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TAX GAP OF INDIRECT TAXES AND POSSIBLE WAYS OF ITS REDUCTION IN GEORGIA

Abstract

Of presented dissertation thesis

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General description of the thesis

Relevance of the research topic: The study and assessment of tax loss has received a great deal of attention recently and is gaining significant relevance. Studies in this area are conducted by almost all the countries with developed economies.

Tax gap analysis provides tax authorities and tax policy-makers with an idea of the scale of lost, not received tax income. We are talking about the loss caused by:

- Illegal actions related to tax accrual, such as for example, not registration as a taxpayer, failure to file a tax return or submission of declaration with reduced amounts;
- Not paying recognized assessed amounts, which implies cases, when it is not possible to fully and timely collect all the tax amounts assessed;
- The existence of the tax exemptions envisaged by tax legislation, according to which a significant part of economic activities is not subject of taxation.

Research goals and objectives: The aim of the dissertation thesis is to calculate the tax gap, using a methodology that takes into consideration the specific nuances of the current tax system in Georgia, including specifics of existing tax policy and enables possibilities of breakdown of the tax gap by fields of economics, to ensure maximum fiscal efficiency.

The following objectives are set for the purpose of the research:

- Study of modern approaches of tax gap calculation and selection of the best methodology, taking into account the peculiarities of the tax system of the country;
- Practical calculation of indirect tax gap based on the selected methodology, taking into account the current tax system and existing practice of tax accounting in Georgia;
- Identification of economic sectors, in which the highest volume of tax gap is anticipated;
- Calculation of the volume of tax gap components and evaluation of efficiency of the tax system;
- Analysis of main factors influencing tax compliance, in order to develop relevant tax risk management strategies and recommendations.

The Subject and the object of the research: The subject of research of the dissertation is specific methodologies, approaches and international practical results for the calculation of indirect tax gap. The object of research is the volume of tax gap in Georgia, the current level of efficiency of the country's tax system and possible directions for improvement.

Theoretical and methodological foundations of the research: Due to the practical nature of the research, quantitative methods of descriptive research and analysis were used, through which grouping, evaluation, trend analysis, comparison and generalization of obtained information was conducted. Economic and financial provisions and theories, modern research of Georgian and foreign scholars, publications and expert conclusions on the need to tax gap research, its structure, causal factors, calculation approaches and practices in advanced tax administrations, were used in the research process.

The theoretical basis of the dissertation is the research and publications of tax authorities and international organizations of countries with developed economies, relevant scientific sources, official documents, instructions, orders and methodological guidelines issued in the tax system of Georgia. As an informational base, National accounts, other official statistical material and data of Revenue Service of Georgia, in full compliance with the requirements of information confidentiality and tax secrecy, are mainly used. The methodological basis of the research is the RA-GAP model, developed and recommended by the International Monetary Fund, which, among other advantages, provides the opportunity for analysis of tax gap, by the fields of economics.

As part of the study, to estimate the tax gap, the potential tax level was determined based on macroeconomic indicators, for which we used the official data presented in the national accounts, which we used as a source of input information in the model we built. In the following steps, we compared the potential level of taxes with the real tax payments, calculated for the purposes of tax GAP calculation, which is based on the author's formula and follows the principles of tax accounting in the country.

Scientific novelties of the research: In the dissertation thesis, a model of tax gap calculation for indirect taxes has been developed, which takes into account tax regimes and preferential terms, established by the tax code. Accordingly, this allows simulating the desired changes in tax legislation and determine the likely fiscal effect based on specific conditions.

There is an opinion developed in the dissertation thesis, according to which, for the purpose of determining the volume of tax gap of indirect taxes, in order to properly compare the amounts of potential and actually collected taxes, it's mandatory that both amounts belong to the same tax/reporting period. A certain number of taxes paid during the year, does not belong to the economic activity carried out in the same year, and in some cases, overpaid amounts from the past periods are used to cover tax liabilities, without real payment transactions. These and other specific nuances must be taken into account in order to correctly calculate the amount of taxes paid, to ensure an adequate level of comparability with macroeconomic indicators. It is for this reason that, for the purposes of calculating the tax gap, we developed a formula for calculating the amounts of taxes actually paid, which is adapted to the new tax accounting system introduced in the country from 2016 and considers all the details of the single treasury account mechanism. On the basis of the model and formula developed by us, as a result of a practical calculation, the impact of the tax gap on tax revenues of the state budget is estimated.

