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PARTIES OF THE «HORIZON 2020» AND «HORIZON EUROPE» PROGRAMS AS PARTICIPANTS IN THE INNOVATION PROCESS

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Abstract. The purpose of this article is to analyze the functioning of the multilateral projects of the «Horizon 2020» and «Horizon Europe» Programs, to establish the peculiarities of the status and activities of their subjects.

To achieve the goal of the scientific work and solve the set tasks, a complex of general scientific and special research methods was used: the method of analysis and synthesis, alternatives, comparative studies, classification.

Research on this issue allows us to state that despite the fact that multilateral Horizon 2020 projects constitute a significant part of EU project funding, scientific research on this issue is insufficient. This is partly due to the lack of a structured analytical approach of the subjects of this Framework Program. In particular, the legal status of the National Contact Point, which provides informational and methodical support for the thematic areas of research determined by the European Commission (EC) for the EU research and innovation program «Horizon Europe», remains overlooked.

Within the framework of this study, the experience of Poland, where there is a Polish National Contact Point for EU research programs, was introduced.

It was determined that at the micro-level of IS there is a Program «Horizon 2020» or «Horizon Europe», which can act as projects (a network of participants who cooperate within the framework of a joint innovation project both at the national level and at the EU level) and as Partners (organization, consisting of a network or group of persons, or an individual participant, who cooperate within the framework of a joint innovation project both at the national level and at the EU level) is a certain level of the very structure of a multi-level innovation system (or IS of a higher level). The authors propose to make changes to the Law of Ukraine on Scientific and Scientific-Technical Activities. So, there is a proposal to add par. 3 to art. 66 regarding the status of a scientific institution that can act as a basic organization in which the National Contact Point of the European Union Framework Program for Research and Innovation «Horizon Europe» has been established.

Keywords: Horizon Europe, scientific institution, grant, innovation, innovation process, international scientific and technical cooperation, foreign states.

Author contributions

The authors made an equal contribution to the article. Together they selected literature, analyzed it and drew common conclusions.

Disclosure statement

The authors have not any competing financial, professional, or personal interests from other parties.

INTRODUCTION

The relevance of research grant activities through participation in the EU research and innovation programs «Horizon Europe» is connected with the European integration policy of Ukraine.

The variety of grant programs is aimed as much as possible at the realization of the right to education of each person, in accordance with his interests and profession, each scientist can choose for himself a program that is more suitable for him in the field of activity. This fact testifies to various conditions for human development in the interests of the development of society and the realization of human rights. Thus, the principle of diversity provides for the greatest possible satisfaction of the professional interests of scientists (Kalina et al., 2022).

Wide distribution and active involvement of scientists in grant activity is also strengthened by the fact that grants are free of charge and provided without the condition of return. It should be noted that scientists who are not EU citizens can receive a grant or scholarship in EU countries.

The purpose of the research is to analyze the functioning of multilateral projects of the «Horizon 2020» and «Horizon Europe» Programs, to establish the status and activities of their subjects.

To realize this goal, the following questions are investigated in the article: structured analytical approach of the subjects of this Framework Program; the legal status of the National Contact Point, which provides informational and methodological support for the thematic areas of research determined by the European Commission (EC) for the EU research and innovation program «Horizon Europe»; peculiarities of activities at the micro-level of IS Programs «Horizon 2020» or «Horizon Europe», which can act as projects (a network of participants who cooperate within the framework of a joint innovation project both at the national level and at the EU level) and as Partners (an organization that consists of a network or a group of persons, or an individual participant, who cooperate within the framework of a joint innovation project both at the national level and at the EU level) is a certain level of the very structure of the multi-level innovation system (or IS of a higher level).

LITERATURE REVIEW

Kalina K. Ye., Nedria K. M., Rybalko L. S., Trubavina I. M. (2022) analyzed the issue of international scientific activity in their scientific research, Kravtsova V., Reshetniak O. (2019) devoted their research to the peculiarities of the organization of scientific activity in EU countries and Ukraine.

Klimova G. P. (2018) revealed the issue of forming a national innovation system, and Hlibko S. V. (2020) — legal support of the national innovation system and innovation process. Podrez-Riapolova I.V. (2022) considered the legal basis of infrastructural support of the innovation process.

