

## THE INFLUENCE OF VALUE-ADDED TAX CHANGES ON THE HOUSEHOLD CONSUMPTION

<sup>a</sup>ALENA ANDREJOVSKÁ, <sup>b</sup>MARTINA REGÁSKOVÁ

*Faculty of Economics, Technical University of Košice, Némcevoj 32, 040 01 Košice, Slovakia*  
 email: <sup>a</sup>alena.andrejska@tuke.sk, <sup>b</sup>martina.regaskova@tuke.sk

This research was supported by VEGA project No. 1/0311/17 on Measuring and Reporting Intangible Assets.

**Abstract:** Value-added tax (VAT) is still relatively new financial instrument of generating government revenues that has become more popular in recent years. The main problem of recent VAT is that it has got an ineffective adjustment. This article solves the problem of VAT impact on household consumption in the Member States of the European Union (EU). To analyze the relationship between change in VAT rate and selected macroeconomic indicators, there was used the regression analysis and the cluster analysis. We applied our research to EU Member States for a period of year 2016. Based on our tested hypotheses, we can conclude that the most significant factor influencing the household consumption is not VAT, but the unemployment rate.

**Keywords:** Standard tax rate, value added tax, macroeconomic factors, household consumption, cluster analysis.

### 1 Introduction

Value-added tax (VAT) is still relatively new but important financial source of government revenues in the Member States of the European Union (EU). From the first establishing of VAT in France it passed almost 50 years. Nowadays VAT represents the main financial instrument of generating government revenues in more than 150 world's countries. When the government sets tax rate in a country, it should take into account that there should not be an excessive tax burden on household consumption, and as well as to maintain enough cash flow to state budget to cover government expenditures. In the EU countries, VAT is regulated since the 1st of January 2007 by Directive No. 2006/112/EC on the common system of value-added tax. This directive contents law rules and legislation on the common system of VAT in the EU, and it replaced the sixth VAT Directive No. 77/388/EEC on harmonization of the laws of the Member States relating to turnover taxes. The Member States apply a standard VAT rate which level is determined by each country as a percentage of the tax base, and which is the same for supplying goods, as well as for providing services. Directive No. 2006/112/EC does not set the one harmonized VAT rate, but sets only a framework for determining rate for the Member States. It means that each individual European government can set their own VAT, and the level of VAT rate independently. However, the Member States have to comply with two basic rules relating to a standard VAT rate and reduced VAT rate. The standard VAT rate for not exempted goods and services has to apply every Member State, and it must be no less than 15%, while there is no maximum level of standard VAT rate. The second rule adjusts one or two reduced rates for goods and services, but no less than 5%. Also, the Directive offers an opportunity to apply "special rate of VAT", zero VAT rates and other particular VAT rates. To many EU countries, it should be allowed to derogate from these conversion rules, following the aim of harmonization of law legislation with EU Directive of the VAT.

### 2 Literature

However, the value-added tax is the most frequent tax used in many countries, it also is relatively new tax instrument through which the government revenues can be significantly increase. The main benefit of VAT is that it is a taxation of consumption. It means that tax payers consider VAT as a natural content of price of goods and services. As Paulíčková (2002) states, VAT is from economic origin a general excise tax, which burden a final consumer, but which pays a supplier. With VAT it is taxed public as well as private consumption, and so the own consumption of entrepreneur. (Alm, El-Ganainy, 2013) analyzed an impact of VAT on consumption in 15 European countries in period of 1961-2005, and they concluded that an increase in VAT rate by 1% leads to a reduction of total consumption approximately by 1%. That means that a correlation between