One necessary step to calculate the tax gap, is evaluation of potential amount of taxes that is to be accrued based on applicable tax legislation. The study confirmed the relationship between the given indicator and the parameter included in the calculation of the tax burden, as a result of which the dissertation substantiated the necessity of using the taxable (and not paid) amounts in the formula for calculating the tax burden. For the purposes of the study, the need for a realistic calculation of the tax burden is further reinforced by the fact that the tax burden is one of the most important factors, influencing the volume of the tax gap. Within the framework of dissertation thesis, value added tax burden using an authorial formula was calculated, which unlike the traditional approach, relies on the potential level of tax payable (rather than paid) by legislation.

Research results: The following can be distinguished from the main results of the research:

- The impact of tax gap on the country's tax revenues is assessed;
- The sectors of the economy in which the largest expected amount of indirect tax losses are identified. Hereto, the results of the study are presented in terms of the tax gap components - assessment, collection and tax policy gap.
- Value added tax burden is calculated, which, unlike the traditional approach, uses the potential level of value added tax, instead of the amount of tax paid, which derives from the current tax legislation. As for the potential level, we mean the amounts, that could be theoretically collected under full tax compliance and which correspond to the value added created in the country as part of economic activities, according to national accounts.

The importance of the dissertation thesis: Theoretical and practical recommendations of the dissertation research results, can be used by agencies whose responsibilities include development of tax policy, initiation of changes in tax legislation and execution of tax legislation. The results of the dissertation research can make a special contribution to the activities of the tax authority of the country and to those entities, which issue recommendations regarding the effectiveness of the existing tax system in the country. It will also be useful for practitioners and specialists working in this field at different levels of university teaching and research. Taking into consideration the findings and recommendations of the study, will significantly improve the effectiveness of tax administration measures and help to reduce tax gap. A systematic analysis of tax gap according to the presented methodology, will facilitate to increase the tax revenues in the country's budget, as well as will allow the Revenue Service to use resources at its disposal more effectively in those sectors of the economy, in which bigger volume of the tax gap is anticipated.

Approbation of the dissertation thesis: The dissertation was approved at the session of finances and banking chair of the Department of Economics and Business at Ivane Javakhishvili Tbilisi State University, on December 4, 2020. Issues related to research topics are covered by the author of dissertation in internationally reviewed, local and foreign scientific publications and at international scientific conference.

Volume and structure of the dissertation thesis: The work includes an introduction, three chapters, nine subsections, conclusions and recommendations. Enclosed by a list of used

literature. The paper is presented in a volume of 198 printable pages. It contains 12 graphs, 4 diagrams, 1 matrix, 3 charts, 34 tables and 27 formulas. A list of literature used with 80 titles, an Internet resource with 17 titles and publications with 5 titles are encloses to the paper.

Structure:

<div align="center">Brief contents of the dissertation</div>

The first chapter of the dissertation, *"Tax gap and the main approaches to its calculation"*, describes the factors that determine the importance of tax gap calculation, the main types of tax gap and its causes. The importance of taxes in the budget revenues of the country, the impact of the unified treasury code on tax accounting and the need to take this into account in the process of calculating tax gap are analyzed. It also describes the main approaches to calculating tax gap, their advantages, disadvantages and explains the reasons for selecting the RA-GAP model for the purpose of dissertation research.

The second chapter, *"Methodological bases for calculating tax gap"*, describes details of the methodology recommended by the International Monetary Fund, based on the RA-GAP model. In the same chapter, the basic principles of the given methodology regarding calculation of tax gap components, the main stages of calculation, the main assumptions of the model, logic, difficulties and issues needed to be addressed in the process of calculation using the given methodology are described. The same chapter presents the practical logic of defining the potential (theoretical) taxable base for indirect taxes, as well as taxable base derived from existing tax legislation. For this purpose, the structure of national accounts is presented and the ways and stages of their conversion for the purpose of calculating tax gap is described. The approaches to calculate indirect tax payments for the purposes of tax gap calculation are also presented along with their advantages and disadvantages. Also, the author's approach of calculating the relevant indicator is described, which takes into account the existing tax accounting system in Georgia.

In the third chapter *"Practical calculation and assessment of tax gap for indirect taxes in Georgia"*, practical calculations are performed, the main ways and approaches to verify the results of tax gap calculation are discussed. This chapter is a practical part of the dissertation thesis, where practical calculation and relevant analysis of indirect taxes is performed. More specifically, the main sectors of the country's economy in which a relatively large amount of tax gap is expected, by all of the main components of tax gap are identified, the trend of compliance gap is discussed and the rate of compliance gap is compared with relevant indicators of EU countries.

