

# Method of Controlling the Non-Observed Economy Through Redistribution of Fiscal Burden Among Types of Economic Activity

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**Abstract.** The article explores the problem of assessing the influence of the fiscal burden on the size of the non-observed economy in individual industries.

The purpose of the study is to work out proposals for reducing the share of the non-observed economy in gross value added (GVA) in various industries by redistributing the fiscal burden among types of economic activities.

The research methods used by the author include comparative analysis, the analytical and constructive method, econometric modelling as well as indirect methods that are based on economic indicators used by the Federal Tax Service of Russia, the Bank of Russia, the Federal State Statistics Service and The National Union of Liability Insurers.

The study yielded estimated percentage changes in the size of non-observed economic activities in various industries in the case of a one-percent change in the fiscal burden. The main outcome is a method of managing the non-observed economy by redistributing the fiscal burden among types of economic activity.

The obtained results could be used by government agencies when developing and implementing tax policy in Russia.

## 1. Introduction

One of the negative impacts of shadow economic activities is that they lead to the non-receipt of revenue by government as today the non-observed economy is primarily associated with the non-payment of taxes to different levels of government. Tax evasion not only prevents the replenishment of the public purse, but also distorts the system of taxation and its functions - the fiscal and regulatory ones. This slows down the development and improvement of taxation. One of the first steps in tackling the problem is to make an adequate assessment of the impact of the tax burden on the scale of the non-observed economy in the region being studied.

There is a fairly diverse set of theoretical and empirical tools for the quantitative assessment of the size of the non-observed economy at a national and regional level [1]-[4]. Various authors [5]-[7] have worked on determining the size of the fiscal burden and estimating its optimum level considering the shadow economy in contemporary economic conditions. Evaldas Stankevicius и Asta Vasiliauskaitė describe tax burden level leverage on the size of the shadow economy [8].

The available literature, however, lacks specific mechanisms of adjusting the tax burden with the purpose of managing non-observed economic activities in specific industries.

This study aims to work out proposals for reducing the share of the non-observed economy in the gross value added of various industries by redistributing the tax burden among types of economic activity.

## **2. Analysis of approaches to calculation of tax burden on the economy**

Tax burden has been a subject of research in Russia since the early 2000s, when the country entered a period of relative macroeconomic stability.

A thorough analysis of formal methods of determining the tax burden on a company is given by I.Yu. Ignatyev [9]. He also identifies their common features and differences.

Earlier, we produced a summary of methods of assessing the optimal tax burden in an economy as a whole and systematized their advantages and disadvantages to establish their applicability at a regional level [10].

Many scholars have studied the tax burden on specific industries.

Ye.A. Yermakova identifies trends in the sectoral distribution of the tax burden and proposes a classification of tax rates by type of economic activity depending on the production and technological characteristics of the company's business cycle [11].

S.N. Sayfiyeva and D.A. Yermilina calculated the tax burden on capital by industry factoring in the transfer of the trade markup. The authors concluded that the existing taxation system lacks incentives and suggested offering tax incentives to selected priority industries that could help the national economy get off its dependence on raw materials [12].

O.M. Nikulina draws an important conclusion that official sources have been understating the actual tax burden [13].

N.M. Turbina and Yu.Yu. Kosenkova point to a highly uneven distribution of the tax burden among industries (with manufacturing bearing a higher burden of tax) and the absence of a comprehensive approach to forming efficient incentives for innovation activity in companies in various industries. The authors suggest introducing a variety of corporate income tax rates to encourage the development of manufacturing companies [14].

The present stage of economic development is characterized by digitization. O.N. Grabova and A.Ye. Suglobov analyze the tax burden on the main types of economic activity in the context of various tax regimes. They stress the fact that as a result of the digitization of contract relationships "a heavier tax burden on an economic entity and on the industry will become an indication of a decreased use of tax minimization techniques" [15].

Both Russian and international legislation as well as the academic literature contain numerous approaches to determining the tax burden and other similar indicators in an economy. For example, the Federal Tax Service of Russia and the Finance Ministry of Russia propose their own methods of calculating the tax burden [17]. The OECD offers a definition of the effective tax rate and the nominal tax rate and suggests a way of calculating them [18. p.68]. M. King and D. Fullerton proposed a method of calculating the marginal tax rate [19, p.4]. Two other variable indicators of the tax burden are "Tax Freedom Day" invented by Dallas Hostetler, and the Tax Misery and Reform Index [20].

Based on our analysis of approaches to estimating the tax burden and similar indicators in an economy and considerations of their expediency and applicability in Russia, we view the methodology designed by FBK Grant Thornton to be the most appropriate one for the purpose of this study [21, p.59].

## **3. Methodology for control over non-observed economy through redistribution of fiscal burden among industry**

Using the methodology proposed by FBK Grant Thornton<sup>1</sup>, we calculated the fiscal burden on economic activities in 2009-17. The fiscal burden was particularly high in the following industries:

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<sup>1</sup> For the sake of the comparability of estimates the calculations were performed for types of economic activity as specified in OKVED (Russian National Classifier of Types of Economic Activity)

- mining;
- processing industries;
- production and distribution of electric power, gas and water.

Using the obtained values of the fiscal burden on industries and adjustments to gross value added for transactions that are invisible to official statistics [22], we built econometric models of the dependence of the non-observed economy on the fiscal burden. In order to identify the impact of the fiscal burden on the outcome, elasticity values were calculated (Table 1).

**Table 1.** Tax elasticity of the non-observed economy.

| Types of Economic Activity  | Variation in size of non-observed economy in response to 1-percent variation in tax burden (%) |
|---|--|
| Agriculture, hunting and forestry                                       | 0,99   |
| Fishing, fish farming   | 0,99   |
| Mining  | 1,03   |
| Processing industries   | 0,97   |
| Production and distribution of electricity, gas and water               | -  |
| Construction  | 0,99   |
| Wholesale and retailing; motorcycle, car and appliances repair services | 0,97   |
| Hotels and restaurants  | 1,01   |
| Transportation and communications                                       | 1,01   |
| Finances  | 0,98   |
| Real estate   | 0,92   |
| Public administration, army and social insurance                        | -  |
| Education   | 0,55   |
| Health care and social services   | 0,66   |
| Other utilities, social and personal services                           | 0,98   |

Considering the data presented in the table, it would be expedient to propose redistribution of the tax burden. The share of the non-observed economy is high in the following industries:

- agriculture, hunting and forestry;
- fishing, fish farming;
- construction;
- real estate.

It makes sense to partially shift the tax burden from those industries to the ones in which the share of the non-observed economy is not so high and would not grow significantly under the influence of higher taxes. Among the latter sectors are:

- retailing and wholesale; car, motorcycle and appliances repair services;
- finances;
- education;
- health care and social services;
- other utilities, social and personal services.

#### **4. Conclusion**

The study enabled the following conclusions to be drawn:

1. The level of the fiscal burden and the share of the non-observed economy in gross value added differ significantly across economic activities.
2. The level of the fiscal burden has a significant impact on the size of the non-observed economy in each industry - a one-percent change in the fiscal burden would lead to a contraction in the non-observed economy ranging from 0.55 to 1.03% (depending on the industry).
3. A contraction in the share of the non-observed economy in gross added value of individual industries could be achieved through redistribution of the fiscal burden among industries, namely by shifting the burden to the industries in which the share of the non-observed economy is not so high and would not grow significantly under the influence of higher taxes.

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### **Acknowledgments**

This study was supported by a grant from the RFBR № 18-010-00792 «Research the spatial differentiation factors of the non-observed economy, ensuring balanced development of the Russian Far East».