The object of this study is existing regulatory approaches to determining the place and purpose of innovations within the economic system of the European Union (EU), in the context of the implemented policy of sustainable development.

In the course of research and generalization of the sustainable development policy of the European Union, it was established that the purpose and role of innovations have not been properly identified. Only the absolute nature of innovation rights is registered while no restrictions in favor of meeting public interests are recorded. It has been proven that this does not meet the needs of the participants of innovative relations and negatively affects the scaling and implementation of innovations. The expediency of improving the existing normative concept of determining the place and role of innovations within the framework of the sustainable development policy of the European Union has been substantiated. Recommendations regarding areas of such improvement have been formed. As such recommendations, the need to formalize the definition of the normative construction of innovations on the basis of international recommendations "Oslo" is highlighted. The need to spread regulatory restrictions on the impact of innovations based on such criteria as industrial and man-made safety has been proven. The expediency of introducing additional guarantees for developers of innovations is also substantiated. The need to make changes to the provisions of such international treaties and agreements as the Horizon Europe Framework Program has been proven.

The study is aimed at forming general theoretical foundations for improving the essence of regulatory techniques for identifying forms of technology transfer. The practical significance of the research results is that the generated results could be used in the formation of international normative acts, recommendations of international institutions, acts of national legislation, and serve as a basis for further scientific research on these issues

***Keywords:** sustainable development policy, innovation policy, innovation, innovation regulation, EU legislation*

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JUSTIFICATION OF DIRECTIONS FOR IMPROVING THE MEANS OF REGULATING INNOVATIVE RELATIONS WITHIN THE LIMITS OF THE SUSTAINABLE DEVELOPMENT POLICY IN THE EUROPEAN UNION

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1. Introduction

The modern world economic system is characterized by a high level of structuring, specialization, and regional institutionalization. Performing the function of a global environment within which the interests of all countries and territories are combined and coordinated, it is unable to achieve all the tasks and goals set before it on the basis of self-regulatory mechanisms. Peculiarities of relations that arise within the macroeconomic level of economic development require a combination of efforts and actions regarding their joint (international) regulation.

Humankind realized the need for centralized intervention in economic processes a long time ago. The vast majority of developed economic systems are among those regulated by the respective states. At the level of international relations, the issue of centralized management influence is determined by numerous international agreements and conventions. Within the evolutionary development of these processes, a certain system of stages of development of regulatory influence is distinguished. The modern one is characterized by a common policy of sustainable development, formed and implemented on the basis of the institutions of the United Nations (UN). One of the key aspects of this system of centralized regulation of international economic relations is innovation. It was identified as one of the key objects of the sustainable development policy, due to the economic potential it has. Such a potential is able to significantly increase the competitiveness of both a business entity at the microeconomic level and positively affect the level of

economic development of the entire state. However, until now, the formal official rules regulating the circulation of innovations are fragmentary and superficial. The law of the European Union has not become an exception to this rule. Thus, most of the regulatory acts of the European Union define only the general features of the forms of transfer of innovation rights. At the same time, insufficient attention is paid to the issues of defining the essence of innovations and the rules of their use. The system of measures to stimulate innovative development is limited only by general principles. It is focused solely on creating conditions for the maximum spread of innovations among as many business entities as possible. At the same time, the policy of sustainable development is a system of obligations aimed at limiting the rights of a certain individual subject for the sake of achieving public interests. This kind of goal cannot be effectively achieved at the expense of only encouraging and stimulating measures of regulation and management. They must be achieved through a system of special regulatory techniques, which is combined on the simultaneous use of measures of restriction and encouragement.

This determines, on the one hand, the relevance of scientific research on this topic, and, on the other hand, gives the scientists the task of formulating proposals for improving existing regulatory measures. It is science that should form such proposals and thereby ensure an organic combination of public and private interests of participants in innovative relations.

2. Literature review and problem statement

Questions related to the definition of the essence of sustainable development policy and the place of innovations in them were studied both in general and in terms of their individual elements. Such studies were conducted both at the level of regulatory systems of individual countries and within international documents of a management nature.

