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**THE ANALYSIS OF INTERNATIONAL AND DOMESTIC EXPERIENCE
OF THE REGULATION OF THE NATIONAL INTELLECTUAL CAPITAL**

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**АНАЛИЗ ЗАРУБЕЖНОГО И ОТЕЧЕСТВЕННОГО ОПЫТА
РЕГУЛИРОВАНИЯ НАЦИОНАЛЬНОГО ИНТЕЛЛЕКТУАЛЬНОГО
КАПИТАЛА**

The article describes different approaches to the definition of «intellectual capital» and examines its components, i. e. human capital and intellectual property. A comparative analysis of the various systems of state regulation of the intellectual capital management and the use of intellectual activity in the USA, Great Britain, China, Russia and other countries is conducted. * The study was sponsored by RFH in the framework of the Research project «Development of proposals to improve the efficiency of using the intellectual capital of Russia» (Project no. 15-02-00632). Special attention is paid to the analysis of universities as an important element of the national system of intellectual capital. In particular, brief characteristics of foreign and domestic systems of remuneration of the teaching staff are considered, which provoke the world discussions on the legality of the use of quantitative and expert assessments in the formation of this system, given the current trend towards the use of quantitative performance indicators. The data is given that now most countries prefer a decentralized system of higher education as more flexible and responsive (in spite of the fact that the process of decentralization brings both positive and negative effects). The most urgent problems of the domestic system of state management of human capital and RIA are stated such as geographical remoteness of the regions from the center, horizontal inequality in wages, low salary of researchers, lack in demand for the intellectual property, etc. A pictorial diagram of different kinds of taxation that promote the use of intellectual capital operating in different countries is based on the accumulated experience. The data on tax benefits, stimulating the domestic system of research and development at the federal and regional levels is classified. The analysis of the national system of tax benefits in the use of intellectual capital, the results of which confirm the gap between the scientific and industrial sectors has been carried out. The directions for the improvement of the national intellectual capital management system are outlined.

INTELLECTUAL CAPITAL; HUMAN CAPITAL; INTELLECTUAL PROPERTY; GOVERNMENT REGULATION; ACADEMIC AND TEACHING PERSONNEL.

В статье раскрываются различные подходы к определению понятия «интеллектуальный капитал», рассмотрены его составляющие – человеческий капитал и результаты интеллектуальной деятельности. Проведен сравнительный анализ различных систем государственного регулирования управления интеллектуальным капиталом и использования результатов интеллектуальной деятельности – американской, британской, китайской, российской и др. *Исследование выполнено при финансовой поддержке РФНФ в рамках Научно-исследовательского проекта «Разработка предложений по повышению эффективности использования интеллектуального капитала России» (Проект № 15-02-00632). Особое внимание в статье уделено анализу вузов как важнейшему элементу национальной системы интеллектуального капитала. В частности, дана краткая характеристика зарубежных и отечественной систем оплаты труда научно-педагогических кадров, согласно которой в мире до сих пор идут дискуссии о правомерности использования количественной или экспертной оценок при формировании данной системы, при существующем тренде к использованию количественных показателей результативности. Приведены данные о том, что в настоящее время, несмотря на традиционные различия в подходах к этому вопросу, большинство стран отдают предпочтение децентрализованной системе высшего образования как более гибкой и оперативной (при этом отмечается, что процесс децентрализации несет в себе как позитивные, так и негативные эффекты). Перечислены наиболее актуальные проблемы отечественной системы государственного управления человеческим капиталом и РИД: географическая удаленность регионов от центра, горизонтальное неравенство в оплате труда, низкие размеры базовых окладов научных работников, невостребованность многих объектов интеллектуальной собственности и пр. На основе обобщенного опыта представлена наглядная схема различных видов налогового стимулирования использования интеллектуального капитала, действующих в разных странах. Систематизированы данные по налоговым льготам, стимулирующим отечественную систему исследований и разработок на федеральном и региональном уровнях. Проведен ана-

лиз отечественной системы налоговых льгот в сфере использования интеллектуального капитала, результаты которого подтверждают разрыв между научным и производственным секторами. Намечены направления по совершенствованию отечественной системы управления интеллектуальным капиталом.