VAT and consumption is negative. So, when considering a change in VAT rate, it is necessary to take into account an influence of VAT on consumption. An increment in VAT rate in a country is often connected with a public interest and sometime it becomes an important factor during the pre-election period. Many people believe that an augmentation of VAT will have a negative effect on the aggregate consumption, and finally the economic growth will be weakening. Similarly, a reduction in VAT rate during the economic recession is sometime a reason for strengthening the economic growth through stimulating the aggregate consumption (Miki, 2011). When we monitor a reduced VAT rate, in many EU countries reduced VAT has got small tax base because it is taxed only a part of the total consumption because of earlier mentioned "special rates of VAT". Special rates are usually applied on foodstuff, health care, education, financial services, housing, public transport and so like (Carroll et al., 2010). Households with a higher percentage of consumption for goods and services with reduced VAT rate, will gain from reduced rate more than other households. This is the main reason, which is argued as an advantage of reduced VAT rates on foodstuff. It is supposed that poorer households have higher percentage of expenditures on foodstuff than richer households. This redistribution effect is more significant if a reduction in VAT rates is associated with augmentation of tax rate on those goods, which have higher percentage of expenditures on consumption of richer households (Economics, 2008). One of the main grounds of establishing the reduced VAT rate on labor-intensive services is lower advantage of the domestic production. The domestic production of services represents an economic loss for a country because there are not used benefits of specialization (Frederiksen et al., 1995). Crossley et al. (2009) draw an attention to forward announced government intention to compensation of reduced VAT rates for higher VAT rate in the future. According to these authors, this compensation has a huge influence on consumers' decisions when they consider their future consumption. It could have led to higher substitution effect because a change in VAT rate in the future will enlarge a size of present relative prices and future relative prices. Attanasio and Weber (2010) claim that if there are occurred unexpected changes in consumers' incomes, then should happen a significant change in consumption. Browning and Crossley (2009), Carroll et al. (2010) examined how consumers react on purchasing long-term consumption goods after changes in tax rates. Changes in tax rates cause changes in consumption between economic seasons because consumers react on higher prices in the future by accelerating their consumption in the current season. Also Miki (2011) states that if an augmentation of VAT rate is forward announced, then people will buy those products by which they can be supplied before tax rate has risen. Anticipating the future increment in VAT rate should raise the demand for particular goods. Also, it is possible that in the future consumers will postpone their consumption on those goods which tax rate will be reduced. A scale of both effects is various in every economic sector because of a dependence on income and price elasticity of demand, as well as on cross-price elasticity of demand (Economics, 2008). Sargent (1978), Hall (1978), Flavin (1981), Hayashi (1982) supposed hypothesis of permanent income. Their claims were based on presumption that consumption and disposable income are generated through a two-dimensional autoregressive process. Based on rational expectations of permanent income, changes in income should not affect private savings or private consumption because these changes are already included in the past consumption decisions. Consumption was based on rational expectations of the permanent income. Hayashi (1982) pointed out that consumption is more sensitive to current incomes. This approach was engaged attention by the existence of liquidity constraints. Deaton (1981) claimed that consumption is high sensitive to anticipated changes in rates, and a difference between anticipated and unforeseen changes is not important. Peter et al. (2006) supposed that consumption does not react on temporary but on permanent changes in incomes. The Member States differ from each other not only by the maturity of the

economy, the tax system, the sectoral specialization but also by the size of population or by percentage of the unemployment to the working population. Therefore, it is necessary to monitor the changes of these specifics on household consumption.

### 3 Data and methodology

The aim of this article is to evaluate an impact of value-added tax and an impact of selected macroeconomic indicators on final consumption of household. The article was divided into two parts: the first part measured the impact of VAT and selected macroeconomic indicators on the household consumption using the linear regression model. The assessment of this impact was carried out for each the Member State separately. We set the hypothesis as:

- Hypothesis I: "Is VAT the main and decisive factor that affects the household consumption?"

In the second part of this article, there was made economically transparent categorization of EU countries with regard to predetermined criteria using the Ward's hierarchical clustering method. Testing this analysis, we set two hypotheses:

- Hypothesis II: "Are the Member States divided into the new and old States?", and
- Hypothesis III: "Economically advanced countries, or indebted countries respectively, can create a common cluster".

The data was common to both analysis and was structured on annual basis from Eurostat (2016) database, as well as from Index Mundi (2016) database for EU28 Member States. The reference period was the year 2016.

