VALUE-ADDED TAX GAP

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Abstract: *The evasion phenomenon has negative implications on various levels and it must be constantly monitored in order to combat it as effectively as possible. One of the most efficient estimation tools to combat tax evasion is the tax gap. The tax gap is defined as the difference between the amount of taxes and fees, which would have to be paid by the taxpayers and the amount that is reported and actually paid. This tax gap distorts the entire economic system, disrupting all major macroeconomic indicators. The paper presents the concept of tax gap, discusses how it is estimated and outlines some limitations regarding the estimation of the value-added tax gap.*

Keywords: Tax revenue, Tax evasion, VAT gap.

JEL Classification Codes: H21, H26.

1. INTRODUCTION

The tax gap represents the difference between the amounts that should be collected by the tax administration according to the tax legislation in force and those that are actually collected. The debate about the tax gap is complex due to the impact the activity of collecting the tax revenues has on the economy and society. Even since 2006, the U.S. Department of the Treasury Office of Tax Policy has recognized the particular impact of the tax gap, proposing ”A Comprehensive Strategy for Reducing the Tax Gap” by improving the voluntary compliance and reducing the possibilities of tax evasion. The issue of tax gap has become much more important in recent years, especially in the Member States of the European Union (EU), because lowering the rate of taxation increases the pressure on public authorities to collect all the tax revenues provided by the budget laws. According to a questionnaire applied by the Tax Gap Project Group established within Fiscalis 2020 cooperation program of the European Union, most EU Member States made estimations on the tax gap regarding the value added tax (VAT) in 2015, while the estimations on the tax gap regarding the corporate and personal income taxes or social contributions were lower, as well as the tax authorities' concerns.

Commercial transactions between companies or between companies and individuals can lead to a tax-inconsistent behavior. Tax evasion in the field of VAT refers to the deliberate undervaluation of the taxable commercial transactions or their non-reporting and this is an important cause of the VAT gap. This paper provides a review of the tax gap issue, emphasizing the conceptual aspects, its causes and the methodologies to estimate it. At the same time, we tried to analyze the VAT gap in the EU Member States, in correlation with the VAT receipts as GDP share and the efficiency of taxation. The results of the study show a close connection between the level of the tax gap and the efficiency of taxation in the VAT field.

2. THE ISSUE OF TAX GAP

The efforts to identify some measures and indicators that can help tax authorities to monitor taxpayers' compliance with the tax regulations have led to the need for tax gap research. Eric Toder defined in 2007 the gross tax gap as the difference between the fiscal obligation established for a period of one year and the value of the tax that is paid voluntarily and on legal deadlines. The components of this type of gap were: (1) the failure of taxpayers to submit the tax declarations within the legal deadlines; (2) the underestimation of taxes due by the taxpayers who submit the tax declarations within the legal terms; (3) the taxpayers' incomes lower than those declared and the non-payment of the related taxes. Similar opinions can be found in a study of the Organization for Economic Cooperation and Development (OECD) from 2008, which distinguishes between the notion of "net tax gap" and "gross tax gap". If the "gross tax gap" is the difference between the estimated amount of taxes that the taxpayers should pay under the law and the amount of taxes actually paid in due time, the "net tax gap" is the difference between the "gross tax gap" and the amounts collected after the settlement of tax receivables by forced execution.

The causes of the tax gap are multiple. According to the studies published by HM Revenue and Customs (an UK government agency, with powers in tax collection), the tax gap can be generated by the taxpayers' mistakes in calculating taxes and misstatement of tax obligations, tax evasion, misinterpretation of legislative provisions in the fiscal field, etc. (HM Revenue and Customs, 2019). Richard Murphy (2014) identified the following causes of the tax gap:

- the taxpayers' remaining fiscal obligations that determine the non-collection of tax revenues. In this situation, the taxpayers are informed about the taxes they have to pay, but they do not make the payments within the terms stipulated by the legal regulations;
- some companies use some fiscal optimization techniques, in order to pay as few taxes as possible;
- tax evasion, a situation in which the taxpayers do not intentionally pay their tax obligations.