Thus, within the framework of work [1], issues of implementation of the goal of sustainable development No. 7, which is related to ensuring universal access to affordable and clean energy, are investigated. An indicative model of regulatory measures of economic policy was formed, allowing one to achieve the specified goal. Within the scope of the specified work, no proposals were formed regarding the improvement of regulatory measures for the implementation of innovations. In the work, only an approximate model of ways to achieve the specified goal was built.

Paper [2] examines the issues of implementation of the fiscal policy of the state in terms of the implementation of the policy of sustainable development. A study of the effectiveness of resource management based on the consumption of renewable energy sources was conducted. It was concluded that fiscal policy measures should be subordinated to the goals of sustainable development. However, within the framework of the study, no generalized proposals were formed regarding the improvement of the place of innovation within the international policy of sustainable development.

In the course of study [3], an assessment of the impact on investment processes of an inadequate level of determination of the principles of sustainable development policy was provided. It was concluded that the current regulatory constructions, with the help of which the policy of sustainable development is defined, are ineffective. The low level of efficiency is due to the inadequate level of detailing of the goals of sustainable development policy. The impact of the instability of managerial influence on economic processes in terms of the conditions and principles of sustainable development policy was also additionally assessed. The experience of the G7, G20, and BRICS countries regarding the introduction of regulatory mechanisms to eliminate the disadvantages of unstable influence has been studied. It was concluded that the variability of management approaches can be compensated only by modifying marketing approaches and using industrial innovations. However, unified approaches to changing regulatory structures were not formed in the work.

The study of how and by what means the economic goals of the sustainable development policy (No. 7–9, 11, 12) in the EU is reported in work [4]. In the course of the research, it was established that the economic policy of sustainable development in the EU is of a fragmented nature. This is due to the fact that the implementation of the goals of the sustainable development policy will have a negative impact on small and medium-sized enterprises (SMEs), which form the basis of the EU economy. As the main inconsistencies of the policy of sustainable development, the imperfection of regulatory structures in the domain of circulation of innovations and transfer of technologies has been identified. The conclusion was drawn that the indicated shortcomings should be compensated by innovative ecosystems within which, on the basis of cooperation, the necessary goals and objectives of sustainable development can be achieved.

Within the scope of work [5], a study of the obstacles that stand in the way of the implementation of the policy of sustainable development was carried out. As the main obstacle on the way to achieving the goals of sustainable development within the economy, the inconsistency of the approach to the analysis of the level of the gross domestic product has been identified. An experimental method for determining the effectiveness of the possibility of achieving the goals of sustainable development is proposed based on an alternative method for determining economic efficiency. The main goal of the work was only to form an alternative approach to determining the effectiveness of sustainable development goals. This approach is justified only at the level of theoretical research without practical testing. Within the scope of the work, no proposals were made to improve the means of regulatory influence within the framework of sustainable development policy.

Work [6] analyzed the reasons and conditions that affect the effectiveness of sustainable development policy within the EU. The main reason for low efficiency was the imperfection of regulatory structures. It has been proven that the complexity and fragmentation of regulatory measures make it impossible to fully perceive this policy as a whole. As a result, civil society is deprived of the opportunity to understand the meaning of the goals of sustainable development and to submit their proposals to the relevant public institutions. The lack of feedback from society leads to the incorrect application of management decisions within the framework of sustainable development policy. Proposals were made to improve the mechanisms of sustainable development policy implementation. However, such proposals only concern ways of involving members of society and individual social groups in the planning of activities within the framework of sustainable development policy. There were no suggestions for improving the regulatory constructions on the issues of the research.

In the course of study [7], the place of innovations in the general system of sustainable development policy was ana-

lyzed. In the course of the study, it was established that the goals of sustainable development are implemented in different ways within different regulatory systems. Most of such systems are characterized by one common feature, a gap between practical management decisions and the goals of sustainable development. Such differences between the practical implementation and the declared goal of implementing the sustainable development policy have an extremely negative impact on its effectiveness. It is proposed to use innovations as a way to achieve all the goals of sustainable development. However, no conclusions were drawn regarding the improvement of regulatory structures to eliminate the identified shortcomings.

