International Scientific Research: Legal and Organizational Aspects in the EAEU Environment

Aleksina I.S.
Yaroslav-the-Wise Novgorod State University,
Veliky Novgorod, Russia,
Irina.Aleksina@novsu.ru

Vasilyeva M.V.
Pskov State University,
Pskov, Russia,
solndolina@yandex.ru

Rozhkova A.Yu.
Pskov State University,
Pskov, Russia,
anroz80@yandex.ru

Abstract—The article discusses the possibilities of organizing cross-border scientific cooperation of regional entities at the level of the Eurasian Economic Union. The existing forms and the algorithm of organizational and legal support of scientific research are analyzed. An expert assessment of the factors and criteria of scientific activities that contribute to the success of regional scientific communities is given. The authors identify the problems and legal risks associated with restricting intellectual property access to foreign markets and internal monopolization of research. The legal significance of the contractual (agreement) form as a tool for protecting a complex of copyright and intellectual property is disclosed. The article suggests applying special criteria for compliance with the scientific research requirements for regional entities; recognizing a special status for the intellectual property market access based on the competitive principle; using the algorithm of organizational and legal support at the level of scientific corporate legal relations based on scientific cooperation. The authors propose to divide the representatives of the regional scientific community into educational and scientific parts with the distribution of their scientific functions. The conclusion follows that the mutual use of private-scientific and public-private partnerships with the participation of institutional entities is the main condition for the scientific community to enter the EAEU international market of intellectual property.

Keywords—international scientific cooperation, regional scientific community, research contract, scientific projects, algorithm of organizational and legal support

I. INTRODUCTION

The international experience of scientific research [1, 2, 3] obviously displays the potential of joint scientific projects that ensure the achievement of scientific and technological goals, standardization of products/services, and the growth of the competitiveness of economies.

In the context of digital integration of the Eurasian environment (the Eurasian Economic Union, hereinafter – EAEU), we consider the issue of cross-border scientific cooperation as one of the tools for ensuring the competitive sustainability of scientific communities and the representatives of scientific and educational institutions of the regions of Russia and the EAEU member states as mostly open to scientific integration.

The challenges of digital integration have led to the state implementation of target tracks for maintaining scientific and technological potential, namely:

- National projects: “Universities as Centers of Environment for Creating Innovations”, “Modern Digital Educational Environment” (2016); “Development of the Export Potential of the Russian Education System” (2017);
- Concept of international scientific and technical cooperation (2019);
- Program for the Development of the Digital Economy of Russia (2019);
- Strategy for the Development of Eurasian Economic Integration until 2025 [4];

The implemented concept “University 3.0.” (science, education, business) [5] should provide a scientific basis and educational environment, organization of centers for the initiation of new technologies at the leading universities, the implementation of scientific projects to increase the global
competitiveness of Russian universities.

Let us dwell upon the proven forms of international research cooperation used by leading Russian universities (Table 1).

These educational institutions actively participate in scientific work, join international consortia, and form the agenda of international scientific events. However, there is a certain “peripherality” of regional universities, expressed by insufficient participation in the implementation of the above-mentioned Russian strategic projects and in the international scientific cooperation.

**TABLE I. FORMS OF INTERNATIONAL RESEARCH COOPERATION OF LEADING UNIVERSITIES [6]**

<table>
<thead>
<tr>
<th>Forms of international research cooperation</th>
<th>Directions and examples of international research cooperation</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in the Federal Target Program “Research and Development in Priority Areas of Development of the Scientific and Technological Complex of Russia for 2014-2020” (joint projects)</td>
<td>Activity 2.1 “Conducting research in the framework of international multilateral and bilateral cooperation” - 163 projects, 23 countries, of which the EAEU partners: Kazakhstan - 7 projects, Belarus - 12; Activity 2.2 “Support for research in the framework of cooperation with the member states of the European Union” - 193 projects, 26 countries of the European Union</td>
<td>2014-2019</td>
</tr>
<tr>
<td>Participation in international competitions of Russian scientific foundations</td>
<td>RFBR - 9 competitions; 599 supported projects; funding 1.5 billion rubles.</td>
<td>2018</td>
</tr>
<tr>
<td>Participation in international competitions of Russian scientific foundations</td>
<td>R$F$ - 3 competitions; 26 supported projects</td>
<td>2018</td>
</tr>
<tr>
<td>Mega-grants competition</td>
<td>BRICS Framework Program - 32 projects, 28 – with RF participation; funding - jointly by the Ministry of Science and HE and RFBR; Innovation Promotion Fund</td>
<td>2018</td>
</tr>
<tr>
<td>Participation in international scientific forums, conferences, fairs and exhibitions</td>
<td>Grant winners: 133 Russian scientists, 31 of them live in the Russian Federation</td>
<td>2010-2019</td>
</tr>
<tr>
<td>Participation in organizing joint scientific infrastructure facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific centers</td>
<td>Mathematical Center in the Siberian Academgorodok, the co-organizer is Novosibirsk National Research State University</td>
<td>2019</td>
</tr>
<tr>
<td>Cooperation of universities at the level of diplomatic missions and consulates of foreign countries</td>
<td>Representatives of the Republic of Iraq and South Ural State University (development of communications - culture, science); Italian diplomatic representative and National Research University “Higher School of Economics”</td>
<td>2019</td>
</tr>
</tbody>
</table>