According to Directorate-General for Taxation and Customs Union (2016), the tax gap is generated by tax evasion and fraud, tax avoidance and other factors (errors in tax returns, the impact of the business cycle and some tax law gaps that can be exploited by the taxpayers to avoid taxation).

The OECD specialists (2008) stated that the tax gap is not a unitary phenomenon, because the fiscal authorities face tax gaps for each category of tax they administer. Thus, the measurement of the total tax gap, registered at the level of a state, requires the aggregation of the fiscal differences related to all the administered taxes.

The tax gap estimations provide information on tax revenue losses recorded by the authorities. Depending on the methodology applied for the estimation, the tax gap may provide information on its components and causes, as well as on the tendency of tax revenue loss (Directorate-General for Taxation and Customs Union, 2016). The tax gap may be estimated through two categories of approaches:

- the macroeconomic or indirect approach, also called the "top-down" approach, implies establishing the difference between the real basis and the estimated potential basis of tax revenues based on macroeconomic statistical data;
- the microeconomic or direct approach, also called the "bottom-up" approach, implies the use of the results of unannounced or operative fiscal controls that allow the quantification of the non-compliant behaviors of the taxpayers.

An analysis of the literature highlights the existence of some methods for measuring the tax gap in the field of corporate income taxes and the tax gap in the VAT field.

The U.S. Internal Revenue Service evaluates the tax gap for a large number of taxes, both direct and indirect, through a compliance measurement program that involves high costs, the results being available with large delays in time. The methods of measuring the tax gap are based on direct approaches, such as auditing taxpayers' compliance or probing them, and indirect approaches, such as comparing aggregate indicators of tax information corresponding to other national economies (Gemmell and Hasseldine, 2012).

Two comprehensive studies conducted by the Directorate-General for Taxation and Customs Union (2016 and 2018) synthesize the types of methods for evaluating the tax gap in the field of VAT and corporate income taxes, as well as the advantages and disadvantages of these methods. The comprehensive estimates of the tax gap in the field of direct taxes are more difficult to make, so that there is a wealth of information on the VAT tax gap, but little data on the tax gap in the income tax of companies or individuals, in the EU Member States. The difficulty of developing a correct methodology for estimating the tax gap in the field of direct taxes is generated by the existence of different and complex tax systems (for example, numerous exemptions, deductions, etc.) for each EU Member State. It is difficult to estimate the fiscal obligations related to the incomes of companies and individuals since there is insufficient information available through the systems of national accounts.

Regarding the tax gap in the field of corporate income taxes, the conclusions of the study entitled "The concept of tax gaps. Report II: Corporate income tax gap estimation methodologies" show the difficulties of their measurement, with reference to the methodological difficulties, as well as the difficulties related to the collection of data needed to make estimates. The authors of the study mention that, for a more accurate assessment of the tax gap, several of the described methods can be used at the same time (Directorate-General for Taxation and Customs Union, 2018).

Since the VAT is one of the most important sources of public revenue in the European Union, the issue of measuring the tax gap in this area has been carefully analyzed in the study entitled "The concept of tax gaps. Report on VAT gap estimates". The European Commission specifies that the choice of a certain methodology for measuring the tax gap in the VAT field depends on the measurement objectives and the available resources (Directorate-General for Taxation and Customs Union, 2016). According to the above mentioned study, the methodologies for estimating the VAT gap used in the EU Member States are different, either based on macroeconomic data (production or consumption) within the "top-down" type approaches, or based on data analysis regarding the tax declarations, the results of the tax audits or the comparison of surveys with the data of the tax administrations, within the "bottom-up" type approaches. The advantages and disadvantages of the methodologies for estimating the tax gap are presented in table no. 1.