The selection of variables was conditional to the theoretical aspects of authors (Akhmetova, 2013, Álvarez-Martínez et al., 2014, Alm et al., 2013, Batina, 1999, Lewis et al., 1998) which examined the influence of VAT and other macroeconomic indicators on household consumption and on final consumer in the EU using regression models. For the categorization of the countries under the cluster analysis was used the Ward's hierarchical linkage method, using `hclust()` function<sup>1</sup> (Ferreira, et al., 2009). The analysis was made in the statistical programme R with using statistical packages `psych`, `GPA` rotation, `nFactors`, `cluster` a `NbClust`. There were carried out the normality test of residuals, the heteroscedasticity test, and detected autocorrelation and multicollinearity that ensured a correct measurement of results. Our model tested input independent variables, which affect most often expenditures on the current consumption in a country as a dependent variable.

In the model, we have taken into account the following input variables:

- Expenditures on the total household consumption – are so called "delayed values", what means that in the calculation of expenditures for the total household consumption in a country  $i$  and in the time  $t$ , we count values in real prices per capita to the base year 2010. We suppose that the delayed values in the time  $t-1$  will have a positive effect on expenditures growth on the total household consumption in time  $t$ .
- The effective VAT – a ratio between VAT revenues expressed in real prices, and expenditures for the total household consumption expressed in real prices.

$$\text{Effective VAT}_{i,t} = \frac{R_{\text{from VAT}_{i,t} \text{ per capita}}}{E_{i,t} \text{ for household C}} * 100,$$

where: R – Revenues from VAT;  
E – Expenditures for household consumption;  
C – Consumption.

- Income tax – is adjusted for inflation rate, and so expressed in real prices for the base period of year 2010.
- Nominal GDP per capita – values calculated per one inhabitant in a country, expressing the economic performance.
- Unemployment rate – expression in relative, not absolute values.
- Total population – all persons with permanent address in certain area of a country, without considering legal status or state nationality.
- Inflation rate – an annual percentage change in consumer prices.
- Disposable income of household – an annual gross disposable income determined to households.
- Random error – an error of the regression model which represents a difference between real values and predicted values. This error can be either positive, or negative.

Based on variables stated above, we set the following econometric model:

$$CC_{i,t} = 1 + PC_{i,t-1} + \beta_1 VAT_{i,t} + \beta_2 IT_{i,t} + \beta_3 GDP_{i,t} + \beta_4 UR_{i,t} + \beta_5 TP_{i,t} + \beta_6 IR_{i,t} + \beta_7 I_{i,t} + \mu_{i,t}$$

where:  $CC_{i,t}$  – Current consumption; a dependent variable,

$PC_{i,t-1}$  – Past consumption; an independent variable,

$X_{i,t}$  - Vector of observed independent variables,

$\beta_{i,t}$  - Parameter vector,

$VAT_{i,t}$  - Value-added tax,

$IT_{i,t}$  - Income tax,

$GDP_{i,t}$  - Gross domestic product,

$UR_{i,t}$  - Unemployment rate,

$TP_{i,t}$  - Total population,

$IR_{i,t}$  - Inflation rate,

$I_{i,t}$  - Income (disposable),

1 - Constant value,

$i$  - Certain country,

$t$  - Year in which the value is given,

$\mu_{i,t}$  - Random error which affects presumptions of normal distribution of the regression model<sup>2</sup>.

### 4 Results and discussion

The Member States apply four basic types of VAT rates. They differentiate special reduced VAT rate (SRR), reduced VAT rate (RR), standard VAT rate (SR) and particular VAT rate (PR). The standard VAT rate is from all VAT rates the highest and it is applied in every Member State. SRR ranges from 17% (in Luxemburg) to 27% (in Hungary). The special reduced VAT rate (SRR) is applied only in five EU countries, meaning Ireland (4.8% for agriculture products), Spain and Italy (both 4%), France (2.1%) and Luxemburg (3%). Generally, SRR is lower than 5% and it usually is applied for basic foodstuff, such as meat, milk, fish, bread and pastry or butter. Also, with the special reduced VAT rate the Member States try to stimulate the willingness of consumers to buy certain products, such as books, musical products, sanitation services, medicine, or orthopaedic instruments. By applying the SRR, basic goods become more available particularly to socially weaker persons and elderly persons. The reduced VAT rate is applied in all the Member

<sup>2</sup> The presumptions of normal distribution are the following:

a) random failures have nil medium value ( $E(\mu_{i,t}) = 0$ );

b) variance of random failures is constant ( $E(\mu_{i,t}^2) = \sigma_{\mu}^2$ );

c) random failures are not correlated with each other

( $E(\mu_{i,t}; \mu_{j,s}) = 0$ , if  $i \neq j$ , or  $t \neq s$ ).