The problem of peripherality is a result of the technological and scientific gap between the leading and regional universities, associated with the inertia of the development of certain Russian regions. The reason is objectively explained by the inconsistency with the target criteria of ratings (Rating “5-100” [7], Interfax Rating), which include the international level and single out the leading educational and scientific institutions as the main members of international scientific consortia. Obviously, the target criteria and indicators meet the conditions for the implementation of national and integrated research projects.

Besides, there is a practical problem of forming a strategy for choosing a priority scientific profile (or profiles) by a “regional” university. Thus, leading universities form a sustainable research portfolio as a set of scientific developments, taking into account the following factors:

- territorial and cross-border characteristics of the university and the existing cooperation ties with enterprises of the regional industries;
- involvement in global trends related to technological modification and digitalization of business processes;
- quality of educational market demand by consumers and economic entities of the real sector of the economy;
- expert opinion of rating companies in regards to global trends.

Thus, for participants “below the average” level, the access to the international scientific level becomes “technically” difficult in the current conditions and requires the development of a special model, criteria, approaches, and methods of organizational and legal support of international scientific cooperation which scientific results are significant for regional growth points and competitiveness of industries in cross-border regions. In our opinion, it is necessary to recognize the special status and to revise the scientific concept of peripheral universities, expressed in the actualization of the public-private form of participation in the international R&D with the involvement of commercial and public sector representatives.

For example, for the involvement into the scientific community, it is sufficient to propose the criteria according to which universities should achieve a certain level of the following indicators:

- positive research reputation;
- bibliometric indicators;
- joint publications with foreign researchers;
- scientific income as intellectual investment in the real sector of the regional economy;
- openness of international scientific transit in starting new scientific work directions;
- scientific specialization of industry affiliation;
- the level of scientific cooperation and integration.

In its turn, the organizational and legal process of launching cross-border scientific cooperation is connected with legal
risks. These risks include conflicts and lack of norms in regulating the behavior of participants, in bringing to legal responsibility, in removing the latency of illegal actions during compilation, plagiarism, scientific theft, data falsification, corruption collusion, as well as in the application and protection of intellectual property and the results of intellectual activity [8]. It seems difficult to find a “responsible” scientific partner, as well as to guarantee the reliability of scientific cooperation and mutually beneficial securing of scientific activity products.

In our opinion, in order to “remove” these problems and risks for regional scientific communities, including universities, joint research projects with the universities from the EAEU member countries could be organized on the basis of scientific cooperation and corporate arrangement.

At the Eurasian Economic Union level, one could envisage the processes of harmonizing legal norms in the regulation of scientific communities organization, behavior, establishment of participants’ legal responsibility, unification of requirements and criteria for the scientific selection of research subjects and objects, the results interpretation methods, the mechanism of funding and remuneration, as well as the procedure for contractual legal relations and human rights activities. It should be noted that the EAEU policy is going through a new stage in strengthening scientific ties: in May 2020, the Supreme Eurasian Economic Council discussed “The Roadmap for the Implementation of the Strategic Directions for the Eurasian Economic Integration Development until 2025”. The process of forming a unified market continues; proposals for joint innovative and investment activities have been worked out. It is planned to create a common scientific EAEU environment, including special structures (the Eurasian Foundation for Science and Technology, the Eurasian Academy of Sciences); it should help expand the capabilities of “peripheral” universities which have not been previously involved in an ongoing international scientific process, but now are organizationally and technologically ready for such interaction.

