Budget as a tool for managing socio-economic development of the Arctic territories

T Barasheva
Luzin Institute for Economic Studies of the Federal Research Centre “Kola Science Centre of RAS”, Apatity

barasheva@iep.kolasc.net.ru

Abstract. With the proclamation of the principles of strengthening independence and increasing the level of sustainable development of the Arctic regions the role of the budget as the main financial tool in the system of state regulation is increasing. Via the budget the state stirs up investments and innovations, stimulates economic and social development of territories, and ensures meeting public needs. The current research topicality is caused by the fact that a carefully study of the budget nature, its functional properties makes it possible to identify its capabilities and possibilities for organizing budget planning, which is the basis for ensuring efficient management of processes in the budget and other management areas. The work explores the budget functionality in connection to the stages of the budget process, determining the conditions and possibilities for the functioning and development of socio-economic systems. An assessment is made of the degree to which the budget functions are implemented: the content is revealed, the nature of their actions is determined from the point of view of efficiency of the budget functions. The research revealed that some budget functions did not reach the expected efficiency. The effect of the reproductive and regulatory functions of the budget in terms of, for example, changes in the structure of the economy is poorly expressed, which is confirmed by the continued leading role of the raw materials industry in the Arctic regions. The planning function aimed at achieving balanced budgets partially fulfills its purpose - it does not provide full coverage of expenses with budget revenues. The control function is not fully implemented at the stage of development and further implementation of tax tools. As a result, the development of negative processes in the economic and social spheres of the regions of the Russian Arctic zone continues.

1. Introduction
At the stage of implementation of new projects for economic development of the Arctic territories with the use of environmentally friendly [1], resource and energy-saving technologies [2], as well as in the context of proclaiming the principles of strengthening financial independence, increasing sustainable development of the Arctic regions, and rising life quality [3] the role of the budget as the main financial tool in the system of state regulation grows. Through the budget, the state activates investment and innovation activities, stimulates the economic and social development of territories, and ensures meeting public needs.

A fairly substantial theoretical base disclosing this area of interest has been formed in the modern scientific literature. Kozyrin A.N., Khmicheva N.I., Komyagin D.L., Krokhina Yu.A. [4] contributed significantly in understanding the budget nature and development of the budget concept. The works of Wagner A. [5], Braitcheva T.V. [6], Gritsyuk T.V. [7] substantiate the role and importance of the...
budget. Povetkina N.A. [8], Umanets O.P. [9], Pachkun V.V. [10], Alexandrova I.M. [11] studied qualitative properties of the budget determining its functionality and examined mechanisms of its functioning. Taking into account the conclusions of experts that “the budget functions reflect its significant properties and qualitative characteristics that to a large extent determine the capabilities and potentialities of the budget” to have regulating influence the possibility to reach results [12] it is relevant to assess the level of implementation of the budget functionalities with the projection to development of socio-economic processes in the Arctic regions. Thus the goal of the work is to disclose the contents of the budget functions and to study efficiency of each function. The basis for the analysis of the functions’ work results will be statistical budget indicators of the Arctic regions of the Russian Federation. To achieve this goal, it is advisable to consider the implementation of budget functions in the context of the budget process stages.

2. Budget functions and their implementation

The budget process includes a set of successively performed actions (stages): formation, distribution and spending of financial resources, which is provided by work of concrete functions.

At the stage of budget revenues formation, the fiscal function of the budget appears. Through collection of taxes and fees, forced withdrawal of part of the GDP created in the process of public reproduction is carried out. Funds alienated in favor of the state are accumulated in budgets of the budget system and further used by state government bodies and local self-governments to fulfill the tasks assigned.

The dynamics of budget indicators of the Russian Arctic regions indicates that the taxation process does not provide the expected level of tax revenues in certain economically developed regions, i.e the fiscal function at this stage is truncated. For example, low tax collection is noted in the Republic of Sakha, having higher level of reached GRP than that in the Republic of Komi (table 1). On the contrary, the Murmansk region and Nenets Autonomous District demonstrate higher tax revenues than the Arkhangelsk region, which provided higher GRP level.

