

**FURTHER STUDIES ON THE PHENOMENON OF TAX
OPTIMISATION VERSUS TAX EVASION - THE SCOURGE OF
CONTEMPORARY SOCIETY**

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Abstract: In this paper we aim to study the phenomenon of tax evasion and tax optimization at the European Union level, in particular on value added tax, in order to outline the concept of the VAT revenue shortfall and to identify its determinants. Tax evasion is a complex and persistent problem faced by most countries around the world. This harmful practice affects the budgets of countries, reducing their revenues and jeopardising the sustainability of tax systems. Either tax evasion or tax optimisation both have the same strategic objective, namely to reduce through legal or illegal means the financial resources allocated to the state budget as taxes or duties. In order to ensure that we achieve the above-mentioned goal, we have set ourselves the objective of carrying out a study in EU member countries on the determinants of the VAT gap.

Keywords: accounting financial information, users of financial accounting information

JEL Codes: M41

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Theoretical background on research

A fundamental quality of a healthy organisation is good corporate governance. This is a set of principles, rules and practices that establish the direction and control of the organisation and the relationships between its various stakeholders (Tsakumis G.,2010). It plays a crucial role in defining how the organisation behaves both internally within itself and in relation to the market. In the modern era, researchers are increasingly focusing on understanding the roots of economic crises and developing proposals for recovery (Kiri

N.,2016). Policy makers seek a balance between the competitive strength of the national economy and the need to comply with international agreements and regulations, given the importance of economic growth (Bruno C., Marazano E.,2008).

Either tax evasion or tax optimization both have the same strategic objective, namely to reduce through legal or illegal means the financial resources destined to the state budget as taxes or duties (Kounadeas T.&al., 2022). Their effect is simple, i.e. it allows companies to save and reinvest those money, strengthening their market position and becoming much more competitive with their competitors (Annette A.,Johannesen.,Zucman G.,2019). One of the taxes that often falls under tax avoidance or tax optimization is the value added tax. One of the direct consequences of tax evasion and optimization carried out on value added tax is the formation of VAT gaps, which is a major concern for tax authorities and economists alike referring to the difference between the amount of VAT estimated to be collected by the tax authorities and that actually collected. Referring to the above, we can say that the motivation for this scientific approach was the amount of money lost by the European countries from the VAT gaps, i.e. from the deficit due to the non-collection of this tax. According to one of the most recent reports at EU level, in 2020 the VAT gap amounted to 93 billion euros, a rather large amount with which a series of social and economic projects could have been carried out, thus contributing to improving the quality of life, especially in countries with a much lower economic level compared to developed countries such as Luxembourg, Germany, France, the Netherlands, Belgium, etc. (European Commission Report, 2022).

In recent times both tax evasion and the VAT gap have become major issues of interest both in Romania and in the European Union as a whole. In the current economic context, the phenomenon of the widening of the VAT gap is a major problem for a fruitful economic and social development in a country. This as a first effect of tax evasion can manifest itself through inflation, unemployment and crisis, which can lead again to the realization of acts of evasion thus creating a vicious circle that can be stopped only by formulating clear, stable and advantageous policies for various categories of taxpayers (Aniței N.C., Lazăr R.E., 2016). When GDP is high and economic activity is robust there is usually a larger tax base for value added tax, leading to higher VAT revenues and a much smaller deficit. Conversely, in periods of economic downturn or recession GDP may fall, leading to reduced consumption, lower taxable transactions and possibly a much larger non-tax revenue deficit (Pastusiak R., Bolek M., Pluskota A.,2022). In general the overriding administrative objective of every state in any period is to maximise the tax revenue collected from taxes.

