

COMPARATIVE PRELIMINARY STUDY REGARDING THE QUANTIFICATION OF FISCAL PRESSURE AT THE LEVEL OF VAT ON THE EXAMPLE OF SOME EUROPEAN COUNTRIES

Raluca Andreea Ghețu¹, Ionela Butu², Adriana Elena Porumboiu³ and Petre Brezeanu⁴

^{1) 2) 3) 4)} The Bucharest University of Economic Studies, Romania
E-mail: gheturaluca93@yahoo.com; E-mail: ionela_butu@yahoo.com,
E-mail: adriana porumboiu@yahoo.com; E-mail: petre.brezeanu@fin.ase.ro

Please cite this paper as:

Ghețu, R.A., Butu, I., Porumboiu, A.E. and Brezeanu, P., 2020. Comparative Preliminary Study Regarding the Quantification of Fiscal Pressure at the Level of VAT on the Example of Some European Countries. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Pleşea, C. Vasiliu eds. 6th BASIQ International Conference on New Trends in Sustainable Business and Consumption. Messina, Italy, 4-6 June 2020. Bucharest: ASE, pp. 610-617

Abstract

Fiscal pressure is on economic phenomenon, which has certain tolerance limits by natural or legal persons. Due to the necessity or the desire to oppose this economic phenomenon, these people resort to different methods of avoiding the payment of taxes, taxes and contributions, base of the fiscal pressure indicator, these being in close connection to the effects of said phenomena, being very important to the economic plain. In order to better understand the fiscal pressure phenomenon, we analyzed six states of the European Union, divided into two groups. Four developed states Italy, Germans, Belgium, France and two emerging states Romania and Malta. We analyzed samples from on a sample 1998-2018, where we identified the general fiscal pressure, the fiscal pressure of the Value Added Tax and the Vat collection efficiency. Finally, this article aims to highlight the link between the VAT collection deficit and the standard VAT rate applied in the six mentioned states of the European Union. The data used in this analysis are those published in September 2019 by the European Commission through TAXUD, for the period 2013-2018.

Keywords

tax; fiscal pressure; fiscal pressure VAT; VAT Revenue; VAT Gap;

JEL Classification

E62; H20; H21; H26; H71

Introduction

In the current economic context, taxes represent a compulsory, non-refundable, unconditional contribution due to the state budget consolidated by the taxpayers to the natural or legal persons related to the income they obtain or to the goods they own. Natural or legal persons

New Trends in Sustainable Business and Consumption

BASIQ

are required by the state to pay taxes and agree to this required, with the risk of appearing a burden, but at a time when taxes exceed certain limits of taxability among taxpayers, phenomena occur. Tax evasion brings serious problems to the state's ability to collect revenues (Brezeanu, 2009).

According to the specialized literature, various points of view are present regarding the definition of the concept of fiscal pressure and its approach. Fiscal pressure is seen as "a relative expression of the tax burden borne by contributions" (Tulai, 2005) in documents, it can demonstrate "how tax care puts a lot of pressure". In other words, it is possible to understand a tax burden on the shoulders of taxpayers.

As stated in the literature, high tax rates will destroy the tax base (Smith, 1776). This concept was materialized by American economist Arthur Laffer, who demonstrated in 1980, with the help of a curve that lowering taxes can bring more revenue to the budget because it stimulates the economy. The level of indirect tax rates and their modification has a major impact on budget revenues. If the tax rates correspond to the allowable area of the Laffer curve, the fiscal pressure will decrease, reducing the tax risk implicitly. At European level, VAT is the basis of Directive 2006/112 / EC on the common system of value added tax, which essentially regulates two important issues: the concrete establishment of the tax area and the application of a minimum standard quota of 15%.

In the context where the standard VAT rates, reduced VAT rates or exemptions are fully harmonized, and the member countries have the right to adopt their own measures, the main objective of the 2006 Directive is for the common VAT system to reach the highest possible level. simplicity and neutrality. To achieve this objective, it would be transposed by the fact that, in the territory of each Member State, similar goods and services bear the same fiscal burden, regardless of the complexity of the economic circuit (Directive 2006/112 / EC).

Methodology for determining fiscal pressure.

