

Evaluation Methods of Tax Burden on a Company as a Mean of Financial Optimization Problems Solving

E Fedulova¹, O Salkova¹ and R Zverev¹

¹Kemerovo State University, 650000 Kemerovo, Russian Federation

E-mail: fedulovaea@mail.ru, o_salkova_72@mail.ru, re.zverev@inbox.ru

Abstract. The article analyzes the possibility of applying the known evaluation methods of tax burden on a company as a mean of financial optimization problems solving. It justifies the need to develop the method for estimating the tax burden, which allows public accounting data using. The study highlights signs that are sufficient to reflect the burden of taxes to ensure that taxes are the source of their coverage (payment). The author describes the method of estimating the tax burden according to the organization's public accounting reports. Its application provides an opportunity to use the economic indicators contained in public accounting reports, to estimate the situation of the organization's tax tension, related to the provision of direct taxes assessed for the reporting period, the source of their coverage (or payment) taxation intensity of the organization. Among them stand out: the assumption of expenses that cause an increase in income tax, volume early payments, deferred payments of income tax and other activities.

Authors identify main tasks that are designed to solve the assessment of the tax burden of companies. Among them, an assessment of the quality of the tax production of a company, the optimization of the organization's financial flows, the search for reserves to increase the efficiency of management. Also in the context of differences in international and Russian accounting and reporting standards, the benefits of using the proposed method of estimating the tax burden are proposed.

1. Introduction

Taxes are one of the factors affecting the financial condition of the organization. They bring embarrassment to the business decisions making process. The fulfillment of commitments to the budget and out-of-budget funds requires the planning and regulation of financial flows. Modern scientific and practical tools, located in the arsenal of subjects of tax relations, allows you to process economic information. But the issues of assessing the tax burden on the basis of public reporting information of organizations remain insufficiently explored. Solving financial problems with this indicator will allow creating prerequisites to optimize the financial flows of organization.

The purpose of this work is to develop a method for estimating the tax burden according to public accounting reports, ensuring that various groups of users are informed about the degree of tax impact on the organization and the results of the compensatory action measures applied by it.

In the second section of the work, an analysis of the known methods of assessing the tax burden of organizations is given, the third is the content of the author's method, and the results of its application in practice are reflected. In the conclusion - the main findings of the study.



2. Analysis of methods for assessing the tax burden of organizations

To obtain a quantitative assessment of the tax burden, it is necessary to single out the event (phenomenon) itself — the effect of the tax on the business entity and also to determine its main characteristic such as the burden of taxes. It is needed to select the units of measurement. Tax burden is a relative indicator, and relative values are expressed in the form of coefficients (with base 1) or percent (with base 100). An important point is the choice and the basis of criteria for measuring and assessing the severity of taxes. With regard to assessing the tax burden when using formalized criteria, the indicator (or indicators) is most often set, to which (or which) the burden of all taxes (or groups of taxes) can be reduced. Such indicator is used as a base (common denominator) with which the total amount of taxes (numerator) is compared. We have analyzed the existing criteria for assessing the tax burden for the presence in them of signs sufficient to reflect the gravity of the "burden" of taxes [1].

It is important to note that such evaluation criteria as revenue, value added, newly created value are characterized by multidirectional influence on the result of the assessment of the tax burden. According to the considered methods, any increase in the criterion indicator reduces the tax burden level, but the increase caused by the increase in expenses, on the contrary, should increase it. Obviously, it is impossible to judge unequivocally about the taxation intensity of the organization based on the dynamics of the tax burden on the basis of the criteria of revenue, value added, newly created value. Note that the use of the sales profit indicator as a criterion for assessing the tax burden provides the opportunity to work with public reporting data [2]. But the assumption of the absence of other types of activity used in the named method limits its possibilities for substantiating decisions of tax optimization.

The authors of this article considered the possibility of applying the tax burden indicator in the financial management of the taxpayer [3]. As a criterion for assessing the tax burden, an indicator of estimated profit was proposed, defined as the difference between the revenue from the main and other activities and expenses (except for tax expenditures). In the proposed method, the criterion indicator "cleared" of elements that distort the real picture of the organization's workload by taxes (elements such as wages, depreciation are excluded from the source of tax payment). However, the indicators used in the method cannot be determined on the basis of public accounting statements, since the basis of their calculation is the internal information of the organization.

There is no uniformity in the issue of recognition of taxes that are counted in the figure, but the tax burden indicator [4, 5, 6, 7]. We believe that only accrued taxes are included in the calculation of the tax burden of the organization, since the source of payment of such taxes are the indicators defined in the accounting according to the accrual method.

