This study considers the system of normative, regulatory, managerial techniques and procedures for identifying innovations in Ukraine and the European Union, as well as their comparison. The study aims to address the unification of innovation flow in Ukraine with the requirements from the European Union. The directions, techniques, and procedures to unify normative regulation of innovation flow in Ukraine with the law of the European Union have been examined.

The study of the processes that regulate innovation flow in Ukraine and the European Union has established their inconsistency with each other. It was determined that such inconsistency stems from the heterogeneity of approaches to identifying innovations in the European Union. It has been proven that the unification of regulation of innovation flow in Ukraine with the requirements of the EU should be holistic and systemic.

The following directions to unify innovation regulation in Ukraine have been substantiated: complex, object-based, network, concentration. The need for unification of Ukraine's regulatory rules with the recommendations of WIPO, the TRIPS Agreement, the Oslo Guidelines, the Horizon Europe Framework Agreement, the European Innovation Act, etc. was proven. The need for amendments to the provisions of the Law of Ukraine "On Innovation Activity" was substantiated.

The study is aimed at forming general theoretical principles for improving the regulation of innovation flow in Ukraine. The results could be used to improve the official rules for the dissemination and circulation of innovations, the formation of relevant decisions of state authorities, state innovation policy, and the basis for further scientific research on the specified issues.

The conclusions from this study could be used to resolve problematic issues of unification of the current legislation of Ukraine with the requirements of the European Union, as well as with international agreements and documents

Keywords: unification of innovations, innovation flow, innovation expertise, unification of innovations, EU legislation

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DEVISING DIRECTIONS FOR UNIFYING INNOVATION FLOW IN UKRAINE IN THE CONTEXT OF ITS EUROPEAN INTEGRATION, GIVEN THE CONDITIONS OF THE ONGOING ARMED CONFLICT AND THE PROSPECTS OF POST-WAR RECONSTRUCTION

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1. Introduction

The war against Ukraine, launched by the Russian Federation in 2014, as well as its active phase since 2022, has led to significant destruction of its economy. The destruction of critical infrastructure facilities, property complexes of key commodity producers, and martial law restrictions negatively affect the ability to restore it. The need to incur unprecedented budget expenditures for the defense of the nation and the country exclude the possibility of using state support. At the same time, the vast majority of the own needs of society and the economy are satisfied by the national commodity

producer. On the one hand, this determines the inability of market self-regulatory mechanisms to compensate for these shortcomings. On the other hand, it requires the use of atypical decisions of a managerial and organizational nature.

The current state of economic development and the conditions under which the state and society of Ukraine have found themselves since 2014 make it similar to the state of European countries in the late 1940s. Their political, managerial, organizational experience in economic recovery should become the object of detailed study and research. And the decisions that they made and adopted are the subject of detailed analysis.

The experience of the European Union countries (hereinafter referred to as the "EU") is especially relevant in connection with the conclusion of the agreement between Ukraine and the EU on the association of Ukraine. When signing it, the state of Ukraine assumed a number of obligations, including the unification of the regulatory influence of the state on the economic system. An additional factor in the expediency of introducing European approaches to regulating innovation flow is that their approaches to managing the process of transferring innovations are recognized as one of the most effective in the world.

However, one should not forget that the economic system of Ukraine and the EU are different in their structure and content. Within the EU, the economic system is significantly structured, formalized, and specialized. It implements algorithms for coordinating common needs, on the one hand, and common interests, on the other. This economic system is characterized by internal restrictions of an imperative nature, such as quotas and limits. The negative consequences of their existence are actively compensated by measures of public centralized financial support.

The study of the regulation of innovation flow in the EU allows us to determine that it is heterogeneous and often different in its essence. Differences are recorded both at the level of EU management institutions and at the level of the countries participating in this intergovernmental organization. Often, the recommendations of international institutions underlie the techniques and procedures that are implemented at the level of centralized management. And a different, specific approach is used as the basis for specific operations on the transfer of innovations. For the purposes of supporting, stimulating, and scaling up innovation flow, within the EU there is its own unique system for identifying the essence of innovations. This approach has already been recognized as ineffective and within the EU they are actively working on its improvement.

This determines the basis of the problem of both this study and those solutions that should be implemented by Ukraine. The unification of regulatory influence should be based on a clear algorithm (process). Its absence deprives Ukraine of clear guidelines on the path to the process of unifying the regulation of innovation flow. This determines, on the one hand, the relevance of scientific research into this area, and on the other hand, it predetermines the need to formulate proposals for the unification (change) of the rules for the innovation flow in Ukraine, in order to comply with EU requirements.

2. Literature review and problem statement

In [1], the degree of dependence of innovative enterprises on the level of state influence and fiscal burden is analyzed. It is proved that a significant degree of centralization of regulatory influence and tax burden reduces the level of scaling of innovation processes. The direct dependence of the number of participants in innovative investment on the level of centralized regulatory influence and fiscal burden is substantiated. However, due to the study of exclusively economic patterns of the functioning of such dependence, the work did not study the level of regulatory influence on innovation flow. These issues remained unresolved and require additional scientific research on this subject.