In the first part of this article we propose an analysis of the total fiscal pressure, determined as a ratio between the tax revenues (direct taxes + indirect taxes + social contributions) and the gross domestic product. The total fiscal pressure reflects the intensity with the income, which is collected from the natural and legal persons at the level of the whole company with the help of taxation. It shows how big issues the tax burden is on taxpayers' shoulders.

At present, many countries, including Romania, use the method of calculating the net fiscal pressure in the calculation of fiscal pressure, which allows to offer the fiscal image from the financial accounting point of view. The rate of fiscal pressure characterizes the share of the revenues of the natural and legal persons that is subtracted from the budget instead of being left for their reinvestment in the economy. This indicator can have a double acceptance, in a narrow sense - it is presented that the ratio between the amount of taxes and taxes collected on the gross domestic product and in the broad sense - is the ratio between the sum of the taxes, taxes and social contributions to the gross domestic product. In this article both methodologies of fiscal pressure are used, in a broad and narrow sense.

Thus, according to the specialized literature, the tax rate is calculated as follows: Rf = (Tax revenues / GDP) x 100 (1).

For this quantification of fiscal pressure we used a sample of two groups of European Union member countries: from the group of developed states we chose Italy, Belgium, Germany, France, and from that of developing or emerging countries we chose Romania and Malta. The analysis period was represented on a sample of 20 years, during the period 1998-2018, the latter being the last year for which statistical data are available, regarding the tax revenues.

	1998	1999	2000	2001	2002	2003	2004	2005	2006
U.E. 27	-	-	-	-	41.06	40.69	41.14	41.28	42.17
Italy	40.9	40.8	39.8	39.7	39.4	39.7	39	38.9	40
Belgium	45.2	44.7	44.3	44.1	44.4	43.8	43.9	43.8	43.6
Germany	41.5	42.2	42	40	39.6	40	39	39.1	39.3
France	45.4	45.8	45	44.8	44.1	44	44.1	44.6	45.1
Malta	26.1	27.7	26.6	28.2	29.3	30.5	31.4	33	33.3
Romania	8.1	14.2	16.4	20.3	23.4	28.6	29.9	26.4	28.2
	2007	2008	2009	2010	2011	2012	2013	2014	2015
U.E. 27	42.41	40.65	39.04	38.92	39.34	40.30	40.70	40.84	40.60
Italy	41.3	41.1	41.5	41.2	41.1	43.1	43.2	42.9	42.8
Belgium	43.3	44.1	43.2	43.6	44.4	45.3	46.1	45.7	45
Germany	39.3	39.7	40.1	38.8	39.1	39.7	39.9	39.6	40
France	44.5	44.4	44.1	44.2	45.4	46.4	47.5	47.7	47.7
Malta	34.2	33.4	33.8	33.2	33.4	33.7	33.8	33.5	31.7
Romania	28.9	28.1	27.3	26.6	27.7	28.1	27.4	27.3	27.8
	2016	2017	2018						
U.E. 27	40.70	40.85	41.03						
Italy	42.1	41.8	41.7						
Belgium	44.2	44.7	44.8						
Germany	40.5	41	41.5						
France	47.6	48.3	48.4						
Malta	32.1	32.9	32.6						
Romania	26.5	26.2	27.1						

Table no. 1 Fiscal Pressure

Source: own calculations based on data from https://ec.europa.eu/eurostat/.

From the data presented above, it resulted that the fiscal pressure in Romania registered a slight decrease from 1998 to 2004, when it reached the lowest level of the analyzed period, more precisely to 8.1%, followed by an increase with 21.8% until 2004, 29.9.3% being the maximum reached by Romania, below the European Union average. In the table no.1 presented above it can be observed that of all the analyzed states, in 2013, the total fiscal pressure reaches the highest level in Belgium and Italy (46.1%, respectively 43.2%), followed by Germany and France (41.5%, respectively 48.4%) in 2018. For the emerging states, a lower share of fiscal pressure can be observed, Romania reaching the highest level in 2004, and Malta in 2017 (32.9%). It is observed that 2 of the 6 analyzed states are from the developed countries, Belgium, France, over a period analyzed exceed the level of the total fiscal pressure registered by the European Union average, below that threshold being instead all the emerging countries analyzed. The differences observed in the analysis of the quantification of fiscal pressure were generally produced by the fiscal policy instituted by the Member States in relation to social protection and the degree of fiscal compliance.