II. RESULTS AND DISCUSSION

Scientific activities organized together with international partners could provide for scientific research studies both at the theoretical and at the empirical level (Article 2 of Law No.127) [9]; they could be included in international cooperation based on the international specialization of scientific communities in leading capital-intensive industries, exclusively within the framework of contractual legal relations.

A private-scientific and public-private partnership could become a scientific community to work with customers from the real sector of foreign economic activity, as well as the state and non-profit sector. At the same time, the forms of joint participation are clearly seen in project and grant work, where, within the framework of a scientific contract, the legal statuses of the parties to a scientific contract are established (part 1 of article 8 of Law No.127) in the recognition and consolidation of a copyrights and obligations complex (article 772 of the Civil Code of the Russian Federation) of the scientific community of the EAEU countries representatives.

The contractual (and agreement) form (common for private-scientific partnership) of scientific relations (Order of the State Customs Committee of the Russian Federation of 08.30.1999 N 572 (revised on 06.13.2000)) [10] unambiguously serves as:

- a tool for protecting the rights for scientific research and the results of intellectual activity to ensure a guarantee for scientific income, namely, for an intermediate and final scientific product for manufacturing, or operational, or consumer purposes, as well as for preserving scientific reputation;
- the tangible foundation of a scientific transaction legality, expressed in the targeted use of scientific investments (financial, technological, technical means) and the achievement of material scientific results;
- the tangible evidence of the established complex of copyrights;
- the basis for legal enforcement measures to implement a transaction, change the scientific contract terms or terminate legal relations, as well as the basis for procedural actions to obtain evidence, to qualify and to establish the composition of offenses, to resolve disputes in the field of copyright, related, patent, and exclusive rights.

Within the framework of international scientific contracts of a joint scientific association of member-representatives of the EAEU countries (for example, a scientific holding), which is not a legal entity, objects can be:

- scientific projects regarding the development of models, concepts, and scientific routes of a particular research area;
- licenses and franchises for the use of exclusive rights and the mutual use of scientific results;
- scientific outsourcing of targeted research studies;
- accumulation of scientific data (for example, registers of involvement in international citation databases).

Obviously, the object of targeted research study is the solution of problems related to the implementation of legal norms and criteria for the organizational and legal support of cross-border scientific cooperation and actions of the scientific community in the field of the EAEU development and provision of export-import operations and customs affairs.

To formulate suggestions in the field of organizational and legal support of international scientific cooperation and the possible creation of a scientific community, we consider the algorithm of international practice of implementing approaches and methods for organizing scientific research.

According to the EEC Order [11], the current practice is represented by the public-private partnership for international cooperation between the departments of the Eurasian Economic Commission (hereinafter - EEC), for example, the scientific partnership of the EEC with a financial university (Federal State Educational Budgetary Institution of Higher Education “Financial University under the Government of the Russian Federation”), where the university acts as an executive developer.

Within the research frame “Development of a methodology for calculating the minimum permissible rates of export loans denominated in the national currencies of the Eurasian Economic Union countries (Russian rouble, Belarus rouble, Kazakh tenge, Armenian dram, and Kyrgyz som) in regards to
the practice of state financial support (subsidizing) of export loans OECD” the structure of the scientific project is as follows [12]:

- technical assignment and technical specifications;
- collegially adopted protocol setting the technical research characteristics;
- explanation of scientific development with:
- the topic relevance statement in regards to existing problems and conflicts;
- the goal objectivity statement;
- designation of applied problems using the scientific methods of analyzing the practice and a benchmark databank, a statistical approach of dynamics and positive and negative manifestations ratio, the actions algorithm description and its test mode approbation in order to assess the effectiveness and obtain an effect during a practical experiment. It is significant to justify the reduction of production, economic, and social costs and risks associated with experimental activities and the use of compensatory measures to ensure the safety and protection of the rights of persons who are the objects of the experiment;
- the scientific work description in the descriptive part of the argued statements’ features;
- requirements and technical specifications for the implementation of scientific results, the procedure for drawing up implementation acts;
- procedure for acceptance of scientific papers.

In general, the presented structure is universal and acceptable for making the forms of drawing up an international scientific project uniform.

It should be noted that the public-private partnership is built on a competitive basis. It applies regulations in the form of local protocols and the competition provisions for the participants’ selection and criteria for meeting customer requirements; there is a certain procedure for setting and applying target indicators for conducting research work, for obtaining scientific results, for the implementation and scaling of scientific products/services, and for technical documentation. In many ways, these elements determine the composition of the organizational and legal support implemented by a special structural unit of an institutional entity.

