

RETROSPECTIVE ANALYSIS OF PARTNERSHIP TYPES IN EU FRAMEWORK PROGRAMMES FOR RESEARCH AND INNOVATION¹

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Abstract. Conducting high-quality research on current problems in the EU Framework Programmes for Research and Innovation requires the involvement of scientists capable of conducting research independently, universities with an appropriate laboratory, etc. Various resources are considered, including foreign, to fulfill it. One of the options for their cooperation is partnership in various forms provided by the EU Framework Programmes for Research and Innovation. However, the types of partnerships have evolved, changed and improved since 1984 to the present. The article attempts to conduct a retrospective analysis of all types of partnerships that were and are valid in the EU Framework Programmes for Research and Innovation. The author highlighted the stages of this phenomenon and formulated their features, advantages and disadvantages. It was found that none of the nine specified programmes contain a definition of the term «partnership», the types of partnerships vary depending on many factors.

Keywords: cooperation, EU, European partnership, EU Framework Programme for Research and Innovation, partnership

Author contributions

The author prepared the article independently. The author independently selected the literature, analysed it and formulated conclusions.

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INTRODUCTION

The desire to participate in the EU Framework Programmes for Research and Innovation (hereinafter – FPRI) or direct participation in them implies fulfilling many requirements, including possession of information about the content of the programme itself, its new concepts, terms. One of them is partnership. It is clear at first glance, but EU legislation on FPRI, which is new in all aspects every time, requires an understanding of these changes and innovations. However, the issue of regulating or consolidating basic terms, concepts or the presence of relevant references in EU legal acts at the EU legislative level is often bypassed. At the same time, the EU legislation directly related to FPRI uses different types of partnerships, while it doesn't directly regulate the concept of «partnership» in the analyzed aspect. Therefore, the question arises regarding the same, unified interpretation, understanding of the term «partnership» depending on the type and FPRI. This affects obtaining the desired financing. The purpose of the article is to conduct a retrospective comparative

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analysis of the types of partnership in FPRI and to propose recommendations for effective changes in this direction.

LITERATURE REVIEW

The terms and concepts used in FPRI are not always properly defined or explained. One of them is the concept of «partnership». Various types of partnerships in FPRI are the object of research for many scholars (for example, Nikolajs Ozoliņš and Nesrin Akin (Ozoliņš & Akin, 2023), Ludmiła Walaszczyk (Walaszczyk, 2024), Daniel van der Velden, Lies Debruyne, Laurens Klerkx, Joost Dessen (Velden et al, 2024), David Ludwig, Vincent Blok, Marie Garnier, Phil Macnaghten, Auke Pols (Ludwig et al, 2022), Lee Rensimer, Rachel Brooks (Rensimer & Brooks, 2024), Rasa Pakeltienė, Jurgita Baranauskienė, Antanas Maziliauskas (Pakeltienė et al, 2020), Valentyna Yakobchuk, Jan Žukovskis, Iryna Lytvynchuk, Mariia Plotnikova, Yuliia Bodashevska (Plotnikova et al, 2024), Roman Osinski (Osinski, 2022), Matt Reed, Joss Langford (Reed & Langford, 2021), Oana Daniela Bugan, Elena Cristina Udrea Făină, Augustin Semenescu, Sorin Cristian Ionescu (Bugan et al, 2024), Daniela Mihaela Neamțu, Ruxandra Bejinaru, Cristian Valentin Hapenciuc (Neamțu et al, 2020), Zbigniew Korzeb, Bernabé Alonso-Faricas, Ana Isabel Irimia-Diéguez, Felix Jimenez Naharro, Urszula Kobylińska, Filippo di Pietro, Maria Jose Palacin Sanchez, Ewa Rollnik-Sadowska, Danuta Szpilko, Joanna Szydło, Antonio de la Torre Gallegos (Korzeb et al, 2024), Merle Küttim, Aino Kiis, Cristina Sousa (Küttim et al, 2020)).

However, their attention is focused on the practical implementation of such types of partnerships in various directions within the framework of the last FPRI. This is due to the fact that EU scientists, European universities and European research organisations need to choose the right type of partnership when participating in FPRI.

METHODOLOGY

The First Framework Programme (1984-1987), the Framework Programme for Community activities in the field of research and technological development (1987-1991), the Framework Programme of Community activities in the field of research and technological development (1990-1994) (hereinafter – the Third Framework Programme), the Fourth Framework Programme of the European Community activities in the field of research and technological development and demonstration (1994-1998) (hereinafter – the Fourth Framework Program), the Fifth Framework Programme of the European Community for research, technological development and demonstration activities (1998-2002) (hereinafter – the Fifth Framework Programme), the Sixth Framework Programme of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002-2006) (hereinafter – the Sixth Framework Programme), the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013) (hereinafter – the Seventh Framework Programme), the Framework Programme for Research and Innovation «Horizon 2020» (2014-2020) (hereinafter – Horizon 2020), the Framework Programme for Research and Innovation «Horizon Europe» (2021-2027) (hereinafter – Horizon Europe) are FPRI whose legislative basis was investigated in relation to the studied issue.

