European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com
e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2021.09.02.71

ICEST 2021
II International Conference on Economic and Social Trends for Sustainability of Modern Society

TAX MANAGEMENT IN NATIONAL INNOVATION SYSTEM

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Abstract

Russian government has increased its support to businesses, primarily in development of knowledge-intensive technologies and a wider national innovation system. Measures used by the state to support inventions appear unrelated and inconsistent. Desirable, in terms of innovation generation and diffusion, aim can be achieved by reduction in tax liabilities given standards and requirements of the current country-specific tax legislation and wider systems of civil and criminal legislation; with inconsistencies and discrepancies in existing legislation resolved in favour of taxpayer. Such methods of reducing tax burden on business initiatives are considered optimizational, as they are used to solve the task of lower tax rates based on either application, or non-application of specific tax benefits, comparison of various taxation rates to be applied in each instance, comparison and application of possible tax regimes and taxation schemes; etc. Russia cannot be claimed a country with efficient national innovation system which will promote interaction and joint effort of research-oriented enterprises and entrepreneurial initiative. Imposition of innovation tax premium is deemed to be more realistic and effective as compared to reduced profit-tax rates in term of incentives created for innovators. Authors consider innovation tax premium to be an effective means of reducing tax rates, and hence tax-related risks and tax burden. Such measure will require an interrelated complex of the three elements of tax management and will eventually increase the efficiency of national innovation system.

Keywords: Tax planning, national innovation system, tax management, tax burden

https://doi.org/ 10.15405/epsbs.2021.09.02.71
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Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

National innovation system (NIS) is regarded a set of economic agents, institutions and relations among them, with the principles of such interaction, and the infrastructure (financial and organizational) providing the basis for generation and diffusion of innovations in national economy and in society. The main factor inducing economic growth is technological change. Each nation strives to attain general prosperity and sustained development thus paying considerable attention to the process of innovation. The process of innovation diffusion within the economy and a wider society is time-consuming and characterized by high rates of uncertainty and ambiguity; in relation to which many economists believe innovation system to require such measures as government support and regulation. Such regulation can use both direct and indirect methods, including financial support allocated from public funds to research and developments, to innovative activity as such, imposition of innovation-related tax regulations. In this respect, one of the principal weaknesses of current tax policies in Russia is the absence of a relevant legislation, which proves deficiencies in systemic methods and methodologies for evaluation of tax regulation efficiency. Development of this requires refinement of the notion and purposes of tax regulation and its position among other regulatory measures and mechanisms applied.

A few approaches to establishment of NIS have been proposed by scholars world-wide. Ch. Freeman, B.-Å. Lundvall, R. Nelson studied changes in innovation activities in different countries to develop theoretical bases for the process of innovation and its role in economy. Ch. Freemen defined NIS as a set of state institutions and private entrepreneurship performing activities related to and interacting in initiation, import, modification and diffusion of new technologies. Ch. Freeman centered his research on an institutional element of innovative activity. He examined different advanced national economies demonstrating high rates of economic growth due primarily to development of science, education and knowledge-intensive industries. B.-Å. Lundvall defined NIS as elements and interconnections residing within a national economic system and employed in the process of generation, diffusion and application of novel knowledge to bring economic benefits (as cited in Puchilo, 2017). In all of the above studies, however, no consideration has been given to taxation systems in economies studied and their role in promoting innovation.

Development of the national system of innovations in Russian Federation (NISRF) is most intimately linked to establishment of a new ‘culture of innovation’ in the Russian society and higher status of an ‘innovator’. This condition can be achieved by support to dissemination and diffusion of best practices in innovation, creation of policies to popularize science, research and innovation as essential elements of modern society and economy. The development of NIS is determined by the degree of the NIS integration in the global system of innovation, providing a nation with an opportunity to be involved in global technological projects, international programs and research networks; in adoption of programs supporting exports of high-technologies, high-tech products and services.

Tax management can be defined as a system of state and corporate governance, which includes tax regulation, tax control, and tax planning (prediction). It aims to provide financial basis to promote economic growth, including development and improvement of public goods, of gross domestic product, tax provisions to guarantee fiscal revenues coming from economic agents. Tax management is closely connected with tax-

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related economic risks, e.g. risk of changes in tax legislation, risk of profit loss from misappropriation of the funds to be made exempt from taxation, etc. Minimization of NIS tax risks requires examination of tax management and its features.

2. Problem Statement

Tax management is a system of controlling tax flows through various forms and methods of decision-making in the field of collecting and allocating tax revenues and expenses at both macro- and micro-economic levels. Most crucial, in terms of tax management, and hence demanding particular attention appear the following problems: providing for tax-based revenues as sources of funding NIS, efficient allocation of the funds received from tax revenues and tax profits; optimization of tax inflows and outflows (i.e. tax revenues and expenses), provisions to maximize tax profits given controlled levels of associated risks; increased efficiency of measures developed in tax regulation and tax control.