In [2], an analysis of EU statistical data on innovation flow was conducted. The dependence of the level of innovation efficiency on the degree of predictability of the onset of economic consequences of its implementation was proven. However, the study does not investigate the impact of regulatory approaches to identifying innovations in the EU and does not study the ways of unifying such structures by other countries. The reason for this is that the subject of the study was only to identify certain patterns of the functioning of innovation flow. The results should form the basis for further research on this issue.

Within the framework of study [3], a universal model of national innovation policy was built. It was proven that innovations require support at the initial stages of their implementation. The feasibility of entrusting this function to the state and interstate entities was substantiated. However, the degree of influence of the effectiveness of regulatory structures for identifying innovations on the effectiveness of their implementation was not studied. This drawback of the study could be eliminated only as a result of additional investigation of such issues.

In work [4], general criteria for the effectiveness of innovation flow were formed. These include the system of education and science for training specialized personnel; mechanisms for distributing experience in implementing innovations; the availability of state support measures. Regulatory measures of influence on innovation flow were not studied. Only individual, selective elements of this process were examined. The reason is that the study explored only the economic patterns of innovation flow. However, such aspects do not provide a holistic system of all factors of influence. This drawback could be eliminated by additional study on this issue taking into account additional circumstances of regulatory influence.

In work [5], a study was conducted to determine the compliance of regulatory structures of innovation flow with the requirements of sustainable development policy in the EU. It was determined that innovations play a key role within such policy. The conclusion was drawn that the regulation of innovation flow in the EU is fragmentary and episodic. The inconsistency of existing regulatory approach to determining the essence of innovations with the goals of sustainable development policy was proven. Directions for improving the innovation regulation process in the EU were devised. However, within the framework of the study, no directions were determined for unifying innovation regulation in Ukraine with EU requirements since these issues were not included in the main subject of the study. However, the conclusions that were obtained should be taken into account, since within the framework of regulation of innovation flow in Ukraine, the requirements of sustainable development are not reflected at all.

Within the framework of scientific research [6], commercial requirements of the European Union countries and developing countries are studied. It is substantiated that

developing countries should ensure the process of converting knowledge into entrepreneurship. The theory of knowledge transfer into entrepreneurship (KSTE) was devised. It was determined that the introduction of advanced knowledge and innovations into the KSTE system is a key task of developing countries. However, within the framework of the study, no directions were formed for unifying regulatory influence. Only the basic principles that such influence should correspond to were determined. In particular, no proposals were defined for unifying innovation flow under the legislation of Ukraine. This shortcoming could be resolved only by conducting additional research on this issue, taking into account the degree of actual impact of techniques and procedures for regulating innovation flow.

In work [7], an assessment of the effectiveness of regulatory influence on the innovation flow in the EU was provided, in particular regarding their ability to eliminate force majeure circumstances. It was proven that the identification of innovation flow with the transfer of rights to intellectual property rights does not meet existing needs of the participants in these relations. It was proposed to include the transfer of experience in the composition of innovation flow. No proposals were made to unify technology transfer in Ukraine with EU requirements. This shortcoming arose because of the fact that these issues were not included in the subject of scientific research in the work. At the same time, this issue requires further study and the formation of real practical proposals for improving the areas of regulatory influence.

When conducting research [8], the relationship between the introduction of innovations and the degree of achievement of economic development goals was analyzed. It was proven that the introduction of innovations makes it possible to intensify the level of economic development. However, within the framework of the study, no proposals were made to improve the existing official rules of innovation flow both in the EU and in Ukraine. In addition, the techniques and procedures of regulation used to influence innovation flow were not taken into account. Their absence within the general system of assessment factors led to the formation of somewhat superficial scientific conclusions. This could be eliminated by conducting additional research on this issue.

In paper [9], general directions for unification of regulation of innovation flow and technology transfer in Ukraine were devised in accordance with the requirements of the EU sustainable development goals. Provisions were formed that a national list of sustainable development goals should be introduced within Ukraine. However, within the framework of the work, a detailed list of directions for unification of technology transfer in Ukraine with EU requirements was not compiled. Attention was paid only to bringing it into line with the EU sustainable development policy. At the same time, the subject of the study did not include factors of general development of innovation regulation in the EU. Only the formal compliance of innovation regulation with the requirements of sustainable development policy was studied. Without taking into account the general directions of reforming the impact on innovation flow, such conclusions are one-sided. This drawback could be eliminated only by conducting additional research on this issue.

Work [10] identifies ways to adapt the Ukrainian economy to the requirements of the EU. It is proven that Ukraine's adaptation to globalization processes includes interrelated strategies that are implemented by the state depending on the degree of intensity of the impact of globalization factors on the national economy. It is proposed to implement a strategy to stimulate globalization processes. At the first stage, the strategy should be based on supporting the existing. However, in the course of the study, no conclusions were drawn on improving the requirements for innovation flow in Ukraine in accordance with EU requirements. Within the scope of the subject of the specified scientific research, mainly internal trends in the development of innovation regulation in Ukraine were studied. However, isolating the directions of development of such influence from general world trends affects the level of their further effectiveness. The only way to eliminate this drawback is to revise the formed conclusions taking into account the experience and general vectors of EU development.

