romania. Large changes of rates per year during

the given period were visible in Greece (in 2010 the rate increased from 19 per cent to 23 per cent) and in Latvia (in 2009 the rate increased from 18 per cent up to 21 per cent).

According to the Council's Directive 2006/112/EC of 28 November 2006, due to the common value added tax system, Member States may apply one or two reduced rates. The reduced rates are a percentage of the taxable value, which may not be less than 5 per cent, but exceptions are specified to some states that may apply a reduced rate of less than 5 percent. This right is exercised by Spain, setting a reduced VAT rate of 4 per cent, France - 2.1 per cent, Ireland - 4.8 per cent, Italy - 4 per cent and Luxemburg - 3 per cent. In general, under the Directive reduced rates can be applied only for the supply of goods or services attributed to defined categories. Member States may also apply the reduced rate of natural gas, electricity or district heating, if there is no threat of competition distortion. Every second year the Council reviews the area of applying reduced rates.

By providing tax relief an incentive is granted to use a specific product or service, thus tax revenue collection is increasing. Even though the reduced VAT rates over the short term may reduce the tax revenue collection, in the medium-term tax relief as the consumer incentive measure outweighs the revenue losses. Also, the reduced rates of VAT act as subsidies of a specific economic sector, thus they affect the profitability of that branch of industry and increased employment in that branch (Bikas, Saikevičius, 2010).

Under the Directive 2006/112/EC, the following activities may be VAT exempt, as regulated conditional activities related to the following areas: certain activities related to public interest; other activities exempt from VAT; intra-Community transactions - the supply of goods, acquisition of goods within intra-Community; certain transport services; import; export; related to international transport; certain transactions treated as exports; mediation services; exemption from VAT of international trade transactions - Customs warehouses, other (non-customs) warehouses and similar procedures, trade transactions for export purposes between Member States.

VAT may be not applied only for a few reasons: in order to protect certain economic activities, thus to create a favorable environment for them or due to VAT accounting (in some areas it is difficult to determine the added value, thus, taxation becomes complicated) (Bikas, Rashkauskas 2011).

The category of passengers and their baggage transportation as well as social goods and services category (across the 23 EU Member States), as well as food, access to cultural and recreational events, goods and services of hotel accommodation categories (across the 22 EU Member States) can be attributed to widely used categories under relief conditions specified by the EU. Meanwhile, the services benefits introduced for the cleaning of windows and premises in private homes are applied only in four countries (France, Ireland, Luxembourg, and Slovenia). Also, few countries make use of the right to apply special exemption from tax conditions for hair cut services category or a category of small repair services of bicycles, shoes and leather goods, clothing and household textile (in eight states).

Analysis of factors determinant accumulation vat

Legeida ir Sologoub (2003), simulating VAT distinguishes two main factors' groups, influencing VAT accumulation: VAT rules (rates, basis, etc.) and other variables of economic activities, conditioning tax basis and compliance of tax regulations. Others state that influence for level of VAT income and coefficient c-effectiveness has standard rate, honesty (characterized as average level of import and export in gross domestic product), period from VAT institution, accumulation of knowledge, related to tax administration, and margin between the highest and the lowest, except zero, rates.

Hence, VAT income is determined by a number of factors, including economic situation of the country, which is best characterised by gross domestic product. In addition, the higher the standard of life in the country, considered as GDP per capita, the higher the consumption, the better awareness of tax payments and lower tax fraud, consequently the relationship with GDP per capita is extra revised. Due to the fact, that VAT is consumption tax, primarily VAT income depends on the consumption level in the country. To identify what influences more TAV income – governments or households' consumption, the relationship not only with the general consumption, but also with both variables, is examined. On the one part, TAV income, in addition to the mentioned above factors, is determined by the level of export and import. Export rate is zero, so the grow of expert could have a negative impact on VAT.

On the other part export growth mostly follows domestic production, which could be pronominal as a result of households' disposable income or demand increase. Variation in import VAT has an opposite influence for income. The higher the import the lower is demand of domestic goods. As import is the target of VAT in the consuming country, the import increase results higher VAT income (Hybka, 2009). Bikas and Rashkauskas (2011) sized up households as the main VAT payers, and, as their core income is wage, authors subsume unemployment as a factor influencing increase of VAT income.

To estimate whether mentioned factors influence VAT tollage in European Union following (1) formula correlation coefficients is calculated (Kėdaitis, 2009, p. 91):

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \times \sum (y - \bar{y})^2}}; \quad (1)$$

Here: x and y – stochastic value;

\bar{x} and \bar{y} – sample means

Multipartite regression model is composed to estimate the influence of established significant factors for VAT tollage into country's budget. This model in addition allows forecasting accumulation of such income. Expression of multipartite linear regression equation is presented in (2) formula (Bilevičienė, Jonušauskas, 2011, p. 199):

$$y = \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_k x_k + \varepsilon; \quad (2)$$

Here: β – coefficients (constant);

x – independent variables;

ε – stochastic error.