However, historically in any society there has been the phenomenon called tax evasion, which undoubtedly weakens the ability of the authorities to collect taxes from various taxpayers, thus creating a budget deficit that hinders the state in financing public expenditure, i.e. the provision of various goods and services to citizens (Kong F., Wang C., 2019). From the above, we can say that tax evasion as a concept is the evasion of taxes or duties by individuals or legal entities. In other words, it generally refers to illegal processes in which the obligation to pay taxes is concealed or ignored, i.e. the taxpayer pays less tax than he should pay according to the law, avoiding to communicate his real income and other important information to the tax authorities .

Research Method

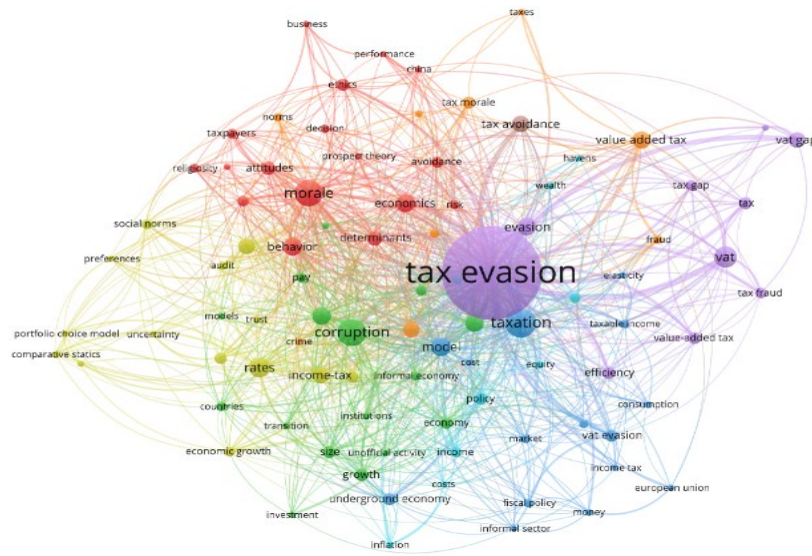
The specialized literature defines the research methodology and the construction of the text of a paper as a "way" to be followed in the research activity to achieve the objectives, namely for information and training. To reach the goals of this research, I relied on a qualitative approach using a general-to-private approach. Regarding the human and social sciences, this research is based on the non-participant observation (Lesage and Wechtler, 2012), more precisely the inductive research method is applied, on the document analysis and on the comparison techniques. The research strategy addressed in the present research is dominated by certain methodological aspects namely:

- inductive (experimental, quasi-experimental, observational) and deductive;
- comparative and non-comparative;
- qualitative and quantitative (Dumitru Zaiț, Alain Spalanzani, 2006).

The research approach was mainly based on a qualitative analysis. The research is theoretical but also empirical. In order to benefit from timely results and conclusions in the research activity specific to the economic field, we aimed to analyze facts, economic events, figures and statistical data.

Bibliometric analysis of the concepts of tax avoidance versus tax optimization

For a better understanding of the relationship between the VAT gap and tax avoidance versus tax optimization, we have further conducted a bibliometric research on concepts to analyze these topics of international interest (Chernykh L., Mityakov S., 2017). The purpose of this analysis is to examine a number of scientific papers, publications and other relevant sources in order to identify trends, impact and evolution of scientific approaches in this field (Nurkholis N. &al. 2020). Thus, in order to carry out this research we used VOSviewer software and Web of Science platform, with the help of which we analyzed 3000 papers in the form of articles, books, book chapters and other relevant publications, the main areas being, Tax evasion, Tax optimization and corporate governance, Economic growth and performance etc. The papers studied were to include concepts of tax avoidance and optimisation, corporate governance, tax fraud and economic performance. Based on the VOSviewer application, we analysed the articles on the Web of Science from the perspective of the keywords mentioned above. Therefore in the graph below we have illustrated the 126 keywords, which reached the minimum threshold of 5 frequencies out of the 6422 reported by VOSviewer.



Chart

no.1.