The general purpose of tax management (Yevstafyeva, 2013) is to provide conditions for sustaining tax equilibrium, long-term balance resulting from taxes realizing their functions based on optimized both incoming and outgoing processes. In terms of the problems discussed within the present study, the purpose of tax management is tax-based optimization of processes within the NIS.

Effective development of NIS requires a well-developed system of tax incentives which, in case of the Russian Federation, is to be revised and optimized (Vlasova et al., 2020). Currently, the problem of tax system optimization is faced by many national economies, including Russia. Possible solutions to this problem may require studies related to the following tasks:

- To analyze methods used for tax regulation in order to optimize the existing structure and size of tax revenues.
- To analyze methods used for tax planning;
- To evaluate the principles and areas of tax control.

2.1. Analysis of methods used in tax regulation to optimize existing structure and size of tax revenues

Currently, multiple methods of tax regulation exist and are applied. They all aim to achieve the principal purpose of maximizing tax revenues in a given economy while trying to minimize tax expenses by tax-payers. The efficiency of tax regulation can be assessed based on the following criteria: analysis of compliance with legislative principles of taxation, e.g. principles of equity, certainty, non-ambiguity, uniformity, tax secret observance; calculation of tax loyalty ratios; calculation of tax burden ratios; expert evaluation (Vlasova et al., 2020).

2.2. Analysis and evaluation of methods applied in tax planning

NIS comprises the following economic agents, entities and organizations:

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- Research institutes and centers aiming to attain a certain level in commercialization and society-oriented effectiveness of their developments.
- Manufacturing entities aiming to innovate and/or modernize their product range, technologies, production organization, operation and management systems.
- Authorities at various levels aiming to increase the rates and scope of innovative activities.

All the agents and entities within this scheme are to organize their tax flows in such a manner which is to bring maximized tax profits and minimized tax expenses. Examination and assessment of existing tax flows can allow for optimization of taxes, for more efficient and feasible planning of tax revenues and expenses.

2.3. Evaluation of principles and applications of tax control within NIS

Every tax-payer, while solving problems of tax optimization, often faces urgent issues in securing funds required to sustain operation and innovation-related activities planned. These, in their turn, result in both legal and illegal arrangements in order to minimize tax-payments. Illegal arrangements include tax evasion and other violations of existing tax legislation. Such arrangements, when disclosed, cause imposition of fines, penalty fees, other types of sanctions applied to entities violating tax legislation. Thus, measures and procedures of tax control are to result in minimization of tax evasions due to clear-cut mechanisms of tax compensations and returns in case of over-payments.

3. Research Questions

The study centers on solutions offered for the flowing research questions:

- What is the economic content of efficient tax regulation in terms of NIS?
- What methods can be applied to evaluate the efficiency of tax panning within a given NIS?
- What measures and procedures are to be used for tax control within a NIS?

4. Purpose of the Study

The present study aims at describing features specific to tax management within NIS and at offering feasible solutions to be used for tax optimization in terms of treating the state as both a tax-payer and a recipient of tax revenues.

5. Research Methods

5.1. Analysis of efficiency of tax regulation within NIS

Optimization of tax payment system is based on strategies, business plans and system of budgets within a given entity or organization, on off-shore and other financial schemes and arrangements. Finance-related tax schemes include global-, medium- and small-scale methods of tax optimization. Global-scale methods of tax optimization are related to optimization of most essential and principal taxes paid by an

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entity to secure large-scale reduction of the tax burden. Such methods will require a change in the form of business organization (business reorganization) and hence, a shift to specific tax regimes, e.g. simplified scheme of taxation and tax payment. Middle-scale methods of tax optimization refer to minimization of a few individual taxes (typically, two or three) resulting in reductions in the total size of tax burden by 20-30%. In this case, minimization is often sought for taxes within a given tax group, e.g. federal taxes, regional or local taxes. Minimization is to be applied to those groups which are to bring reductions in big-size tax-payments based on changes in tax base and tax rates applied within each group, e.g. corporate profit tax, corporate property tax etc. Small-scale methods of tax optimization are related to optimization of a single tax. Global- and middle-scale tax optimization methods require establishment of an entity with a preferential taxation regime (Kozhin & Voronin, 2014).