In order to conduct a retrospective analysis in the outlined plane, the author used the following methods: 1) logical-semantic and analytical – to clarify the types of partnerships in all FPRI, based on their legislative framework; 2) evaluation – to identify positive and negative aspects regarding the types of partnerships in FPRI; 3) modeling and forecasting – to formulate ways to further improve the types of partnerships in FPRI.

RESULTS

The use of one or another type of partnership from the current FPRI is relevant for today. This is related to the possibility of solving the existing problem in the most effective and rational way during participation in the grant. External and internal factors require rethinking and proposing new types of partnerships. They can appear due to the understanding of the already proposed types of partnerships in the framework programmes, because it is possible to make the necessary changes, remove negative aspects in a specific type of partnership after its evaluation, or propose something new, taking into account modern trends. A retrospective analysis of the formation of different types of partnerships in FPRI from 1984 to the present made it possible to trace their changes, negative and positive features, and to provide recommendations for their further improvement.

DISCUSSION

The First Framework Programme was regulated by the Council resolution of 25 July 1983 on framework programmes for Community research, development and demonstration activities and a first framework programme 1984 to 1987 (Date of end of validity: 31.12.1987). From 1984 to 1987, it acted accordingly (On framework programmes for Community research..., 1983). The second framework programme was called the Framework Programme for Community activities in the field of research and technological development. It was already based on the Council Decision of 28 September 1987 concerning the framework programme for Community activities in the field of research and technological development (1987 to 1991) (87/516/Euratom, EEC) (Date of end of validity: 31.12.1991) (hereinafter - Council Decision 87/516/Euratom, EEC) and the Council Decision of 28 March 1988 supplementing Decision 87/516/Euratom, EEC concerning the framework programme for Community activities in the field of research and technological development (1987 to 1991) (88/193/EEC, Euratom) (Date of end of validity: 31.12.1991) (The framework programme for Community activities..., 1987; The framework programme for Community activities..., 1988). This programme operated from 1987 to 1991. An analysis of these documents shows that no partnership was envisaged at that time. Thus, the period 1984-1991 and existing framework programmes during this period, in the author's opinion, can be considered the first stage when the very phenomenon of partnerships was born. Although the very concept of «partnership» or its types are still absent, there are specific provisions in the above documents on cooperation. They do not have its definition. For example, «In implementing the framework programme, provision may be made for Community participation in activities undertaken by several Member States and for Community cooperation with third countries or international organizations... The framework programme shall provide for the following activities: 1) Quality of life; 2) Towards a large market and an information and communications society; 3) Modernization of industrial sectors; 4) Exploitation and optimum use of biological resources; 5) Energy; 6) Science and technology for development; 7) Exploitation of the seabed and use of marine resources; 8) Improvement of European S /T cooperation» (Articles 1 (2), 2 (1) of the Council Decision 87/516/Euratom, EEC) (The framework programme for Community activities..., 1987). We believe that this approach is an attempt to form the necessary basis for the emergence of the concept of «partnership» and its types.

The emergence of the Third Framework Programme, which was regulated by the Council Decision of 23 April 1990 concerning the framework Programme of Community activities in the field of research and technological development (1990 to 1994) (90/221/Euratom, EEC) (Date of end of validity: 31.12.1994), is the second stage, as it introduces the concept of «partnership» for the first time. However, its definition, explanation regarding practical implementation is absent at the legislative level at this time. In the author's opinion, this is an attempt to show a new vision of the implementation of Title XV «Research and Technological Development» in the Treaty establishing the European Community. It seems that partnership is one of the types of cooperation. In the framework programmes

two terms will be used in the future: partnership and cooperation. Therefore, we can conclude that an attempt is being made to show the possibility of implementing cooperation.

The next stage is the emergence and operation of the Fourth Framework Programme in accordance with the Decision № 1110/94/EC of the European Parliament and of the Council of 26 April 1994 concerning the fourth framework programme of the European Community activities in the field of research and technological development and demonstration (Date of end of validity: 31.12.1998) (hereinafter - Decision № 1110/94/EC). Its period of operation covers from 1994 to 1998. Based on the analysis of the above document, the following types of partnerships can be identified: 1) small and medium-sized undertakings, institutes of higher education and research centres; 2) universities, research institutes and industry; 3) industry or sub-contracting (Annex III of the Decision № 1110/94/EC) (The fourth framework programme of the European Community activities..., 1994).