Zelisko A.V., Rozghon O.V. (2022) in their research analyzed legal approaches to the legal regulation of those subjects of innovative activity that are endowed with the status of a legal entity in different states.

Rothwell R. (1993) focused on five generations of models of the innovation process, including the «fully integrated parallel model», which acts through the instrument of the EU implementation policy in the field of innovation — financing of research projects, in particular, «Horizon Europe», as noted by Büttner S. M., Leopold L. M. (2016). Maria K., Maria B., Andrea K. (2021) noted *the network of participants in the innovation process* within the Horizon 2020 project.

Klerkx L., Seuneke P., de Wolf P., Rossing W.A.H. (2017) investigated the functioning of a multinational project such as «Horizon 2020».

Van Lancker J., Mondelaers K., Wauters E., Van Huylenbroeck G. (2016), Bergek A., Jacobsson S., Carlsson B., Lindmark S., Rickne A. (2008) and Hekkert M., Negro S., Heimeriks G., Harmsen R. (2011) investigated the structure of the innovation system, where the «Horizon 2020» and «Horizon Europe» Programs are a *separate micro-level of the level IS*. As we can see, there is no Horizon 2020 general research of the functioning of partnerships between participants in the form of multilateral projects.

METODOLOGY

When conducting scientific research, a complex of general scientific and special research methods was used.

Based on the analysis of a number of publications related to activities at the micro-level of the innovation process of the «Horizon 2020» or «Horizon Europe» Programs using methods of analysis and synthesis the shortcomings of regulation and the prospects for regulation of grant activities due to the participation of scientists in the EU research and innovation programs «Horizon Europe» were revealed, which is related to the European integration policy of Ukraine.

The method of alternatives used in the study made it possible to critically assess the provisions of regulatory and legal acts from the standpoint of regulating the status of scientific institutions as the basic organization in which the National Contact Point of the European Union Framework Program for research and innovation «Horizon Europe» was created.

The applied method of comparativistics made it possible to identify the main indicators, according to which it is expedient to continue the transformation of the regulation of national contact points for EU research programs in accordance with the standards established in the world community on the example of Poland.

The use of the classification method became the basis for generalization in «Horizon Europe», in the research and adduction Program of the European Atomic Energy Community «Euratom» (EAEC) and the identification of gaps in the regulation of the status of the subjects of these projects, in particular, the lack of information regarding the requirements (criteria) to the basic organization and the level of training of experts of such an organization.

Despite the fact that multilateral Horizon 2020 projects constitute a significant part of EU project funding, there is not enough scientific research on this issue. This is partly due to the lack of a structured analytical approach of the subjects of this Framework Program. In particular, the legal status of the National Contact Point, which provides informational and methodological support for the thematic areas of research determined by the European Commission (EC) for the EU research and innovation program «Horizon Europe», remains overlooked.

RESULTS

In recent years, a low level of participation of Ukraine in multilateral research and innovation projects has been observed. Although integration into the EU is one of the priority areas of Ukraine's foreign policy. And the strengthening of the European integration processes of Ukraine contributes to the formation of the appropriate vector of development in the field of science and technology. This development is possible only under conditions of international cooperation and coordination of efforts of all parties in multilateral projects.

The priority of the development of international cooperation is to support the development of innovations and the latest technologies. European Union (EU) policy defines innovation as the result of an interactive and co-evolutionary process involving different types of actors (EIP AGRI Service Point, 2017).

The creation of partnerships, clusters, participation in EU research and innovation programs «Horizon Europe», etc., can serve as a tool for «*accelerating*» innovation.

Necessary actions of international cooperation are conducting and participating in events aimed at intensifying cooperation with enterprises of EU member states and other world states, as well as ensuring the implementation of projects.

The prospect of cooperation between Ukraine and the EU in the field of innovative activity through grant activity is important for the modern period.

It should be noted that in the doctrine, the analysis and experience of grant activity of different countries was not the subject of generalization in the theoretical aspect.

