

**REALIZATION OF THE BUDGETARY FUNDS USE EFFICIENCY PRINCIPLE IN THE RUSSIAN PRACTICE OF FINANCING SCIENTIFIC RESEARCH**

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**Elena Nikolaevna Nikonova**  
*Kazan Federal University*

**Chulpan Mansurovna Shavaleyeva**  
*Kazan Federal University*  
*e-mail: elnik-fin@mail.ru*  
*mailto:elnik-fin@mail.ru*

**Abstract.** The state support of research and development makes the maintenance of one of the fundamental principles of state policy in the field of scientific and technological development of the Russian Federation. Extent of science development, certainly, is closely connected with financial security of scientific research; at the same time basic researches is a sphere in which financial security, owing to its features, a key role is played by the state. Applied scientific research is a sphere which including can function also on a commercial basis, but, nevertheless, in the Russian Federation budgetary funds make the prevailing share in structure of sources of financing of scientific research of applied character. The science cannot develop without the state financial support, but increase in volumes of the budgetary funds allocated for scientific research should not be considered as the only condition of development of domestic science. Increase in the budgetary financing not necessarily means increase in effectiveness of scientific activity. In article the analysis of expenses of budgets of the budgetary Russian Federation system on basic and applied scientific research is carried out, the conclusion that the state financial support of scientific research has to be given at obligatory observance of the most important of the principles of the budgetary Russian Federation system - the budgetary funds use efficiency principle is drawn.

**Keywords:** scientific research, budgetary financing, expenses of budgets, state programs, grant financing, efficiency of the budgetary expenses.

## 1. INTRODUCTION

Problems of science development in general and financial security of basic and applied scientific research in particular are very widely discussed by both the Russian, and foreign scientists. Among works of the Russian authors devoted to questions of financing of basic scientific research it is necessary to allocate Mindeli L. E. works., Black S. I. (Mindeli & Nlack, 2016) (Mindeli & Black, 2016), foreign experience of support of research and development is analyzed in works as Ilyina I. E., Spherical E. N. (Ilyina & Zharova, 2017), problems of assessment of results of scientific activity are investigated in Kulagin A. S. works. (Kulagin, 2016), Frolova I. E. (Frolov, 2015).

Among the foreign authors investigating a grant form of financing of scientific research it is possible to note works of Graves, N., Barnett, A.G., Clarke, P. (Graves, 2011), Jacob, V. A., Lefgren, of L. (Jacob & Lefgren, 2011), Hosotsubo, M., Nishii, R., Howell, S.T. (Howell, 2017), Oztaysi, B., Onar, S.C., Goztepe, K., Kahraman, C. (Oztaysi, Onar, Goztepe & Kahraman, 2017).

Authors of the majority of the Russian publications pay attention to insufficient financing of scientific research by the state, pointing that "level, the structure and tendencies of financing of domestic science do not correspond to either the general needs of Russia, or a strategic problem of overcoming lag from leaders of world scientific and technological development, nor to the indicators reached in Soviet period" (Mindeli & Nlack, 2016).

Agreeing to some extent with Mindeli L. E. opinion., Black S. I. that "the quantity and quality of a research product are directly proportional to the level of financing of his creators" (Mindeli & Nlack, 2016), nevertheless, it is necessary to understand that a problem of increase in effectiveness of scientific research, and, therefore, and it is impossible to solve ensuring efficiency of use of the budgetary funds allocated for their carrying out only increase in the budgetary financing. Especially as in recent years in Russia authorities pay much attention to science development, dynamics of expenses of the budgetary Russian Federation system on research and development has positive character, but at the same time the problem of ensuring efficiency of use of budgetary funds remains to one of urgent. It is difficult not to agree with Kulagin A. S. opinion. that "the consumer needs not work, but its result" therefore it is necessary to pass from "system of the accounting of scientific research to system of the accounting of results of researches" (Kulagin,

2016). Results of the scientific activity financed at the expense of budgetary funds have to make the real contribution to social and economic development of the country.

## 2. METHODS

As tools of a research such methods as the analysis and synthesis, comparison, the description and generalization were used.

Materials of a research are the data of Federal Treasury on performance of budgets of the budgetary Russian Federation system, the materials of Audit Chamber of the Russian Federation posted on their official sites which are in open access.