The review of the Order of the State Customs Committee of the Russian Federation of August 30, 1999 No. 572 in the part “Procedure for the conclusion and execution of contracts for research and design works on the development of project documentation for departmental communication networks and transfer of customs authorities data” reveals the following algorithm:

- subjects (a customer and a contractor, if necessary, a project representative (a consultant, an expert)), their legal status and powers for a set of actions under the contract;
- institutional entities (Eurasian Science and Technology Fund, Eurasian Academy of Sciences, Innovation Fund, Science Fund [13]) as initiators and organizers of joint research projects, acting as international investors to support and ensure competitive principles of scientific potential and access of all members of the scientific community to the intellectual property market;
- the draft of R&D contract, as well as additional agreements;
- the procedure for drawing up a technical specification and approving a roadmap for scientific cooperation and cost estimates;
- the procedure and requirements for a non-departmental examination of a scientific project;
- securing of scientific results by the customer’s local document (order) on the scientific project implementation.

The given regulation may well serve as a form for unifying organizational and legal support for cross-border international scientific cooperation of regional subjects representing scientific and educational institutions.

Recently, EEC has initiated the scientific substantiation of ensuring the safety of citizens’ health and life in the framework of foreign trade, for example, “Research on quality indicators of copied drugs in dosage forms in relation to original (reference) drugs” [14].

The EEC decision locally fixed the criteria for applied scientific research, namely:

- “types of research with direct human participation and ways of modeling in laboratory conditions”;
- imperative “use of specifications for dosage forms groups”;
- submission of evidence for the verification of measurement parameters: “by the half-elimination period from the human body”, “distribution of nanopreparations in target tissues”, “absence of drug-specific toxicity”.

These features can serve as basic criteria for participation in an international scientific project aimed at the implementation of scientific initiatives by the regional scientific community in regards to the sectoral and regional advantages of scientific specialization.

In particular, due to the existing technological and scientific gap, it is appropriate for regional representatives of the scientific community to involve scientific outsourcing in the implementation of empirical and experimental research using the short-term leasing of laboratory equipment and technical means for solving specific problems associated with regional economic development. In this case, the scientific product acquired within the framework of a certain type of scientific research can meet the specified criteria of scientific and industrial specialization in providing the base of empirical evidence and verity of the target efficiency and effect indicators. At the same time, the ownership of a scientific product and the results of intellectual activity remain with the regional scientific community.

Besides, it is significant to differentiate between the scientific and educational composition of scientific community
representatives in terms of delimiting their scientific functionality and creating scientific cooperation when launching scientific centers (as a legal entity) equipped with experimental and laboratory facilities, including the use of scientific outsourcing.

Let us assume that, the representatives of the educational part of scientific community express their scientific activity by theoretical fundamental, monitoring, and foresight research. The obtained results of scientific activity will go for target indicators verification, technical and temporary practical testing of the proposed models and concepts carried out by the scientific part of scientific community representatives who will use laboratory, experimental, and calculation equipment on leasing terms. Such a mechanism may well fit into the scientific cooperation of subjects and legal entities, namely, an educational institution and a scientific center in the form of a scientific holding, or a scientific corporation on the basis of corporate legal relations within the framework of corporate agreements (contracts).

At the same time, the corporate agreement between representatives of the scientific community takes into account the obligation to ensure a high-quality scientific contribution that affects the increase in the target indicators of the scientific community competitiveness and the effectiveness of scientific products/results. This approach can help bridge the technological gap, avoid pseudoscientific activities, including those associated with violation of copyright and scientific ethics; scientific ideas and concepts can be put into practice without remaining just scientific publications.

Thus, it is proposed to use the private-scientific partnership of the scientific community on the basis of corporate principles and scientific cooperation, which allows obtaining scientific income. Moreover, the scientific activity of the regional scientific community within the framework of public-private partnership is feasible in international scientific cooperation with the EAEU institutional entities.

It is efficient to combine the forms of private-scientific and public-private partnership at the corporate and international level of scientific activity, ensuring the competitive stability of the scientific community, reliability of international scientific cooperation and the quality of international scientific product/scientific result.

Considering the above-mentioned problems, risks and prospects, as well as the peculiarities of the practice of scientific cooperation, the use of elements of organizational and legal support algorithm, we will formulate conclusions.