ИНТЕЛЛЕКТУАЛЬНЫЙ КАПИТАЛ; ЧЕЛОВЕЧЕСКИЙ КАПИТАЛ; РЕЗУЛЬТАТЫ ИНТЕЛЛЕКТУАЛЬНОЙ ДЕЯТЕЛЬНОСТИ; ГОСУДАРСТВЕННОЕ РЕГУЛИРОВАНИЕ; НАУЧНО-ПЕДАГОГИЧЕСКИЕ КАДРЫ.

Introduction. Currently, great attention is paid to the concept of intellectual capital. This subject has been brought up by the researchers engaged in the study of the development and use of intellectual capital, such as G. Becker, J. Ben Poret, J. Mintzer, L. Thurow, T. Schultz, L. Edvinsson, M. Malone, N. Bontis and others, whose works show that knowledge and skills have socio-economic value. They, in turn, relied on the classical works of political economists, such as D. Ricardo, W. Petty, A. Smith, who analyzed the nature of the labor force and considered the creative abilities of people and their development as the main source of the country's wealth. In particular, L. Edvinsson and M. Malone noted that the intellectual capital generated by human knowledge is the latent source of the value of the company [1]. T. Stewart [2] defined intellectual capital as an intellectual material that includes knowledge, experience, information, intellectual property, and is vital for the creation of values.

The objective of this article is to analyze foreign and domestic experience of state regulation of country's intellectual capital usage. For this purpose, at the macro level, this category is defined as: (1) *human capital, that is, people with their abilities, skills, knowledge and qualification that make up the human resource of the national economy, one of the factors of the economic growth;* (2) *the results of intellectual activity (hereinafter – RIA) or, in other words, the intellectual product of human capital.* As noted by S.E. Ushakov and S.S. Aushkap [3], «there are many areas of implementation of the intellectual product. The intellectual product is used in the economic activities of the enterprises, in the system of education, as well as the source of the accumulation of basic knowledge that can be demanded in the future».

1. The analysis of the experience in the state regulation of the development, use and accumulation of human capital

1.1 The analysis of the international experience in the state regulation of the development, use and accumulation of human capital. The authors aim to analyze the existing

world experience in the given area with the view to use it in the Russian context. In many technologically developed countries one of the key roles in the development and application of the scientific knowledge belongs to higher educational institutions that are focused on fundamental and applied research. The quality of state regulation of the higher education sector influences directly the efficiency of the use of human capital. The effectiveness of its use depends on academic staff remuneration, certification and reward system, quality control of educational programs, systems of professional standards and training, etc.

Today, there are various models of the control system of higher education management, with varying degrees of centralization. The centralized model of management education is typical for **France**, where the state fully controls the entire educational system. Moreover, education in France is funded mainly by the state. Public expenditures on national education in France make up approximately 23 % of the state budget [4].

In the **United States** there is a three-tier system of educational management, with no single federal body of higher education management, and many of the issues of financial security as well as accreditation of educational institutions are solved at the regional and federal level [5]. Public funding of higher education in the US is carried out in three main areas – research funding, financial support to universities and financial assistance to students. Funding is provided through the federal budget, the budgets of state and local budgets [6]. A similar system operates in Canada, where state regulation of educational activities is carried out at the level of provinces and territories, and there is no federal Ministry of Education. Thus, Canada's universities have the status of autonomous institutions with independent educational systems, which report to the regional ministries of education. The structure of public funding of higher education institutions in Canada is made up of the federal budget, funds administration and the provinces of the municipal budget. Today, programs of targeted financing of research universities are

increasingly popular in Canada. Such programs are implemented by the source of the federal budget specially created by the National Fund for the promotion of innovation (Canada Foundation for Innovation), aimed at the promotion of the university research and development [7].

For the **UK** it is typical to have many specialized intermediary agencies to communicate between the central education authorities (Department of Education and Training) and local authorities [8]. This demonstrates quite a high degree of decentralization of the British education system. Financing higher education in the **UK** requires the allocation of funds according to indicators of student admission, labor input and resources for their training. It should be noted that in the **US**, as well as in **Canada** and in the **UK**, private funding of higher education accounts for more than 40 % [9].

In **Germany**, the system of education is managed by the Ministry of Education which develops the concept of educational policy, determines the national legal framework for the functioning of the education system, provides funds for the expansion of higher education institutions and the development of the modern infrastructure for their effective functioning. Current management of education is the responsibility of the state governments and is regulated by the relevant laws on higher education, based on the federal framework law. On the state level, educational process is managed by the ministries in terms of, primarily, financial, administrative and personnel matters. Most of the financial costs of the universities is covered by the communities. Annual budgets of universities are part of the community budgets, which are adopted by the land parliaments. This suggests that the educational system in **Germany** is to a certain extent decentralized to the regional level.