## 3. RESULTS

In recent years at the federal level the important program documents defining the prospects of development of the Russian fundamental and applied science were developed and approved. In particular, the order of the Government of the Russian Federation of 8.12.2011 No. 2227-r approved the Strategy of innovative development of the Russian Federation for the period till 2020. In April, 2014 the Government of the Russian Federation approved by the resolution No. 301 the state program of the Russian Federation "Science development and technologies" for 2013 - 2020. The decree of the Russian President of 1.12.2016 No. 642 approved the Strategy of scientific and technological development of the Russian Federation

Financial security of realization of the priority directions of science development, the equipment and technologies designated in these documents, the provided program actions is carried out at the expense of means of budgets of the budgetary Russian Federation system and non-budgetary sources. At the same time we will note that, according to Rosstat, in structure of sources of financing of internal costs of researches and developments budgetary funds made: in 2012 - 66%, 2013 - 65,8%, 2014 - 67,1%, 2015 - 67,5%. Increase in a share of private investments in internal costs of researches and developments - one of the major tasks on prospect designated in the Strategy of scientific and technological development of the Russian Federation according to which the level of private investments by 2035 has to be not lower than state.

So far transition of Russia to innovative economy is followed by essential increase in volumes of the

budgetary financing of scientific research. Only for the last five years as these tables 1 testify, the total amount of expenses of budgets of the budgetary Russian Federation system on basic and applied scientific research increased by 1,6 times (and it in the conditions of rigid budgetary restrictions!). It should be noted that for the same period the total amount of expenses of budgets of the budgetary Russian Federation system increased by 1,3 times, and the volume of the tax and non-tax income - only by 1,2 times. The main amount of financing is the share of the federal budget - 99% both on fundamental, and on applied researches. At the same time only within budgetary appropriations of the federal budget the budgetary financing of scientific research in the field of national defense, national security and law-enforcement activity is carried out. As for civil science, means of the federal budget are absent as a part of the budgetary sources of financing only of scientific research in the field of housing and communal services, in all other areas they considerably prevail over means of other budgets.

*Table 1. Dynamics of expenses of budgets of the budgetary Russian Federation system on basic and applied scientific research \**

Indicators	2012	2013	2014	2015	2016
1. Expenses on basic researches, billion rubles.	87,3	113	122	121	106
2. Expenses on applied scientific research, billion rubles. including in the area:	468	553	604	674	802
-nation-wide questions	17,5	14,3	14,2	16,6	16
-national defense	162	196	245	319	471
-national security and law-enforcement activity	32,7	40,6	39,5	31,8	29
-national economy	230	266	269	270	252
- HPU	0,04	0,12	0,04	0,23	0,1
-environmental protections	0,47	0,46	0,64	0,63	0,6
- educations	13,7	8,76	15,5	13,4	12
-cultures, cinematographies	0,44	0,4	0,42	0,35	0,4

- health care	10,1	25,4	18,9	21,5	21
- social policy	0,21	0,41	0,27	0,2	0,2
- physical culture and sport	0,35	0,33	0,32	0,32	0,3
- MEDIA	0,11	0,11	0,09	0	0

\* Compiled by authors on the basis of (*Performance of budgets, 2017*)

#### 4. DISCUSSION

Possibilities of the budget regarding the further essential growth of expenses on scientific research are very limited, especially in the conditions of the developing growth rates of the Russian economy. The existing budgetary restrictions more than ever staticize earlier a problem of efficiency of use of the budgetary funds allocated for science development. What contribution was made by results of the basic and applied scientific research which is carried out at the expense of budgetary funds in transformation of the Russian economy, development of the welfare sphere? Whether there are risks of an expenditure of budgetary funds without achievement of social and economic results?

At the beginning of 2017 the Audit Chamber of the Russian Federation conducted survey during which an assessment of grant financing of basic scientific research by the Russian scientific fund was given. Among other questions to auditors information was important: whether perhaps practical use of results of the scientific research conducted at the expense of grants of the Russian scientific fund in branches of economy of the Russian Federation? On the matter the following answers were received: 37% of respondents answered "yes, practical application is possible in the next 3 years", 53,1% of respondents answered "yes, practical application is possible in the next 10-20 years" and 9,9% consider that there is no they ", results of scientific research have theoretical character" (*Assessment of grant financing of basic scientific research, 2017*). From our point of view, the last figures demonstrate formation of high risks of an expenditure of the budgetary funds allocated in the form of grants for scientific research without achievement of the results which are of practical interest to today's transformations in national economy for increase in welfare of citizens, their educational, cultural level, etc. It should be noted here too that, according to Audit Chamber of the Russian Federation, degree of efficiency of the mentioned earlier state program of the Russian Federation "Science development

and technologies" in 2014 corresponded to the Low Efficiency of the State Program level; in 2015, according to Audit Chamber of the Russian Federation, this program is not subject at all to efficiency assessment as the share of program indicators on which the actual values were not presented to control body made 75,9%.