III. CONCLUSIONS

The research indicated the relevance of organizational and legal framework of cross-border scientific cooperation of regional entities at the international EAEU level through the prism of problems, risks, and significant scientific prospects.

The article discusses a general register of criteria and suggests a special register of requirements compliance criteria for regional scientific communities of the cross-border location.

The importance of the contractual form of public-private partnership for removing the latency of violating scientific ethics and copyright and for intellectual property protection is emphasized.

The research defines a list of objects of scientific transactions; their framework could give scientific potential to regional scientific community representatives of cross-border location and the recognition of their special status for access to the intellectual property market on the principle of competitiveness.

The algorithm of organizational and legal support of international scientific cooperation of public-private partnership is described; it reflects the structure and regulations for the development and acceptance of a scientific project.

The subjects of a scientific transaction were identified, as well as the regulation of securing scientific results to the copyright holder for implementation and scaling, or disposal of exclusive rights in the form of issuing licenses (franchises) within the framework of scientific outsourcing and other scientific services.

The article describes the practice of promoting scientific initiatives by institutional subjects (EEC, FCS, funds) of scientific transaction as customers and international investors.

In general, the findings allow formulating organizational and legal aspects for private-scientific partnership as an alternative form of international scientific cooperation of “peripheral” (regional) scientific community representatives of educational and scientific institutions.

In particular, criteria for the procedure for conducting scientific research are proposed as a possible basis for the unification of requirements and their legal consolidation, including the corporate level.

The application of the organizational and legal support algorithm will also be useful within the framework of private-scientific partnership at the level of scientific corporate legal relations based on scientific cooperation with the involvement of scientific outsourcing (including those based on external civil law agreements).

A corporate agreement was proposed for a private-scientific partnership.

For the purposes of rights assignment and civil liability of the parties to scientific transactions, it is proposed to differentiate the representatives of the regional scientific community into educational and scientific parts due to the delegation of the scientific functionality of an educational institution and a scientific center.

We believe that the corporate approach at the level of the scientific community makes it possible to remove legal risks and manifestations of corruption associated with a long process of harmonization and unification of the rules of conduct for participants at the international level of scientific activity. In particular, this approach allows establishing the legal order of scientific activity, norms and requirements for scientific results/products, requirements for the selection of subjects, as well as allows regulating the behavior of participants in ensuring and protecting a complex of copyrights and intellectual property. This approach can level the technological gap between regional scientific communities.

The register of scientific transactions objects presupposes regional and sectoral advantages in resolving issues of regional specialization and digital integration at the international level.
The mutual use of private-scientific and public-private partnerships to participate in institutional entities, which can act as the main condition for the scientific community to enter the international intellectual property market, is proposed.

Additionally, the solution of these problems is achieved through the strengthening of cooperative forms of scientific work, keeping up to date the information characteristics of scientific research participants (for example, inclusion in international citation bases), expanding humanitarian ties, academic mobility, etc. It is recommended to pay special attention to the balanced character of scientific developments portfolio of each participant (university) of the international R&D.

In general, the proposals presented do not exhaust this study due to the need for a legal analysis of law enforcement in the field of contractual, corporate and court proceedings in order to substantiate the effectiveness of organizational and legal tools at the level of the scientific community and the EAEU in the field of organizing international scientific research.

References


[10] Consultant Plus, Order of the State Customs Committee of the Russian Federation of 30.08.1999 No 572 (as amended on 13.06.2000) “On the procedure for drawing up and concluding contracts for conducting research and development work” (together with the “Regulations on the procedure for drawing up and concluding contracts for conducting scientific research and development work on the creation (modernization), manufacture of installation (experimental) batches and operation of information and technical means”) [Prikaz GTK RF ot 30.08.1999 No 572 (red. ot 13.06.2000) “O porядке оформления и заключения договоров на проведение научно-исследовательских, опытно-конструкторских работ” (вместе с “Положением о порядке оформления и заключения договоров на проведение научно-исследовательских, опытно-конструкторских работ по созданию (современи), изготовлению уставновочных (опытных) партий и эксплуатации информационно-телекоммуникационных средств”). (In Russ.). Retrieved from http://www.consultant.ru/coms/cgi/online.cgi?from=2838980&end=F571FB68FCCF5EDC38E3906FD7F94=doc&base=LAW&n=358870&REFDOC=2838980&REFBASE=E%2F#1l3gftzpz