The issue of *international scientific activity* is acutely faced by scientists of various levels: education applicant, young scientists, experienced scientists, educators. In the framework of *international*

cooperation and exchange of theoretical developments, practical experience, and assets, *grant activity* is widely used. This is necessary in the context of attracting funds for research work, to support the academic mobility of scientists at various stages of their careers, to expand scientific research on off-budget topics (Kalina et al., 2022).

Despite the participation of many participants, including Ukraine, in the «Horizon 2020» and «Horizon Europe» programs, the doctrine lacks *a complete understanding of the mechanism of these programs*.

Rothwell R. (1993) identifies five generations of models of the innovation process, among which the interactive (innovation model or fully integrated parallel) model that is active now is the model of strategic network, strategic integration and installation of connections.

«Interactive innovation model» is applied through a classic tool of EU policy implementation: *project financing* (Вьttner & Leopold , 2016). Financing in the field of innovative activity is carried out with the help of the «Horizon 2020» Program in the form of multilateral projects.

Multilateral projects may (or not) be «research» projects because these projects can carry out three «types of activities»; that is, «Research and innovation activities» (RIA), «Innovation Actions» (IA) and «Thematic Networks» (TN). The main part of the Program budget is allocated to joint scientific and research projects (in particular, through «Research and innovation actions» (RIA) and «Innovation actions» (IA), support to individual applicants is provided within the framework of ERC, Future and Emerging Technologies (FET) grants. Coordination, support and other activities are used to conduct research, expert groups, conferences, and to disseminate and use the results. Such grants are also used to support R&D policy initiatives in the field of R&D (for example, Innovation Deals).

Their activities are expected to be based on «*joint innovation*» between actors with complementary knowledge (and other resources) «throughout the project», from problem definition to solution implementation (Cronin et al., 2022).

The application of the «interactive innovation model» within the framework of the «Horizon 2020» grant activity is cooperation between the participants of different states for the use of complementary types of knowledge and skills with a view to the joint creation and dissemination of solutions/opportunities, the implementation of innovations in practice.

In particular, Ukraine participated in the Horizon 2020 Program. The program «Horizon 2020» is the largest program of the European Union aimed at financing research and innovative development, which provides for activities aimed at the further development of the *European Research Area (Ministry of Education and Science of Ukraine website)*. Integration into the European Research Area is an important tool for deepening cooperation with the EU scientific community and adapting EU standards and norms in the field of science and innovation. In order to establish a clear position on the protection of academic freedom within Europe, Ukraine joined the Bonn Declaration on Freedom of Scientific Research.

The «Horizon Europe» Program, which will operate during 2021-2027, has now begun. At the end of December 2020, the EC approved the budget of the «Horizon Europe» program in the amount of 95,5 billion euros. Ukraine is negotiating with the European Union on the conclusion of an agreement on the Association in the program «Horizon Europe» (EC website).

The *European Partnership* in «Horizon Europe» brings together the European Commission and private and/or public partners to address some of Europe's most pressing challenges through *joint research and innovation initiatives*. They are a key instrument for the implementation of the Horizon Europe and Euratom European Atomic Energy Community (EAEC) programs and make a significant contribution to the EU's political priorities. By bringing together private and public partners, European partnerships help avoid duplication of investment and contribute to reducing the fragmentation of the research and innovation landscape in the EU.

The European Partnership is divided into *three types* depending on the way it functions: co-financed European *partnerships*, joint programming of European partnerships and institutionalized European partnerships. Joint programming of European partnerships that implements the Research Partnership Program, which is implemented through competitive topics included in the Work Programs for individual clusters of the «Horizon Europe» program. Separate clusters are thematic,

which also include Digital technologies, industry and space (Krajowy Punkt Kontaktowy NCBR website).

Research of multinational scientific and research projects by Klerkx L., Seuneke P., de Wolf P., Rossing W.A.H. (2017) and Ingram J., Gaskell P., Mills J., Dwyer J. (2020) point to the *lack of a structured approach* to account for differences in institutional, cultural and social contexts that influence co-innovation and social learning processes.

As indicated above, the «Horizon 2020» and «Horizon Europe» Programs are multilateral, so the parties to these programs are also *participants in the innovation process in the innovation system* (IS).