Our review of the literature [1–10] demonstrates the focus of scientific research on solving the issue of improving the unification of technology transfer requirements, including the unification of Ukraine's requirements in accordance with EU requirements.

All this allows us to argue that it is advisable to conduct a study aimed at formulating proposals for improving the regulation of technology transfer in Ukraine in accordance with EU requirements.

3. The aim and objectives of the study

The purpose of our study is to substantiate the directions of unification and improvement of innovation flow in Ukraine with the requirements of the EU. This will make it possible to form directions of unification and improvement of innovation flow in Ukraine.

To achieve this aim, the following objectives were accomplished:

– to identify the features of approaches to determining the essence of innovations and innovation flow in the EU and in Ukraine;

– to form proposals for directions of improving the regulation of innovation flow in Ukraine.

4. The study materials and methods

The object of our study is a system of regulatory means and methods for determining innovations within their circulation in the economic system of Ukraine and the EU and their comparison.

The hypothesis of the study assumes that the current directions for determining the content of the category of "innovation" in Ukraine do not comply with the requirements of EU law. When conducting this study, it was assumed that the inconsistency of the existing regulatory influence in identifying innovations and innovation flow negatively affects the scale of their distribution both in Ukraine and abroad.

During the conduct of this study, a simplification was adopted, within which the feasibility of changes in the regulatory approach in Ukraine was not studied since such a decision had already been made by Ukraine at the official level. Another simplification regards the identification of the concept of innovation flow. The definitions that follow from the essence of official EU regulatory acts were taken as the basis.

When conducting the study, official regulatory acts of both the EU and Ukraine were analyzed, as well as information from open sources, recommendations of EU government

bodies and institutions. In addition, analytical data from international organizations, statistical data, and public information were used.

Within the framework of our study, general scientific theoretical methods were used, namely synthesis and analysis, deduction, induction, abstraction, and comparison, as well as systemic and functional methods, modeling, formal-logical interpretation of the content of regulatory categories.

5. Results of investigating directions for improving the rules for unification of innovation flow in Ukraine within the framework of its European integration process

5. 1. Identification of features of approaches to determining the essence of innovations and innovation flow in the EU

Regulation of methods for identifying innovations and innovation flow in the EU is characterized by the absence of a single approach to determining the specified categories [1–4]. At the level of EU institutions, there are no official interpretations of the concepts of "innovation" and "innovation flow" [5]. In general, this system can be identified as multi-level, based on the recommendations of special international organizational entities (institutions). Among them, it is customary to distinguish the following approaches:

1) innovation as a system of intellectual property rights. And innovation flow is defined as the transfer of rights to intellectual property rights that constitute an innovation. This approach was specifically formulated by the World Trade Organization ("WTO") in the Agreement on Trade-Related Aspects of Intellectual Property Rights (hereinafter referred to as the "TRIPS" Agreement) [11]. A similar approach is also defined within the framework of the explanations of the World Intellectual Property Organization (hereinafter referred to as "WIPO") [12];

2) innovation as a new or significantly improved product (thing according to the Ukrainian classification), which is significantly different from others and has become available to third parties. At the same time, innovation flow was identified with the transfer in any way of such a unique object (thing). It was formed within the framework of the joint activities of the International Organization for Economic Cooperation and Development (hereinafter referred to as the "OECD") and Eurostat [13];

3) innovation as one of the results of scientific research and development work. The concept of innovation flow was reduced to the transfer of the results of scientific research and development work under relevant contracts and agreements. This approach was defined for the purposes of supporting and scaling technologies, within the framework of the EU Framework Program "Horizon Europe" [14].

Systematization of the main formulations of the definition of the essence of innovation in the EU is shown in Fig. 1.

The systematization of basic formulations for defining the essence of innovation flow in the EU is shown in Fig. 2.

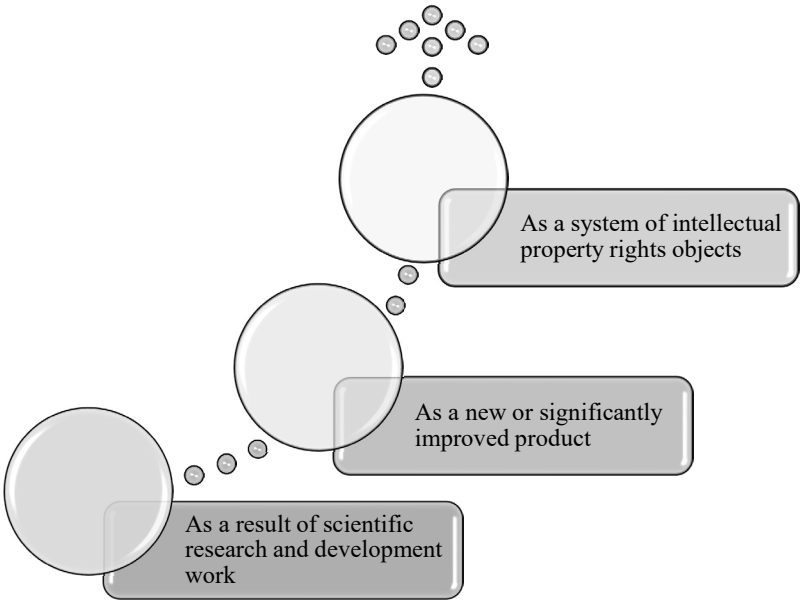

Fig. 1. Systematization of the main formulations for defining the essence of innovation in the EU