The impact of indirect taxes compliance gap on the country's tax revenues is analyzed. The value added tax burden in Georgia is calculated, for which purpose, unlike the traditional approach, instead of the actually paid tax, the potential value added tax level is used, which is derived from the current tax legislation.

The report provides key recommendations and describes the factual circumstances that need to be considered in the process of developing an action plan and a tax risk management strategy, aiming to minimize tax gap.

Tax revenues are a major component of a country's budget revenues, and VAT on its part, is the main source of tax revenues. It is the most important component of the country's budget revenue, which is why this paper for the purposes of tax gap study and research, focuses on the tax with the highest fiscal effect and significance - VAT.

Despite the urgency of the problem, the scale of scientific treatment of tax gap and the relevant theoretical literature are relatively scarce. The official publications of the tax authorities are also mainly devoted to the review of the results of studies already conducted and not to the practical methodology of calculation. With this in mind, in the dissertation thesis we present in details both - the theoretical aspects of the selected methodology for calculating tax gap, as well as the practical logic of the calculation model, which is maximally adapted to the specifics of the Georgian tax system.

Within the framework of the research, we have developed a model for calculating the tax gap of indirect taxes in Georgia, which takes into account the specifics of the current tax system in the country. In particular, the parameters of the built model take into account the tax regimes and preferential norms established by the Tax Code. Their adjustment enables us to mimic the desired changes in tax legislation and to determine the likely fiscal effect.

The basic logic of any approach to calculate tax gap is based on determining the difference between potential and actual tax revenue. At first glance, the amount of taxes paid / collected is rather an unambiguous concept and can create the misconception that it is not very difficult to calculate. In fact, in order to properly adjust the amounts of taxes paid to the potential tax level, in the process of calculating the tax gap, it is necessary to redistribute the actually mobilized tax amounts, over the reporting periods of economic activity, at the taxpayer level. In case of Georgia,

where tax accounting is performed using so called cash method, it is necessary to take into account the mechanism of the Single Treasury Account and other practical nuances of tax accounting.

The paper presents an authorial formula of real payment calculation for the tax gap assessment purposes. The logic is adapted to the new tax accounting system introduced in the country since 2016 and takes into consideration all the details of the single treasury account mechanism. At current stage, it is impossible to correctly calculate the amount of taxes paid for tax GAP purposes in Georgia without using this approach. According to the author's logic, for the reality existing Georgia, the formula for calculating the amount of taxes paid for tax Gap purposes, was formulated as follows:

$$AVac^s = \sum_{t \epsilon s}(Vm^t + (Avp^t - Vo^t) - Vc^t)$$

Where:

$AVac^s$ - The net accrued VAT revenue for the "s" sector according to authorial logic;

Vm^t - VAT on imports belonging to the relevant period, for the taxpayer "t" from the sector "s";

Avp^t – VAT accrued on taxable transactions belonging to the relevant period, that exceeds the amount of input VAT (in other words, the amount of accrued VAT over input VAT, in relevant tax period), of the taxpayer "t" from the sector "s", in cases where the taxpayer's Vo^t is less than Avp^t;

Vo^t – VAT debt of the taxpayer "t" from the sector "s", at the end of reporting period;

Vc^t - t The input VAT on purchases belonging to the relevant period for the taxpayer "t" from the sector "s", that exceeds the amount of VAT accrued (in other words, the amount of input VAT above VAT accrued).
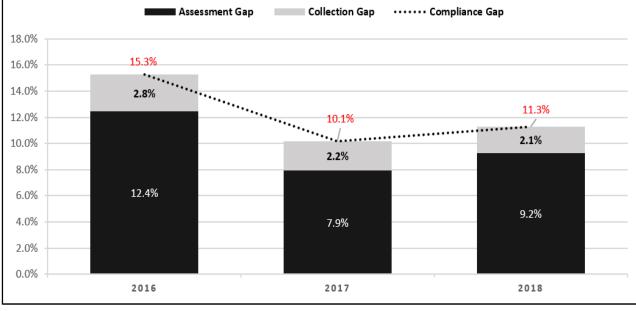
As a result of use of the formula for calculating the actually paid taxes and the Gap calculation model built by us, it became possible to make a practical calculation of the indirect tax gap in Georgia for the years 2016-2018. VAT compliance GAP calculated for the research period ranges from 1-1.5% of GDP. Most of the compliance GAP (over 80%) fall under the

assessment GAP component, while the collection GAP remains consistently low (20%) for each year.