In work [8], practical recommendations were given regarding the universal model of regional management policy based on the principles of sustainable development policy. With the help of three analysis methods: the Rasmussen method, the focus group method, and the Shift-Share Analysis method, it was determined that the only way to implement such a policy is to increase the role of innovation and technology transfer. It is substantiated that only the intensification of innovation processes makes it possible to obtain a basis for the effective implementation of the restrictive principles of sustainable development policy. And only large-scale penetration into all domains of economic relations will make it possible to achieve an effective level of implementation of the goals of sustainable development policy. However, no proposals were made to improve existing regulatory approaches to defining the role, place, and purpose of innovation in this process.

All the works analyzed above [1–8] testify to the focus of scientific research on solving the issue of increasing the effectiveness of sustainable development policy. At the same time, the absolute majority of scientific works do not question the goals of the sustainable development policy defined within this policy. No works were found, within which proposals for improving regulatory approaches to determining the place of innovation within the framework of sustainable development policy would be formed. But we can talk about the existence of many problematic aspects of the implementation of the goals of the sustainable development policy.

All this allows us to state that it is appropriate to conduct a study aimed at the formation of proposals for the improvement of regulatory structures of the place of innovation in the policy of sustainable development. Formed proposals should ensure a higher level of efficiency of sustainable development policy. The conclusions drawn within the scope of this study could become the basis for further scientific developments, as well as the basis for the formation of promising international and national regulatory acts.

3. The aim and objectives of the study

The purpose of our study is to justify directions for improvement of the regulatory constructions of identifying the place of innovation within the framework of the sustainable development policy of the European Union. The obtained achievements could be useful for changing the provisions of international acts of the EU and the UN, national rules of the member states of the European Union, the laws of the European Union.

To achieve this goal, the following tasks are defined:

– to analyze the fundamental approaches to defining the essence and characteristic features of sustainable development policy, to evaluate the place of innovations in it and their purpose;

– to formulate proposals for improving the regulatory structures for the identification of innovations within the framework of the sustainable development policy of the European Union.

4. The study materials and methods

The object of our study is a set of regulatory, normative methods and techniques for determining the place and purpose of innovations within the framework of the sustainable development policy of the European Union (hereinafter referred to as "the EU").

The hypothesis of the study assumes that the mechanisms for identifying the place of innovation, which are already registered within the framework of the EU sustainable development policy, do not meet the needs of its participants and are not effective. When conducting this study, it was assumed that the inconsistency of the existing regulation in the identification of innovations negatively affects the implementation of the goals of sustainable development of the EU.

During the implementation of this study, a simplification was adopted that did not take into account the essence of the goals of the sustainable development policy. The need for such use is due to the fact that such goals were formed as a result of long-term international cooperation and, because of this, are endowed with a high degree of authority.

In the course of the study, the prescriptions of the official acts of the EU institutions of the United Nations Organization (hereinafter referred to as the "UN"), information from open sources were used. In addition, the recommendations of leading international institutions, statistical information and public information were used.

When conducting the research, general scientific theoretical methods were used, namely: synthesis, induction, deduction, analysis, abstraction, comparison, generalization, functional and systemic methods, modeling methods, formal and logical interpretation of the content of scientific and normative categories and concepts.

5. Results of investigating directions for improvement of innovative regulation within the framework of the EU sustainable development policy

5. 1. Studying the essence and signs of sustainable development policy, the place of innovations in it and their purpose

The idea of sustainable economic development began to be actively discussed in scientific circles starting from the second half of the 20th century [4]. The basis of scientific approaches to determining its essence was the hypothesis that stable conditions of economic development contribute to the efficiency of the economic system [4]. The main scientific achievements in this field were represented by the works of scientists from the Massachusetts Institute of Technology, the United States of America [9]. The specified scientific achievements were actively used within the UN and the EU and quickly became popular when making certain management decisions. Thus, in 1972, during the UN Stockholm Conference on environmental issues, the concept of sustainable development, as the idea of the stability of the man-

agement system, was changed. It was supplemented by the concept of limiting the interests of an individual participant in economic or social relations in order to observe the proper conditions of general social existence. The first successful "case" of the implementation of this principle was the limitation of the harmful impact on the environment on the part of product manufacturers, due to the need to ensure the general needs of society [10].