Summarizing the international experience of state regulation in the higher education system, it should be noted that currently, many countries prefer a decentralized system of higher education system, which allows to make quick decisions in the organization of the educational process, thereby certainly improving the efficiency of the educational system. However, there are still prospects for the development of a clearly defined multi-level public sector management

structure of higher education. A full or partial rejection of the state system of regulation of the educational sphere stimulates strengthening the market mechanisms in the educational environment, which does not always lead to positive results in terms of the quality of educational services. In this regard, we can conclude that state control of educational services is important.

Effective use of human capital as part of the intellectual capital of the nation is also stimulated by a competent state policy on the formation of a remuneration system of scientists and university professors. In the world, the financial reward of academic and research staff is one of the most pressing issues in the regulation of the human capital use. The academic community in the world is becoming less homogenous and more subject to diversification. In this respect, in many technologically developed countries, the material incentives for highly qualified personnel, in addition to the basic salary, include bonuses, allowances and subsidies, and their share depends on the country and university traditions, and other factors. In most countries, salary depends to a greater extent on the position, work experience, scientific degree, and the field of knowledge of the researcher. Such areas of knowledge as economic, engineering and natural sciences are usually valued higher than humanities. The average income level of the professor tends to reach the general level of the middle class, although it can be lower in some countries [11].

Universities in most countries are divided into public and private that coexist in different proportions. The former, as a general rule, are funded centrally from the state budget or public funds, or charge a tuition fee or exist at the expense of special private or public funds. For example, in **Australia**, almost all universities are state. Reduced funding in **Australia** in recent years has led to a reduction in the number of teachers and their differentiation. The level of wages is regulated by the trade union.

UK is among those countries where wages in the academic sector are high in comparison with the salaries of the specialists from other areas of the economy and allow academics to reach the top layer of the middle class. British universities often promote the additional employment of the teachers, and counseling can be carried out by

the teachers, both independently and as part of the university. However, salaries of the academic staff in the UK are still lower than those in other English-speaking countries such as the United States and Canada.

In some countries with lower living standards and paternalistic relations with the state system, an essential part of academic earnings is made up by the additional payments, allowances and subsidies, which increases the basic salary by several times. For example, in **China**, additional payments for meals, travel expenses, books and magazines, housing, insurance premiums in case of unemployment, etc., are quite common in addition to bonuses for the position and overload. However, the question of the legitimacy of paying such subsidies is decided by the university, its departments or faculties (depending on the performance), but they are not guaranteed by the central government [12].

In **Japan** it is common to motivate the research staff in higher education institutions by paying extra for experience and innovation. The experience of Japan is unique for the thoroughly built human resource management system, which includes not only world-known lifetime employment, but also the system of personnel rotation and training them in the workplace [13]. Japanese companies, including research institutions, are characterized by regular insignificant increase, motivating employees, and their transfer to other departments, sectors and branches. Professional career in science under Japanese law must be over at the age of 60, and before that no researcher having a permanent position can be fired. Every year there is a certification of researchers, during which their performance is assessed on the basis of such performance as indicators of scientific activity, the number of publications and links to them, the number of invitations to the conferences, the number of patents, etc. In case of successful certification the employee is promoted to the next level of payment [14].

Currently, there is a tendency in the world towards the development of scientific and teaching personnel pay system that is mainly based on quantitative indicators of performance in research and teaching activities, although this form of evaluation is subject to legitimate criticism from the scientific community. According to M. Yurevich, some countries, such

as Britain and France, prefer to use an expert job evaluation system of scientists and lecturers. Such countries as the Netherlands, Germany, Australia use a combined system of evaluation, i. e., quantitative indicators in conjunction with the expert assessment [15]. The question of whether to use a quantitative or expert assessment of the effectiveness of scientific and teaching staff performance in the formation of the remuneration system is still debatable.