Next, we carried out a qualitative analysis of the tax pressures governed by VAT. In the second part of the qualitative study we analyzed the fiscal pressure at a macroeconomic level registered by 6 member states of the U.E. Italy, Belgium, Germany, France, Romania and Malta, the comparison was made for the period 1998-2018 in which all six states had legislative changes involving value added tax. Malta and Romania adopted a lower VAT rate. On the other hand, Belgium, France, Germany and Italy have raised the value of the standard VAT rate, because VAT is the most powerful taxation tool against tax evasion and fraud, at the expense of taxes. income or profit, thus bringing in substantial revenues. The importance of the VAT value added tax and its quantification at the level of fiscal pressure. Starting with 1967, the member states of the U.E. e have adopted a well-developed system of income



taxation, in which they have also introduced VAT systems, the most important arguments in support of VAT, being considered a taxing instrument more resistant to fraud against income taxes, thus bringing in substantial revenues, From the perspective of the share of revenues generated from VAT at EU level it is considered to be the most important indirect tax. In support of the important VAT in the presented article we emphasize that in the European Union, respectively in the 27 countries (EU2020), in 2018, the total VAT revenues represent a significant percentage of 7.1% of GDP - the gross domestic product according to the data presented (Eurostat).

Methodology for determining the VAT tax pressure.

The weight of fiscal pressures was calculated according to the relation: Primp% = (Total Indirect Tax / GDP) * 100, (2)

Indirect tax exclusively includes value added tax,

Romania

6.40

6.12

6.33

GDP is the gross domestic product. The data used in the analysis was collected from the Eurostat database and the database of the European Central Banks.

In the following table we follow the evolution of fiscal pressure in relation to value added tax, in the six developed and emerging states (Italy, Belgium, Germany, France, Malta, Romania,) for the period 1998-2018, as well as the average for of the European Union.

	1998	1999	2000	2001	2002	2003	2004	2005	2006
U.E. 27	-	-	-	-	6.8	6.7	6.9	7.05	7.2
Italy	5.9	5.8	6.2	6	5.9	5.7	5.6	5.7	5.9
Belgium	6.8	7	7.1	6.9	6.9	6.9	6.9	6.9	7
Germany	6.5	6.7	6.6	6.4	6.2	6.2	6.1	6.1	6.2
France	7.6	7.6	7.2	7.1	7	7	7.1	7.2	7.1
Malta	4.4	5.1	5.4	5.7	5.8	6	6.8	7.7	7.6
Romania	1.7	2.7	3.5	4.4	5.9	7.5	7.19	7.48	7.64
	2007	2008	2009	2010	2011	2012	2013	2014	2015
U.E. 27	7.3	6.9	6.5	6.8	6.8	6.8	6.9	6.9	6.9
Italy	5.9	5.7	5.5	6	6	5.9	5.8	5.9	6.1
Belgium	7	7	7	7.1	7	7.1	7.1	6.9	6.7
Germany	6.8	6.9	7.3	7	7.1	7.1	7	6.9	7
France	7	6.9	6.7	6.8	6.8	6.8	6.8	6.9	6.9
Malta	7.3	7.5	7.4	7.2	7.6	7.5	7.6	7.5	7
Romania	7.86	7.72	6.59	7.55	8.44	8.35	8.03	7.56	7.95
	2016	2017	2018						
U.E. 27	7.01	7.09	7.16						
Italy	6	6.2	6.2						
Belgium	6.8	6.8	6.9						
Germany	7	7	7						
France	6.9	7.1	7.2						
Malta	6.9	7.2	7.4						

Table no. 2 Fiscal Pressure VAT

Source: own calculations based on Eurostat data.

According to the data presented in table no.2, regarding the evolution of the fiscal pressure related to value added tax, there is a slight difference between the developed and developing countries. Thus, the values are registered between 5.9% -8.44%. Italy having the lowest indicator of fiscal pressures from the point of view of the value added tax, the highest level is registered in Romania in 2002, due to the political instabilities, this returning at an average

BASIQ B

level until the end of 2018. High levels of fiscal pressure related to indirect taxes (VAT), compared to the levels of the European Union were recorded during the period analyzed 1998-2018 in Romania, Malta (developing states) followed by Germany, France, Belgium and last in the rank Italy.