The analysis of the Fourth Framework Programme shows that there was an attempt to prescribe the planned measures for the implementation of partnerships between universities, research institutes and industry, including partnerships with industry, through the general objectives of the fourth activity. We believe that they are defined in sufficient detail, in compliance with the requirements and criteria for conducting a high-quality research. At the same time, the elimination of competition from small laboratory associations from different countries (including twinning) is foreseen, as it is stated: «they will also be eligible for support when they are considered to form the core of a future larger network» (Annex III of the Decision № 1110/94/EC) (The fourth framework programme of the European Community activities..., 1994). Thus, after some time there will be only «European laboratories without walls», which will occupy a monopoly position, where exclusively talented researchers will work. In the author's opinion, this is a positive side.

The Fifth Framework Programme was designed for the period from 1998 to 2002. The following documents became its legal basis: the Proposal for a European Parliament and Council Decision concerning the 5th Framework Programme of the European Community for research, technological development and demonstration activities (1998-2002) (Date of end of validity 22.12.1998) and the Decision № 182/1999/EC of the European Parliament and of the Council of 22 December 1998 concerning the fifth framework programme of the European Community for research, technological development and demonstration activities (1998 to 2002) (Date of end of validity 31.12.2002) (hereinafter – Decision № 182/1999/EC). This programme contains a new type of partnership – Euro-Mediterranean (for example, UNICE), which is introduced in Chapter 2 Second activity. Horizontal theme «Confirming the International Role of Community Research» of the Decision № 182/1999/EC (The Fifth Framework Programme of the European Community for research, technological..., 1998). However, this programme doesn't specifically define or explain this type of partnership. At the same time, there are provisions regarding the Mediterranean partner countries in cooperation with certain categories of third countries: «improving through joint activities their RTD capacities and promoting innovation; cooperation in areas of mutual interest, notably regional aspects of the Mediterranean, including environmental aspects, support for socio-economic development, including the urban dimension, transition to the information society and preservation of cultural heritage, accompanying measures to facilitate participation in the other programmes of the framework programme, including through cooperation networks» (Chapter 2 Second activity. Horizontal theme «Confirming the International Role of Community Research» of the Decision № 182/1999/EC) (The Fifth Framework Programme of the European Community for research, technological..., 1998). So, we observe that this framework programme has clearly outlined, without a specific list, the European countries that will have advantages or a larger share in funding than others. They include certain categories of third countries, including the Mediterranean (p. a «Cooperation with certain categories of third country» Chapter 2 Second activity. Horizontal theme «Confirming the International Role of Community Research» of the Decision № 182/1999/EC) (The Fifth Framework Programme of the European Community for research, technological..., 1998). The very list of actions and directions of research indicated for the Mediterranean countries, in the author's opinion, are quite general,

without specification or detail. This may be due to the fact that this is a primary phenomenon for framework programmes. We believe that the Fifth Framework Programme is the fourth stage. It is characterised by attempts to consolidate a new type of partnership without disclosing its content or explaining at the EU legislative level, i.e. in the documents governing this framework programme. Therefore, each person can interpret the Euro-Mediterranean partnership at his own discretion. A possible result will be the observation of negative consequences. For example, choosing the necessary projects, getting more funding for certain projects.

The Sixth Framework Programme is one of the programmes governed by the Decision № 1513/2002/EC of the European Parliament and of the Council of 27 June 2002 concerning the sixth framework programme of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002 to 2006) (Date of end of validity 31.12.2006) (hereinafter – Decision № 1513/2002/EC) and the Regulation (EC) № 2321/2002 of the European Parliament and of the Council of 16 December 2002 concerning the rules for the participation of undertakings, research centres and universities in, and for the dissemination of research results for, the implementation of the European Community Sixth Framework Programme (2002-2006). Unlike previous framework programmes, there are no specific types of partnerships. However, there is the following. «In support of the external relations, including the development policy of the Community, specific measures aimed at encouraging international research cooperation will be undertaken. Apart from these specific measures, third country participation will be possible within the thematic priorities. The following groups of third countries will be involved: (a) developing countries; (b) Mediterranean countries, including the western Balkans; (c) Russia and the New Independent States (NIS) including, in particular, activities carried through the International Association for the Promotion of Cooperation with Scientists from the NIS (INTAS). The research priorities in this category of activities are defined according to the interests and objectives of the partnership between the Community and the groups of countries concerned, as well as their specific economic and social needs... Subject to conditions to be specified in the specific programmes and in the rules for participation, the integrated projects will have a high level of management autonomy including, where appropriate, the possibility to adapt the partnership and the content of the project. They will be carried out on the basis of overall financing plans preferably involving significant mobilisation of public and private sector funding, including funding or collaboration schemes such as Eureka, EIB and EIF» (Annexes I, III of the Decision № 1513/2002/EC) (The sixth framework programme of the European Community..., 2002). From the analysis of the above, it can be established that the lack of a general legal definition of the term «partnership» for the framework programme or each such programme leads to the search for new types of partnership that will be effective and implemented in a short time. In the author's opinion, the Sixth Framework Programme is also an independent stage, i.e. the fifth. A special feature is the refusal to establish a specific type of partnership in this framework programme.