Calculations are made using 2004 – 2011 data of European Union members, presented by Eurostat – since Lithuania joins EU till last data presented. Correlation coefficient between VAT income tollage and factors influencing it were calculated and resented in the table in order to estimate causes conditioning VAT accumulation in European Union countries (table 2).

VAT tollage is determined by economic factors as well as by resolutions of governments of the countries. So, the interrelationship was examined between factors, reflecting macroeconomic ratios, and VAT regulations, established by governments. The latter covers relationship between VAT income tollage and standard VAT ratio. In addition, to estimate influence of exemption, margin between the highest and the lowest, excluding zero, VAT ratios are used. It is proposed that the longer the period of VAT institution in the country, the more effective is its administration, more evident and comprehensible taxable, and for society – payment, regulations, grater acceptance of society paying it, accumulated more knowledge and practice related to tax administration, so the relationship with the period of VAT institution is examined. Hence, theoretical positive relationship between standard VAT ratio, period of VAT institution and tollage of income exists (increasing of mentioned variables tollage of VAT income increases). Negative relationship should exist (when one increase, another decreases) between margin of highest and lowest, except zero, VAT ratios and tollage of VAT income. Notwithstanding directives of EU established general VAT system, however countries have a lot of freedom instituting their own VAT systems in implementation stage, therefore it is complicated to ascertain general quantitative ratios related with VAT regulations set by a country. Due to this, characterizing European Union as a general territorial unit, all chosen ratios, describing governments' decisions, are used as an arithmetical mean of all EU 27 until 2007 including Romania and Bulgaria.

The interrelationship between VAT income and these chosen macroeconomic ratios, characterizing economic situation: gross domestic product, gross domestic product per capita, consumption costs, households' consumption costs, governments' consumption costs, export, import and unemployment in the country is analysed. Increase of gross domestic product, gross domestic product per capita, consumption costs, households' consumption costs, governments' consumption costs, import raise VAT income (positive relationship exists), while increase of export and unemployment influences VAT income drop (negative relationship).

Table 2. Correlation coefficient of VAT and factors influencing it in EU

	GDP	GDP per capita	Consumption costs	Households' consumption costs	Governments' consumption costs	Export	Import	Unemployment.	Standard VAT ratio	Margin between VAT ratios	Period of VAT institution
Ireland	0,88	0,99	0,51	0,65	0,25	-0,26	0,24	-0,81	-0,33	-0,41	-0,52
Austria	0,97	0,96	0,99	0,98	0,99	0,76	0,78	-0,67	-	-	0,99
Belgium	0,99	0,99	0,96	0,98	0,94	0,93	0,92	-0,64	-	-	0,96
Bulgaria	0,90	0,87	0,95	0,95	0,92	0,84	0,94	-0,65	-	0,05	0,77
Czech	0,98	0,97	0,99	0,99	0,99	0,93	0,91	0,04	0,65	-0,94	0,96
Denmark	0,95	0,97	0,88	0,94	0,76	0,94	0,94	0,06	-	-	0,81
Estonia	0,96	0,96	0,94	0,94	0,81	0,78	0,77	-0,03	0,36	-0,36	0,74
Greece	0,88	0,87	0,81	0,84	0,62	0,88	0,88	-0,14	0,35	0,37	0,61
Spain	0,03	0,15	-0,04	0,09	-0,24	0,28	0,58	-0,41	0,14	0,14	-0,15
Italy	0,87	0,86	0,82	0,85	0,69	0,88	0,94	-0,09	-	-	0,75
Great Britain	0,84	0,81	0,85	0,86	0,69	0,68	0,79	-0,44	0,75	0,75	-0,27
Cyprus	0,85	0,96	0,86	0,90	0,68	0,91	0,97	-0,08	-	-	0,68
Latvia	0,85	0,82	0,84	0,87	0,72	0,66	0,95	-0,38	-0,06	0,04	0,40
Poland	0,98	0,99	0,98	0,98	0,97	0,97	0,99	-0,88	0,46	-0,46	0,86
Lithuania	0,99	0,99	0,96	0,97	0,91	0,88	0,95	-0,02	0,40	0,40	0,78
Luxemburg	0,95	0,89	0,99	0,98	0,98	0,90	0,89	0,09	-	-	0,99
Malta	0,97	0,97	0,96	0,97	0,94	0,93	0,92	-0,55	-	-	0,97
Netherlands	0,95	0,96	0,90	0,95	0,83	0,89	0,90	-0,76	-	-	0,80
Portugal	0,63	0,66	0,58	0,69	0,18	0,81	0,89	0,24	0,63	0,65	0,42
France	0,96	0,98	0,89	0,92	0,82	0,91	0,97	-0,25	0,00	-	0,83
Romania	0,95	0,96	0,95	0,97	0,85	0,92	0,99	-0,64	0,48	0,45	0,79
Slovak	0,98	0,98	0,97	0,98	0,95	0,96	0,96	-0,70	0,52	0,09	0,95
Slovenia	1,00	1,00	0,94	0,95	0,89	0,92	0,88	-0,08	-	-	0,88
Finland	0,96	0,94	0,95	0,97	0,91	0,64	0,88	-0,49	0,64	-	0,92
Sweden	0,96	0,92	0,99	0,98	0,99	0,90	0,93	0,14	-	-	0,89
Hungary	0,74	0,76	0,65	0,68	0,52	0,78	0,70	0,71	0,23	0,23	0,81
Germany	0,94	0,95	0,95	0,94	0,93	0,85	0,86	-0,98	0,95	0,95	0,97
EU	0,97	0,97	0,94	0,97	0,82	0,99	0,99	-0,20	0,58	0,20	0,79