The procedure for determining the organization's tax burden in foreign literature is described quite ambiguously. In some foreign countries, the effective (actual) tax rate, which represents the share of tax in the total taxable income of the taxpayer, is used to estimate the tax burden. The results of the study of the relationship between the effective tax rate and the size of the company allow us to assess the quality of tax regulation [8, 9, 10], including the investment aspect [11, 12, 13, 14]. Attention is drawn to the lack of a relationship between corporate tax rates and foreign investment of companies [15, 16]. In these studies, the issue of informative indicator of the tax burden is given second-rate attention. Also, issues of assessing the tax burden are considered in the context of working time spent on accounting and preparing tax reports [17]. In this approach, the amounts of taxes charged remain underestimated.

Thus, the criteria used in the methods of estimating the tax burden are characterized by sufficient conventionality, the absence of a full and complete expression, have a double interpretation. Some criteria indicators can not be determined on the basis of public accounting, which limits the possibility of their use by external users of economic information.

3. Method of estimating the tax burden of an organization based on public accounting data

The assessment of the tax burden according to public accounting statements should be structured to satisfy the direct interests of a certain circle of users, ensuring that they are adequately informed.

We highlight the main objectives of this assessment:



- 1) study of the impact of the tax process on the financial performance of the organization, i.e., assessment of the conditions for the implementation of the regulatory function of taxes;
- 2) a description of the tax consequences of the operations that the organization conducted during the reporting period, drawing the attention of the management of the organization (potential investors) to the most characteristic factors that determine the taxation intensity of the organization;
- 3) providing a base for comparing the level of taxation of organizations belonging to one group of economic entities united according to homogeneous features (type of activity, composition of products produced, relation to the sphere of material production, etc.) in order to identify the reasons for their own backlog from the leaders based on the results of the implementation of tax planning measures.

We offer in the method of estimating the tax burden to apply the rate of profit from sales, i.e., the result of the main activity for the intended purpose. In the case of the formation of a negative balanced result from other activities, the amount of profit from sales is to be reduced. This means that sales revenue can be a valuable source of tax coverage. Its application will make possible to assess the situation of an organization's tax tension related to the provision of direct taxes accrued during the reporting period with a source of their coverage (or payment). We also note that in the conditions of unprofitable activity the organization has no source that ensures the payment of tax payments, which means the practical inability of the taxpayer to make regular payments to the budget and extrabudgetary funds.

It should be noted that the Report on the financial results reflects the size of the current income tax, the concept of which is normatively enshrined in RAS 18/02 "Accounting for calculations on corporate income tax" [18]. Elements of the formula for calculating the current income tax are quite informative. Thus, it is possible to judge by the magnitude of the minimized (balanced) amount of permanent tax assets and liabilities, to what extent the organization controls and strictly substantiates the operational necessity of expenses that are not taken into account when calculating the profit tax or taken into account, but not in full. A positive change in the deferred tax asset for the period under review indicates the adoption by the organization's leadership of an ineffective accounting policy and other non-rational decisions that led to a temporary diversion of financial resources from the turnover to the payment of income tax. A positive change in the postponed tax liability for the period under review signals the adoption of decisions that led to temporary savings in the payment of income tax.

The loss of profit from sales due to the payment of the current income tax will be determined by the formula:

$$1 - ((Sp - CPT) / Sp) \tag{1}$$

where Sp – sales profit, CPT – current profits tax. The influence of factors of formation of consumer goods on the loss of profit is determined by the formula:

$$1 - ((Sp - F_{CPT}) / Sp)$$
 (2)

where F_{CPT} – factors of formation of the current income tax.

The advantage of the proposed method is highlighted in the context of differences in international and domestic standards that establish the accounting for income tax: IFRS (IAS) 12 "Income taxes" and RAS 18/02 "Accounting for income tax calculations". Financial statements based on IFRS allow to evaluate the tax effect of operations and other events completely, i.e., not only in respect of income taxes payable for the period, but also taxes payable and reimbursed in future periods [19, 20]. In the Russian practice of accounting and reporting, the amounts of deferred tax assets (DTA) and deferred tax liabilities (DTL) do not participate in the formation of net profit. However, in our opinion, such indicators play a significant role in regulating the income of a taxpayer, affect the state of their own working capital. Through temporary differences in the recognition of incomes and expenses in accounting and tax accounting, it is possible to evaluate the operation of the mechanism of accelerated accumulation of own funds, the conditions for the implementation of the regulating function of the profit tax.