1.2. Analysis of the domestic experience of state regulation in the development, use and accumulation of human capital. In Russia, there is a three-tier system of higher education management: at the federal, regional and local level. In recent years, as part of the administrative reform, there have been some changes in the system of state regulation of the higher education sector. Currently, higher education management at the federal level is carried out by the Ministry of Education and Science of the Russian Federation and the Federal Service for Supervision in the Sphere of Education and Science affiliated with it. At the regional and local level, the educational system is administered by the appropriate federation bodies and local governments of city districts. As a result of the reforms there was a change in the organizational structure of the management system of higher education, but it has led to a more complicated process of decision-making and duplication of the functions of the bodies involved in the management of the higher education system [16]. Focusing on the result in the management of the higher education system came as a positive outcome of the reforms. In this context, attempts are made to develop public funding of higher education, depending on the universities performance, proved by such indicators as the number of undergraduate and graduate students, the number of teachers with advanced degrees, publication activity of the teachers, the number of available educational programs of the university, and so on.

The entire system of higher education in Russia is to a large extent influenced by the geographical remoteness of the Far Eastern and Siberian regions from the central part, which leads to some decentralization in the public administration system. V.M. Novikova says [17]: «This situation has both negative and positive



consequences. The former are due to the difficulties in coordination and harmonization of the standards at different levels. The latter are caused by the opportunities to introduce the best features of European, Asian and American educational system into the Russian educational system». Geographical aspect leads to a shortage of highly qualified scientific and teaching staff in the regions. Current programs aimed to attract scientists and teachers in the regions do not give the desired effect. Research personnel is mainly concentrated in the capital region and in the traditional research centers (e. g., Novosibirsk). Other regions of the country do not attract qualified researchers. This is due, inter alia, to the socio-economic situation in Russia as a whole. The lack of high-tech production results in the low demand for highly qualified specialists and, as a consequence, highly qualified teaching staff. Therefore, there is no need for the state regulation of relocation of scientific and teaching staff. Thus, it is necessary, first of all, to solve the problem of employment of future graduates in high-tech industries to cope with the problem of uneven distribution of highly qualified personnel in the country.

In recent years, plans to support federal and national research universities are implemented in Russia. According to I.B. Nazarova [18], one of the main objectives of federal and national universities is «... to strengthen the ties between higher educational institutions and economic and social spheres and to develop innovative services and products». In general, the implementation of these plans contributes to independence of the universities which have the status of federal and national ones and it is consistent with the process of decentralization of the Russian higher educational system. It should be noted that the decentralization process brings both positive and negative features. On the one hand, a significant part of the authorities is delegated to universities, which facilitates the decision-making process, but, on the other hand, gives rise to certain isolation of the bodies of the higher education system of the country, its inconsistency and unevenness of their development. In this connection, given the scale of the country, the relevant experience of Germany could be useful in Russia. It should be noted that in Germany there is a federal center of higher education management system, yet

most authorities are delegated to regional management structures, i. e., the Land Ministries of Education.

Speaking about the remuneration of academic staff, it still remains one of the main issues in Russia. A number of new regulations in the system of remuneration of scientific workers and teachers has not been approved yet and is still under discussion. The documents that are in force now include the Decree no. 38n of 25.11.2014 adopted by the Federal Agency of Science and Education «About the system of payment of the federal state budgetary institutions employees in the sphere of research and development», and the Decree no. 10 «On the approval of the Model remuneration system of employees of the federal state budgetary educational institutions, subordinate to the federal agency of scientific organizations» as well as the Decrees of the Ministry of education and science and the Ministry of Healthcare of the Russian Federation which suggest schemes for the remuneration of scientists and university professors. However, new schemes have not yet been put into action. As is known, according to the legal documents defining the strategic guidelines of the development of scientific, technical and educational spheres, salaries of researchers and university professors should be several times higher than the average salary in the region. However, in the first half of 2015 the average salary of the researcher was 32 566 rubles, which amounted to 115.9 % of the average wage [19]. The solution to this problem has not been found yet.

Now in Russia there is a system of allowances and bonuses for academic and teaching staff. Extra charge for an academic degree and position, a higher salary for the rank of full members and corresponding members of the state academies of sciences are the most widespread [20]. Innovative Development Strategy of the Russian Federation for the period up to 2020 provides for the introduction of additional allowances to the salaries of the university lecturers engaged in efficient research activities. Since December 2009 there has been an increase in the average salary of researchers up to 25 thousand rubles, but there are significant differences in the wage level of employees in scientific and educational spheres behind the average figures.