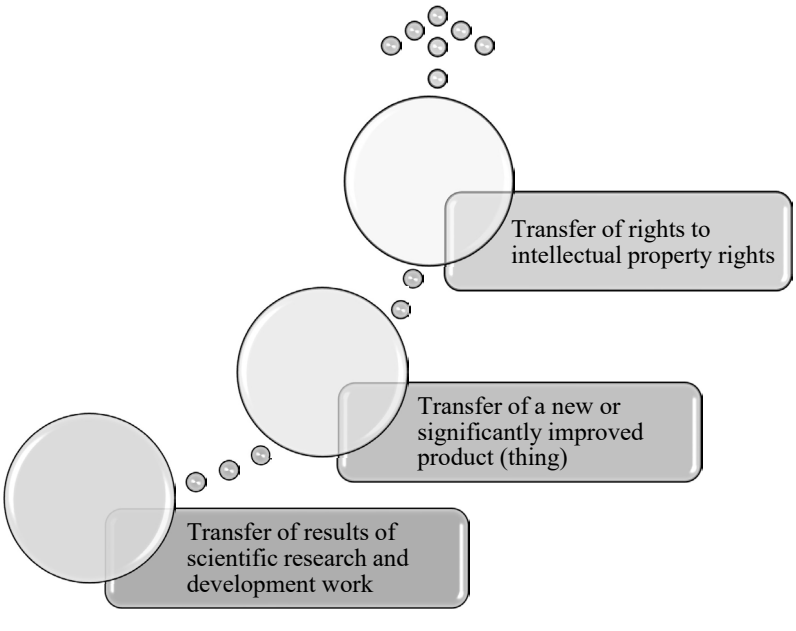

Fig. 2. Systematization of basic formulations for defining the essence of innovation flow in the EU

Summarizing all of the above, we could conclude that innovation flow within the framework of EU regulatory acts is the process of transferring innovations (rights to innovation) from one entity to another. This approach does not correspond to the definitions of the innovation life cycle and technology transfer [2, 5]. Thus, the innovation life cycle is a process that encompasses all stages of the emergence, functioning and termination of innovations. From the emergence of a certain new idea, its materialization in the form of an intellectual result and to its implementation in a certain economic activity. Technology Transfer Mechanism is defined as

the transfer of means of production with information about the method and procedure for their use within a certain production process [9]. As a result of comparing the essence and content of these two categories, we can conclude that innovation flow and technology transfer are different categories. At the same time, they are interconnected since technologies can be created on the basis of innovations and vice versa. However, they are aimed at different domains of social and economic life. Whereas the technology and its transfer are aimed at the production realm, the innovations can be implemented at other levels of the economic system. In any case, the main object of regulatory influence within the EU is innovation and those social relations that arise regarding its creation, transfer, and implementation. The concept of innovation flow is such, it is formed by a synthetic combination of all actual and existing ways of its transfer. For the purpose of unifying the regulation of innovation flow in Ukraine, this approach should remain the main one and its change is not considered advisable.

The multi-level approach to defining innovations and defining innovation flow, shown in Fig. 1, 2, was recognized as ineffective in the EU [6–10]. In January 2025, the EU launched a reform of the regulation of the status of innovations and innovation flow. Instead of several levels of their definition, a universal official structure should be fixed, which will operate both at the level of the entire EU and at the level of its member states. We are talking about a new intergovernmental agreement within the EU – the European Innovation Act [15]. This document should be a cardinal change in the process of regulating innovation flow in the EU. Regretfully, at the time of this study, neither the indicative draft of this agreement nor its previous version had yet been published. However, the basic principles of how the regulation of innovation flow would be determined can be determined from the preparatory actions of the relevant EU institutions. Thus, the main principles of prospective regulation of innovations and their circulation have already been recorded in a special program document. It is the program of reforming the EU state policy to increase its competitiveness "A Competitiveness Compass for the EU" [16]. In addition, a systematic analysis of such official sources as:

– newsletters of the European Commission to the European Parliament and EU committees [15, 16];

– methodological explanations of the European Institute of Innovation and Technology [17];

– ultimately allows us to form the basic principles of how innovation flow and innovations in the EU will be regulated. These basic principles are shown in Fig. 3.