Another example of low efficiency of the fiscal function is the persistence of lowering dynamics in the amount of non-tax revenues regarding the use of state and municipal property.

The following negative factors can be called obstacles to the fulfillment of the financial security function: maintaining a significant amount of the shadow sector; hidden employment; imperfection of tax administration procedures; low productivity of using state and municipal property; unsystematic tax incentives and preferences; tax breaks established by federal laws in respect of large business entities (for example, creation of a consolidated group of taxpayers, formation of the financial result of which members may lead to an underestimation of the tax base for income tax).

| Regions                      | Share of GRP in total GRP of RF, % | Share of taxes in total tax revenues of RF, % |
|------------------------------|-----------------------------------|---------------------------------------------|
| Yamalo-Nenetskiy Autonomous District | 3.29                              | 6.63                                        |
| Krasnoyarskiy kray           | 2.51                              | 1.86                                        |
| The Republic of Sakha        | 1.22                              | 0.99                                        |
| The Republic of Komi         | 0.77                              | 1.04                                        |
| Arkhangelsk region           | 0.62                              | 0.4                                         |
| Murmansk region              | 0.59                              | 0.46                                        |
| Nenetskiy District           | 0.37                              | 0.42                                        |
| Chukotskiy District          | 0.09                              | 0.07                                        |

Source: author’s calculations by [13]

Another example of low efficiency of the fiscal function is the persistence of lowering dynamics in the amount of non-tax revenues regarding the use of state and municipal property.
The maximum tax exemption for the fiscal function is not an end in itself. The fiscal function, encompassing the entire budget process from the stage of resource formation and in the course of their spending, is also implemented in the direction of creating conditions for engaging all resources and their efficient use, stirring up economic and investment processes, and raising the level of citizens’ incomes. The correct choice of mechanisms of tax and budget regulation ensures the growth of economic potential and consumer demand at the market of goods and services. The result of the measures taken is the growth of revenue sources of the budget system, and the increase in the volume of budget services. As a result, macroeconomic stability and the growth of population welfare are achieved.

At the end of the stage of accumulation of budgetary funds, the process of direct organization of budgetary activities begins, during which planning of the volume of budgetary funds and their distribution by purpose of expenditures is carried out. At this stage, the organizational functions of the budget are involved - planning and distribution.

The planned function is designed to ensure balance of budgets by revenues and expenditures. However, in practice, full coverage of expenditures with revenues for implementation of tasks of each management level is not performed. The problem of unbalanced budgets is most acute in regions and municipalities and has a long history. Thus, in most regions of the Russian Federation, budget expenditures are provided by tax revenues in the range of 29-94% [14]. In this regard, it is fundamental to ensure financial independence of regional and local budgets, which can be done by increasing efficiency of budget planning.

Planning and distribution functions are interconnected. The planning function, designed to plan the volume of budgetary funds in accordance with the established needs of each management level, is supplemented with the distribution function. Here, distributed incomes change their status to budget expenditures, which are consistent with expenditure obligations of authorities at each level.

Federal authorities ensure achievement of national goals. To achieve macroeconomic stability and increase the level of well-being of citizens, they regulate issues of financing the economy and financial support for social programs, and envisage expenditures for defense, security, foreign policy, and the maintenance of government and administrative bodies. A significant amount of funds is redistributed through the federal budget to the state administration of regional development.

Regional authorities are entrusted with expenditure powers, among which the prevailing expenses are for the social policy, maintenance of social sectors that provide services to the population, development of industry, construction, energy, agriculture, support to development of small and medium-sized enterprises.

Local issues include provision of various services to the population, which are related to ensuring livelihoods (housing, utilities, transport, construction, communications, consumer services, health, culture, recreation, sports, environmental protection, public order protection, guardianship, trusteeship, etc.).