Diagram N1. The dynamics of value added tax GAP and its components

(As a share to potential level)

Period	Assessment Gap	Collection Gap	Compliance Gap
2016	12.4%	2.8%	15.3%
2017	7.9%	2.2%	10.1%
2018	9.2%	2.1%	11.3%

Source: Author calculation

As the results of the study show, the Revenue Service is quite efficient in terms of collecting accrued and recognized amounts. During the research period, collection losses of Indirect tax, remain at the 2-3% mark compared to the potential tax volume, which is a quite acceptable rate. Consequently, there is no need to make significant changes in this direction, however, despite everything, constant care is necessary to maintain this low level of the indicator. On the other hand, when analyzing and planning measures to reduce compliance GAP, more emphasis should be placed on elimination of the assessment GAP component, which averaged about 9-10% (compared to the relevant potential level of VAT by legislation).

In view of the above, when planning measures to eliminate the compliance GAP, more attention should be paid to the economic activities, in which the highest level of compliance GAP is revealed for each year of the study period.

Based on the application of the model built by us, according to the analysis of the obtained results, the highest level of compliance gap is expected in the following activities:

-Retail trade, including trade of motor vehicles and motorcycles;

-Retail trade of motor fuel;

-Manufacture of coke, refined petroleum products and nuclear fuel, manufacture of chemicals, chemical products and man-made fibres, manufacture of rubber and plastic products, manufacture of other non-metallic mineral products;

-Manufacture of basic metals and fabricated metal products;

-Hotels, camping sites and other provision of short-stay accommodation;

-Restaurants, bars, canteens and catering;

-Real estate, renting and business activities.

Unfortunately, the macroeconomic approach of tax gap calculation, does not allow for further breakdown of the tax gap at the taxpayer level. Therefore, based on the analysis of the research, our recommendation to Revenue Service of Georgia, is to conduct specific sectoral surveys covering relevant high risky economic activities revealed by research and to use additional microeconomic approaches of tax gap calculations.

The results of the study revealed a significant impact of value added tax loss on the country's tax revenues. In particular, strategic measures of increasing value added tax compliance, have the theoretical potential to increase total tax revenues of the budget of Georgia by 5-6%.

According to our calculations, the average level of VAT compliance gap in Georgia for the years of 2016-2018 was 12.2%, which is not significantly different from the similar average of EU member states. At the same time, we can say that, in 12 out of 28 EU countries, the VAT compliance gap was higher than in Georgia, and in 16 countries it was lower.

One of the most important factors influencing the amount of tax gap is the tax burden. It is a common practice, determining the tax burden by mainly using the ratio of the amount of taxes paid to GDP. The paper discusses the disadvantages of the traditional approach to

calculating the tax burden, which has a corresponding negative impact on the accuracy of the final figure. In order to get the result that is closer to reality, it is suggested to use the amount of tax payable in accordance with the tax legislation, which is one of the necessary indicators for calculating the tax gap. In other words, in order to correctly calculate the tax burden, instead of actual payment transactions, we should use the potential level of payments, that should have been made in accordance with the tax legislation (with considerations of tax reliefs) based on the performed taxable economic activities in the country during the calculation period (Source: Author):

$$TB = \frac{PTL}{GDP}$$

Where:

TB_ Tax Burden;

PTL_ Potential payable VAT by law;

GDP_ Gross domestic product

Detailed information on the VAT burden calculated by our logic is given in the following table:

Table N1. Value Added Tax Burden

(in million GEL)

Year	GDP	Potential VAT By Law	Tax Burden
2016	35,836	3,702	10.3%
2017	40,762	4,159	10.2%
2018	44,599	4,470	10.0%

Source: https://www.geostat.ge/ka/modules/categories/23/mtliani-shida-produkti-mshp (Last seen 14 May 2020); authorial calculations

The given values of the tax burden do not represent high rates, therefore, according to the results of the research, the significant impact of the VAT tax burden on the amount of VAT tax gap is not revealed[1]. As a recommendation, we consider it desirable that the tax burden to be calculated based on a similar principle with respect to all taxes.

Leval Dgebuadze, Mikheil Chikviladze, "Determination of optimal tax burden to achieve high rate economic growth (Case of Georgia), Journal „EKONOMISTI", N2 (2018) Tbilisi: 121-128.