Results of two control actions of Audit Chamber of the Russian Federation presented in table 2 expert analytical/also confirm a conclusion about what, despite the considerable efforts made by the state for support of development of the Russian science, the level of effectiveness of scientific research, therefore, and efficiency of use of the funds allocated for their carrying out, remains insufficient

*Table 2. The main conclusions of Audit Chamber of the Russian Federation by results of test actions in the field of an expenditure of means of the federal budget on scientific research \**

Expert analytical/control action	Main conclusions
Assessment of activity of the main managers of means of the federal budget for effectiveness and efficiency of an expenditure of the funds of the federal budget allocated in 2012 and 2013 for research and development	<p>1. The analysis of execution of the budget settings allocated for basic and applied scientific research confirms insufficiently productive and effective activity of the main managers of budgetary funds.</p> <p>2. Level of efficiency of research and development (Research and development) in 2012-2013 remained insufficient, their planning badly coordinated with achievement of nationwide and branch priorities, the operating standard, regulatory and economic incentives did not provide the required scales of introduction of results of research and development. A share of the introduced results of research and development in 2012 - 26,1%, in 2013 - 24%.</p>

Check of target and effective use in 2013-2015 and the expired period of 2016 of the funds of the federal budget allocated for performance of an action "Grant financing of basic scientific research by the Russian scientific fund"	<p>1. The developed regulatory legal base does not exclude possibilities of financing of scientific works, similar in contents, at the expense of means of the federal budget. There are risks of adoption of unreasonable decisions on grant financing practically at each stage of the organization of selection of projects.</p> <p>3. The system of grant financing of scientific research by the Russian scientific fund is not aimed at obtaining significant results of intellectual activity and actually comes down to distribution of means of the federal budget between public institutions of science and education for increase in level of compensation of scientists. Neither the current legislation, nor local acts of Fund establish the requirement for the analysis of results of the scientific research received by grantees (except for publications). Reliability of reporting data on the results represented by grantees is not checked by Fund, the accounting of the received results and monitoring of their further use is not carried out.</p>
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\* Compiled by authors on the basis of (*Accounts Chamber of the Russian federation*, n. d)

## 5. SUMMARY

Thus, in modern conditions along with a problem of increase in a share of the financing of scientific research arriving from non-state sources control of effectiveness of the scientific research conducted at the expense of budgetary funds, and practical applicability of the received results has to amplify (first of all - results of applied scientific research). According to authors, escalating expenses of the

budgetary system of the country on financing of scientific research predetermine need not only monitoring of scientific activity (to what in Russia very much attention is paid), but also assessment of its effectiveness on the basis of the developed standards on a regular basis. Such assessment of efficiency of use of budgetary funds has to be considered at further distribution of the budgetary financing. Besides, at distribution of budgetary funds in the course of formation of drafts of budgets first of all the priority directions of basic and applied scientific research have to be considered. In this connection it should be noted that the Decree of the Russian President of July 7, 2011 No. 899 (in an edition. The decree of the Russian President of 16.12.2015 No. 623) nine priority directions of science development, technologies and the equipment in the Russian Federation are approved.

Let's note also that in the Russian Federation the complex analysis of the sphere of researches and developments for identification and specification of the priority directions of researches and formation of scope of research works is one of the main activities of Research institute "Republican research scientific advice center of examination" which is under authority of the Ministry of Education and Science of the Russian Federation. For the organization of work of expert community for key questions of development of a scientific and technological complex of the Russian Federation by the specified institute the Federal register of experts of the scientific and technical sphere which includes more than 4000 experts now is created. In 2015 with involvement of experts of the Register information and analytical materials in the priority directions of research and development for the benefit of the solution of social and economic tasks" were developed ". From our point of view, the subjects of researches and developments designated in the document first of all can apply for receiving the budgetary financing.

As for assessment of efficiency of use of the budgetary funds allocated for financing of basic and applied scientific research, certainly, we agree that definition of effectiveness of science as a type of economic activity represents rather complex problem. But complexity of a problem should not be an explanation of impossibility of its complex decision, especially so far as concerns results of applied scientific research, their practical importance. As it is defined by the Federal law of 23.08.1996 No. 127-FZ "About science and the state scientific and technical policy", applied

scientific research is the researches directed mainly to use of new knowledge for achievement of the practical purposes and the solution of specific objectives. What need of assessment of a contribution of results of applied scientific research to the solution of specific objectives of social and economic development of the country follows from. Let's note that work in this direction is conducted, so, for example, within the researchers conducted at Institute of problems of science development of the Russian Academy of Sciences methodological bases of assessment (measurement) of a contribution of science to economic growth for the first time were developed.

## 6. CONCLUSIONS

The "Freedom of scientific and technical creativity" designated among the fundamental principles of state policy in the field of scientific and technological development of the Russian Federation means not only granting an opportunity to research teams and the organizations, other participants of researches and developments to choose and combine the directions, interaction forms, methods of the solution of research, technological tasks, but also increase in their responsibility for effectiveness of the activity and the importance of the received results for development of national economy and society. The last, in our opinion, is especially important if results of the conducted basic and applied scientific research were received with use of budgetary funds, i.e. means of taxpayers - the organizations and citizens of Russia.

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