Since 1987, within the framework of the general structure of the UN, a special advisory institution was created, which is entrusted with the implementation and improvement of the concept of sustainable development policy. This body evolved into the World Commission on Environment and Development (hereinafter referred to as the "WCED"). In the course of its operation, this institution received another name – the Gru Harlem Brundtland commission [11]. This name was formed due to the fact that this body was headed for a long time by the political figure from the Kingdom of Sweden – Gru Harlem Brundtland [7]. The whole modern concept of understanding the policy of sustainable development was formed precisely within the functioning of this UN commission. Among the most significant results of its activity, we can name the formation of the main elements of the legal mechanism of sustainable development policy (hereinafter referred to as "SD policy"). Also, the formation of criteria for determining the effectiveness of SD policy implementation within the boundaries of a separate state deserves special attention. For convenience, the main achievements of the "WCED" within the framework of the formation of the essence of the SD policy are depicted in Fig. 1.

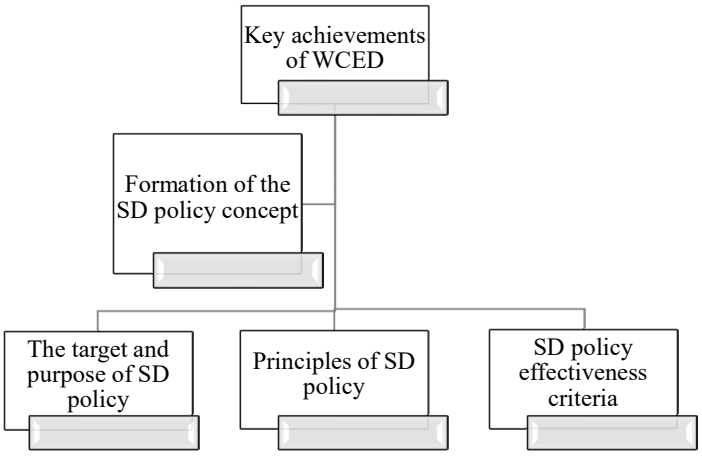

Fig. 1. The main achievements of "WCED" within the framework of the process of forming the essence of sustainable development policy

The main "idea" of the formed concept of the SD policy was the need to limit the absolute capabilities of individual subjects of economic and social relations for the sake of meeting common needs. At the same time, this kind of restrictions were defined as balanced, i.e., those that do not deprive the opportunity to achieve the set goals [7].

Within the EU, the concept of the SD policy has been actively developing since its nominal establishment. One of the first stages of implementation and implementation of the SD policy on the territory of the EU member states was the Commission's Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. With the title – Integration of sustainable development into EU policy: Overview of the EU sustainable development strategy for 2009 [12]. Within this regulatory document, for the first time, the policy goals of the SD were formed, which were to be achieved as a result of joint management actions of all EU members. These goals included:

– promoting a rapid transition to a low-carbon, low-cost economy based on energy– and resource-efficient technologies and sustainable transport, as well as a transition to sustainable consumption behavior;

– activation of environmental efforts to protect biodiversity, water, and other natural resources. Facts show that the destruction of biodiversity continues at an alarming rate. Degradation of ecosystems not only reduces the quality of life and the life of future generations, but it also stands in the way of sustainable, long-term economic development;

– promotion of social engagement. The most vulnerable sectors of society are at risk of being hit the hardest by the economic crisis, and its effects may last for them the longest if effective measures are not taken;

– strengthening the international dimension of sustainable development and intensifying efforts to combat global poverty [12].

However, the practice of implementing the established goals of the SD policy within the EU has proven that achieving the set goals is not easy. Most of the goals were not achieved due to a number of macroeconomic and microeconomic factors [4]. It is because of this that the work on the formation of the concept of sustainable development policy in the EU continued.

In 2010, the framework program "Europe 2020. A strategy for smart, sustainable, and inclusive growth" ("A strategy for smart, sustainable and inclusive growth") was approved within the framework of official EU rules, which is further referred to as the Europe-2020 program [13].