<sup>1</sup> This method is used the most frequently in the praxis.

States, except Denmark where is applied only the standard VAT rate (25%). Some EU countries have even two reduced VAT rates, applied for precisely identified products and services. Lastly, the particular VAT rate cannot be lower than 12% and it is applied in Belgium (12%), Ireland (13.5%), Luxemburg (14%) and Portugal (13%). With the particular VAT rate are taxed power-producing products, works of art, driving schools, sport and recreational crafts or agricultural equipment (all VAT rates in the Member States are shown in Tab.1).

Tab.1: VAT rates in the EU Member States (in 2018, %)

Member State	PR	SRR	RR	SR
AT	-	-	10	20
BE	12	-	6/12	21
BG	-	-	9	20
CY	-	-	5/9	19
CZ	-	-	10/15	21
DE	-	-	7	19
DK	-	-	-	25
EE	-	-	9	20
ES	-	4	10	21
FI	-	-	10/14	24
FR	-	2.1	5.5/10	20
GR	-	-	6/13	23
HR	-	-	5/13	25
HU	-	-	5/18	27
IE	13.5	4.8	9/13.5	23
IT	-	4	10	22
LT	-	-	12	21
LU	14	3	8	17
LV	-	-	5/9	21
MT	-	-	5/7	18
NL	-	-	6	21
PL	-	-	5/8	23
PT	13	-	6/13	23
RO	-	-	5/9	20
SE	-	-	6/12	25
SI	-	-	9.5	22
SK	-	-	10	20
UK	-	-	5	20

Source: own processing

Note: PR – particular rate, SRR – Special reduced VAT rate, RR – Reduced VAT rate, SS – Standard VAT rate.

Linear regression models of the Member States

Based on our regression analysis, we found out that between selected macroeconomic indicators and household consumption in EU countries is significant influence. We tested hypothesis I, as was stated above: “Is VAT the main and decisive factor that affects the household consumption?” Also, we tested input variables on normality presumptions, as well as homoscedasticity. In the model, there are not present neither autocorrelation, nor multicollinearity. We tested every country separately. As all normality presumptions above are confirmed, we created Tab. 2, in which to every Member State are assigned main variables that influenced household consumption in that certain State.

Tab. 2: Factors affecting household consumption in the EU

Determinant	The Member State
Effective VAT	Belgium, France, Romania, Spain, Sweden
Past consumption	Czech Republic, Denmark, Estonia, Finland, France, Luxemburg, Hungary, Germany, Slovakia, Slovenia, Spain, Italy, Italy, Greece, Netherland, Ireland, Lithuania
Unemployment rate	Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, Hungary, Malta, Poland, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Croatia, Ireland, Lithuania, Latvia
Disposable income	Luxemburg, Malta, United Kingdom, Ireland

Total population	Czech republic, Poland, Slovakia, Sweden, Netherland, Croatia, Lithuania , Latvia
GDP per capita	Belgium, Cyprus, Denmark, Finland, France, Germany, Portugal, Austria, Sweden, Italy, Greece, Netherland
Inflation rate	Portugal, Romania, Slovakia
Income tax	Not represented in any Member State