In the case of Italy, the increase of the fiscal pressure exerted by these types of indirect taxes is explained by the increase of the standard VAT rate from 20% to 21% in 2012 and then to 22% in 2014, the reduced rate being maintained at 10% / 4 %. The higher level of the fiscal pressure related to indirect taxes in France is most likely due to the increase of standard and intermediate VAT rates (transport services, restaurant services, hotel accommodation, renovation of private homes, home care, parks). thematic, television, organic fertilizers, etc.) these being reduced from the standard quota 19.6% and 7% to 20% and 10% from 01.01.2014. In the case of Romania, the main source of income is indirect taxation, but the fiscal pressure related to these types of taxes fluctuated from 19% until 2010 when it increased by 5%, in 2015 the share decreased by 4%, in particular due to the reduction of the quota VAT from 24% to 20% starting with January 1, 2016, finally reaching the standard rate of VAT of 19% in 2017. Also, a reduced rate of 9% applies to goods and services from the following categories: bakery products, specialized medical equipment, books, newspapers, school textbooks, access to different cultural services, accommodation services and assimilated to hotels.

In Malta, starting with 2004 the standard VAT rate is 18% (increased from 15%). The slight decrease of the fiscal pressure can be justified by the reduced application rates of 5%, respectively 7%. In most cases, the analyzed states have had a constant evolution in relation to the fiscal pressure related to the indirect taxes, respectively the value added tax, during the period analyzed 1998-2018.

In Belgium, the indicator analyzed does not display large fluctuations during the period verified because the VAT rates have remained the same level since 1998, the standard share being 21%, and the reduced rates 6% and 12% respectively. Also, Germany is among the countries with the lowest consumption taxes in the European Union, respectively the standard share 16% until 2006 when it increased by 3 percent reaching 19%, and the reduced rate remained 7% throughout the period verified, therefore the revenues from these indirect taxes remained relatively constant.

We can see that the fiscal pressure has decreased for the year 2018 compared to the previous year, for all the mentioned states, which can say that the fiscal burden has begun to be tolerable for the taxpayer. We can not fail to observe that the states with diminished fiscal pressure are those whose economy is much better developed, and the payer bears the tax burden favorably, even if it is greater than that of a developing state. Fiscal pressure produces pressure due to several internal and external factors, but also due to the reluctance of taxpayers to improve the economic conditions presented in Romania and Malta. France enjoys a relaxing share of fiscal pressure, which shows that the fiscal system adopted is a burden on taxpayers. There are some opinions that the level of taxation of a state is influenced by both external and internal factors of the taxation system, such as: the scale of progression of tax quotas, the way of determining the taxable mass, the gross domestic product, the type of public institutions. and the effects of the increase of fiscal pressure that are manifested in various forms, a printer that we mention: the diminution of productive efforts, the risk of inflation through taxation, risk related to the fact that any increase of taxes has an impact on the processes of price determination, fraud and tax evasion, generated by high or increasing fiscal pressure, as well as political resistance. In order to determine the degree of risk of tax evasion, we can consider the coefficient of collecting the value added tax for the states analyzed above.



The value-added tax collection performance

Because value added tax has become an important component of the tax system in most states, and fiscal pressure decisively influences the performance of value added tax collection, in this article we wanted to analyze at a macroeconomic level from the quantitative point of view the performance of its collection on based on the indicator of the efficiency of VAT collection, we took as the model the study from "Value Added Tax: Onward and Upward? (Jorge Martinez-Vazquez and Richard M. Bird, 2010) based on the formula: VAT collecting efficiency = VAT collected / (Standard quota x GDP) (3)

I begin the analysis of the emerging states Romania and Malta, which are similar in terms of VAT rates at the end of 2018. At the same time, from the desire to highlight the differences between the emerging and developed countries, Italy was included in the study, Belgium, France and Germany, the analysis of the value added tax collection performance is carried out for the period 1998-2018. Table no. 3 presents the Vat collecting efficiency for Italy, Belgium, Germany, France, Malta and Romania.