The Seventh Framework Programme was established by the Decision № 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013) (Date of end of validity 31.12.2013) (hereinafter – Decision № 1982/2006/EC) and the Council Decision of 18 December 2006 concerning the Seventh Framework Programme of the European Atomic Energy Community (Euratom) or nuclear research and training activities (2007 to 2011) (2006/969/EC) (Date of end of validity 18.12.2006). Its feature, in our opinion, is the presence of the first attempt to establish the definition of the proposed types of partnership: 1) long term public private partnerships in the form of Joint Technology Initiatives could justify in a very limited number of cases, the scope of an RTD objective and the scale of the resources involved. «These initiatives, mainly resulting from the work of European Technology Platforms and covering one or a small number of selected aspects of research in their field, will combine private sector investment and national and European public funding, including grant funding from the Seventh Framework

Programme and loan and guarantee finance from the European Investment Bank. Each Joint Technology Initiative will be decided upon individually, either on the basis of Article 171 of the Treaty (this may include the creation of a joint undertaking) or on the basis of Specific Programme Decisions in accordance with Article 166(3) of the Treaty» (Annex I of the Decision № 1982/2006/EC) (The Seventh Framework Programme of the European..., 2006). An example is SESAR. Its legal status is regulated by the Council Regulation (EC) № 219/2007 of 27 February 2007 on the establishment of a Joint Undertaking to develop the new generation European air traffic management system (SESAR) (Date of end of validity 29.11.2021). Thus, we can state that the proposed type of partnership is effective; 2) industry-academia partnerships: «support for longer term cooperation programmes between organisations from academia and industry, in particular SMEs and including traditional manufacturing industries, will aim at stimulating intersectoral mobility and increasing knowledge sharing through joint research partnerships, supported by the recruitment of experienced researchers to the partnership, by staff secondments between both sectors, and by the organisation of events» (Annex I of the Decision № 1982/2006/EC). It seems that there are general provisions in such a partnership, because there are no specific measures, requirements, conditions. For example, an experienced researcher, promotion of interdisciplinary mobility, joint research partnership. These are the terms used specifically for this type of partnership, but this framework programme doesn't explain or define them. Thus, we observe a new look at this type of partnership, which is inherent in previous framework programmes (for example, the Fourth Framework Programme). This type of partnership, in our opinion, needs to be improved for its full realization; 3) partnerships to support the exchange of researchers isn't disclosed in the meaning of the Decision № 1982/2006/EC; 4) international partnerships with third country organisations in scientific society is defined through a specific list of activities. These are «research projects, studies, networking and exchanges, public events and initiatives, prizes, surveys and data collection» (Annex I of the Decision № 1982/2006/EC). Their implementation is established in the Decision № 1982/2006/EC. For example, «broadening the engagement of researchers and the public at large, including organised civil society, with science-related questions, to anticipate and clarify political and societal issues, including ethical issues; gender research, including the integration of the gender dimension in all areas of research and the promotion of the role of women in research and in scientific decision-making bodies; creation of an open environment which triggers curiosity for science in children and young people, by reinforcing science education at all levels, including in schools, and promoting interest and full participation in science among young people from all backgrounds; strengthening the role of research carried out in universities and other higher education institutes and the engagement of such universities and institutes in the challenges of globalisation; improved intercommunication and mutual understanding between the scientific world and the wider audience of policy-makers, the media and the general public, by helping scientists better communicate and present their work and by supporting scientific information, publications and media» (Annex I of the Decision № 1982/2006/EC). So, there are first steps to provide an explanation before the implementation of such a partnership; 5) «strategic partnerships with third countries in selected fields of science and by engaging the best third country scientists to work in and with Europe» (Annex I of the Decision № 1982/2006/EC). However, the term «strategic partnership» isn't defined in this document. Thus, it was possible to interpret it at their own discretion by those people who wished to participate in this programme.

In our opinion, in this framework programme all these types of partnerships could be more logically systematised. So, industry-academia partnerships and international partnerships with third country organisations in scientific society. It seems that they can be combined to form one type of partnership – a scientific and industrial partnership in the EU and third countries. Its own specifics should be prescribed for each direction.

