

Methodological Tools of Assessment of the Taxable Capacity of Territories

Valentina F. Tarasova, Marina L. Dedusenko, Tatiana V. Saprykina and Yuri L. Aulov
Belgorod State University, Belgorod, Russia

Abstract: The objective of the study consists in development of the procedure for assessment of the taxable capacity of territorial entities. In the course of the study, the methods of systematization and logically cognitive interpretation as well as traditional techniques of economic analysis were used. This study describes the role of taxes in the economic circulation model; the substantiation and role of the tax policy of the state are specified. The essence of the taxable capacity of territories is specified, the assessment of the taxable capacity and tax efforts is formulated. The proposed system of indicators characterizing the taxable capacity allows objectively forecasting the tax revenues of the local budgets and substantiating the amount of subsidies.

Key words: Tax, taxation, tax policy, taxable capacity, tax efforts

INTRODUCTION

The resources redistributed by means of the budget system impose the great responsibility on the government authorities for the effective replenishment, control and disposal thereof. The modern challenges make to take a fresh look at the role of the state and its financial instruments in maintenance of the national welfare and ensuring the sustainable and balanced economic growth. The tax revenues are the main source of formation of the budget system income which allows the state fulfilling its functions.

By determining the role of the tax policy, the essence of taxation many researchers interpret these categories with regard to the national legislation. The general theoretical points of the state finances and taxation theory in the modern conditions of the economic development require re-thinking. One of the essential issues is definition of the taxation capacity and taxation efforts of territories.

The fundamentals of taxation and its effect on the economy are specified in the classical works of W. Petty, A. Smith, A. Laffer, G. Mill, A. Marshall, A. Pigou, E. Seligman, J. Stiglitz, M. Friedman. Significant effect on the investigation of the taxation capacity was exercised by the studies of S. Barro, D. Belkin, R. Berd, I. Bogacheva, N. Matrusova, R. Musgrave, A. Osipova, R. Tannenwald, H. Chernik, O. Yutkina.

However, the above-mentioned issue has not yet reached the degree of scientific development that would correspond to its theoretical and practical relevance. Polemical character is peculiar both the essence of taxes and taxation capacity and to the procedure of assessment thereof.

MATERIALS AND METHODS

Main part

Taxes in the economic circulation model: The state budget revenues are formed by means of taxes, fees, charges and borrowings. Taxes and fees are charged from the private sector without imposing obligations on the state as to the fund repayment. Payment of taxes is the compulsory obligation of economic entities.

One of the aspects of investigation of the essence and nature of taxes is determination of their effect on the circulation of income and expenditures in the economy. The originator of this concept is the professor Musgrave (1981). Based on the fundamental conclusions of R. Musgrave the researchers of the present study propose considering the simplified diagram of circulation of revenues and expenditures in the economy with indication of the points of application of different kinds of taxes (Fig. 1).

The nominal flow of income and expenditures presented in Fig. 1 is oriented clockwise while the actual flow of the production factor cost and output is oriented counterclockwise.

Thus, the income (1) received by households is divided into the consumer expenditures (2) and household saving (3). The consumer expenditures are forwarded to the market for consumer goods and turn into the cash receipts of the companies (4) selling these products. Savings are forwarded to the market for capital goods and turn into investments (5). Further, on they become expenditures at the market for means of production and turn into cash receipts of the companies (6) manufacturing these means of production. The gross cash receipts of the companies (7) may be further on used by them for their

Table 1: Tax classification

Taxes imposed	On companies		On households	
	On the seller (source of income)	On the customer (consumption)	On the seller (source of income)	On the customer (consumption)
At the market for consumer goods				
All products	Retail sales tax, VAT (of consumer kind) (4)		Tax on expenses (2)	
Some products	Excises, tax on cigarettes, gasoline tax (oil products) (4)		Phone tax, tax on cigarettes, gasoline tax property (oil products), tax (2)	
At the market for factors of production				
All factors of production, all kinds of activity	VAT (of income kind) (10)		Income tax (individual income tax) (1)	
Some factors of production, all kinds of activity	Payroll tax paid by the employer (11)		Payroll tax paid by the employee (13)	
Some factors of production, some kinds of activity	Corporate income tax, property tax (12)			