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Italy	0.29	0.29	0.31	0.30	0.30	0.28	0.28	0.29	0.30
Belgium	0.32	0.33	0.34	0.33	0.33	0.33	0.33	0.33	0.33
Germany	0.40	0.42	0.41	0.40	0.39	0.39	0.38	0.38	0.39
France	0.39	0.39	0.37	0.36	0.35	0.36	0.36	0.37	0.36
Malta	0.29	0.34	0.36	0.38	0.38	0.40	0.38	0.43	0.42
Romania	0.09	0.14	0.18	0.23	0.31	0.39	0.37	0.39	0.40
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Italy	0.30	0.29	0.27	0.30	0.30	0.28	0.28	0.27	0.28
Belgium	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.33
Germany	0.36	0.36	0.38	0.37	0.37	0.37	0.37	0.37	0.37
France	0.36	0.35	0.34	0.35	0.35	0.35	0.35	0.34	0.35
Malta	0.41	0.42	0.41	0.40	0.42	0.42	0.42	0.42	0.39
Romania	0.40	0.40	0.34	0.39	0.35	0.34	0.39	0.35	0.34
	2016	2017	2018						
Italy	0.27	0.28	0.28						
Belgium	0.32	0.32	0.33						
Germany	0.37	0.37	0.37						
France	0.35	0.35	0.36						
Malta	0.38	0.40	0.41						
Romania	0.33	0.32	0.33						

Table no. 3 VAT collecting efficiency

Source: own calculations based on Eurostat data.

According to the specialized literature, the efficiency of collecting value added tax is calculated based on the VAT efficiency indicator. The data refer to a state with a single standard rate of VAT, which has taxable transactions without exemptions and tends without tax evasion, the efficiency of the VAT should register the value 1, i.e. 100%. From the quantitative verification, it resulted that Belgium registers the highest rate of VAT efficiency 0.43 in 2005, subsequently decreasing but not by much. On the other hand, the developed countries have retained the highest VAT rate, but the VAT efficiency has remained as good throughout the period analyzed, which shows that the economic situation is quite good, with a low degree of economic crime. For the emerging countries, the VAT efficiency indicator is quite low, indicating a reduced value added tax collection and a rather high tax evasion rate. In Romania, there has been no major improvement in the efficiency of VAT, after the VAT rate decrease.

The situation of VAT receipts in the period 2013-2018

In the following, we will compare the direct proportional relationship from the fiscal pressure generated by the burden of taxation quotas, the efficiency of collecting value added tax and the situation of VAT receipts. All three variables are closely linked, influencing the taxpayer to pay taxes to the state budget (Butu et al., 2019). Thus, the budget is directly influenced by the fiscal pressure, the tax rates, the efficiency of their collection and finally the results are observed in the situation of the receipts, in this article we talk about the receipts of VAT. At the level of the European Union, for the period 2013-2018, the situation of the VAT deficit for this indirect tax is illustrated in fig. no. 1

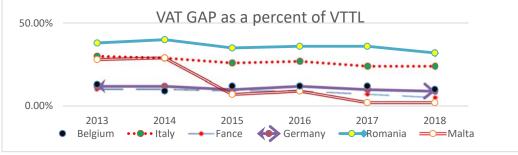


Fig. no. 1 VAT deficit (%) Source: own, according to data presented in the TAXUD 2019 Report

Of those presented the highest VAT rate in the analysis of the six mentioned states, Italy holds (22%), followed by Belgium (21%), France (20%), Germany (19%), Romania (24% -19%), Malta (18%), These data show that the gap between VAT rates applied at EU level is not so different between developed and emerging states and represents "a step towards harmonization"(Vladetal,2018). According to the TAXUD 2019 report, all the mentioned states had difficulties in collecting VAT and these led to different results of VAT deficits in the period 2013-2018, from 2% in Malta, to 35.5% in Romania. Romania has the largest deficit in VAT, the emerging state, and the smallest recorded VAT deficit is registered in France and Germany. Malta had a promising circuit, managing to go from 28% (2013) to 2% VAT deficit (2018). In conclusion, we cannot say that there is a directly proportional relationship between VAT rates and the VAT deficit.