Thus, the considered program is the first among its predecessors, where various types of partnership are established. Some of them contain explanations and definitions. This is a positive feature, in the author's opinion. However, there are also negative features. Firstly, those types of partnerships that

are only listed will not be implemented at the earliest or vice versa, but at the discretion of those people who decide to use a particular type of partnership. To avoid this situation, it is necessary to either rethink these types of partnerships or to join those types of partnerships that already have explanations and definitions. Secondly, there was the problem of constantly searching for explanations in the EU legislation, the implementation of some provisions of the Seventh Framework Program at that time. Thirdly, the absence of definitions for some terms, the use of general provisions when disclosing some types of partnership, in the author's opinion, complicates their implementation. Fourth, the list of types of partnership is quite extensive, where some of them hardly defined. Some types of partnerships are almost the same in this framework programme. It seems that it was necessary to combine them, which would provide an opportunity to review the measures for each group of countries and make changes if necessary.

Consequently, the period of the Seventh Framework Programme is also an independent separate stage in the formation of types of partnership in the framework programme. Its feature can be considered the first attempts to define some types of partnership in this document.

Horizon 2020 was regulated by the Regulation (EU) № 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in «Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)» and repealing Regulation (EC) № 1906/2006 (Date of end of validity 31.12.2020), the Regulation (EU) № 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020) and repealing Decision № 1982/2006/EC (Date of end of validity 31.12.2020) (hereinafter – Regulation (EU) № 1291/2013). The following types of partnership are established in the Regulation (EU) № 1291/2013:

1) the European Innovation Partnerships. However, the Regulation (EU) № 1291/2013 doesn't define what should be considered this partnership. Although, there are the following: «Horizon 2020 should contribute to the aims of the European Innovation Partnerships in line with the flagship initiative «Innovation Union», bringing together all relevant actors across the whole research and innovation chain with a view to streamlining, simplifying and better coordinating instruments and initiatives. The flagship initiative «Innovation Union» of the Europe 2020 strategy sets out a strategic and integrated approach to research and innovation, setting the framework and objectives to which future Union research and innovation funding should contribute» (Regulation (EU) № 1291/2013). Specific objectives are prescribed in various priorities of «Horizon 2020» (for example, clause 4.1. «Specific objective» of Section 4 «Research Infrastructures» of Part I «Excellent science» of the Regulation (EU) № 1291/2013). However, the objectives of the flagship initiative «Innovation Union» are not always specified. It seems that it is necessary to think about, search, independently formulate this objective. In our opinion, this practice should be reviewed. We believe that there is the absence of a clear definition of this partnership in the Regulation (EU) № 1291/2013 and the attempt to reveal its essence through the flagship initiative «Innovation Union» is unsuccessful. The Regulation (EU) № 1291/2013 defines it in a general manner without indicating specifics or features. At the same time, in the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Europe 2020. Flagship Initiative «Innovation Union» SEC(2010) 1161 (COM/2010/0546 final) (hereinafter – Communication COM(2010) 0546), which has not been published, is an attempt, in the author's opinion, to reveal the essence of this partnership, its implementation. Thus, «European Innovation Partnerships should be launched to accelerate research, development and market deployment of innovations to tackle major societal challenges, pool expertise and resources and boost the competitiveness of EU industry, starting with the area of healthy ageing» (clause 8 of the Communication COM(2010) 0546). The analysis of Communication COM(2010)0546 suggests that it is a ready-made plan for the implementation of such a partnership. This opinion is due to the fact that there are defined areas for such a partnership. For example, «tackling the major climate change & energy challenge coming from cities (which consume around 80% of the overall EU energy and are responsible for about the same share of

greenhouse gases) by creating a representative platform of key stakeholders and boost the use of existing and future ICT to accelerate the deployment of smart grids, new systems for using energy from renewable source, smarter & cleaner urban mobility, increased energy efficiency of buildings; ensuring higher quality and efficiency of our supply use of water; ensuring a secure supply chain and achieve efficient and sustainable management and use of non-energy raw materials along the entire value chain; reducing emissions of greenhouse gases by higher emission efficiency of transport also beyond the urban dimension, notably through inter-operable and intelligent traffic management systems across all transport modes, leading to progress in logistics and behavioural changes; promote EU's competitiveness in the digital society through faster access to information and new ways of trustworthy communication, interfacing and knowledge sharing enabled notably by the internet of the future; improving the supply of foodstuffs produced in a resource-efficient, productive and low-emission way through improved agricultural and food-processing methods; improving the quality of life of an ageing population e.g. by new innovative solutions, clinical tests, diagnostics and treatments for age-related diseases, deployment of new innovative ICT-based solutions and the development and introduction of novel products, appliances and services specifically suitable for the elderly» (clause 5 of the Communication COM(2010) 0546). This document also describes the steps to implement and improve this type of partnership. Annex III of the Communication COM(2010) 0546 contains an example of a pilot European Innovation Partnership in the field of active and healthy ageing. We believe that the existing algorithm, the plan in the Communication COM(2010) 546 regarding this type of partnership, although it doesn't have a clear definition in the Regulation (EU) № 1291/2013 and the Communication COM(2010) 0546, indicates its effective implementation;