Within this Framework Program, the EU has formulated the following three complementary priorities for all its institutions:

– smart growth: development of an economy based on knowledge and innovation;

– sustainable growth: promoting a more efficient, ecological, and competitive economy;

– inclusive growth: promoting an economy with a high level of employment that ensures social and territorial cohesion.

Another regulatory technique was also used to overcome the high level of abstractness of the formed tasks. Thus, within the framework of this program, additional quantitative indicators were formed, which were to be achieved in the period from 2010 to 2020. These indicators included the following:

– 5 % of the population aged 20–64 must be employed;

– 3 % of EU GDP should be invested in research and development;

– the "20/20/20" climate/energy targets must be achieved (including an increase to 30 % of emissions reduction under appropriate conditions);

– the share of those who left school early should be less than 10 %, and at least 40 % of the younger generation should have higher education;

– 20 million fewer people should be at risk of poverty.

Only a part of such indicators was achieved within the established terms [4].

Within the framework of the EU economic system, the Europe 2020 Framework Program defined the following tasks:

– strengthening of knowledge and innovation as a driving force of future growth;

– improving the quality of education;

– strengthening of scientific research;

– promotion of innovation and transfer of knowledge;

– full use of information and communication technologies;

– providing conditions so that innovative ideas can be transformed into new products and services that create growth and quality jobs [13].

The generally recognized version of the concept of the SD policy was formed in September 2015, by the New York session of the UN General Assembly [14]. It was there that the main goals of sustainable development (Sustainable Development Goals/SDGs) were formed. 17 goals of sustainable development were included among the main ones, which defined 169 tasks detailing them. A graphic representation of the main goals of sustainable development is shown in Fig. 2.

Within the established goals of sustainable development, innovation is indicated (goal No. 9). Thus, from Fig. 2, it is seen that innovation is one of the key objects of sustainable development policy.

Starting from 2021, the EU adopted as a basis the SD policy model, which was formed on the basis of the SDGs defined by the UN and subsequently subordinated its management decisions to the specified model [1].

As a result of the systematic analysis of the given characteristics of the SD policy within the EU, it is possible to highlight the following main characteristic features (Fig. 3).

Fig. 2. Sustainable development goals approved at the New York session of the UN General Assembly (https://ourworldindata.org/sdgs)

The SD policy is a special regulatory regime that includes a system of measures aimed at achieving SDGs

The SD policy is aimed at ensuring the achievement of an optimal combination of general needs and the satisfaction of personal interests

The SD policy is implemented in all domains of social and economic life of the EU

The SD policy is the criterion on which the adoption of most management decisions within the EU, as well as the governments of the EU member states, should be based

The SD policy is based on an inseparable combination of restrictive measures and measures of stimulating influence

Fig. 3. Main features of sustainable development policy in the European Union

As determined within the Framework Program "Europe-2020" [13] and within the SDGs formed by the UN [14], economic growth within the framework of the SD policy can be ensured exclusively due to the implementation and mass dissemination of innovations. The majority of scientists studying this issue agree with this statement [2, 3, 6, 8]. Thus, innovation is given a key place within the framework of SD policy in the EU and in the course of actions aimed at achieving SDGs. Regulation of the status of innovations within the EU is concentrated within a separate special act. Such a regulatory act is the Horizon Europe Framework Program (hereinafter referred to as the Horizon Europe Framework Program) [15]. It is this program that is the fundamental official document within which the essence, order of transfer of innovations and methods of intensification of their implementation processes are determined [16]. In its preamble, it is clearly defined that all means of stimulating and intensifying innovative renewal of the economic sector are subordinated to the SDGs operating within the EU. A systematic analysis of the Framework Program "Horizon Europe" allows us to establish that its main impact is provision of financial resources to the participants of innovative relations. At the same time, it lacks the means by which it would be possible to achieve SDGs within the framework of the SD policy in the EU [2].