Conclusions

Fiscal pressure and payment of taxes is an important issue for individuals and legal entities for the members of the European Union. The presentation of the article has shown that a developed national economy can be granted, the gross domestic product is reported, the high taxes are levied, or a higher general fiscal pressure is ratified, to the detriment of the emerging states, with a lower tax rate. Following the verifications it was found that modifications can be made in Romania and in Malta. Several moderates are being supported for fiscal pressure, in order to overcome the conditions in the European countries. The decrease of VAT rates in Romania and Malta has had many positive results, especially for Malta, observing or improving at a level of fiscal pressure for cats and effective VAT groups.

At the same time, this article presented the efficiency of VAT collection in the period 1998-2018, where it was shown that the degree of economic development is indeed a fundamental feature in quantifying public finances, because they underline the efficiency of the state intervention in the economy. This could be demonstrated on the basis of the collection

BASIQ

efficiency index, which shows the value of the value added tax and the importance of the supportability of the natural or legal persons, but also the degree of influence of the tax rates. An important conclusion that came to the end of the article is that the level of the standard VAT rate does not guarantee the influence of the deficit in a certain interval. However, we cannot deny that a lower VAT rate also implies a lower risk of losing revenue from this source. It can be said that the level of quotas is not the one that mainly influences the state VAT collection rate, because the deficits are the result of the interaction of several factors, such as: the events of the companies with an impact on the VAT collection on the budget - such as bankruptcy - insolvency, organization of the system of VAT. tax administration, tax fraud, VAT exemptions used abusively, etc., external factors that need to be studied separately.

References

- Brezeanu, P., 2009. *Fiscalitate: Concepte, teorii, politici și abordări practice*. București: Editura Wolters Kluwer.
- Bunescu, L., 2011 International Financing Alternatives for Romanian Central Government. Studies in Business and Economics, 6(3), pp.39-51.
- Butu, I., Brezeanu, P., Porumboiu, A. and Ghetu, R.A., 2019. Theoretical Considerations on VAT Structure Rates in the European Union. In Finante - provocarile viitorului (Finance -Challenges of the Future), University of Craiova, Faculty of Economics and Business Administration, vol. 1(21), pp.54-62.
- Consiliul Uniunii Europene, 2006. Directiva 2006/112/CE a Consiliului din 28 noiembrie 2006 privind sistemul comun al taxei pe valoarea adăugată, [online] Available at: https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX%3A32006L0112 [Accessed 14 March 2020].
- European Council, 2018. Council Directive (EU) 2018/1695 of 6 November 2018 amending Directive 2006/112/EC on the common system of value added tax as regards the period of application of the optional reverse charge mechanism in relation to supplies of certain goods and services susceptible to fraud and of the Quick Reaction Mechanism against VAT fraud, [online] Available at: https://eur-lex.europa.eu/legal content/EN/TXT/?uri=CELEX%3A32018L1695> [Accessed 19 February 2020].
- European Parliament, 2004. Regulation (EC) No 638/2004 of the European Parliament and of the Council of 31 March 2004 on Community statistics relating to the trading of goods between Member States and repealing Council Regulation (EEC) No 3330/91, [online] Available at: https://eur-lex.europa.eu/legalcontent/en/ALL/?uri=CELEX%3A32004R0638 [Accessed 6 March 2020].
- European Parliament, 2019. *Report on financial crimes, tax evasion and tax avoidance. Special Committee on financial crimes, tax evasion and tax avoidance*, [online] Available at: https://www.europarl.europa.eu/doceo/document/A-8-2019-0170_EN.html [Accessed at 30 January 2020].
- Institute for Advanced Studies (Consortium leader), 2019. *Study and Reports on the VAT Gap in the EU-28 Member States: 2019 Final Report.* [pdf] Available at: https://ec.europa.eu/taxation_customs/sites/taxation/files/vat-gap-full-report-2019 en.pdf> [Accessed 8 February 2020].
- Jorge Martinez-Vazquez and Richard M. Bird, 2010. "Value Added *Tax: Onward and Upward?* International studies program, working papper 10-26.
- Smith, A., 1776. An Inquiry into the Nature and Causes of the Wealth of Nations, ed. Edwin Cannan, London: Methuen & Co., Ltd.
- Tulai C., Şerbu S., 2005. Comparative taxation and tax harmonization. Cluj Napoca: Paper Science Publishing House.