2) «public-private partnership means a partnership where private sector partners, the Union and, where appropriate, other partners, such as public sector bodies, commit to jointly support the development and implementation of a research and innovation programme or activities» (Article 2 of the Regulation (EU) № 1291/2013). Such partnership was also inherent in the Seventh Framework Programme. However, there is a definition here. Article 25 of the Regulation (EU) № 1291/2013 contains specific legal norms regarding the implementation of public-private partnerships. This article appears for the first time in the FPRI, including Horizon 2020. From the analysis it can be established that there are positive features. For example, the involvement of joint undertakings established pursuant to Article 187 TFEU under the Seventh Framework Programme, subject to the amendment of their basic acts; describes the criteria on which it is based: «a) the demonstration of the added value of the action at Union level and of the choice of the instrument to be used; b) the scale of impact on industrial competitiveness, job creation, sustainable growth and socio-economic issues, including societal challenges, assessed against clearly specified and measurable objectives; c) the long-term commitment, including a balanced contribution from all partners based on a shared vision and clearly defined objectives; d) the scale of the resources involved and the ability to leverage additional investments in research and innovation; e) a clear definition of roles for each of the partners and agreed key performance indicators over the period chosen; f) complementarity with other parts of Horizon 2020 and alignment with the Union research and innovation strategic priorities, in particular those of the Europe 2020 strategy» (Article 25 of the Regulation (EU) № 1291/2013). In the author's opinion, this partnership also has negative features. For example, there are no criteria, requirements for interested partners, including, as appropriate, end-users, universities, small and medium-sized enterprises and research institutions; «this form of partnerships shall only be implemented where the scope of the objectives pursued and the scale of the resources required justify it taking full account of the relevant impact assessments, and where other forms of partnerships would not fulfil the objectives or would not generate the necessary leverage» (Article 25 of the Regulation (EU) № 1291/2013). This provision is contained in the Communication COM(2010) 0546 on the European Innovation Partnership. Thus, it is possible to choose one type of partnership, and then another, referring to the fact that the previous partnership didn't achieve the necessary goals. The result will be the financing of one project for different types of partnership;

3) «public-public partnership means a partnership where public sector bodies or bodies with a public service mission at local, regional, national or international level commit with the Union to jointly support the development and implementation of a research and innovation programme or activities» (Article 2 of the Regulation (EU) № 1291/2013). Once again, there are no requirements or criteria, no performance indicators for such public bodies. Public-public partnership is a new type of partnership for FPRI. «Horizon 2020 shall contribute to the strengthening of public-public partnerships, as and when appropriate, where actions at regional, national or international level are jointly implemented within the Union. Particular attention shall be paid to Joint Programming Initiatives between Member States. Joint Programming Initiatives receiving support from Horizon 2020 shall remain open to the participation of any Member State or associated country» (Article 26 of the Regulation (EU) № 1291/2013). We believe that Article 26(1) of the Regulation (EU) № 1291/2013 clearly states when this partnership is appropriate. It seems that it is necessary to add specific directions, topics in Article 26(2) of the Regulation (EU) № 1291/2013, which can be implemented through this partnership, since paragraph 3 of Article 26(2) of the Regulation (EU) № 1291/2013 only states the following: «...such initiatives shall only be proposed in cases where there is a need for a dedicated implementation structure and where there is a high level of commitment of the participating countries to integration at scientific, management and financial levels». In the author's opinion, a list of criteria is given that will quickly clarify the application of this type of partnership. However, the specified list of topics for such a partnership is a more logical phenomenon;

4) a partnership of universities, research institutions, research infrastructures, businesses, small and medium-sized enterprises and other socio-economic groups, both within Europe and worldwide in the form of the exchanges of R&I staff in the Marie Skłodowska-Curie grant (Annex I of the Regulation (EU) № 1291/2013). In the opinion of the author, this type of partnership, although specifically outlined, is rather narrow, because the purpose of the above-mentioned exchange is not specified;

5) research infrastructures and research partnerships with industry. Based on the analysis of clause 4 «Research infrastructures» of Annex I of the Regulation (EU) № 1291/2013, it can be concluded that there is no direct definition of this type of partnership. However, the following is noted: «...to facilitate industrial use of research infrastructures and to stimulate the creation of innovation clusters. This activity shall also support training and/or exchanges of staff managing and operating research infrastructures» (clause 4 «Research infrastructures» of Annex I of the Regulation (EU) № 1291/2013). So there is an attempt to explain this kind of partnership with industry. This explanation is quite clear, in our opinion. The most urgent is to promote the industrial use of research infrastructures (clause 4 «Research infrastructures» of Annex I of the Regulation (EU) № 1291/2013);

6) international space partnerships in the form of development of advanced space technologies. It seems that this partnership is described quite abstractly without certain boundaries.