Source: own processing based on output from R

The structure of the Member States to household consumption is various. The most important indicator that has a significant impact on household consumption is unemployment rate and past consumption. These variables had decisive impact in most the Member States, specifically unemployment rate had significant impact in 18 Member States (Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, Hungary, Malta, Poland, Slovakia, Slovenia, Spain, Sweden, United Kingdom). To the Member States with the lowest unemployment rate belong Germany (4.3%), Czech Republic (4.5%), Malta and United Kingdom (both 5.1%). On the other hand, the Member States with the highest unemployment rate are Greece (24.6%) and Spain (20.5%), while the European average is at the level of 8.9%. The second most significant indicator influencing household consumption was past consumption. This factor had important impact in the following Member States: Czech Republic, Denmark, Estonia, Finland, France, Greece, Netherland, Ireland, Luxemburg, Hungary, Germany, Slovenia, Slovakia, Spain, Italy and United Kingdom. The highest value has reached Luxemburg (24 100 EUR per capita), then Denmark (20 100 EUR per capita), and on the contrary the smallest value has reached Hungary (5 000 EUR per capita) while the European average of past consumption is at the level of 12 050 EUR per capita. The next investigated indicators were GDP per capita and the total population. GDP per capita had an impact in 12 Member States (Belgium, Cyprus, Denmark, Finland, France, Greece, Netherland, Germany, Portugal, Austria, Sweden and Italy), while the highest value has reached Germany (105.3 EUR per capita), Sweden (102.5 EUR per capita) and Austria (102.1 EUR per capita). On the other hand, the smallest value has reached Greece (83.5 EUR per capita). The total population was an important indicator in 10 Member States (Bulgaria, Czech Republic, Netherland, Croatia, Lithuania, Latvia, Malta, Poland, Slovakia and Sweden). The majority of inhabitants within these EU countries is living in Germany (81.1 M.), Poland (38.02 M.) and Netherland (16.86 M.), and the less inhabitants are living in Malta (425 thous.). The average population living in the EU is 18.029 M. inhabitants per one country. The next analysed indicator was the effective VAT rate, which had an influence on household consumption only in 5 Member States (Bulgaria, France, Romania, Spain and Sweden). The highest percentage of government revenues from VAT and consumption within these countries had Sweden, France (96.82%) and Spain (63.62%), while the lowest percentage of government revenues reached Bulgaria (47.11%). Slovakia belongs to the Member States under EU average with only 61.315% of government revenues. The European average is 75.68% of revenues. Next, the value of annual disposable income was a significant indicator only in 4 Member States, specifically in Ireland (1 539 593 EUR), United Kingdom (1 439 593 EUR), Luxemburg (322 858 EUR), and Malta (112 495 EUR). The European average was at the level of 377 360 EUR. The inflation rate, as the next factor, was important in Portugal (0.6%), Romania (- 0.1%) and Slovakia (- 0.5%). Many EU countries reached negative inflation rate while the European average was at the level of 1.5%. And lastly, there was the income tax which was the only one indicator without any impact on household consumption.

## 5 Cluster analysis

Through the cluster analysis we identified groups of the Member States which have similar characteristics, and we tested hypothesis II. and hypothesis III.. We assumed that the new Member States of the EU and the old Member States create separated clusters. Our next presumption was that economically

advanced Member States (respectively indebted States) can create a common cluster. We applied the cluster analysis using the Ward's method. The result of this method was dendrogram with four clusters, as is shown in the following Figure 1.

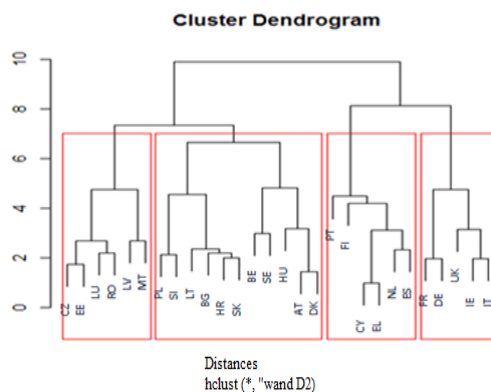


Figure 1: Dendrogram constructed by the Ward's method (in 2016)