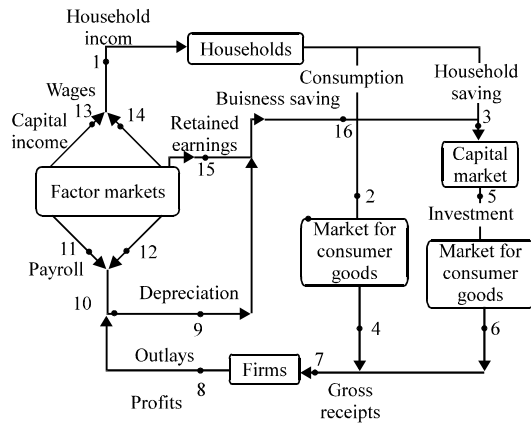


Fig. 1: Points of application of taxes in the economic circulation

own needs (8). A portion of them is used for covering the depreciation and amortization (9) and the rest (10) is spent on purchasing labor in the form of salary (11), capital in the form of profit and interest (12) and other investment in the market for factors of production. Altogether, they represent different shares of the factors in the national income (Grewal *et al.*, 1980; Oates, 1972). These shares are paid to the suppliers of factors in the form of salary (13) and return on the capital (14) such as dividends, interest or rent income. Thus, they represent the household income (1).

Sometimes profit remains undistributed (15) and dividends are paid from it. Suppliers of along with the accumulated depreciation the undistributed profit represents the savings of the companies (16) that being combined with the household (3) are spent on investment or procurement of the factors of production (Rubinfeld, 1987; Chernik, 2010). Thus, the circulation of income and expenditures is closed.

Having considered the economic circulation one may specify the point of application of different taxes. Taxes may be applied to the household income at the point 1, to the consumer expenditures at the point 2, to the profit on sales at the point 4, to the gross corporate income at the point 7, to the net income net of depreciation at the point 10, to the payroll budget at the point 11, on profit at the point 12, to the employee's salary at the point 13, to undistributed profit at the point 15 or to the capital income at the point 14.

On the basis of the study performed the researchers propose the classification of taxes presented in Table 1.

In Table 1, the digital symbols correspond to the points in Fig. 1. This classification may be useful by investigation of consequences of introduction of some or other taxes.

The economic effects of taxation are various. Their include the effects at the micro-level in terms of distribution of income and disposal of resources as well as macro-effects consisting in effect on the output rate, employment of population, price management (Goncharenko and Arkhiptseva, 2011). Thus, the role of the taxation policy in securing the state stability and economic growth is of fundamental importance.

RESULTS AND DISCUSSION

Taxation capacity and assessment thereof: The national government in a federal state is interested in equality not only between individuals and households but between the territorial units as well. Different territorial units substantially differ though the per capita income and therefore through their fiscal capabilities. The main aspect of complexity of determining the trend of the government tax policy is based on different financial standing of different territories, i.e., on their ability to satisfy the needs of population and economic development.

The effective taxation system forms the taxation capacity of the economy by which the entire capacity of entities and the tax basis to bring income to the state in the form of tax revenues is understood. Thus, the taxation capacity represents the greatest possible amount of tax revenues on a certain territory during a certain period of time in the conditions of the applicable fiscal legislation in other words this is the potential capability of the territory to provide the maximal revenues to the budget (Dedusenko, 2013).

The capability of territories to fulfill their financial tasks depends on the scope of the taxation basis (taxation capacity) against the expenditures required for performance of the public services (their needs). When a territory with a relatively high taxation capacity features low needs its financial standing is stable (Tarasova and Saprykina, 2014).

The services of the standard level may be provided both against the small ratio of the tax revenues to the taxation basis (low taxation effort) or alternatively, the standard level of taxation efforts results in the high level of servicing with respect to the demand (high financial performance). Otherwise, greater efforts may be required in order to ensure the performance rate not below the rated one (Compson and Wavratil, 1997). The taxation effort means the degree of utilization by the government authorities of the taxation capacity of the own territory.

The researchers propose the system of indicators characterizing the taxation capacity of territories. Let's assume there is only one taxation rate and one taxation basis in reality there are different bases such as sales, property and income. On the basis thereof, let's determine the taxation capacity of the territory j , having denoted it through C_j as:

$$C_j = B_j \times t \tag{1}$$

Where:

B_j = The tax base in the j territory

t_s = Standard taxation rate

Thereby C_j measures the tax yield the territorial unit j would gain if applied this standard to its basis. The tax revenues form the main revenue side of the territory and the receipts of the territorial unit are in their turn, distributed for the needs and purposes specified in the expenditure side of the budget. The taxes reveal their nature not only within the fiscal aspect but the distributive, control, social ones as well (Tarasova and Saprykina, 2015). Let's provide the example of the specific social demand for education Z . The tax demand of the territory in the sphere of education is determined according to the formula:

$$N_j = Z_j \times n_s \tag{2}$$

Where:

N_j = Tax demand

Z_j = The number of the target population such as the number of schoolchildren

n_s = The cost of provision of standard services per Z unit such as education of a single child

Thus, N_j measures the expenditures in the territorial unit j , required for provision of the standard services level. Similarly, the tax demand in different spheres can be estimated.