Source: authors' calculations based on Eurostat data

Calculated correlation coefficient educed all relationships between VAT income and chosen ratios in European Union states, except export and margin between highest and lowest, except zero, VAT ratios, purposed: between gross domestic product, gross domestic product per capita, consumption costs, households' consumption costs, governments' consumption costs, import, VAT ratio, period of VAT institution and tollage of VAT positive relationship exists, while between unemployment and VAT income – negative. The increase of export negatively influences VAT income due to zero ratios, but export growth commonly follows domestic production. Due to this it could be stated that households' disposable income or domestic consumption increases together, thus

export could positively influence VAT income. Only in Ireland correlation coefficient between export and VAT income gets negative value.

The strongest relationship in EU (meaning of correlation coefficient 0.99) exists with ratios characterizing international trade, i.e. import and export. Also very strong relationship exists between gross domestic product, gross domestic product per capita, households' consumption costs, and general consumption costs (meaning of correlation coefficient between 0.94 and 0.97). Medium depth relationship exists between VAT tollage and government consumption costs (0.82), period of VAT institution (0.79), standard VAT ratio (0.58). While calculated correlation coefficient with margin between highest and lowest (except zero) VAT ratios shows that mentioned ratio influences slightly VAT income in countries' budgets (correlation coefficient meaning amounts 0.20). Relationship between unemployment rate and VAT income is adverse, i.e. the higher is the level of unemployment in European Union the lower is the amount accumulated by VAT income, but this relationship is not strong (correlation coefficient meaning amounts -0.20).

The strongest relationship with chosen ratios in European Union was found in Check, Germany, Belgium, Malta and Slovakia, while the weakest relationship according calculate correlation coefficient has Spain, Ireland and Latvia. Notwithstanding analyzing EU as a integrated territorial unit the strongest correlation relationship with VAT tollage was stated for export and import, however analyzing all EU members it is seen, that majority of countries had a very strong relationship (exceeding average 0.90 meaning of correlation coefficient) with households' consumption costs (19 countries), GDP (18 countries) and GDP per capita (18 countries). At that point very strong correlation coefficient with VAT tollage has export and import respectively 12 and 15 countries. Comparing with other factors the weakest correlation with VAT tollage is coherent with unemployment rate, margin between highest and lowest VAT ratios and standard VAT ratio (the meaning of correlation coefficient is lower than 0.50) in EU as integrated territorial unit and in majority of separate countries (accordingly 16, 11 and 10 countries).

To estimate the reliability of correlation coefficients t statistics is computed and compared with Stjudent distribution. The results obtain comparing t statistics with Stjudent distribution (2.45) show that calculated correlation coefficient between VAT tollage and standard VAT ratio in EU as integrated territorial unit and all EU member states, except Germany, do not show reliable relationship. Either reliable relationship does not show correlation coefficient calculated between VAT tollage and margin between highest and lowest, except zero, ratios in EU as integrated territorial unit and in majority countries (except Germany, Check and United Kingdom). It is impossible to rely on relationship calculated between VAT tollage and unemployment rate (reliable relationship exists only in Ireland, Poland, Netherland and Hungary) either. Thus, these ratios will be not included estimating factors, influencing VAT tollage in EU. Considering that the period of VAT institution and unemployment rate comparing with other ratios has lower correlation coefficient and unreliable relationship recorded in conditionally more countries (accordingly 7 and 9 countries), these ratios will also be not included into regression model to reveal complex influence on VAT tollage.

It is not possible still and all to state that unemployment rate in the country and other ratios have no impact on VAT tollage. Unemployment rate in the country indirectly influences the VAT tollage into the budget via level of income and consumption. Also standard ratio and margin between highest and lowest VAT ratios are efficient means of governments to balance budget income in the period of economic fluctuations, though are not included in the regression analysis as influencing factors. Naturally one common ratio in all European Union member states will not ensure the same income from VAT due to different development level, administration, that is difficult to estimate quantitatively, progressiveness, varied mentality of countries' citizens, influencing level of shadow economy and other factors, however it also negatively effects VAT tollage in countries.