Such reforms have resulted in a new system of wages in scientific and educational spheres, but, unfortunately, have not solved all problems, and even spawned new ones. Thus, E.A. Volodarskaya and V.V. Kiselev [21] consider horizontal inequality in pay, i. e., significant differences in wage levels of the groups of the same qualification working in different departments, regions, scientific fields, etc., one of the main problems. This inequality impedes the development of the scientific potential of the country. According to the study, increasing regional inequality is not caused by the objective reasons, such as the results of research, the implementation of priorities and so on, but is due to the regional differentiation, the competitive position of the firms, the formation of monopoly groups of scientists working for the corporate interests and other subjective factors. As a result, those scientists who managed to earn «relational» capital, which in its turn forms the administrative rent, are in a more privileged position, while inefficient redistribution of resources based on lobbying only reinforces the existing imbalances. For example, highest wages are paid to scientists working in the areas related to mining, economics and law and those working in the most affluent and successful regions.

According to E.A. Volodarskaya, V.V. Kiseleva [21] and D.A. Bocharnikov [20], a large gap between the wages of managers and employees (also, the dependence of the employees wage level on the managers decisions can be a means of influence on the former), a large gap between the wages of experienced scientists and young ones, low basic salary and an insignificant bonuses that do not motivate employees to improve their skills, as well as the high proportion of alternative employment of scientists are other important issues in the regulation of salaries of researchers. Thus, analyzing the current situation, we can conclude that the problem of work stimulation of scientists and university professors, who constitute of the main components of human capital, has not yet been solved in Russia.

2. The analysis of experience of state regulation in using RIA

2.1. The analysis of international experience of state regulation in using RIA. Now, let us consider the international experience of state regulation in the use of another component of the country's intellectual capital, i. e., intellectual property. Reification of RIA occurs through the

introduction of intellectual work results such as patents, licenses, models, copyrights, know-how, software, etc., into practice. In practice, intellectual capital is used in the process of commercialization (or introduction into economic circulation) of RIA, for instance, manufacturing high-tech products and services based on the use of RIA, or sale of patents and licenses for their use.

International experience shows that management of intellectual property is one of the priorities of state policy both in the higher educational sector and in the sectors of science and high-tech production. The development and implementation of the regulatory acts for creating and maintaining favorable conditions for the implementation of the measures to stimulate the efficiency of using intellectual capital is one of the forms of state regulation.

The experience of legal regulation of intellectual property rights in countries such as Britain and the US is quite unique, since the legislation of these countries has a rich history. In the UK, a specific role in the law system is given to judicial precedents. On the whole, the UK legislation contains more than two hundred legal documents, rules, regulations and international treaties relating to regulatory issues of legal relations in the field of intellectual property [22]. The main legislative acts regulating relations in the sphere of intellectual property in the UK are the following: the Law «On copyright, industrial designs and patents» (1988), the Law «On Trademarks» (1994), the Law «On copyright and related rights, as well as on trademarks (crime and liability)»(2002), the Law «On patents» (2004). These regulations govern patenting of industrial property, introduce the criteria of novelty and industrial application of these objects, define possibilities of the copyright owner for the use and alienation of these rights, determine the means of legal protection of industrial property, the order of their registration, etc. [23].

In the **United States** the scope of intellectual property is regulated by more than 150 regulatory documents, regulations and contracts. The main laws are the following: the Law «On intellectual property and the priorities of the Organization» (2008), the Law on Patents (Industrial Designs) and the Code of Federal Regulations Patents (1996). An important legal document in terms of stimulating the creation of intellectual property is the law of Bay-Dole Act (1980), under which US universities are defined as not only higher



education institutions but also centers of research and development, and are instructed to patent the results of intellectual activity with the view to subsequently commercializing them. Thus, intellectual property rights, according to this law, belong to its creator, the commercial organization. This trend can be found in other technologically advanced countries. L.V. Levchenko [24] wrote in his book [24]: «The main trend in the legislation of the last two decades observed in technologically advanced countries is the dominance of the idea of securing exclusive rights for intellectual property to the organizations, as they are most likely to launch these results into economy basing on the interests for all parties: the authors and other right holders as well as customers and performers».

China's legislation in the field of intellectual property can be called relatively «young» in comparison with the legislation of the United Kingdom and the United States. These issues have been under close consideration only since the mid 1980s, when the development of science and technology became a priority in the country. The main normative acts in this sphere are the Law «On Copyright» (2010) and the Law «On Patents» (2008). All in all, China has 22 laws and 100 regulations and rules relating to intellectual property [22]. However, the violation of intellectual property rights remains a challenge for modern China and its legislation needs further improvement. It should also be noted, that, according to E.A. Salitskaya [25], «an important step in China's policy in the field of scientific research and rights on intellectual property was the permission (under the American Bayh–Dole Act) to commercialize intellectual property created in the framework of research projects funded by the state».