The direction of the distribution function is to redistribute budget expenditures between sectors of the economy and other subjects of budget relations. Expenditures are distributed by priority areas within the framework of current plans for socio-economic development, for implementation of priority national projects, investment programs, etc. Through the action of social programs, incomes of various groups of the population are aligned, and the budget revenues are aligned at the regional and municipal levels through the transfer system.

Distribution of budgetary funds is carried out on the basis of implementation of a number of functions operating at the stage of cost management, which include: reproduction, regulatory, stimulating, and social. The presented budget functions reveal the orientation of their actions and indicate the expenditure powers possessed by the authorities and administrations.

The reproduction function of the budget involves ensuring continuity of processes at various stages of production, distribution, exchange and consumption. Through the budget as a tool of reproduction, the state participates in management of macroeconomic processes: it affects growth rates of the
economy and development of the key industries, contributes to changing the economy structure, introduction of innovations, acceleration of scientific and technological progress, etc.

The regulatory function of the budget reveals its participation at macro-, meso- and micro-levels during the distribution of financial resources among participants of the public production and in managing flows between the budget system levels, with the goal of ensuring sustainable economic growth, regulating social development and living standards. Support can be provided in relation to unprofitable enterprises providing production of socially significant goods and services, as well as depressed and crisis territories with low economic potential. The financial obligations are fulfilled by methods of budget financing and using economic mechanisms.

In practice, the result impact of the reproductive and regulatory functions of the budget in terms of, for example, changes in the economy structure is poorly expressed, which is confirmed by persistence of the leading role of the raw materials-based industry in the economy structure of the Arctic regions (table 2).

### Table 2. Structure of gross value added by activities in the Arctic regions, %

| Years | Agriculture, fishery and fish farming | Extraction of minerals | Processing productions | Production and distribution of electric energy, gas and water | Construction | Wholesale and retail trade, repairs | Transport and communication |
|-------|--------------------------------------|------------------------|------------------------|-------------------------------------------------------------|--------------|-----------------------------------|-----------------------------|
| 2005  | 7.7                                  | 22.7                   | 11.3                   | 4.9                                                         | 7.0          | 11.2                              | 12.8                        |
| 2010  | 5.8                                  | 25.4                   | 9.3                    | 4.5                                                         | 8.0          | 9.4                               | 11.9                        |
| 2016  | 3.3                                  | 38.0                   | 9.9                    | 4.8                                                         | 8.5          | 6.5                               | 8.9                         |
| 2017  | 3.5                                  | 38.1                   | 10.4                   | 4.5                                                         | 8.2          | 6.5                               | 8.9                         |

Source: author’s compilation by [13]

In addition, the mechanisms of intergovernmental regulation responsible for equalizing the level of per capita incomes do not provide the required effect. Significant differentiation in the level of budgetary provision among the Arctic regions is noted (table 3). In the Murmansk and Arkhangelsk regions, incomes corrected to the subsistence wage did not reach the average Russian level. This indicates the limited ability of regional authorities to provide budget services in the same cost for citizens, regardless of their place of residence.

The purpose of the stimulating function of the budget is to create conditions for efficient circulation and distribution of financial resources for development of the economy, support to advanced industries that provide high efficiency and quick payback. The budget regulation also provides mechanisms that support the interest of state authorities and local self-governments in earning additional budgetary funds in the form of subsidies, provided that measures are taken to strengthen and expand the economic potential of the territories and increase the tax base. Similar budgetary incentives are applied at the level of municipalities.