Thus, the following model determining VAT income factors is constructed via strongest, reliable and linear relationship causes: GDP, consumption costs, households' consumption costs, export, import and GDP per capita:

$$y = -907222,59 - 0,42x_1 - 0,06x_2 + 0,50x_3 + 0,28x_4 - 0,26x_5 + 158,80x_6$$

Here: y – VAT tollage;

x₁ – gross domestic product;

x₂ – consumption costs;

- x_3 – households' consumption costs;
- x_4 – export;
- x_5 – income;
- x_6 – gross domestic product per capita.

Testing how constructed model corresponds the real tollage VAT income the results are presented in figure 2.

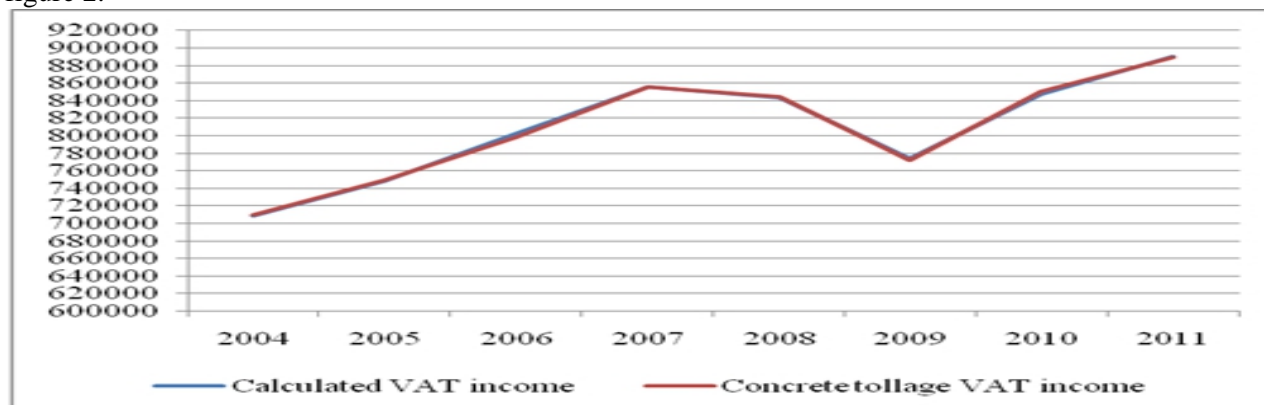


Figure 2. Calculated and concrete tollage VAT income in EU in 2004-2011, million Euros. **Source:** authors' calculations according Eurostat data.

The investigation shows that constructed model with chosen variables properly exactly determines tollage VAT income. Calculated and concrete tollage VAT income in analyzing period (2004-2011) differs less than 0.5 percent. Thus it could be stated that constructed model is suitable to forecast VAT income and designate main ratios, influencing VAT tollage: GDP, consumption costs, households' consumption costs, export, import and GDP per capita.

Conclusion

VAT – is indirect tax, assessing public and private consumption. The entire burden is shifted on consumers as tollage is collected via price system. According to VAT structure value added is created in each stage of production process, thus each stage carries out income into governments' budget.

VAT was regulated for the first time in 1970 by the first and second directives in European Economic Community. The foundation for VAT harmonization was made by sixth directive in 1977, which regulates practically all sides of VAT application.

EU countries apply standard VAT ratios, which are established by each country as a percentage of taxable value, but it could not be less than 15 percent. VAT ratio in EU countries varies in 12 percentage points (from 15 percent to 27 percent). EU member states could apply one or two exempt ratios. Established exempt ratios are percentage part of taxable value, not less than 5 percent, but according provided exemptions some countries apply even lower.

To designate factors, influencing VAT income, correlation coefficient between established VAT regulations (standard VAT ratio, margin between highest and lowest, except zero, VAT ratios and period of VAT institution), ratios, characterizing economic conditions (GDP, GDP per capita, consumption, household' consumption, governments' consumption, import, export and unemployment rate), that positively influence VAT income, was calculated. The obtained results show that reliable and strongest relations exist between ratios, characterizing economic conditions (GDP, GDP per capita, consumption, household' consumption, import and export), that positively influence VAT income. VAT income tollage is more influenced by households' consumption than governments'.

Though it is impossible to conclude that the relationship does not exists with decisions made by government in the field of VAT or unemployment rate as they can indirectly influence VAT income. However VAT income model, which exactly enough characterizes VAT income (deviations between calculated and concrete tollage VAT income is below 0.5 per year) relies only on factors containing the strongest and reliable meaning.

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