Source: output from R

As the analysis results showed, the first cluster contained 6 Member States: Czech Republic, Estonia, Luxembourg, Romania, Latvia and Malta. So, in this cluster are the new Member States, except Luxembourg. The common characteristic that had influence on household consumption was the past consumption, the unemployment rate and the total population. The exception represents two countries, meaning Luxembourg, where the significant indicator was the past consumption (24 100 EUR per capita, as well as the disposable income in value of 322 858 EUR per capita), and Romania, where it was the effective VAT rate (at level of 48.53%) as well as the inflation rate (-0.1%). The current consumption in Czech Republic, Estonia and Luxembourg was dependent on the past consumption (Czech Republic reached 7 200 EUR per capita, Estonia 6 400 EUR per capita, and Luxembourg 24 100 EUR per capita what represents the highest value within the EU28 at the same time). The unemployment rate was common factor for Czech Republic, Estonia, Latvia and Malta, meanwhile the total population was common factor for Czech Republic (where are living 10.512 M. inhabitants in 2016), Latvia (2.033 M. inhabitants) and Malta (425 thousand inhabitants).

The second cluster was contained by 11 EU economies: Poland, Slovenia, Latvia, Bulgaria, Croatia, Slovakia, Belgium, Sweden, Hungary, Austria and Denmark. In this case, there is typical categorization between the new and old EU countries. However, differences between the States in consumption have vanished. The presumption of level of economic advancement was not very significant indicator because in the second cluster were associated the advanced Member States with the developing Member States. The results showed that in the new Member States prevails a dependence of household consumption on the unemployment rate and on the country's population. On the other hand, in the old Member States the current consumption was dependent on GDP per capita. In Bulgaria, Denmark, Croatia, Lithuania, Hungary, Poland, Slovakia, Slovenia and Sweden the significant factor that influenced consumption was the unemployment rate. Within these countries, the highest value reached Croatia (17.1%), and the lowest value reached Denmark (6.53%). Also, the indicator influencing consumption was the total population that means in Bulgaria, Croatia, Lithuania, Poland, Slovakia and Sweden. The most inhabitants are living in Poland (38.063 M.), and in Lithuania are living the least inhabitants within this cluster (2.944 M.). Next, in Denmark, Lithuania, Hungary, Slovakia and Slovenia the current consumption is affected by the past consumption. Within this cluster, the highest value achieved Denmark (20 100 EUR per capita) and the lowest value reached Hungary (only 5 000 EUR per capita). The other indicator affected consumption in the second cluster is GDP per capita, mainly in Belgium, Denmark (100.4 EUR per capita), Austria and Sweden (102.5 EUR per

capita). And the effective VAT rate is important factor in Belgium (101.36%) and in Sweden (105.44%).

The third cluster contained 6 Member States: Portugal, Finland, Cyprus, Greece, Netherland and Spain. We accepted our hypothesis in this cluster that individual clusters are created based on economic level of advancement, specifically in this case based on the economic indebtedness. The cluster was contained by Portugal, Cyprus, Greece and Spain what means the Member States which accepted financial packages and financial aid from European stability mechanism because of their enormous financial indebtedness. The others two States, Finland and Netherland belong to advanced economies. All the Member States in the cluster have approximately equal consumption, although some countries have produced consumption by their own economy, and other countries had higher indebtedness. The most significant indicator influencing consumption was GDP per capita, and particularly the past consumption as well as the unemployment rate. GDP per capita associates the Member States such as Cyprus, Finland, Greece, Netherland and Portugal, while the highest value reached Netherland (99.6 EUR per capita), and the lowest value reached Greece (83.5 EUR per capita). The past consumption associates Finland, Greece, Netherland and Spain in one group. The highest value achieved Finland and the lowest Greece (11 100 EUR per capita). And lastly, the unemployment rate in third cluster associates Cyprus, Finland and Spain.

The last fourth cluster was contained by 5 Member States: France, Germany, United Kingdom, Ireland and Italy. These countries are economically advanced and have relatively high level of economic development. However, Ireland and Italy adopted fiscal packages in 2008 to stimulate their economies, their household consumptions were as the same as in the advanced economies. To main variables influencing consumption in this cluster belong the past consumption, GDP per capita and the unemployment rate. The past consumption affected consumption in all Member States (the highest value had in the United Kingdom, 18 000 EUR per capita; and the lowest value in Italy, 15 000 EUR per capita). GDP per capita associates in one group States like France (101.3 EUR per capita), Germany (105.3 EUR per capita) and Italy (94.1 EUR per capita). The unemployment rate associates Ireland (11.26%) and United Kingdom (6.2%).