The application of this technique was tested on the materials of the reporting of PJSC Kuzbassenergosbyt for 2015–2017 [21]. Profit losses caused by current income tax are 30%, 25%, 15%, respec-



tively. Consequently, the risk of tax evasion over the study period is reduced. The rolled-up sum of fixed tax assets and liabilities has an insignificant assessment of the factor influence: from 0.8% to 2%. This means that the company does not allow excessive expenditures that cause loss of profit from sales. There is a slight effect of changes in DTA and DTL in regulating loss of profits: from 0.1% to 0.9%. So, the company in the analyzed periods rarely use the methods of accounting for individual elements of the accounting policy, leading to deferred payments (or early payments) on income tax. The desire to bring together accounting and tax accounting does not allow the company to apply depreciation as a tool for accumulating its own investment resources. The company's management in justifying decisions can apply the revealed facts.

4. Conclusion

We proposed the author's methodology for assessing the tax burden, based on a factor analysis of the variability coefficient of the profits of organization. Its application will allow: to use the economic indicators contained in public accounting reports, to assess the situation of the organization's tax tension related to the provision of direct taxes calculated for the reporting period with a source of their coverage (or payment); to reflect the effect of factors contributing to the intensity of taxation of the organization (the assumption of expenses that cause an increase in income tax, volume early payments, deferment of payments on income tax, other activities). The proposed research method is based on relative indicators, which makes it possible to compare them with similar indicators of other enterprises or similar indicators for previous years.

References

- [1] Salkova O S 2015 Tax burden and fiscal optimization Finance 10 37-41
- [2] Zlobina L A, Stazhkova M M 2004 Practice of optimization of the tax burden of an economic entity. (Akademicheskiy proekt, Moscow)
- [3] Salkova O S, Chistyakova D O 2017 The concept of assessment of the tax burden as a factor of increasing the informativeness of the measure of the tax burden *Finance and credit* vol 23 **22** 1274-1280
- [4] Kuznetsova O N 2012 Tax burden on the company and ways of its optimization *Bulletin of Bryansk State University* **3(1)** 34-37
- [5] Savina E O 2015 Current issues of tax burden Questions of the theory and practice of taxation **21** 78-84
- [6] Chipurenko E V 2008 Tax burden of the enterprise: analysis, calculation, management Tax Herald
- [7] Chernik A A 2013 Comparative analysis of methods for calculating the tax burden of the organization *Scientific and methodical electronic journal "Concept"* **4** 166-176
- [8] Zyryanova T V, Zagursky A O 2018 VAT for payers of UAT *Finance* 7 33 37
- [9] Liu L, Altshuler R 2013 Measuring the burden of the corporate income tax under imperfect competition *National Tax Journal* vol 66(1) 215–238
- [10] Murphy C 2016 Efficiency of the Tax System: a marginal excess burden analysis The Australian National University TTPI Canberra
- [11] Carreras M, Dachapalli Ch, Mascagni G 2017 Effective corporate tax burden and firm size in South Africa United Nations University World Institute for Development Economics Research
- [12] King M A, Fullerton D 1984 The Taxation of Income from Capital A Comparative Study of the United States, the United Kingdom, Sweden and West Germany *The University of Chicago Press*
- [13] Gendron P P, Gordon A, Mintz J 2003 Corporation Tax Asymmetries and Firm-Level Investment in Canada ITP Paper 0303 International Tax Program, Rotman School of Management University of Toronto (Toronto)
- [14] Cooper M G, Knittel M J 2010 The Implications of Tax Asymmetry for US Corporations *National Tax Journal* vol 63(1) 33-62



- [15] Herger N, Kotsogiannis C, McCorriston S 2008 Corporate Taxes and Alternative Modes of FDI CESifo Group, Institute for Economic Researchat the University of Munich University of Exeter (England)
- [16] Jensen N Do 2007 Low Corporate Tax Rates Attract Multinational Corporations? Department of Political Science Washington University
- [17] Simon J, Alison E 2007 Optimum Tax Compliance Costs, Tax Simplification and Developing a Strategy for Tax Reform School of Business and Economics, University of Exeter, Streatham Court, Rennes Drive, Exeter, EX4 4PU, UK Tax Research Network 16th Annual Conference University of Sheffield
- [18] Order of the Ministry of Finance of Russia dated 11 19 2002 No. 114n "On Approval of the Provision on Accounting" Accounting for the Settlement on Corporate Profit Tax "RAS 18/02" (as amended on April 06 2015)
- [19] "International Financial Reporting Standard (IAS) 12" Profit taxes "(enacted on the territory of the Russian Federation by Order of the Ministry of Finance of Russia No. 217n dated December 28 2015) (edition No. 98n dated June 27 2016; 11 07 2016 No. 111n; dated 03 27 2018 No. 56n)
- [20] Parushina N V 2016 Formation and use of indicators of the accounting reports of organizations in management and economic analysis *Economic environment* **1** 6-13
- [21] Accounting statements of PJSC «Kuzbassenergosbyt» http://www.kuzesc.ru/?inf=1