Horizon Europe is currently functioning. It is regulated by the Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) № 1290/2013 and (EU) № 1291/2013 (hereinafter – the Regulation (EU) 2021/695) and the Council Decision (EU) 2021/764 of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU. There is only one type of partnership in this programme - the European Partnership. It is understood as «an initiative, prepared with the early involvement of Member States and associated countries, where the Union together with private and/or public partners (such as industry, universities, research organisations, bodies with a public service mission at local, regional, national or international level or civil society organisations including foundations and NGOs) commit to jointly supporting the development and implementation of a programme of R&I activities, including those related to market, regulatory or policy uptake» (Article 2 of the Regulation (EU) 2021/695). By analyzing the definition, it can be concluded that public-

private and public-public partnerships have already been rejected, which only differ in the partners who are not required. There are no partner requirements here too.

Article 10(1) of the Regulation (EU) 2021/695 enshrines three types of the European partnership with an explanation for each of them: Co-programmed European Partnerships, Co-funded European Partnerships and Institutionalised European Partnerships. We believe that this is a new look at the European Partnership. However, for example, «institutionalised European Partnerships shall be implemented only where other parts of the Programme, including other forms of European Partnerships, would not achieve the objectives or would not generate the necessary expected impacts, and where justified by a long-term perspective and a high degree of integration» (Article 10(1) of the Regulation (EU) 2021/695). Consequently, there are no clear criteria for the application of these types of European partnerships. This can lead to the practice of embodying all its types. The consequences can be both positive (for example, to get the desired result with minimal time, funding) and negative (for example, the search for resources in the form of unnecessary, ineffective ways). Annex III of the Regulation (EU) 2021/695 clearly states the effectiveness of such a European Partnership in its selection, implementation, monitoring, evaluation, phasing-out and renewal. Thus, this type of partnership is a new step, because all the previous developments were grouped and created the European Partnership. It is logically constructed, but contains irregularities, «white spots» at some points.

Horizon Europe, although already adopted and valid, but the analysis of the Regulation (EC) 2021/695 provides an opportunity to formulate the following conclusions. In the author's opinion, there are also positive and negative aspects that need to be revised or abandoned. Thus, the positive aspects of this framework programme are: 1) several types of partnerships are proposed with the definitions enshrined in the Regulation (EU) 2021/695; 2) public-public and public-private partnerships differ only by partners who are obliged, regardless of partnership, to jointly support the development and implementation of scientific and innovative programmes or activities. The Regulation (EU) 2021/695 specifies the types of partnerships in some areas. For example, «areas for possible Institutionalised European Partnerships: Partnership Area 1: Faster development and safer use of health innovations for European patients, and global health; Partnership Area 2: Advancing key digital and enabling technologies and their use, including but not limited to novel technologies such as artificial intelligence, photonics and quantum technologies; Partnership Area 3: European leadership in Metrology including an integrated Metrology system; Partnership Area 4: Accelerate competitiveness, safety and environmental performance of Union air traffic, aviation and rail; Partnership Area 5: Sustainable, inclusive and circular bio-based solutions...» (Annex VI of the Regulation (EU) 2021/695).

It seems that the disadvantages here are: 1) another type of European partnership is implemented only when other types of European partnerships don't allow to achieve the goals or don't cause the necessary expected impact; 2) there are no requirements for partners regarding indicators of their functioning and activity. May lead to fraudulent activity.

The last two framework programmes (Horizon 2020, Horizon Europe), in our opinion, form a new independent seventh stage regarding partnerships in FPRI. This author's view is due to the fact that new types of partnerships are emerging or existing types of partnerships are being improved. Almost all proposed partnerships have definitions, specifics of application, etc. This stage starts in 2014 and continues as long as Horizon Europe is in force.

CONCLUSIONS

The conducted analysis of the types of partnerships in FPRI showed that this phenomenon has undergone a long-term process of reformation in many directions: content, name, etc. We believe that this transformation will continue constantly, because it depends on external and internal factors, the development of society, existing current problems.

However, none of the nine considered programmes contains a definition of the term «partnership». We believe that it isn't possible to form all kinds of partnerships if there is no definition of the basic

term. In order to avoid independent interpretation of terms and concepts that don't have a definition in FPRI, but are actively used, it was necessary, in the author's opinion, to make a reference to the EU legislation in each such programme, where the relevant terms with definitions are present.

In the considered programmes the widespread experience seems to be relevant and effective in relation to the emergence of new types of partnerships or a return to the previous ones, when after the end of the programme an analysis was carried out and positive, negative features of the previously proposed partnerships were identified.

Each new FPRI adopted only positive experience from its predecessors regarding the types of partnerships. Such this period of improvement from 1984 to the present was outlined in seven independent stages. The last stage is not over yet.