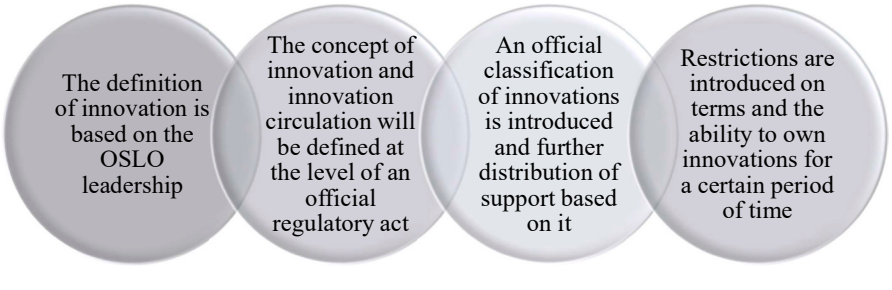

Fig. 3. Basic principles for regulating innovations and innovation flow in the EU, after the adoption of the European Innovation Act

In addition to the data shown in Fig. 3, it is also necessary to take into account that the very fact of the emergence of the "European Innovation Act" will entail changes in the regulation of innovations and innovation flow in the EU member states. Thus, there will no longer be a situation in which each individual EU country could have its own special definition of innovations and innovation flow. After the implementation of this agreement, innovation flow will be regulated uniformly throughout the EU. The problem of the free definition of innovations, which was used by business entities, will also be eliminated while the latter, in their relations with each other, could intentionally identify as innovations an object that never was.

The process of unification of the regulation of innovations and innovation flow in Ukraine directly depends on the "European Innovation Act". Accordingly, by the time work on this agreement is completed, full unification in Ukraine will be impossible.

Despite the identified features of the regulation of innovations and innovation flow in the EU, the importance of this object for the economic development of the EU is key. This dependence could best be demonstrated by the number of participants in these relations in the EU. Thus, according to Eurostat data, as of 2022, within the EU, the total number of business entities that used certain types of innovation is 7.5 million [18]. With a total number of business entities of 33.0 million, the percentage of entities involved in the realm of innovation flow is 22.7%. The detailed structure of these entities is given in Table 1.

Table 1

The structure of economic entities within the EU and the Eurozone involved in the process of implementing innovations

Type of innovation / Territory of distribution	Business process innovations, thousands of units	New or improved production methods, thousands of units	New or improved information processing methods, thousands of items	New marketing promotion methods, thousands of pieces
European Union	310 587	152 122	173 817	121 904
European zone	264 269	128 148	150 516	101 124

The main regulatory act of Ukraine in the field of innovation flow is the Law of Ukraine "On Innovation Activity" [19]. Thus, according to the provisions of this official regulatory act, innovation is defined as:

1) newly created (applied) and (or) improved competitive technologies;

2) newly created (applied) and (or) improved competitive products or services;

3) organizational and technical solutions of a production, administrative, commercial or other nature that significantly improve the structure and quality of production and (or) the social realm.

The systematization of the content of the concept of innovation in Ukraine is shown in Fig. 4.

At the same time, the current legislation of Ukraine does not define the essence and content of the concept of innovation flow at all. Taking into account the general principles of state intervention in the economy, in the absence of special requirements for this process,

it could be concluded that innovation flow is any transfer of innovations. In other words, this category is identified with the widest list of grounds and procedures for transferring a thing from one person to another.

Using the comparison method, it can be established that existing regulation of innovations and innovation flow in Ukraine does not meet the requirements of the EU. Regulatory methods for identifying innovations are broader than in Ukraine. Thus, Ukraine recognizes only certain types of objects (things) as innovations. These include technologies, products, services, organizational and technical solutions. At the same time, within the EU (the Oslo Handbook and the EU Framework Program "Horizon Europe" [13, 14]) it is determined that innovations could be any objects (things). The analysis of the above approaches allows us to conclude that the concept of innovation in the EU is broader than the similar category in Ukraine. The aspect of identifying innovations with objects of intellectual property rights is also important. Whereas within the EU (WIPO recommendations and the TRIPS agreement) such an approach is allowed, in Ukraine, it is only indicated that the object of intellectual property could be part of the innovation [19].

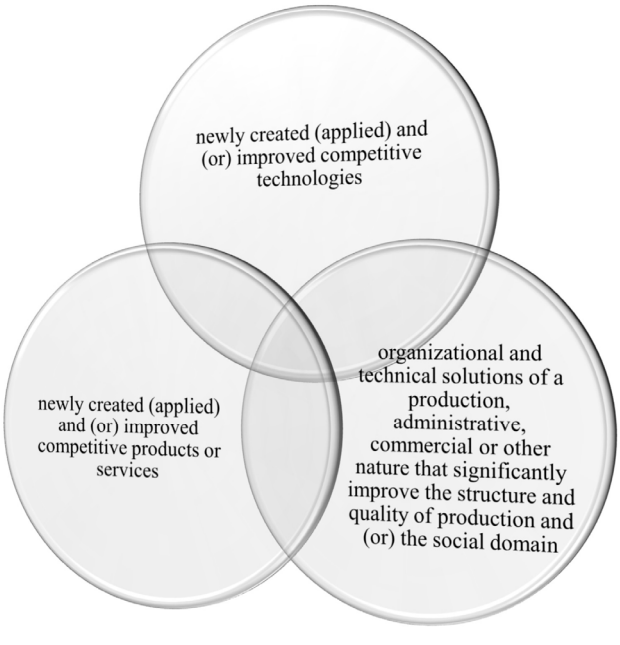

Fig. 4. Systematization of basic definitions of the content of the concept of innovation in Ukraine

In addition, one cannot ignore the place of innovations in the general system of economic relations between Ukraine and the EU. Within the EU, innovations are an independent and separate object of social and economic relations. They underlie all social processes [2]. At the same time, innovations in Ukraine are attributed to a specific sector of the national economy. Thus, the place of innovations was previously defined as part of investment relations. This was recorded in the provisions of the Economic Code of Ukraine [20], which expired on 28.08.2025. The generalized structure of the place of technology in the economic system of Ukraine is shown in Fig. 5.