2.1.1. Taxes as a means of management and use of intellectual capital. The study of foreign experience has shown that there are various types of tax incentives used as a tool to improve the efficiency of its use. These incentives include: reduction of tax rates (income tax, value added tax, other taxes); tax breaks and exemptions from taxes of the companies engaged in research and development within the framework of special programs or areas; write-off of the expenses on research and development with the multiplying factor; investment tax credit; tax breaks to pay taxes on the profit from ongoing investment projects; special depreciation regimes;

income tax benefits on salaries of researchers and their contributions to social funds.

Figure below shows tax incentives, their mechanism and the countries using them:

The analysis of the dynamics of the main indicators in the field of creation and use of intellectual capital in the countries using tax incentives has shown that these measures do not always lead to an increase in the share of research and development expenditures in the enterprise structure. For instance, the analysis of statistical data of the Organization for Economic Cooperation and Development (hereinafter – OECD) showed that in 2010–2011 such countries as Spain and Canada have provided significant support to the business sector by indirect methods to stimulate research and development and the use of RIA. However, in terms of the activity of the business sector in carrying out their own research and development, the positions these countries have taken were far from leading (27 and 22 respectively, of the 36 countries included in the sample). Moreover, Canada observed a decrease in the activity of the business sector in financing the companies' own research and development, compared with the data of 2001. In this context, countries periodically review a set of tax measures to stimulate the R&D sphere, through continuous monitoring of their effectiveness.

2.2. Analysis of the state regulation experience in the use of intellectual activity in Russia. In Russia, the use of the results of intellectual activity is controlled by about 80 normative documents, regulations and contracts. The main legal acts are the Civil Code of the Russian Federation, the Federal Law no. 364-FZ «On the Amendments to the Federal Law «On Information, Information Technologies and Protection of Information» of November 24, 2014, the Civil Procedure Code of the Russian Federation» and a number of other regulatory documents. The regulatory framework governing the creation and use of intellectual property is provided by the international legal acts adopted under the World Intellectual Property Organization and its agencies (hereinafter – WIPO), agreements between individual states, acts of the International Organization for Standardization (hereinafter – ISO), international financial reporting standards (hereinafter – IFRS) accounting intellectual property in the financial statements of the entities in accordance with the federal legislation.

Reduced rates of income tax	Taxation of the income from the use of a qualified intellectual property object, at the effective income tax rate, which depends on the mode share of income that is not subject to taxation	Belgium, France, Hungary, Luxembourg, the Netherlands, Spain, United Kingdom
Reduced tax rate on the sale revenue of technology stocks	Cancellation or introduction of preferential tax rate on the sale revenue of high-tech innovative companies	Belgium, USA
Exemption on value added tax	Reduced tax rates, or application of differentiated rates for high-tech goods	United Kingdom, Germany, Spain, Sweden
Write-off of the expenses on research and development with a multiplying factor	The size of the tax credit is calculated from the amount of R&D expenditure, or from the increase in R&D expenditure	Australia, Austria, Belgium, Britain, Denmark, Hungary, the Czech Republic
Investment tax credit	Payment of the accrued income tax to companies engaged in research and development. The amount of the tax reimbursement is calculated as a percentage of R&D spending	Australia, Austria, Belgium, United Kingdom, Hungary, Denmark, Canada, USA
Tax breaks to pay tax on profit from ongoing investment projects	Permitted delay of paying the profit tax for the companies doing research and development	China, India
Special modes of depreciation	Accelerated depreciation of fixed assets used in R&D	Belgium, Brazil, United Kingdom, Denmark, Canada, China, Mexico, France, Poland
Exemptions from income tax on the salaries of researchers and their contributions to social funds	The exemption of the income tax on the salaries of researchers with a PhD or master degree, as well as salaries of engineers or other employees of the companies with the status of «fledgling innovative company»	Hungary, the Netherlands, Turkey, France

Tax incentives for the creation and use of RIA, their mechanisms and the list of countries using them [26]

The Government Resolution no. 233 «On the approval of the rules of the state management of the RF rights on the results of intellectual activity carried out for the civil, military, special and dual purposes» of March 22, 2012 is the document regulating the process of rights management of intellectual property created at the expense of public funds. The aim of this Regulation is to streamline the rights management process on the results of intellectual activity, created by order of the state.