The main drawback of this program is that it is aimed exclusively at scaling the processes of innovation turnover and speeding up the processes of transferring innovations from their developer to the business entity that must implement them. At the same time, it almost lacks any form of restrictions, including the optimal restriction of the interests of participants in innovative relations to ensure social and general needs. This confirms that the status of innovations within the EU does not meet the SD policy and SDGs requirements.

5. 2. Proposals for improving the regulatory constructions of the identification of innovations within the framework of the EU sustainable development policy

The inconsistencies of the methods of regulation of innovations in the EU with the requirements of the SD policy in the EU revealed during the research indicate the need to change the approach to their identification.

The main direction of improvement of the regulatory constructions of defining innovations in the EU should be based on those shortcomings that were discovered during the implementation of the SD policy. The first stage (direction) of such improvement should be the formalization of the concept of innovation within the framework of EU acts. The current stage of development of regulatory approaches to determining the essence of innovations is based on a number of international acts – recommendations. These include:

– TRIPS agreement [17];

– WIPO recommendations [18].

However, the stability of innovative development directly depends on understanding the essence of those regulatory rules by which it is regulated [7]. This is evidence that the current state of innovation regulation development in the EU requires an official registration of the definition of innovation at the level of the Horizon Europe framework program. The Oslo recommendations [19] can be the basis for such formalization.

The next (second) direction of improvement of the existing regulatory constructions of identification of innovations for SDGs is the introduction of restrictions on the protection of the interests of individual participants in innovative relations. The most vulnerable participants in innovation relations are innovation developers [20]. A mechanism for guaranteeing the protection of the interests of innovation developers at the expense of EU resources should be implemented within the framework program "Horizon Europe".

Another (third) direction of improving the regulatory methods for identifying innovations for the purpose of SD policy in the EU should be the expansion of restrictions on environmental safety. Requirements for compliance with existing rules of industrial and man-made safety should be added to the existing restrictions on the level of harmful effects of innovations on the environment. Such limitations should be registered at the level of the Horizon Europe Framework Program in order to take them into account at the stage of selecting innovations for their further support.

6. Discussion of results of investigating the directions for improving the regulation of innovative investment

Our research results and the formed approach to determining the essence and place of innovations are explained by the need to solve the identified shortcomings of the sustainable development policy in the EU. The proposed areas of improvement solve most of these shortcomings.

Depicted in Fig. 1 conclusions and recommendations formed in 1972 during the Stockholm UN Conference can be called an attempt by this world organization to influence the world economy. The scientific achievements taken as a basis, focused on the realization of the conditions of stable development, were transformed into another concept. It now began to include not only the conditions for providing businesses with stable organizational rules for their activities and economic regularities in the course of economic relations. This concept now began to include certain restrictive measures aimed at finding the optimal mechanism for combining public and private interests. It is now based on the idea that not only stability is the key to effective economic growth. An additional factor is fair and equal environmental conditions in the broadest sense. Later, this kind of restrictions were implemented into another concept, in which the policy of sustainable development began to be understood as a system of restrictive principles for the functioning of the economy, society, and the state.

The concept of SD policy, formed within the framework of WCED activities, the achievements of which are shown in Fig. 1, became a fundamental moment in the history of its formation. All the principles on the basis of which it is implemented within the modern stage of the evolutionary development of humankind were achieved thanks to its functioning. Thus, the main advantage of the results of the "WCED" can be called the determination of the place of SD policy within the framework of international and national regulation. All the rules of the SD policy received a place above the national regulatory systems. They have become the guiding vector on the basis of which, and taking into account, management decisions at the national (intrastate) level should be made. The main drawback of the formed concept is that all the principles of the SD policy are extremely abstract in nature and do not take into account any regional features of economic, social, political, and social development. This, too high level of abstractness, determines the need for significant refinement and additional implementation of the SD policy at the level of individual states.

The main advantage of the proposal to register a formalized definition of innovation is the stabilizing effect that should follow after its implementation. In this case, the participants of

innovative relations will have more specific opportunities for an adequate understanding of all innovation implementation processes. The introduction of a formalized definition of innovation will become the basis for the consolidation of measures of innovation stimulation on innovations of critical importance for the EU and, at the same time, will provide an opportunity to achieve the SDGs depicted in Fig. 2. The main disadvantage of the proposed direction is that any formalized definition will always differ from real economic transactions. This shortcoming should be compensated by means of such a method as its periodic review based on the Oslo recommendations.