Tax-related arrangements and measures within NIS comprise certain specific provisions for tax optimization which are reduction of the relevant tax base, schemes of deferring tax payments, substitution or division of taxable transactions and operations and tax base elements. The essence of the substitution method is that when making decisions on the form of business organization and in further business-related operations and transactions entities choose those forms that appear most beneficial in terms of tax minimization. Certain types and form of relations are substituted with such that are characterized by lower tax rates provided by application of beneficial tax treatment, e.g. substitution of a purchase and sale agreement for a contract of leasing. This method aims to reduce the size of tax base by exempting certain taxed operations given the condition of preserving the overall operational efficiency of the entity. Such solutions related to undervalued costs of goods and services may bring effects in the form of reduced VAT or corporate profit rates up to 30%; revision of the inventories and depreciation of fixed assets may result in lower corporate property tax rates, etc. (Gulaygova & Yarullin, 2017). The method of deferring tax payments is also based on the principle of dispositivity in application of civil rights and procedures, with a difference that in this case certain economic transactions and relations are not substituted with other types, but subdivided into a set of more specific minor transactions and relations; the former principle is also applied as a separate procedure of tax optimization. For example, transactions and procedures related to reconstruction of a production facility (plant) are recommended to be divided into reconstruction and overhaul repair, in this case spending on reconstruction are regarded a means to increase the value of the fixed asset and are financed from company's net profits and other sources while spending on overhaul repair are regarded costs and hence are to de deduced from the company tax base in calculating corporate profit taxes. Another method of tax optimization within the NIS is exemption from VAT payment. Such exemption, according to Russian tax legislation, is granted for the period of up to 12 months with no option of arbitrary refusal. The condition for granting such exemption is 1) the operational revenues received during the following three consecutive months are not to exceed 2,000,000 RUB; 2) tax payer is not to deal in excisable goods. Still other option for reduction of VAT rates is selection of partner companies and organizations – they are to be applying VAT-based tax scheme (Suslina & Leukhin, 2018). The above examples allow drawing a conclusion that efficient tax optimization can be regarded a means of tax regulation.

Other methods to be applied in analysis of tax regulation include calculation and assessment of such tax-related indicators as the ratio of tax loyalty, tax burden ratio and fiscal sustainability ratio. Tax burden

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can be defined as the relation of the amount of tax payments to gross national income, i.e. the total of the taxes paid (tax revenues) is divided by the total income and multiplied by 100%. This indicator is crucial for assessing tax planning. The Federal Taxation Service of the Russian Federation published the following statistics demonstrating tax burden in Russia in 2019 (figures given by sector/industry):

- agriculture, forestry, fishing industry – 4.5%.
- mineral extraction and mining operations – 41.4%.
- processing industries – 7.6%.
- electrical energy, gas and steam supply systems – 7.1%.
- water supply and waste disposal utilities – 9.9%.
- wholesaling and retailing – 2.8%.
- construction – 11.9%.
- IT and communications – 17.2% (Kirova, & Kozhebatkina, 2020).

Statistical data demonstrate the highest ratio of tax burden to be characteristic of mining operations sector. Hence, it can be concluded that federal tax revenues come largely from mineral extraction and mining industry, while the sector of wholesaling and retailing brings the minimum rates of tax revenues at national scale. This fact can be indicative of either low efficiency in organization and operation of the industry in economic terms, or of multiple facts of tax evasion present in it and undisclosed.

Tax burden indicator can be modified into a fiscal sustainability ratio which has certain advantages in application as compared to the former one since it allows both for controlling the amounts of a company's own working capital and for assessing and analyzing the amounts of obligatory payments into fiscal budget. This method implies analysis of fiscal sustainability ratio as an indicator of the extent to which obligatory fiscal payments are coverable with the net assets adjusted by the criteria used for evaluating tax-related risk exposure degrees performed by economic agents. The main drawback of such method is that earlier tax liabilities are deduced from the taxes to be paid, though existing practices in the field allow fiscal authorities to claim liabilities and debts in the current tax period (Vlasova et al., 2020).

The last of the ratios discussed, the ratio of tax loyalty, is calculated based on the system of financial indicators, e.g. net equity capital ratio, asset profitability and equity capital profitability rates, coefficient of short-term liquidity, financial independence ratio, etc.

5.2. Evaluation of tax planning methods efficiency within NIS

Tax planning is considered an essential component of tax management in terms of NIS and comprises both calculation of numerical values related to tax payments and predictions related to a nation's socio-economic development. The ultimate end of optimizational tax planning can be defined as an increase in a company's total after-tax incomes rather than minimization of certain individual tax rates, i.e. optimization of tax liabilities applied to certain economic agents and entities within a NIS. Tax planning is to be performed as an analysis and assessment of the current system of taxation existing and applied in a given national economy, of the indicators resulting from implementation of given tax policies, as deviations and inconsistencies revealed in effective macro-economic indicators as compared to the forecast ones,

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identification and analysis of the reasons causing the deviations and inconsistencies revealed (Taleiko, 2017).