The abolition of the Commercial Code of Ukraine, although it destabilized the regulation of the economy by the state, in terms of determining the place of innovations, has a conditionally positive effect. Due to the lack of determination of the place of innovations, the necessary prerequisites have been created in Ukraine for a relatively free determination of the place of innovations in the general economic system.

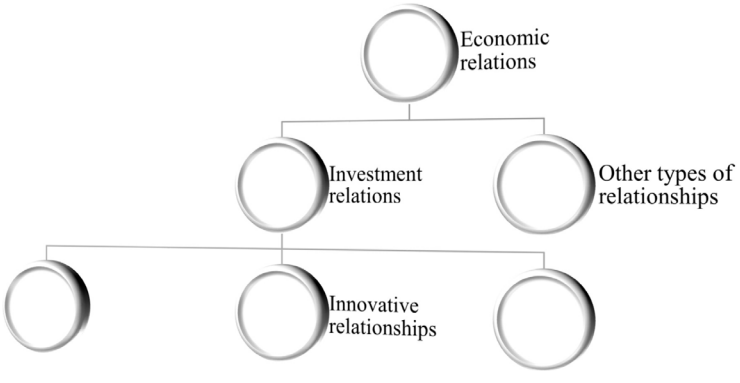

Fig. 5. Generalized structure of the place of innovations in the economic system of Ukraine

Considering that the concept of innovation flow within the national regulatory system of Ukraine is not defined at all, nothing prevents the processes of unification of regulatory influence with EU requirements.

In addition, one cannot fail to mention the system of specialized business entities that must carry out innovative activities. Thus, within the EU, such main entities are startups [21] and skylups [17]. For the Ukrainian economy, these organizational formations are either little known or not known at all. In addition, there is no system of centers of infrastructure support for innovation flow.

5. 2. Determining the directions for improving innovation flow in Ukraine

The unification of innovation flow in Ukraine with EU requirements should take place on a systematic basis. When carrying it out, it is imperative to take into account the recommendations that were compiled within the framework of joint meetings of the relevant working groups of Ukraine and the EU. Thus, at the end of 2021, based on the results of a study of the conditions for innovation flow and technology transfer in Ukraine, specialists from the Joint Research Center of the European Commission published their report [22]. It formed the following directions for general improvement of the conditions for innovation flow and technology transfer:

– carrying out legislative reforms with an emphasis on simplifying and unifying the regulation of innovation flow in Ukraine;

– forming appropriate legal support for grant funding;

– introducing specialized infrastructure business entities (spin-off companies);

– reforming the system of protection of rights to intellectual property rights;

– providing special conditions for carrying out economic activities for companies that introduce scientific experience into the production sector of the national economy;

– development of fundamental and applied science.

Based on the above, as well as on the discrepancies between the regulation of innovation flow in Ukraine and

the EU, it is considered possible to form the following directions of their unification:

– firstly, it is a comprehensive direction. It involves the implementation of existing methods of regulation of innovations and innovation flow within the EU. Within this direction, it is necessary to make changes to the provisions of the Law of Ukraine "On Innovation Activity" and to consolidate the concept of innovation flow and a broader concept of innovation in it. The reference point in this is the "Oslo" recommendations [13];

– secondly, it is an object direction. It provides for an updated identification of innovation within the economic system of Ukraine. Instead of attributing it to a type of investment activity, it should become an independent object of economic relations. The final directions of unification of innovation flow in this direction could be formed only after the publication of the "European Innovation Act";

– thirdly, it is a network direction. It involves the implementation by Ukraine of a system of specialized subjects of innovation flow and infrastructure support, such as startups, skylups, spin-off companies. The Horizon Europe Framework Program could be taken as a reference point on this path [14];

– fourthly, it is a concentration direction. Its essence is the fact that Ukraine is currently under such conditions that the use of free financial resources for needs other than defense needs is inappropriate. In order to create prerequisites for more effective use of available support funds, a special type of innovation should be introduced within the innovation cycle of Ukraine. They should be aimed at the restoration of infrastructure facilities, energy security and post-war reconstruction of Ukraine. As experience shows, those innovations that are more effective in providing a positive economic effect from their implementation are more effective [2–4]. It is because of this that it is advisable to devise a procedure for expert selection of those innovations that are really needed for the effective economic recovery of Ukraine. The essence, features, purpose, and procedure for expert selection of innovations are a topic for a separate scientific study. However, whatever the mechanism of such preliminary expert verification, it can be implemented only when the main criteria for such compliance are determined. Expert selection of innovations and inclusion of the relevant expert opinion in the information support of innovations is the key to implementing the selection system.