Bibliometric analysis of tax evasion & VAT gap concepts

Source: own processing in VOSviewer

We can see that there are five clusters or groups, each of which is highlighted by a distinct circle of a different colour depending on its relevance. Therefore, this network clearly illustrates that this area of research is of great importance and attracts considerable interest from the international scientific community and tax professionals. In this regard, by examining the bibliographic resources we concluded that: bibliometric analysis of tax evasion revealed a significant concern for this phenomenon both in the literature and in practice. This can also be seen in the graph above where the concept of tax evasion which is purple is interlinked with other concepts such as: corruption, business, vat-gap, vat evasion, value added-tax, taxation, economy etc. Thus, we can say that we have identified different theories, models and methods of estimating tax evasion, as well as case studies that analyze the causes, consequences and ways of combating tax evasion in the context of VAT, and this underlines the importance of effectively combating tax evasion in order to reduce the VAT gap and ensure efficient collection of this tax.

On the other hand, bibliometric analysis of the relationship between tax avoidance versus tax optimisation and the VAT gap has highlighted the existence of a complex connection between these concepts. This can also be identified in the graph above through the prism of purple, orange, red and green, illustrating the VAT gap as a result of evasion, optimisation, ethics and corruption. Thus, work has been identified that explores the interplay between these concepts sometimes highlighting the subtle boundaries between them and the challenges in identifying and evaluating tax practices. At the same time, examples of tax abuses that tend to fall into the grey area between tax avoidance and tax optimisation were also highlighted. This underlines the need for a balanced and consistent approach in tax legislation to prevent abusive practices and to reduce the VAT gap.

Overall, therefore, we can say that the bibliometric analysis carried out shows a strong connection between tax avoidance versus tax optimisation in relation to the value added tax gap, highlighting the need for continued debate and research in this area. Based on it,

guidance and insight can be provided in the development of effective tax policies and anti-avoidance measures to ensure efficient VAT collection and a fair tax system. However, in order to analyse these phenomena from an applied point of view and to get some clearer ideas, in the following we will present an econometric model of the factors influencing the gap at EU member country level, trying to highlight the dependency relationships, but also the factors that have amplified this evolution.

Econometric model on the factors influencing the VAT gap at EU level

Nowadays, tax management is one of the biggest challenges for a businessman. For a more efficient management of their assets and liabilities and in an attempt to achieve maximum profit, taxpayers resort to various tricks to evade or mitigate their tax obligations (Trif V., 2019). The shortfall from non-collection of value added tax, is a measure of overall VAT non-compliance (Tsakumis G.,2010). Value added tax is one of the basic sources of total revenue collected in all European countries. In 2020 alone, the contribution of VAT to total tax revenue ranged from 20% to 50% at Member State level as well as accounting for approximately 26% of total annual tax receipts for EU governments (Smietanka A., Tanski A.,2022). Most often this indicator is expressed in absolute terms according to the formula:

$$VAT\ Gap = VTTL - VAT\ revenue\ collected$$

or relative to a reference, which is always represented by the VTTL indicator:

$$VAT\ Gap(\%) = (VTTL - VAT\ revenue\ collected) / VTTL \times 100\%$$

As mentioned, the approach used for the estimates of basic income is carried out by calculating the VTTL indicator for a given time interval, while also aligning it with its relevant figures. Information from the national accounts (as a source of information on the tax base), various statistics as well as data from tax registers are used to estimate total VAT receipts. Compared to the production-based approach, which estimates VTTL payments for all sectors, the consumption-based approach analyses the final liability in a product breakdown and corrects the liability estimates for non-deductible VAT hidden at the intermediate stage.

The main objective in this econometric work is to relate the value added tax gap to the independent variables mentioned above through a mathematical regression and to determine the importance of each independent component in the evolution of this gap. In order to obtain valid explanations of the correlation between the dependent variable and the independent variable, we entered the data in SPSS 25 and checked the validity of several regression models, obtaining that the best model in this situation is the multiple linear regression, which has the form:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon;$$

In the case of our model, the equation will have the form:

$$VAT\ gap = \alpha + \beta_1 \text{ Standard VAT rate} + \beta_2 \text{ GDP} + \beta_3 \text{ Number of unemployed} + \beta_4 \text{ VTTL} + \beta_5 \text{ Exchange rate} + \varepsilon$$

We therefore aim to show that this model best describes our research hypothesis, and gives us a high degree of confidence in the econometric explanations taken in relation to the economic ones.