Table 1. ***The advantages and disadvantages of the methodologies for estimating the tax gap in the VAT field***

Methodologies based on "top-down" approaches	*Methodologies based on "bottom-up" approaches*
Disadvantages	
- volatility in time due to the periodic review of the data from the system of national accounts and updates of the forecasted macroeconomic indicators;	- the data on which the estimates are based may be erroneous, because the information available to the tax administrations comes from surveys, tax returns, etc. and their accuracy depends on the honesty of the taxpayers;
- difficulties in including other factors that determine the tax gap (eg evaluation of tax-exempt business transactions, evaluation of tax	- appropriate statistical tools (econometric modeling, extrapolation, etc.) must be used to make estimates based on information collected

facilities granted to taxpayers, etc.), besides the taxpayers' non-compliance;	from operational tax controls (primarily targeting taxpayers with high risk of non-compliance) or unexpected tax controls;
- the impact of the underground economy cannot be differentiated in estimating the tax gap;	- estimates based on surveys can generate partially erroneous results because there is a risk of using non-representative samples of taxpayers, because the number of large companies is small and the population of this category has a heterogeneous character;
- difficulties in establishing the causes of the tax gap (tax evasion and fraud or tax avoidance, errors in tax declaration, payment deferrals, etc.);	- higher costs incurred for obtaining estimates.
- the impossibility of applying for periods less than 1 year, due to the data characteristics from the system of national accounts.	
Advantages	
- data sources and estimates based on the system of national accounts are more accurate and comprehensive than the fiscal data;	- the possibility of establishing the causes of the tax gap;
- reduced costs committed to obtain estimates.	- the possibility of applying for periods less than 1 year.

Source: processing by Directorate-General for Taxation and Customs Union (European Commission), 2016, The concept of tax gaps. Report on VAT gap estimations.

As part of a project funded by the Directorate General of Taxation and Customs Union, the Center for Social and Economic Research (Project leader) has developed a methodology for estimating the tax gap in the VAT field, based on the macroeconomic approach (data available in the national accounts system). The tax gap in the field of VAT represents the difference between the total theoretically estimated revenues to be collected from VAT and the revenues actually collected. The total theoretical revenues estimated to be collected from VAT are generated by different sub-aggregates of the economy on six components: households, government, final consumption of non-profit organizations, intermediate consumption, gross fixed capital formation and other specific adjustments.

3. TAX GAP ANALYSIS FOR THE EUROPEAN UNION MEMBER STATES

The report published by the Center for Social and Economic Research (Project leader) in 2019 highlights the reduction of the VAT gap (as a percentage of the total theoretically estimated revenues to be collected from VAT) in the EU Member States from an average of 15% in 2013 to an average of 11% in 2017. Except from Ireland, Greece and Finland, all EU Member States recorded a tendency to reduce the VAT gap.

The best performances were recorded in Malta where the tax gap reduced from 28% in 2013 to 2% in 2017 and in Poland where the tax gap reduced from 27% in 2013 to 14% in 2017. Romania was the state with the highest VAT gap (between 35% and 40%) during the analyzed period. There were significant differences between the Member States from the point of view of the VAT gap estimates in 2017 (figure 1).

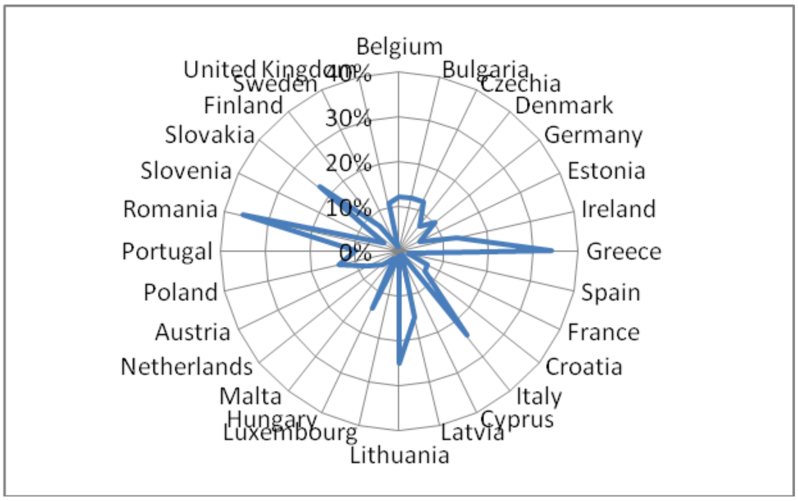

Figure 1. ***The differences between the EU Member States from the point of view of the VAT gap estimates (2017)***

Source: based on data from Study and Reports on the VAT Gap in the EU-28 Member States: 2019 Final Report, Center for Social and Economic Research (Project leader)

The high levels of tax gaps could be reflected in the level VAT receipts in GDP (lower), but this last indicator depends largely on the tax rate.