The optimal place for the implementation of these areas is the Law of Ukraine "On Innovation Activity". This regulatory act is the only one that defines the rules of innovation flow in Ukraine.

The main advantage of the proposals formed is that they maximally take into account the key aspects of unification of innovation flow regulation with EU requirements. All other proposals are not endowed with such a level of completeness and systematicity and are fragmentary in nature.

The main disadvantage of this proposal is uncertainty about the essence and place of innovations within EU law, due to the non-adoption of the "European Innovation Act". This disadvantage could be compensated by the implementation of existing mechanisms for regulating innovation flow in the EU with their subsequent revision if necessary. Given the level of stability of regulation of the economic system in the EU, such a procedure for unification is seen as effective.

6. Discussion of Results of investigating the directions for improving the rules of unification of innovation flow in Ukraine

The scientific results from our study (in terms of directions of improving the innovation flow in Ukraine) are attributed to the need for a comprehensive solution to the identified problems. The substantiated directions of such improvement solve the issue of unification of innovation flow in Ukraine with the requirements of the EU.

Existing approaches to determining the categories of "innovation" and "innovation flow" within the EU (Fig. 1, 2) differ from those implemented in Ukraine (Fig. 2). The study of the place of innovation and the determination of the category of "innovation flow" under the legislation of Ukraine (Fig. 3–5) allows us to conclude that these differences are correlated as incomplete correspondence of the categories being compared. When forming the directions of unification and improving the rules of innovation flow in Ukraine, the addition method was used. Due to which, the existing regulatory rules and regulatory structures were supplemented with missing elements. Along with this, for certain areas of improvement, an approach was used in which the formation took place on the initial principles.

The advantage of our research is that the results could be used in regulatory and legal acts of the national level in Ukraine. Further study of the outlined issues could make it possible to obtain results of a practical orientation that could be used within the framework of state policy measures. In the case of the formation of official regulatory structures, the substantiated directions will require some refinement and changes. In any case, the scientific conclusions obtained could become the basis for both further scientific developments and future regulatory and legal acts. All previously conducted studies [1–10] either did not form similar scientific proposals or investigated only individual aspects of the innovation cycle. Based on the results of our work, several directions for solving the issue of unification of the innovation cycle of Ukraine with EU requirements have been formed. However, all these results do not have any signs of systematicity and do not apply to the majority of participants in relations related to the transfer of innovations.

The results of our study have substantiated the directions, solutions to most of the identified problems, unification of innovation flow in Ukraine with the requirements of EU law. The main advantage is that the results are additionally aimed at increasing the level of efficiency of innovation flow in Ukraine. In addition, the identified proposals provide for more effective mechanisms for solving the problems of unification of innovation flow than those reported in [1–10].

When conducting this study, limitations were identified due to the lack of the text of the "European Innovation Act" and the active process of reforming the rules of innovation flow in the EU. The lack of regulatory structures for the definition of "innovation" is an objective obstacle to conducting a comprehensive study. Potential directions of prospective research on this topic are the development of specialized directions for amending the provisions of the current legislation of Ukraine. The main disadvantage of this study is that the experience of individual EU member states was not taken into account within the framework of its conduct. Considering that each country pursues a separate policy of regulating innovation flow, the directions of their development are quite

different from each other and their systematization requires a separate scientific study of this issue.

7. Conclusions

1. We have determined that existing regulatory techniques for identifying innovations and innovation flow in Ukraine and the EU differ from each other. The approach to identifying innovations in the EU is broader than the approach within the legislation of Ukraine. The concept of innovation flow in official regulatory acts of Ukraine is absent. In Ukraine, only part of the EU regulatory approaches to defining innovations have been implemented and they are not implemented as independent objects of intellectual property rights.

2. Directions for improving innovation flow in Ukraine with EU requirements have been formed, which are aimed at expanding the ways of interpreting the content of this concept:

– comprehensive direction (implementation of the Oslo recommendations);

– object direction (implementation of the European Innovation Act);

– network direction (implementation of the EU Framework Program "Horizon Europe");

– concentration direction (implementation of a system of expert selection of innovations).

It has been determined that the main place (form) of changing the regulation of technology transfer in Ukraine should be the Law of Ukraine "On Innovation Activity".

Conflicts of interest

The authors declare that they have no conflicts of interest in relation to the current study, including financial, personal, authorship, or any other, that could affect the study, as well as the results reported in this paper.

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Data availability

All data are available, either in numerical or graphical form, in the main text of the manuscript.

Use of artificial intelligence

The authors confirm that they did not use artificial intelligence technologies when creating the current work.