According to Klimova G. P. (2018) *innovative systems* are diverse. Summarizing the points of view existing in the scientific literature, it is necessary to highlight innovative systems that exist at the macro-, meso-, micro-, and local levels. At the macro level, we are talking about the global innovation system, international and transnational systems that are its components, as well as the national innovation system (NIS). Regional innovation systems are distinguished at the meso level, sectoral (cluster) innovation systems at the micro level, and the innovation system of a specific enterprise at the local level (Klimova, 2018).

It can be argued that, in contrast to the national regulatory approach, the *european theoretical base is based on two main understandings of NIS:* 1) as a system of institutions that create, implement, use innovations or promote such activities; 2) as a system of relations, in the process of which innovations are created, implemented, and used.

At the same time, the national approach to understanding the essence and content of NIS mostly corresponds to the international one, and each of the elements of NIS is involved at a specific stage of the innovation process, from the stage of the emergence of an idea to the production and implementation of innovative products, creating the necessary conditions for innovative development in Ukraine (Hlibko, 2020).

Van Lancker J., Mondelaers K., Wauters E., Van Huylenbroeck G. (2016) developed an organizational Innovation System (OIS) approach, where the Horizon project clearly focuses on this micro-level. At the same time, the authors emphasize connections with *higher-level IS*. Projects can be conceptualized as *temporary organizations* (Sydow & Braun, 2018).

Fieldsend A. F., Cronin E., Varga E., Biry S., Rogge E. (2020) applied the concept of OIS to multilateral *co-innovation* partnerships.

This indicates the need for further study of how to *coordinate and take into account studies of co-innovation* processes that cross different scalar (micro- or macro-level), geographic (national, regional), paradigmatic (technological, disciplinary, mission-oriented) and sectoral borders of IS (Berthet et al., 2018; de Boon et al., 2021; Kernecker et al., 2021; Klerkx et al., 2012; Klerkx & Begemann, 2020; Pigford et al., 2018).

But the analytical integration of IS *perspectives* at the micro- and macro-levels is necessary for a full understanding of the mechanisms underlying the *operation and process of joint innovation development* within the framework of Horizon 2020 projects, in which many participants participate. For example, two types of IS are classified at the micro level: the «Horizon 2020» project as a co-innovative partnership of many actors, and partner organizations-participants or individual partners. The Horizon 2020 Consortium consists of several partners, and *partner organizations* or individual participants may participate in several Horizon 2020 projects (Cronin et al., 2022).

Note that at the micro level of IS there is the «Horizon 2020» or «Horizon Europe» Program, which can act as ***projects*** (a network of participants who cooperate within the framework of a joint innovation project both at the national and EU level) and as ***Partners*** (organization, consisting of a network or group of persons, or an individual participant, who cooperate within the framework of a joint innovation project both at the national level and at the EU level) is a certain level of the very structure of a multi-level innovation system (or IS of a higher level).

In order to further characterize the mechanism of the innovation process and conceptualize the «Horizon 2020» and «Horizon Europe» Programs as projects, it is necessary to analyze the subject composition of the «Horizon 2020» and «Horizon Europe» Programs. This is due to the fact that the characteristics of the mechanism of the innovation process in relation to the «Horizon 2020» and

«Horizon Europe» Programs, because IS depend on the context in which they are embedded. That is why a structured approach is needed to study the interdependence and interconnection of subjects.

Klerkx L., Seuneke P., de Wolf P., Rossing W.A.H. (2017) illustrated a possible approach to analyzing the influence of various dimensions of *institutions on the functioning* of a multinational project. Since Horizon 2020 projects *must cover* at least three EU Member States and *consortia* must include several *types of partner organizations*, they depend on the specific institutional conditions and constellations of actors associated with each of these contexts located at different levels (i.e. project, technology, country and *partner organization*).

This recognition of the existence of different levels of context is a subject of constant debate in the application of *concepts of innovation systems* (IS), because these findings support the argument that *IS can include different levels of IS* that are interconnected and interdependent, and the mechanisms between them can influence the functioning of one on one (Van Lancker et al., 2016; Kieft et al., 2017; Klerkx et al., 2017).

The IS structure contains the main building blocks that relate to IS actors (entities), innovation network or interaction, institutions and infrastructure or resources (Cronin et al., 2022). In the opinion of Van Lancker J., Mondelaers K., Wauters E., Van Huylenbroeck G. (2016) an *innovation process* should be added.