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РЕТРОСПЕКТИВНИЙ АНАЛІЗ ВИДІВ ПАРТНЕРСТВА У РАМКОВИХ ПРОГРАМАХ ЄС З ДОСЛІДЖЕНЬ ТА ІННОВАЦІЙ

Анотація. Проведення високоякісних досліджень з актуальних для сьогодення проблем у Рамкових програмах ЄС з досліджень та інновацій потребує залучення вчених, здатних самостійно проводити дослідження, університетів з відповідною лабораторією тощо. Розглядають різноманітні ресурси, в т.ч. іноземні, для виконання останнього. Одним із варіантів їх співпраці є партнерство у різноманітних видах, що передбачені у Рамкових програмах ЄС з досліджень та інновацій. Однак, з 1984 року до сьогодення види партнерства пройшли шлях становлення, змін та вдосконалення. У статті зроблена спроба провести ретроспективний аналіз всіх видів партнерств, які були та є чинними у Рамкових програмах ЄС з досліджень та інновацій. Автором було виділено сім етапів такого явища та сформульовані їх особливості, переваги та недоліки з урахуванням дії вказаних програм: 1 етап) період 1984-1991 рр. та діючі рамкові програми в цей період: зародження партнерства. Само поняття «партнерство» чи його види ще відсутні, але є конкретні положення у даних документах щодо співпраці; 2 етап в період 1990-1994 рр. з'являється вперше поняття «партнерство» без визначення, пояснення на законодавчому рівні ЄС; 3 етап охоплює період 1994-1998 рр., коли притаманні партнерства між університетами, дослідницькими інститутами та промисловістю, в т.ч. партнерство з промисловістю; 4 етап період 1998-2002 р.р., де присутнє євро-середземноморське партнерство без розкриття його змісту чи пояснення на законодавчому рівні ЄС; 5 етап період 2002-2006 рр., коли у Шостій рамковій програмі Європейського Співтовариства з досліджень, технологічного розвитку та демонстраційної діяльності, що сприяє створенню Європейського дослідницького простору та інноваціям відмовилися від закріплення конкретного виду партнерства; 6 етап в період 2007-2013 рр спостерігаються перші спроби надати визначення деяким видам партнерства: довгострокове державно-приватне партнерство, партнерства промисловості та наукових кіл, міжнародне партнерство з організаціями з третіх країн у науці в суспільстві; 7 етап з 2014 р. і до сьогодення, коли з'являються нові види партнерства або вдосконалюються вже ті види партнерств, що колись були, а також майже всі запропоновані види партнерства мають визначення, специфіку застосування тощо.

Встановлено, що жодна з дев'яти вказаних програм не містить визначення терміну «партнерство», види партнерств змінюються в залежності від багатьох факторів.

Ключові слова: Європейське партнерство, ЄС, партнерство, Рамкова програма ЄС з досліджень та інновацій, співпраця

RETROSPECTIVE ANALYSIS OF PARTNERSHIP TYPES IN EU FRAME – WORK PROGRAMMES FOR RESEARCH AND INNOVATION

Abstract. Conducting high-quality research on current problems in the EU Framework Programmes for Research and Innovation requires the involvement of scientists capable of conducting research independently, universities with an appropriate laboratory, etc. Various resources are considered, including foreign, to fulfill it. One of the options for their cooperation is partnership in various forms provided by the EU Framework Programmes for Research and Innovation. However, the types of partnerships have evolved, changed and improved since 1984 to the present. The article attempts to conduct a retrospective analysis of all types of partnerships that were and are valid in the EU Framework Programmes for Research and Innovation. The author identified seven stages of this phenomenon and formulated their features, advantages and disadvantages, taking into account the action of these programmes: 1 stage) the period 1984-1991 and the existing framework programmes during this period: the birth of a partnership. The very concept of «partnership» or its types are still missing, but there are specific provisions about cooperation in these documents; 2 stage) in the period 1990-1994, the concept of «partnership» appeared for the first time without a definition or explanation at the EU legislative level; 3 stage) covers the period 1994-1998, when partnerships between universities, research institutes and industry, including partnerships with industry, were typical; 4 stage) the period 1998-2002, where the Euro-Mediterranean Partnership is present without disclosing its content or explaining at the EU legislative level; 5 stage) the period 2002-2006, when the Sixth Framework Programme of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation, refused to establish a specific type of partnership; 6 stage) in the period 2007-2013, there were initial attempts to define some types of partnerships: long term public private partnership, industry-academia partnerships, international partnerships with third country organisations in scientific society; 7 stage) since 2014 and to the present, when new types of partnerships appear or the existing types of partnerships are improved as well as almost all the proposed types of partnerships have definitions, specifics of application, etc.

It was found that none of the nine specified programmes contain a definition of the term «partnership», the types of partnerships vary depending on many factors.

Keywords: cooperation, EU, European partnership, EU Framework Programme for Research and Innovation, partnership

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