Referenses

1. Telnova, H., Petchenko, M., Tkachenko, S., Gurzhiy, T., Pyrohov, S. (2022). Factors of Venture Capital Investment Activation. Financial and Credit Activity Problems of Theory and Practice, 2 (43), 46–52. https://doi.org/10.55643/fcaptp.2.43.2022.3591
2. Andrijauskiene, M., Ioannidis, D., Dumciuviene, D., Dimara, A., Bezas, N., Papaioannou, A., Krinidis, S. (2023). European Union Innovation Efficiency Assessment Based on Data Envelopment Analysis. Economies, 11 (6), 163. https://doi.org/10.3390/economies11060163
3. Yevtushenko, V., Sviezhentsev, O. (2018). Components of state innovative policy and the mechanism of its implementation in the measurement of the world experience. Bulletin of V. N. Karazin Kharkiv National University Economic Series, 94. https://doi.org/10.26565/2311-2379-2018-94-05
4. Fajri, R. F., Syamsul Maarif, Yuli Subiakto, Pujo Widodo, Kusuma (2023). Japan's Technology Investment Strategy And Innovative Approach To Enhancing Resilience And Sustainable Development In Indonesia. International Journal Of Humanities Education and Social Sciences (IJHESS), 3 (2). https://doi.org/10.55227/ijhess.v3i2.593
5. Brovdii, A., Bakalinska, O., Lisohorova, K., Sivash, O., Khaletska, K. (2025). Determining the regular impact on the processes of stimulating the innovation circulation within the limits of the EU sustainable development policy. Technology Audit and Production Reserves, 2 (4 (82)), 93–98. https://doi.org/10.15587/2706-5448.2025.326075
6. Cuvero, M., Granados, M. L., Pilkington, A., Evans, R. (2022). Start-ups' use of knowledge spillovers for product innovation: the influence of entrepreneurial ecosystems and virtual platforms. R&D Management, 53 (4), 584–602. https://doi.org/10.1111/radm.12567
7. Sepúlveda, C. I., Ocampos, J. A. (2021). International Technology Transfer to Promote Access and Innovation in Times of Global Crisis. les Nouvelles - Journal of the Licensing Executives Society, LVI (1). Available at: https://ssrn.com/abstract=3771482
8. Klemun, M. M., Ojanperä, S., Schweikert, A. (2024). Approach for characterizing technology- and infrastructure-induced linkages between sustainable development goals. STAR Protocols, 5 (1), 102639. https://doi.org/10.1016/j.xpro.2023.102639
9. Davydiuk, O. (2024). Improving the technology transfer in Ukraine under the conditions of implementing the international policy of sustainable development. Technology Audit and Production Reserves, 5 (4 (79)), 49–52. https://doi.org/10.15587/2706-5448.2024.314539
10. Tomashuk, I., Tomchuk, O., Girenko, Y. (2021). Development of international economic relations in the conditions of globalization. "ECONOMY. FINANCES. MANAGEMENT: Topical Issues of Science and Practical Activity," 2 (56), 197–212. https://doi.org/10.37128/2411-4413-2021-2-14
11. TRIPS – Trade-Related Aspects of Intellectual Property Rights. WTO. Available at: https://www.wto.org/english/tratop_e/trips_e/trips_e.htm

12. Exchanging Value. Negotiating Technology Licensing Agreements: A Training Manual. International Trade Centre (ITC). WIPO. Available at: https://www.wipo.int/edocs/pubdocs/en/licensing/906/wipo_pub_906.pdf
13. Oslo Manual 2018 (2018). The Measurement of Scientific, Technological and Innovation Activities. https://doi.org/10.1787/9789264304604-en
14. Consolidated text: 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) No 1290/2013 and (EU) No 1291/2013 (Text with EEA relevance)Text with EEA relevance. Available at: https://eur-lex.europa.eu/eli/reg/2021/695
15. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. A Competitiveness Compass for the EU (2025). Brussels. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52025DC0030&from=EN
16. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. The EU Startup and Scaleup Strategy Choose Europe to start and scale (2025). Brussels. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0270
17. EIT Launches Two New Guides to Showcase Innovation and Business Creation Impact (2025). EIT. Available at: https://www.eit.europa.eu/news-events/news/eit-launches-two-new-guides-showcase-innovation-and-business-creation-impact
18. Innovation profiles of enterprises - results. Eurostat. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Innovation_profiles_of_enterprises_-_results#How_innovative_are_European_businesses.3F
19. Pro innovatsiynu diyalnist. Zakon Ukrainy vid 04 lypnia 2002 r., No. 40-IV. Available at: https://zakon.rada.gov.ua/laws/show/40-15#Text
20. Hospodarskyi kodeks Ukrainy. Zakon Ukrainy vid 16 sichnia 2003 r., No. 436-IV. Available at: https://zakon.rada.gov.ua/laws/show/436-15#Text
21. Davydiuk, O., Shovkoplias, G., Usatyi, V., Ivanova, H., Bytiak, O., Duiunova, T. (2025). Innovation in the Legal Regulation of Small (Medium) Enterprises in the EU Law. Science and Innovation, 21 (1), 35–49. https://doi.org/10.15407/scine21.01.035
22. Milosavljević, N., Cowey, L., Shvarova, O. (2021). Technology transfer in Ukraine 2019-2020. Publications Office of the European Union. https://doi.org/10.2760/930671