Bergek A., Jacobsson S., Carlsson B., Lindmark S., Rickne A. (2008) and Hekkert M., Negro S., Heimeriks G., Harmsen R. (2011) understand the *innovation process* as adding a temporal dimension to the analysis rather than a structural building block of IS.

Acting persons (Actors) as *subjects* IS can be organizations or individuals. They are at the Partner level, most likely, there are individual persons. There are different categories of actors, such as those working in the research sector (for example, universities, ***scientific and research institutes***), intermediary sector (for example, consultants or innovation brokers), corporate sector (for example, agricultural enterprises or producer organizations) and sub objects of influence on innovation (for example, a government body or a group of social interests) (Lamprinopoulou et al., 2014).

Kayal Aymen A. (2008) noted that NIS consists of *components* that exist in the forms of individuals or organizations, such as business firms, banks, universities, *scientific and research institutes* and public authorities.

The *innovation network* is dynamic, which means that it plays different roles at different stages of the innovation process (Wiczorek & Hekkert, 2012).

In micro-level IS, the *innovation network* is most important from the point of view of ensuring the representation of relevant stakeholders who are not directly part of the «subject of innovation activity» (Van Lancker et al., 2016). *At the macro level of IS*, it is understood as relations and connections between subjects, both at the level of networks and at the level of individual contacts (Klein Woolthuis et al., 2005). In addition, allocate *institutions* «Rules of the game» or «code of conduct» (Klein Woolthuis et al., 2005).

Infrastructure in the broadest sense are physical (e.g. roads, broadband), knowledge (e.g. expertise, strategic information) and financial (e.g. subsidies, loans) infrastructure. At the same time, *infrastructure* is not a constant structural element in IS studies Wieczorek A. J., Hekkert M. P. (2012), it was not included either, for example, in the studies of Lamprinopoulou C., Renwick A., Klerkx L., Hermans F., Roep D. (2014).

Maria K., Maria B., Andrea K. (2021) note that they encountered difficulties when studying the *networks of participants in the innovation process* within the Horizon 2020 project. We assume that this situation applies to «Horizon Europe» as well.

In this project «Horizon Europe» indicated such subjects (European Commission Decision C(2022)2975, 2022):

The European Commission, independent experts from various fields, applicants who submit a proposal under the blind evaluation pilot project and must have the know-how, qualifications and resources to successfully carry out their tasks in the project and contribute their share (including, where necessary, sufficient experience of participation in EU projects/transnational projects of comparable size).

The rights to participate in the competition have: affiliated persons, associated partners, subject without legal entity status, EU bodies as part of a consortium, Joint Research Center, Joint Research Center.

Legal entities, which have the right to participate regardless of the place of its establishment, including legal entities from non-associated third countries or international organizations (including international European *scientific research organizations* is an international organization, the majority of whose members are member states or associated countries, and whose main purpose which is the promotion of scientific and technical cooperation in Europe) is eligible to participate (regardless of whether it is eligible for funding or not), provided that the conditions set out in the Regulations of the Horizon Europe program have been met, and any other conditions set forth in the specific topic of the contest.

In multi-beneficiary grants, the beneficiaries participate as a *consortium* (a group of beneficiaries). They must select a coordinator who will manage and *coordinate* the project and represent the consortium to the granting authority.

In the Program «Horizon Europe» as a subject is also established National Contact Points (NCP) (European Commission website).

The network of National Contact Points is the main structure for providing *guidance, practical information* and *assistance* on all aspects of participation in Horizon Europe. NCP are also established in many non-EU and non-associated countries, also known as third countries.

As NCP in the EU are national structures, the type and level of services offered may differ from country to country. NCPs are national structures created and financed by the governments of the 27 EU member states and states associated with the framework program. NCPs provide personalized *support on site and in the applicant's native language*. NCP systems can vary from one country to another, from highly centralized to decentralize networks and a number of very different actors, from ministries to universities, research centers and special agencies to private consulting companies.