### Table 3. Level of budget security in the Arctic regions in 2018

| Regions                        | Per capita budget revenues, RUR. | Per capita budget revenues corrected to the subsistence wage, times |
|--------------------------------|----------------------------------|---------------------------------------------------------------|
| Chukotskiy Autonomous District | 725 370                          | 33.6                                                          |
| Yamalo-Nenetskiy Autonomous District | 434 709                        | 28.0                                                          |
| Nenetskiy Autonomous District | 528 461                          | 26.0                                                          |
| The Republic of Sakha          | 256 803                          | 15.4                                                          |
| The Republic of Komi           | 115 627                          | 8.9                                                           |
| Krasnoyarskiy kray             | 96 387                           | 8.3                                                           |
| Russian Federation             | 84 429                           | 8.3                                                           |
| Murmansk region                | 109 587                          | 7.5                                                           |
| Arkhangelsk region             | 84 683                           | 7.2                                                           |

Source: author’s compilation by [13]
In recent years, the focus has shifted to the stimulating function implemented at the level of the federal budget. This has been noted: the advantage is given to state priorities, pushing back regional interests. The evidence of the situation are: a selective approach to financial investments in the economy of individual regions (for example, territories of the Caucasus, the Far East); maintaining federal benefits for regional taxes; extension of the list of benefits on the major budget-forming for the region taxes (income tax). The introduced at the federal level tax incentives lead to growth of revenue losses in regional budgets, which ultimately impedes implementation of tax initiatives at the territorial level.

The social function of the budget involves financing costs of health care, education, culture and other social programs. Its purpose is also to support the poor. Most of the financial resources for solving social problems (over 64% of all budget revenues) are planned in regional budgets. At the same time, financial problems of regional budgets do not allow full fulfillment of social obligations, which is reflected in the living standard. Thus during the whole analyzed period population with incomes lower than the subsistence wage in the Arctic regions was higher than the Russian average. And only in 2018 did the situation begin to change (table 4).

Another reason to be mentioned is carrying out the budget reform in the course of which part of economically active population was released to regional labor markets because of merging and liquidation of institutions of health care, education and culture.

The control function of the budget, which is involved at all stages of the budget process, is especially significant, how and in which direction they are distributed, and also whether the volumes of allocated funds correspond to the needs. The control function of the budget allows identifying problem situations, evaluating cost savings, targeted and efficient use of budget resources involved, determining the level of tax pressure on the business and the efficiency of taxes in terms of tax revenues to the budget. As a result, the strength of the government’s influence on the reproduction process is established and adjusted.

| Table 4. Population with incomes lower than the subsistence wage |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Population with incomes lower than the subsistence wage in RF, % from total population of the region | 12,5   | 12,7   | 10,7   | 10,8   | 11,3   | 13,4   | 13,2   | 12,9   | 12,6   |
| Population with incomes lower than the subsistence wage in the Arctic zone on the average, % from total population of the region | 13,1   | 13,1   | 11,3   | 11,7   | 12,3   | 13,5   | 13,4   | 12,9   | 12,2   |

Source: author’s calculations by [13]

Efficient spending of budget funds is one of the significant areas of the control function of the budget. For this purpose, a variety of methodological approaches and techniques are implemented during the budget process. So, for example, funds intended to support the poorest segments of the population are distributed on the basis of the principle of targeting and need. Tax incentives are evaluated in terms of their efficiency, since at the stage of their provision they become tax expenditures (lost income) for the budget. For this purpose, at the regional level requirements to the following performance criteria are developed: budget, social and economic [15]. There are also evaluated distributed budget investments, budget expenses for the provision of activities (services) of subordinate institutions, for procurement of goods, works and services for the state needs, etc.

At the same time, one can note the limited fulfillment of the control function at the stage of development and further application of tax tools. In a number of cases, there is no preliminary assessment of possible consequences, which leads to additional budget losses caused by the reaction of taxpayers (concealment of income, tax evasion, etc.) to tax innovations. One of such examples was the
introduction of higher rates of insurance payments, which led to personnel policy change at enterprises in the (reduction in the number of employees, withdrawal of employees from the staff, leaving of companies to shadow businesses [16]. As a result of the abolition in 2008 of the investment incentive while reducing the profit tax rate investment activities of companies declined: share of own funds of companies of the Arctic regions in the structure of financing fixed capital decreased from 41.9% in 2008 to 41.2% in 2011 [17].