Evaluation of tax planning efficiency is based on the analysis of effective and planned (predicted) indicator values related to tax payments, adjustments in the currently applied system of tax planning while refusing methods and procedures producing insufficient effect. For economic agents and entities within a given NIS the following indicators to evaluate tax planning efficiency are to be applied (Kirova, 2015):

- Ratio of taxation efficiency (relation of the entity's net profits to aggregated tax expenses).
- Ratio of corporate incomes taxation (relation of the entity's working capital tax rates to total sales).
- Ratio of costs tax rates (relation of the entity's tax rated related to expenses to total expenses).

5.3. General lines of development and evaluation of tax regulation efficiency to promote NIS growth

The growth of Russian NIS requires modernization of tax control measures and procedures applied to eliminate violations of tax legislation in the form of under-estimation of the tax base, evasion from tax liabilities, incorrect application of tax deductions and exempts, etc. Evaluation of tax control efficiency is to be performed on procedures of calculating the entity's tax burden and comparing it to the median tax burden rates and figures in a given region or industry. This arrangement can be helpful in determining the probability for a given entity to attract particular attention of fiscal authorities and to be examined in terms of compliance to tax legislation; it can also be useful in terms of explanations (to be provided in case of necessity) for the reasons to have caused deviations in tax-rate figures of a given entity from median figures by region or industry (Kirova & Kozhebatkina, 2020).

6. Findings

Thus, analyzing the experience of other national economies and governments across the globe in promoting and developing their NISs allows conclusions drawn as to the general lines to be followed and measures to be designed and implemented to promote innovation-related activities. Establishment of innovation-friendly social and economic environment requires state-supported programs and projects. One of such programs, supported by the Russian government, is Economic Development and Economy of Innovations, in many respects relying on sound and efficient tax management. Highly efficient tax incentives and tax regulation can be extremely effective in solving problems of innovation-intensive manufacturers and industries forming the Russian NIS.

The present paper has discussed such components of tax management as tax regulation, tax planning and tax control. The general purpose of tax management is measures and procedures to result in tax optimization. Such procedures, already finding wide application, are the methods allowing legal deductions from the entity's tax base, of deferring tax payments, of substituting forms and types of business transactions and division of a single operation into a set of operations allowing for application of lower tax

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rates under the current tax legislation. The latter appears most relevant as it often allows practical and legal procedures and steps to reduce the size of the entity's tax burden.

Methods used for tax planning evaluation are based primarily on calculating the ratio of taxation efficiency as it allows for totalling and generalization of both the financial inflows (in form of total sales and net profits) and outflows (in form of aggregate tax expenses).

To minimize entrepreneurial risk and promote innovation-related activities entities can be given incentives in the form of innovation tax premium calculated based on the ratio applied to expenses on innovation-related activities (except for spending on research and development and depreciation costs) of 1.5 on expenses in the form of company profit tax payments (Nazarova, 2021). Taxpayers, in such case, are to be allowed to individually and arbitrarily set a ratio (not exceeding 1.5) to be fixed and documented in their accounting and reporting policies. Such measure will create additional incentives promoting innovative activities by businesses at all economic levels. Innovation-related risks arising are to be offset by reductions in the tax base and lower rates of profit taxes. Measure in the form of innovation premium is deemed more preferable as compared with lower profit tax rates as it establishes an immediate connection of tax rates to innovative activities. Innovation premium is to be granted exclusively to those taxpayers who are active in innovation generation and diffusion implying innovation-related expenses (Puchilo, 2017).

7. Conclusion

Currently, Russia cannot be characterized as an economy with efficient NIS to promote active and ever increasing interaction and cooperation of research institutes and organizations and entrepreneurship. Measures used by the Russian government appear to be highly unrelated and inconsistent. The basis of tax-based regulation is creation of tax incentives to stimulate innovation-related activities in the Russian economy, i.e. NIS of Russia.

Currently, a specific feature of tax management within NISRF is the lack of consistency and interrelation between its components. Tax regulation is to be related most immediately to tax planning thus determining the methods of tax control to be applied in each specific case.

One of the main purposes of tax regulation is optimization of taxes paid resulting from reductions in tax liabilities by applying tax legislation-based measures allowing for rightful reduction of tax rates. Tax optimization implies sound application of tax benefits, choice of the optimum tax regime and tax rates, planning for tax expenses and revenues. This procedure allows minimization of the tax burden for every individual economic agent or entity. If tax optimization is regarded in terms of finance optimization the problem to be solved and decisions to be taken relate to best-suited, in terms of a given agent or entity, options: a reduction of tax liabilities to be paid in the short term, or longer periods to pay tax liabilities given a certain increase in the sum to be paid. The study allows a conclusion that innovation premium can be used as a means of reducing tax rates, and hence, tax risks and tax burden. Such measure will require an interrelated system of three components of tax management to improve the efficiency of NISRF and accelerate its growth.

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