Conclusions and recommendations

According to the results of the research, from the components of the VAT gap, compliance gap is relatively large, the volume of which in relation to 2016-2018 averaged 10% of the potential VAT under the legislation. Accordingly, the Revenue Service should focus on this area.

The macroeconomic approach to tax gap researches, does not allow for further breakdown of tax gap at the taxpayer level. Therefore, based on the analysis of the research results, we recommend the planning of specific field studies and the use of additional microeconomic approaches. For the purposes of using microeconomic approach we find it necessary to introduce a program of random tax audits in the Revenue Service, within the framework of which, tax audits should be conducted on a certain number of randomly selected taxpayers. Revealing of randomly selected noncompliant taxpayers and identification of their characteristics that would be somewhat correlated with the amounts accrued as a result of the audit, is extremely important from a practical point of view. In case of sufficient number of samples, based on the practical results of the audits performed, it is possible to build quite effective machine learning classification model (for example: "Random Forest", "SVM", "Decision Tree", "KNN", "Xgboost"), Which will serve as an additional indirect identifier for revealing similar risks regarding other taxpayers with similar characteristics and can be extended to the full population of registered taxpayers.

It is vital for modern tax authorities to have access to alternative information, in which assumed all the data that is related but not directly sourced from taxpayers. In order to timely identify tax risks, it is necessary to expand the circle of agencies, institutions, government bodies, business associations and other third parties, from which the Revenue Service is able to systematically receive data, directly and indirectly related to taxation (preferably in the form of electronic services). In this regard, it is necessary to focus on all the factors that affect the ability of the Revenue Service to analyze and respond to tax risks: Practical ability to obtain information; Legislative legitimacy of obtaining information; Level of development of information technology

systems; Possession of modern software and practical use; A strategy for storing, sorting, processing and quality assurance of large volumes of data for analytical purposes; Quality of e-services development; Most importantly, staff equipped with adequate skills and experience, who will be able to properly process, analyze, and effectively use large volumes of data.

When talking about third party information, we cannot fail to mention the limited access of the Revenue Service to taxpayer's bank accounts in relation to cash flow. The Tax Code of Georgia allows the Revenue Service to request the taxpayer's bank information only within the framework of the already appointed tax audit and also on the basis of a court decision. This practice, in our view, significantly hinders the detection of cases of potential misconduct. This information could effectively be used to reduce tax gap.

It is widely believed, that the existence of tax gap is the sole responsibility of the tax authority. In fact, the existence of the gap cannot be explained only by the inefficient functioning of the tax authority, as many factors affect the volume of the gap: level of tax culture of taxpayers; Awareness, the level of state thinking of citizens and the existing trust in state institutions; Understanding of potential threats to noncompliance and the level of severity of those threats; Simplicity, non-ambiguity of tax legislation and heaviness of the tax burden; A preventive, compliance encouraging measures of the tax authority and the tax system in general; Effective use of monitoring, controlling, enforcing and the another means of tax administration, provided by tax legislation at disposal of tax administrations and most importantly - an effective tax risk management strategy. The correct approach to reducing the tax gap, should take into account at least all of the above-mentioned factors and should not be limited to just one of them, or to a particular measure, such as increasing the number of tax audits.

For the implementation of general analytical procedures in the high-risk sectors, identified as a result of the research, it is possible to develop typical, general indicators. In case of such an opportunity, development of such indicators is more appropriate in cooperation with those sectoral business associations and state structures, which are interested in existence of fair play rules in the relevant field. As typical indicators can be considered, for example: the average proportion of the amount of taxes paid and turnover, the average ratio of expenditure and income, the typical profit margin, the average turnover per employee. The anomalous deviation found in

the comparative analysis process, should be considered to be one of the indicators of the existence of potential risk and should be subject to individual in-depth study. The possibility of disclosing such indicators, which would allow taxpayers to self-monitor and self-correct, may also be considered.

Despite the need for systematic monitoring of tax gap and the need to take constant care to reduce its level, the expectation of achieving complete elimination of tax gap and full compliance is unrealistic. Therefore, the strategic goal in this direction should be to achieve and maintain the minimum level of tax gap, beyond which, the costs of additional administration of taxes will be considered ineffective. For this purpose, there is no substitution for using a risk-based, preventive approach, in which the focus will be made on those economic activities revealed by relevant analysis, in which there are more resources to increase tax compliance.

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