3. Conclusion
The study has shown that the budget fulfills its purpose as an efficient tool of state regulation of development of territories. Implementation of budget functionality is ensured by the work of the functions, each of which is associated with a certain stage of the budget process development and has a special purpose. On the example of the Arctic regions, an assessment of the efficiency of the budget functions was made, which confirmed in general the possibility of their use for managing budgetary resources. The results of the work of individual functions (planning, reproduction, regulatory, and control) that do not provide the expected effects, causing the emergence of negative reactions of participants in budget relations and development of negative trends in the economic and social spheres, are also demonstrated. The necessity of enhancing the efficiency of budget functions with a focus on the current priorities of the state policy in the Arctic and the specific features of such territories is substantiated. It will be an incentive to increase efficiency of the budget process, which creates the conditions and opportunities for functioning and development of regional socio-economic systems in the Russian Arctic zone.

References
[1] Gutman S, Teslya A 2018 Environmental safety as an element of single-industry towns' sustainable development in the Arctic region IOP Conference Series: Earth and Environmental Science, 180 Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85051926483&doi=10.1088%2f1755-1315%2f180%2f1%2f012010&partnerID=40&md5=d4cad4c5e3a07f9cd6767ddd9e9da445 [Accessed January 2020]
[2] Didenko N I, Romashkina E S 2018 Assessment of the Influence of the Extraction of Energy Resources on the Environment IOP Conference Series: Earth and Environmental Science, 180 Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85051931381&doi=10.1088%2f1755-1315%2f180%2f1%2f012014&partnerID=40&md5=1e1ee98ea02684b838669490bc67f395 [Accessed January 25 2020]
[3] Didenko N, Kulik S V, Kikkas X N, Kudriavtceva R-E A 2018 Models of the impact the global crisis has on the world economy International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management SGEM 18(5,3) 585-592
[4] Lominadze A A 2015 On the concept and role of the budget Issues of economics and law 10 21-25
[5] Afanasiev M P, Afanasiev Ya M 2009 Methodological and theoretical bases of forming a Wagner law Approaches to its testing Issues of state and municipal government 3 47-70
[6] Braycheva T V 2012 State finances (Moscow: Piter) p 288
[7] Gritsyuk T V 2004 State regulation of the economy: theory and practice (Moscow: RDL Publishing house) 76-80
[8] Povetkina N A Role and importance of budget revenues Financial law 6 17
[9] Umanets O P 2013 Budget: the functionalities Economics and management: challenges, solutions 5 15-21
[10] Pachkun V V 2012 Conflict as a property of the implementation of budget functions Financial law 5 14-18
[11] Alexandrov I M 2010 The budget system of the Russian Federation 4 22
[12] Umanets O P The budget: transformation of the system model Financial analytics: challenges and solutions 169 11-12
[13] Regions of Russia Socio-economic indicators Available from: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/document_1138623506156 [Accessed 04 February 2020]
[14] Badylevich R V Barasheva T I Verbinenko E A Dyadik N V Kobylinskaya G V Krapivin D S Chapargina A N 2018 Financial regulation of development of the High North Regions: the Institutional Aspect Apatity 150
[15] Barasheva T I On managing the process of mobilizing budget revenues in the Murmansk region Finances 12 18-23
[16] Kobylinskaya G Barasheva T Dyadik N 2019 Chapargina A Governmental Regulation of Territorial Development: The Arctic Privileges and Preferences IOP Conference Series: Earth and Environmental Science 302(1) 012126 DOI: 10.1088/1755-1315/302/1/012126 6.
[17] Kobylinskaya G V 2016 Influence of the financing investment structure on development of the northern regions ECO 503 89-106