A mandatory condition for the effectiveness of the implementation of the specified changes is that the list of the main forms of technology transfer must be established in the relevant international legal documents. It is expedient to include the framework program "Horizon Europe" among them. It is this international agreement that reflects the basis of regulatory influence on innovation within the EU.

As a basis for the improvement of the framework program "Horizon Europe", it is expedient to put already existing international developments regarding the regulatory improvement of innovations. Such recommendations are formed on a systematic basis within the framework of the functioning of a permanent institution – the Organization for Economic Cooperation and Development (hereinafter referred to as "OECD") [19]. Thus, according to the mentioned recommendations, an innovation is not an object of legal regulation but a product. The product is proposed to understand the result of economic activity, i.e., whether it is a production product or consumer goods. Thus, the limitation of innovation at the level of results of systematic activity on the creation of a social product allows one to concentrate means of support in business processes. It is precisely within this domain of the economy that results are created that most effectively contribute to the economic growth of the region and the country.

Proposed in Fig. 3 areas of improvement of the regulatory constructions of the definition of innovation within the EU, for the purposes of the SD policy, are our vision of this issue. When identifying them, those manifestations of them, which are discussed in scientific research, were taken into account. In general, these areas are suitable both for use within the definition of official rules for the implementation of innovative activities and for its further scientific development.

The main advantage of our research is that its results can be used within the framework of the legal technique of forming the provisions of normative acts of international and national legislation. Further research into the outlined issues will make it possible to obtain scientific results of a practical orientation. If the process of improving the forms of technology transfer is formed on its basis, the proposed concept will need to be refined. However, in any case, all previous scientific studies [1–8] either did not formulate similar propositions or investigated separate aspects. Various options for solving the issue of the existing inefficient regulatory approach to determining the essence of innovation in the context of SD policy in the EU were proposed. However, all these results do not have signs of integrity and are not aimed at all participants of innovative relations.

In the course of the research, directions were formed, solutions to most of the actual problems that exist when determining the issue of innovative investment. The main advantage is that they are aimed at creating conditions for more effective implementation of innovative activities and allow achieving the SDGs. The proposed proposals offer more effective mechanisms for solving existing problems with increasing the efficiency of identification of forms of technology transfer than was proposed in works [1, 2, 6–8]. Greater efficiency is determined by the fact that the conclusions formed as a result of this study solve a larger number of SDGs depicted in Fig. 3. Also, the research results solve the problems formed within the framework of works [1–8], while their authors only outlined the main regularities of the existing state.

This study is subject to limitations due to the sources of the collected information. Information about existing innovations and forms of their transfer is limited in access, as it is often a commercial secret of business entities.

The main drawback of the study is the episodic nature of systematized information about examples of innovation transfer that have already taken place. Another drawback is that it is theoretical in nature since there is no possibility of testing the generated results experimentally.

The results of this scientific research contain conclusions that can become the basis for the formation of official regulatory rules, prospective normative legal acts. The possibility of their implementation within the limits of official regulatory rules is their advantage over similar studies. Further development of this research may consist in the development of legal mechanisms for registering the concept of innovation. On the basis of this study, it is possible to conduct further scientific research in the field of state regulation and regulatory influence. The main difficulties in the way of further development of this research will be the regional specificity of defining the essence of innovation and different national approaches to defining the SD policy.

7. Conclusions

1. It has been determined that existing regulatory techniques for identifying innovations within the EU do not correspond either to SDGs or to the SD policy introduced in the EU.

2. Recommendations on improving regulatory techniques for identifying the status of innovations for SD policy in the EU have been formulated:

– formalization of the definition of innovations based on the recommendations of "Oslo";

– introducing a system of guarantees for developers of innovations;

– the spread of restrictive measures regarding innovations that are being developed also in the domains of industrial and man-made safety.

The expediency of making changes to the provisions of such an international agreement as the Horizon Europe Framework Program has been proven.

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.

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