The analysis of VAT receipts, as GDP share, for the EU Member States in 2017, shows a much more uniform situation, the differences between the Member States being relatively small (figure 2).

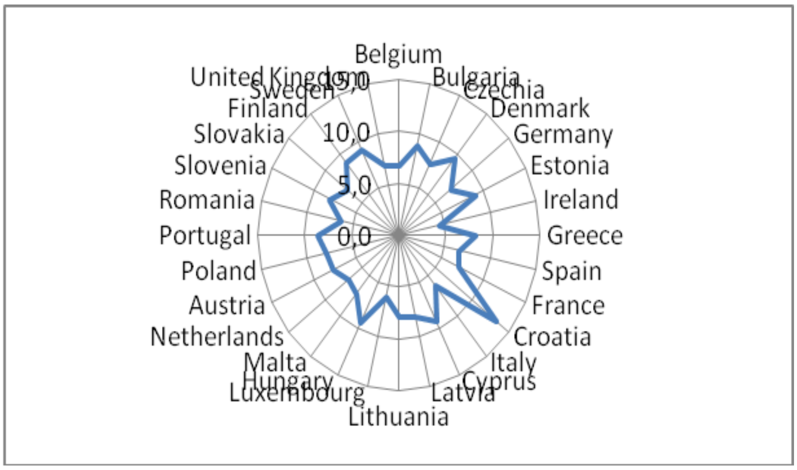

Figure 2. ***The differences between the EU Member States, in terms of VAT receipts, as GDP share (2017)***

Source: based on data from Data on taxation, Eurostat

Considering both the level of VAT receipts as GDP share and the tax rate, an evaluation of the efficiency of VAT collection can be made. A comparison between the tax gap in the field of VAT and the degree of efficiency of VAT collection in 2018, for the group of new EU Member States in Central and Eastern Europe, shows the close connection between the two indicators. Thus, countries with a low tax gap, such as Slovenia and Estonia, have the highest rates of taxation efficiency in the field of VAT, and countries with a large tax gap, such as Romania and Lithuania, have the lowest efficiency indexes in case of VAT taxation.

Table 2. VAT gap and VAT taxation efficiency *(2017)*

State	*Tax gap*	*Taxation efficiency index* [1]
Bulgaria	12%	0.88
Czech Republic	12%	0.86
Estonia	5%	0.97
Latvia	15%	0.69
Lithuania	25%	0.65
Hungary	14%	0.92
Poland	14%	0.77
Romania	36%	0.7
Slovenia	4%	0.96
Slovakia	23%	0.74

Source: Study and Reports on the VAT Gap in the EU-28 Member States: 2019 Final Report, Center for Social and Economic Research (Project leader) and Annual Report of the Fiscal Council, 2019.

The annual report of the Fiscal Council (2019) specifies that the position of each country according to the efficiency index of taxation must be interpreted also from the point of view of the structural differences between the analyzed economies, considering that the higher percentage of the population living in the rural area is reflected in a larger share of the self-consumption component and the (non-taxable) peasant market, influencing the value of this index.

4. CONCLUSIONS

The analysis of the VAT gap estimations in the EU Member States has shown a tendency to reduce it during the last years. Romania remains in the first place in the ranking of states with high VAT gap, an aspect that highlights the high level of non-compliance with payment and the tax evasion.

The level of the VAT gap does not have a significant influence on the level of VAT receipts, as GDP share. This research shows the close connection between the level of the tax gap and the efficiency index of taxation in the VAT field. The tax gap should be a performance indicator for the tax authorities, as it expresses the level of payment compliance. In this context, the reports on the level of the tax gap should also extend to direct taxes, since only a few Member States conduct estimates on the tax gap for the incomes of companies or individuals.

[1] The tax efficiency index represents the ratio between the default tax rate and the weighted average VAT rate. The default tax rate represents the ratio between "VAT revenues" (ESA code D211REC) and "final consumption of households and IFSLSG" (ESA code P31_S14_S15).

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