NCP are independent organizations of various types (ministries, academies of sciences, research agencies, etc.) that provide information to ERC (European Research Council) applicants in their native language. They are located in all EU countries and associated states, as well as in some non-European countries. NCPs do not represent the ERC. Their mission is to raise awareness, inform and advise on ERC funding opportunities at national and local levels.

The NCP structure includes: NCP Coordinator, European Research Council (ERC), Marie Sklodowska-Curie Activity (MSCA), Research Infrastructures, Partnerships in the field of health care; culture, creativity and inclusive society; civil security for society; digital sector, industry and space; climate, energy and mobility; food, bio economy, natural resources, agriculture and environment, European Innovation Council (EIC) and European Innovation Ecosystems, Joint Research Center, European institute of innovation and technology (EIT), EU Missions.

It is appropriate to cite the example of Poland, where there is a Polish NCP for EU research programs. The Polish NCP supports Polish scientists, research and scientific institutions, SMEs and other organizations interested in participating in the EU Horizon Europe research program. The mission of NCP is comprehensive support at every stage of participation: starting with information about open tenders, rules of participation, through the creation of a project consortium and consultation of project proposals to project implementation and reporting. For this purpose, NCP provides consultations on individual projects, consultations, mentoring, organizes master classes, educational seminars, information days and conferences.

NCP, together with 11 *regional contact points* located in the largest academic centers of Poland, fulfill the tasks assigned by the Polish Ministry of Science and Higher Education as a network of NCP. The NCP network in Poland also actively supports the international mobility of researchers by hosting *Euraxess* service centers that are part of the Euraxess European network. Euraxess – Researchers in Motion is a unique pan-European initiative that provides information and support services to professional researchers. Supported by the EU, Member States and Associated Countries, it supports researcher mobility and career development, while strengthening scientific cooperation between Europe and the world. The Foundation and the Polish NCP, on the basis of the signed

agreement, have launched various activities aimed at encouraging Polish scientists and research institutions to participate in Horizon Europe, focusing especially on strengthening the internationalization of research and the international mobility of researchers (FNP website).

In order to implement the Agreement on the participation of Ukraine in the Framework program for research and innovation «Horizon Europe» and the Program for research and education of the European Atomic Energy Community «Euratom» and to ensure the integration of the domestic sector of scientific research and innovation into the European Research Area, Regulations were developed (project Resolutions of the Cabinet of Ministers of Ukraine «On approval of regulations on the functioning of the Coordination Center and National Contact Points of the European Union Framework Program for Research and Innovation «Horizon Europe») and submitted for public discussion by the Ministry of Education and Culture of Ukraine in September 2022 (Ministry of Education and Science of Ukraine website).

The following subjects are indicated in this project: National Contact Point (hereinafter – NCP) of the European Union Framework Program for Research and Innovation «Horizon Europe», Coordination Center of the «Horizon Europe» program, basic organization, national network of National Contact Points (hereinafter – NCP).

In particular, it is proposed to define the National Contact Point (hereinafter – NCP) of the Framework Program for Research and Innovation of the European Union «Horizon Europe» and the Program for research and education of the European Atomic Energy Community «Euratom» (EAEC) is a natural person entrusted with the responsibility links to informational and methodological support of the thematic areas of research, determined by the European Commission (EC) for the EU research and innovation program «Horizon Europe», for the representation of national interests in these areas. NCPs of the «Horizon Europe» program are approved by order of the central executive body, which ensures the formation and implementation of state policy in the fields of science, scientific, scientific-technical and innovative activities, or by agreement with it by another executive body. NCPs are created on the basis of a *basic organization*.

Where the *base organization* is a legal entity (ministry, agency, educational, *scientific, research institution,* association, etc.) in which the NCP is established.

The *coordination center of the «Horizon Europe» program* is a legal entity or a subdivision of a legal entity, which is entrusted with the task of general coordination of the work of the national NCP network, technical and methodical support of its functioning.

NCP, in accordance with the tasks assigned to it: organizes, with the help of the European Commission, information and educational activities (information days, seminars, conferences, fairs, etc.), in particular, organizes *events for target groups (subjects of scientific, scientific, technical and innovative activities of scientific institutions,* institutions, Small and Medium-sized Businesses (SMB), business entities, women scientists, etc.) or thematic events regarding legal aspects, conditions of participation, funding rules, etc.; monitors the participation of Ukrainian subjects in scientific, scientific and technical and innovative activities in the program «Horizon Europe» or «EAEC» according to the direction of its activity.