According to the statistical tests carried out during the modelling at the level of all EU member countries we can observe that between the variables GVA_Gap, number of legislative changes, number of unemployed, VAT rate, VTTL and GDP there is a strong link, therefore based on the results obtained, we can say that the variation of the independent variables explains 73.4% of the variation of the VAT gap. In other words, if the VAT Gap shows a certain evolution, it means that the number of legislative changes, the number of unemployed, the VAT rate, the VTTL and GDP will be able to explain 73.4% of this evolution.

Table no 1. Regression coefficients for EU-27 model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,732	6,325		,590	,561
VAT quota	-22,726	28,980	-,096	-,784	,442
GDB	-,022	,008	-3,052	-2,718	,013
No unemployed	1,507E-6	,000	,506	3,011	,007
VTTL	,344	,112	3,373	3,085	,006
Nr sc leg	1,484	,944	,183	1,571	,131

a. Dependent Variable: Gap TVA

Table Coefficients gives us data on the regression coefficients. Thus, according to the data the estimated equation of the multiple linear regression model has the form:

$$\text{Gap_VAT} = 3.732 - 22.726 \cdot \text{VAT_quota} - 0.022 \cdot \text{GDP} + 1.507\text{E-}6 \cdot \text{Nr_somers} + 0.344 \cdot \text{VTTL} + 1.484 \cdot \text{Nr_sc_leg} + \varepsilon$$

According to the Coefficients table and the equation estimated above, we observe that the variable that has the greatest influence on the VAT gap in all EU member countries is the VAT_rate. Although it would seem to us that the VAT rate applied at the level of the Member States should increase the VAT gap, by analyzing the above equation, we understand that in the case of this model the VAT rate applied at the level of the EU countries, on the contrary, contributes to the decrease of the VAT gap, and this can be explained by the fact that a possible increase of the standard VAT rate can cause an increase of the prices of goods and services, and because of this consumption decreases, demand decreases and therefore the revenues of the taxpayers decrease, which includes the value added tax.

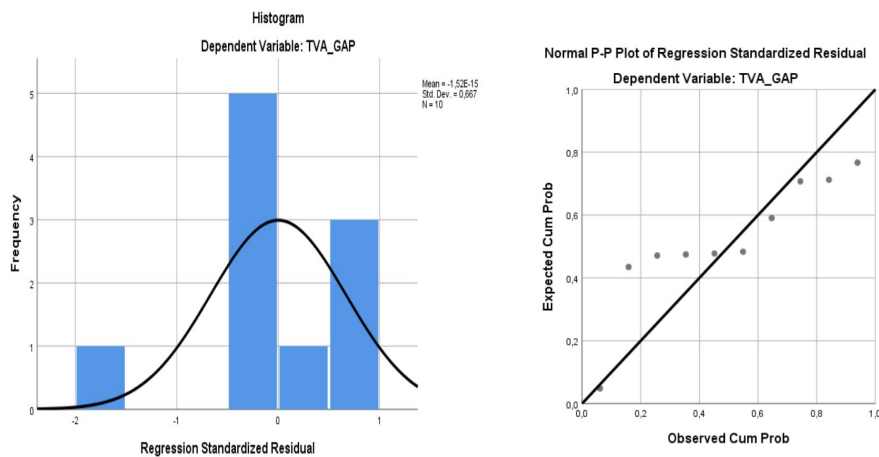
Another variable that has a significant influence on the VAT gap is the number of changes in VAT legislation. This is most clear, as frequent changes in the VAT regulatory framework make it more difficult for taxpayers to adapt and therefore they may commit errors due to the instability of VAT legislation or they may intentionally resort to fraudulent acts because the previous legislation was much more convenient than the current one. A positive influence on the VAT undercollection gap is the variable (VTTL) total estimated VAT receipts, which could contribute to an increase in the gap due to the fact that the

higher this variable is and the lower the total actual VAT receipts collected, the higher the gap will be.