The inventory showed that the balance of the state has accumulated a huge amount of intellectual

property created by the state order and unclaimed in the actual production. An important step towards enhancing circulation and use of RIA, established by the state in economic activity of enterprises, was the legislating process of donating rights to enterprises which are manufacturers of products, works and services on the basis of the free use of intellectual property. This step, of course, contributes to the process of commercialization of intellectual property, and, therefore, leads to the more efficient use of intellectual capital.

As for the fiscal aspect of state regulation in the field of RIA use, there is a whole set of tax



incentives for the sphere of scientific research and development in Russia, that is, the creation and use of intellectual capital at the federal and regional levels [26].

The analysis of the system of tax benefits in the use of the country's intellectual capital in Russia showed that such benefits are mainly focused on encouraging the work of the scientific research sector. In the field of production involving the use of intellectual products (innovations), there are fewer tax benefits. The study based on the data of the Institute of Statistical Studies and Economics of Knowledge of HSE showed low demand for the tax exemption for the implementation in Russia of the exclusive rights on inventions, utility models, industrial designs and other RIA as well as the use of rights on RIA on the basis of a license agreement. The survey conducted by the experts of the Higher School of Economics found that in 2011 the advantage of this benefit was taken by 24.3 % of research institutes, 23.1 % universities and only 0.3 % of industrial enterprises [27]. This data suggests a low turnover of RIA in the Russian market and the low demand for it from the manufacturing sector of the economy. These statistics suggest that there is a problem of the gap between research and the productive sector of the economy that can be attributed to the systematic macroeconomic problem of the Russian economy that needs to be solved. Intelligent product created in the science sector, is not fully commercialized. This is also proved by the "Unified state information system for recording the results of research and development and technological works of civil purpose" database (rosrid.ru) [28], which accumulates information on a large number of RIA created with public funds, but not applied in the real economy. Thus, the gap between research and productive sectors in economy makes the complex of existing tax incentives ineffective and calls for its restructurization.

Conclusions

1. To develop proposals for a more efficient use of the country's intellectual capital, which consists of two components, the human capital and the intellectual property, it is necessary to use the experience of the countries where the administration system in scientific and technical spheres is well-established, stable and flexible to the new realities, and the system of commercialization

and legal protection of the intellectual product is well-developed.

2. The analysis of foreign experience in the state regulation of the creation, use, and accumulation of human capital has shown that many countries prefer a decentralized higher education system, which results in a more efficient decision-making process in the educational organization, thereby improving the efficiency of the educational system. However, at the same time, the development of a clearly defined multi-level public sector management structure of higher education should not cease altogether. Given the scale of the country, the experience of Germany, where there is a single federal management center of higher education, but a significant number of competences is delegated to the regional management structures, could be useful for Russia.

3. One of the most important instruments to promote the efficient use of human capital as part of the national intellectual capital is the remuneration system of scientific and teaching staff. Currently in the world, the remuneration system tends to be based on the quantitative performance indicators of research and teaching activities. Russia has also embarked on a similar pay system. However, there is no consensus about the quality of the system in terms of the efficient use of human capital in Russia and in other countries.

4. Most important forms of government regulation in RIA use are the legislating activities. In Russia, there is an on-going process of improving the legal framework for managing the use of RIA. In particular, a big step in this direction was the legal registration process of the donation of rights on RIA funded by the state to the companies that are potential producers of products on the basis of RIA.

5. The analysis of the international experience in the formation of the tax incentives complex in the field of RIA use showed that in technologically advanced countries, the efficiency of the mechanism for promoting the creation and use of intellectual capital requires constant monitoring and updating. However, the tools to stimulate the effective use of RIA are applied in the world and are yielding results. The analysis of the fiscal aspects of state regulation in RIA use showed that in Russia a set of tax incentives for the nation's intellectual capital is currently

inefficient and needs to be revised. The inefficiency of fiscal instruments is largely due to the low demand for tax incentives in the manufacturing sector, reflecting the need to address systemic macroeconomic problems in the Russian economy.

The direction of future research includes specification of the results obtained in the course of the study and their development to the level of practical use by various structures and institutions.

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