We note that the project *does not contain information* on the requirements (criteria) for the basic organization and the level of training of the experts of such an organization. In Minimum standards and Guiding principles for setting up a Network of National Focal Points also does not have the term «*base organization*», but only National Contact Points (NCP – also as in the draft Resolution of the Cabinet of Ministers of Ukraine «On approval of the regulation on the functioning of the coordination center and national contact points of the European Union framework program for research and innovation «Horizon Europe») (European Commission website).

As indicated earlier, scientific and research institutes can be *active persons* (Actors) *as subjects*) IS as subjects working in the research field. In clause 16) of art. 1 of the Law of Ukraine on Scientific and Scientific-Technical Activity defines the concept of a scientific institution (scientific-research, scientific-technological, scientific-technical, scientific-practical). The scientific institution is a budgetary and non-profit organization in accordance with the current legislation of Ukraine. Scientific institutions provide paid services according to the list determined by the Resolution of the Cabinet

of Ministers of Ukraine of July 28, 2003 № 1180 «On approval of the list of paid services that can be provided by budgetary scientific institutions», as well as in accordance with the statute of the scientific institution.

In its essence, scientific (scientific and technical) activity is the production of knowledge, in a single process of creating innovations. The innovation process implies the «provenance» of an innovation from a scientific idea to its applied research and further implementation through design and technological developments, first in experimental and then in serial production, which finally ends with appropriate support in the field of its use. So, we can say that the innovation process begins with the activities of scientific institutions, which are one of the main subjects of NIS (Rozghon, 2022).

DISCUSSION

In order to implement the Agreement on Ukraine's participation in the Framework Program for research and innovation «Horizon Europe» and the research and education Program of the European Atomic Energy Community «Euratom» and to ensure the integration of the domestic sector, we propose to add par. 3 to art. 66 of the Law of Ukraine on Scientific and Scientific-Technical Activities and set out in the following wording: A scientific institution that is part of the structure of the National Academy of Sciences of Ukraine, national sectoral academies of sciences, can act as a basic organization in which the National Contact Point of the Framework Program for Research and Innovation of the European Union «Horizon Europe» is created, is entrusted with the promotion is entrusted with the promotion of international scientific and technical cooperation, the implementation of projects within the framework of international scientific and technical cooperation in accordance with the legislation, in particular in international bilateral and multilateral interstate scientific programs, to interact in the established manner with the relevant authorities of a foreign state and international organizations, to carry out international scientific relations in the part that does not contradict this Law and international agreements.

CONCLUSIONS

At the micro-level of IS, there is the «Horizon 2020» Program or Horizon Europe, which can act as ***projects*** (a network of participants who cooperate within the framework of a joint innovation project both at the national level and at the EU level) and as ***Partners*** (an organization consisting of from a network or group of persons, or an individual participant who cooperate within the framework of a joint innovation project both at the national level and at the EU level) is a certain level of the structure of a multi-level innovation system (or IS of a higher level).

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СТОРОНИ ПРОГРАМ «HORIZON 2020» ТА «HORIZON EUROPE» ЯК УЧАСНИКИ ІННОВАЦІЙНОГО ПРОЦЕСУ

Анотація. Метою даної статті є аналіз функціонування багатосторонніх проєктів Програми «Horizon 2020» та «Horizon Europe», встановлення особливостей статусу та діяльності їх суб'єктів.

Для досягнення мети наукової роботи та вирішення поставлених завдань використано комплекс загально-наукових та спеціальних методів дослідження: метод аналізу та синтезу, альтернатив, компаративістики, класифікації,

Дослідження цього питання дозволяє стверджувати, що незважаючи на те, що багатосторонні проєкти «Horizon 2020» становлять значну частину фінансування проєктів ЄС, наукових досліджень щодо цього питання недостатньо. Частково це пов'язано з відсутністю структурованого аналітичного підходу суб'єктів цієї Рамкової Програми. Зокрема, поза увагою залишається правовий статус Національного контактного пункту, який виконує інформаційно-методичний супровід тематичних напрямів досліджень, визначених Європейською Комісією (ЄК) для програми ЄС з досліджень та інновацій «Horizon Europe».