For estimation of the tax standing of the territory j , having denoted it through P_j , we propose the following formula:

$$P_j = \frac{C_j}{N_j} = \frac{(B_j \times t_s)}{Z_j} \times n_s \tag{3}$$

Therefore, the tax standing is equal to the ratio of taxation capacity to the tax needs. Let's assume that the average value of P for the territory equals to 1, then the value $P_j > 1$ corresponds to the high tax standing and $P_j < 1$; to the low tax standing. The value P is the index to which the distribution shares in the subsidizing formulas relate.

Further on, let's estimate the tax effort E_j on the territory j as the ratio of the actual income t_j on the territory j , gained as the result of application of the tax rate to the income that would have been gained in case of application of the rate t_s according to Eq. 4:

$$P_j = \frac{(t_j \times B_j)}{(t_s \times B_j)} = \frac{t_j}{t_s} \tag{4}$$

Finally, let's estimate the level of performance (effort) M as the ratio of the actual costs incurred by the territory j by application of the cost rate P_j to the costs incurred by application of the standard cost rate n_s according to the formula:

$$M_j = \frac{(n_j \times Z_j)}{(n_s \times Z_j)} = \frac{n_j}{n_s} \tag{5}$$

Assuming that the budget is balanced, i.e., the tax revenues are equal to the tax needs we will get:

$$t_j \times B_j = n_j \times Z_j \tag{6}$$

Substituting the budget balance in Eq. 3, we get the alternative estimation of the tax standing of the territory:

$$P_j = \frac{(n_j / n_s)}{(t_j / t_s)} \quad (7)$$

Thus, the tax standing of a particular territory may be determined by the ratio of the taxation capacity to the tax needs or by the tax effort performance ratio.

CONCLUSION

In the course of investigation of the tax effect on the circulation of income and expenditures in the economy it was found that: taxes may be introduced at the goods or factor market, imposed on a customer or seller. The optimal taxation system shall be designed in such a manner that will allow meeting the requirements to fair distribution of the taxation burden, effective utilization of resources, implementing the goals of the macro-economic policy and easiness of management.

The study performed demonstrates significant differences in the taxation capacities and taxation efforts of territories. It was proved that financial standing of different territorial units depends on their taxation capacity and needs. The territories differ through their financial and fiscal standing and this peculiarity shall be taken into account by forecasting the tax revenues of the local budget and substantiating the subsidy amount.

REFERENCES

Compson, M. and J. Wavratil, 1997. An Improved Method for Estimating the Total Taxable Resources of the States, Research Paper, 9702. U.S: Department of the Treasury.

- Chernik, D.G., 2010. Appropriate Taxation Policy Inventive and Support for Business. *J. Tax*, 1: 9.
- Dedusenko, M.L., 2013. Role of taxes in formation of the revenue side of the budgets Vectors of development of integration processes in the economy, I.V. Vladyk (Eds) Moscow: Publishing House of the Bauman Moscow State Technical University, pp: 254-281.
- Grewal, B., B. Geoffrey and R.L. Matthew, 1980. *The Economics of Fiscal Federalism*. Canberra: Australian National University Press.
- Goncharenko, L.I. and L.M. Arkhitektseva, 2011. Taxation capacity: factors of formation and development *J. National Interests: Priorities and Security*, 6: 21.
- Musgrave, R.A., 1981. *Approaches to a Fiscal Theory of Political Federalism: National Bureau of Economic Research. Public Finances, Needs, Sources and Utilization*. Princeton, N.J.: Princeton.
- Oates, W.E., 1972. *Fiscal Federalism*. New York: Harcourt-Brace.
- Rubinfeld, D.L., 1987. *The Economics of the Local Public Sector: A. Auerbach and M. Feldstein (Eds.), Handbook of Public Economics*. Amsterdam: North Holland, Vol. 2.
- Tarasova, V.F. and O.V. Saprykina, 2014. Harmonization of relations between the taxpayers and the tax authorities in the Russian Federation. *J. Res. Finding Series: Economic Studies*, 1, 2(2): 93-100.
- Tarasova, V.F. and O.V. Saprykina, 2015. Direct and indirect taxes and their effect on formation of the revenue side of the budget system of the Russian Federation. *J. Innovations and Investments*, 3: 31-34.