As regards the variable No_unemployed, it can be said that it has a positive but not very significant influence in all Member States, as it can in principle have an indirect impact on the deficit from non-collection of value added tax. Thus, this variable may lead to a reduction in consumption, or a decrease in the performance of some economic activities. However, the fact that the value of the coefficient next to this variable is very small means that compared to the total consumption of goods and services at EU level, consumption by the unemployed is so small that even if they in partnership with some suppliers were to resort to tax evasion, it would be insignificant.

Based on the research conducted, we can say that the most important indicator in determining the VAT gap is corruption, which can contribute to increasing this indicator by supporting and protecting tax evaders in exchange for financial incentives. This protection often invokes the provision of strictly confidential information on the conduct of tax controls, the deliberate blocking of investigations or the payment of very low taxes and penalties compared to the frauds committed. Thus, we can clearly outline the idea that the exercise of corruption can weaken the tax control and supervision system by means of illegal influences exerted on tax officials and authorities. This can lead to a certain relaxation in the application of tax rules and a reduction in the detection and sanctioning of tax evaders, causing the VAT-Gap to increase.

Next, in order to validate the above mentioned hypothesis we will illustrate in the following graph the histogram and the P-P Plot which should say that our variables do not exert such a large influence on the VAT-Gap.



Chat no 2. Histogram and Normal P-P Plot of the situation in Romania

Source: Own processing in SPSS

According to the above graph we can see that the histogram follows a totally fluctuating distribution with a number of deviations, and if we refer to the probability plot of the residual we can say that it is not similar at all to the line graph, which tells us that this model requires one more variable, namely the corruption index that could make the error terms normally distributed. Thus according to the analysis of this graph we can validate

the hypothesis formulated above and we can confirm the influence, interdependence and correlation between the dependent variable with the independent ones but most importantly the enormous contribution of corruption exercised among public authorities which amplifies the effect of the independent variables and ranks Romania 1st in the EU on the VAT gap.

Conclusions and proposals

In this paper we aimed to study the concepts of tax evasion and tax optimization and their influence on value added tax, in order to outline the phenomenon known as the VAT gap. Among the most common ways of evading the payment of taxes imposed were: underestimation of wealth and property owned, use of alternative means of payment and bribery of tax collectors, and these activities have only forced public authorities to formulate more balanced and intelligent tax policies over time.

According to the research carried out, the main indicators determining the evolution of the gap in the EU-27 Member States are the standard VAT rate, the number of legislative changes and the number of unemployed. However, we have identified a difference between economically developed countries and those with an average economy, namely that in the case of less developed countries, the increase in the VAT rate contributes to reducing the gap due to the increase in prices, the decrease in demand due to the lack of financial resources and the decrease in taxable income in terms of VAT, whereas in developed countries the opposite is true, the increase in the VAT rate contributes to the widening of the gap, and this can be explained by the fact that companies operating in those countries, since VAT is increased, have an incentive to evade versus optimise tax in order to reduce the tax base, which leads to lower compliance and a much higher deficit.

We can say that a high level of corruption affects the growth of the gap by supporting and protecting tax evaders by providing strictly confidential information on the conduct of tax audits, intentionally blocking investigations or paying very low taxes and penalties compared to the frauds committed. On the basis of this analysis we can say that as long as corruption exists in public administration, the socio-economic objectives of a state will be very difficult to achieve. The authorities therefore have a duty to formulate measures to combat both corruption and tax evasion in order to ensure financial stability and prosperity in all areas of state activity.

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