There have been many authors in literature that solved the problem of the impact of VAT on household consumption, such as Flavin (1981), Abel (1990), Wu (1997), Barrell et al. (2009) Aizenman et. al (2008), Darabos,É. (2016), Milošević, et al. (2015), Vlacsekova, et al. (2017) or Papcunova et al. (2012). According to studies of these authors, we can conclude that VAT does not work as the only one factor that influenced consumption. Except VAT, there have also been analysed and evaluated other variables with an impact on the final consumption. Also, our results comply with theoretical presumptions of household consumption. It is clear that a development of consumption is not determined only by a change in VAT rate. Therefore, when we tested our hypotheses, we focused on the past consumption, the effective VAT rate, the nominal GDP per capita, the unemployment rate, the total population, the inflation rate and the disposable income. All of these macroeconomic indicators based on our opinion affect the level of VAT rate. Value-added tax did not act as the only one factor influencing consumption in the Member States of the EU. There are many another factors influencing the final consumer, and eventually the final consumption of household. The further research in this field should be improved by selection of other variables in the panel regression. For example, as stated Barro (1991), in panel regression should be included an influence of human capital. Then, according to Porta et al. (1998) and Berkowitz et al. (2003), an impact on final consumption has also legal conditions, or a relationship between income and democracy, as Acemoglu et al. (2008) demonstrated.

## 6 Conclusion

Although value-added tax has got a long history in tax system, we cannot consider VAT as unchangeable instrument of the

economic policy. It is an instrument, which reacts on changes in the economic, financial and political sectors. In the recent time, the Member States of the European Union try to harmonize direct and indirect taxation within EU, in order to ensure the functioning of the common European market based on the free movement of goods, services, persons and capital. Generally, the indirect taxation is considered as less harmful than direct taxation. However, economic consequences on VAT are hardly quantified and measured. It is unnecessary to monitor and analyse VAT and its effect on household consumption because the final consumer is burdened with VAT the most from all of the economic entities. Therefore, an increase in VAT rate has a negative effect on the purchase parity of consumers, as well as on the whole economy because of a decline in consumption. In this paper, we analysed an influence of VAT on household consumption in the Member States, using the regression model and the cluster analysis. The lowest standard VAT rate within the EU is currently applied in Luxemburg (17%). On the contrary, the highest VAT rate is applied in Hungary (27%). Our analysis through the linear regression model was focused on testing the null hypothesis if VAT is the main and decisive factor influencing household consumption. This presumption has not been confirmed because the decisive factor that affects household consumption is the unemployment rate, which was found in 18 Member States. VAT was the decisive factor of consumption in only five Member States (in Bulgaria, France, Romania, Spain and Sweden). The second applied analysis in our model was the cluster analysis, which was focused on the categorization of the Member States in a certain groups of countries. Based on cluster analysis, we tested two hypotheses. The first one: "Are the Member States divided into groups of the new and old States?" was confirmed only in the fourth cluster, which associated solely the old Member States (France, Germany, United Kingdom, Ireland, Italy). In the other clusters, the old Member States were mixed with the new Member States. The second hypothesis in a form: "Economically advanced countries, or indebted countries respectively, can create a common cluster", was confirmed only in the third cluster, which was created by Portugal, Finland, Cyprus, Greece, Netherland and Spain. Within the third cluster, the Member States were associated based on the level of economic advancement, respectively in this case based on indebtedness. According to our analyses, we can sum up that VAT is not the only one factor affecting the level of consumption. The consumption of every country is individual and influenced by many specifics. Current issues in discussion about VAT represent usually questions about the effective VAT, or about the European harmonization process in taxation. To the foreground have come also inadequate tax reforms. So, experts' discussions about the future development of VAT and their possible modifications represent still continuing debate.

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#### Primary Paper Section: A

#### Secondary Paper Section: AH