У рамках даного дослідження запроваджено досвід Польщі де є Польський НКП для дослідницьких програм ЄС.

Визначено, що на мікрорівневі ІС є Програма «Horizon 2020» або «Horizon Europe», які можуть виступати як проєкти (мережа учасників, які співпрацюють у рамках спільного інноваційного проєкту як на національному рівні, так і на рівні ЄС) і як Партнери (організація, що складається з мережі чи групи осіб, або окремого учасника, які співпрацюють у рамках спільного інноваційного проєкту як на національному рівні, так і на рівні ЄС) це певний рівень самої структури багаторівневої інноваційної системи (або ІС вищого рівня).

Автори пропонують внести зміни до Закону України «Про наукову та науково-технічну діяльність». Так, є пропозиція додати абз. 3 до ст. 66 та викласти його у наступній редакції: Наукова установа, яка входить до структури Національної академії наук України, національних галузевих академій наук, може виступати як базова організація в якій створено Національний контактний пункт Рамкової програми Європейського Союзу з досліджень та інновацій «Горизонт Європа», на яку покладається сприяння міжнародному науково-технічному співробітництву, реалізація проектів у межах міжнародного науково-технічного співробітництва відповідно до законодавства, зокрема у міжнародних двосторонніх та багатосторонніх міждержавних наукових програмах, взаємодіяти в установленому порядку з відповідними органами іноземних держав і міжнародними організаціями, здійснювати міжнародні наукові зв'язки у частині, що не суперечить цьому Закону та міжнародним договорам.

Ключові слова: Horizon Europe, наукова установа, грант, інновації, інноваційний процес, міжнародне науково-технічне співробітництво, іноземні держави.

PARTIES OF THE «HORIZON 2020» AND «HORIZON EUROPE» PROGRAMS AS PARTICIPANTS IN THE INNOVATION PROCESS

Abstract. The purpose of this article is to analyze the functioning of the multilateral projects of the «Horizon 2020» and «Horizon Europe» Programs, to establish the peculiarities of the status and activities of their subjects.

To achieve the goal of the scientific work and solve the set tasks, a complex of general scientific and special research methods was used: the method of analysis and synthesis, alternatives, comparative studies, classification.

Research on this issue allows us to state that despite the fact that multilateral Horizon 2020 projects constitute a significant part of EU project funding, scientific research on this issue is insufficient. This is partly due to the lack of a structured analytical approach of the subjects of this Framework Program. In particular, the legal status of the National Contact Point, which provides informational and methodical support for the thematic areas of research determined by the European Commission (EC) for the EU research and innovation program «Horizon Europe», remains overlooked.

Within the framework of this study, the experience of Poland, where there is a Polish National Contact Point for EU research programs, was introduced.

It was determined that at the micro-level of IS there is a Program «Horizon 2020» or «Horizon Europe», which can act as *projects* (a network of participants who cooperate within the framework of a joint innovation project both at the national level and at the EU level) and as *Partners* (organization, consisting of a network or group of persons, or an individual participant, who cooperate within the framework of a joint innovation

project both at the national level and at the EU level) is a certain level of the very structure of a multi-level innovation system (or IS of a higher level). The authors propose to make changes to the Law of Ukraine on Scientific and Scientific-Technical Activities. So, we propose to add par. 3 to art. 66 and set out in the following wording: A scientific institution that is part of the structure of the National Academy of Sciences of Ukraine, national sectoral academies of sciences, can act as a basic organization in which the National Contact Point of the Framework Program for Research and Innovation of the European Union «Horizon Europe» is created, is entrusted with the promotion is entrusted with the promotion of international scientific and technical cooperation, the implementation of projects within the framework of international scientific and technical cooperation in accordance with the legislation, in particular in international bilateral and multilateral interstate scientific programs, to interact in the established manner with the relevant authorities of a foreign state and international organizations, to carry out international scientific relations in the part that does not contradict this Law and international agreements.

Keywords: Horizon Europe, scientific institution, grant, innovation, innovation process, international scientific and technical cooperation, foreign states.

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