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IMPROVING THE TECHNOLOGY TRANSFER IN UKRAINE UNDER THE CONDITIONS OF IMPLEMENTING THE INTERNATIONAL POLICY OF SUSTAINABLE DEVELOPMENT

The object of this research is a set of management and regulatory methods of state influence on the technology transfer of Ukraine in the context of the implementation of the global model of sustainable development policy. Methods and techniques of public regulation of technology transfer in Ukraine and its compliance with the requirements of sustainable development are studied. The analysis and generalization of the existing world and international approaches to the definition of sustainable development policy established that technology transfer is one of the key objects of managerial influence. It has been proven that the existing regulatory model of technology transfer in Ukraine, formed without taking into account the goals of sustainable development, does not meet its strategic development objectives. The expediency of improving the existing concept of regulation and management of technology transfer in Ukraine in order to eliminate the identified inconsistencies is substantiated. Recommendations have been made regarding directions for improving regulatory and management approaches to determining technology transfer in Ukraine. The necessity of making changes to the provisions of the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer" has been proved, with the aim of bringing it into line with the international policy of sustainable development.

The research is aimed at the formation of general theoretical foundations for the improvement of managerial and regulatory methods of technology transfer in Ukraine. The research results can be used in the improvement of public rules of technology transfer, the formation of strategic public management decisions, state technological policy and serve as a basis for further scientific research on these issues. The conclusions obtained in the course of this research can be used to solve issues and problems of improving the current legislation of Ukraine to the requirements of international agreements and documents.

Keywords: technology regulation, forms of technology transfer, unification of transfer forms, state technology policy.

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1. Introduction

The modern world economic system is characterized by a high degree of globalization, where the economies of many countries exist exclusively due to external relations and partner trade relations. In such conditions, the degree of economic development directly depends on the level of international trade and the competitiveness of the national producer on the relevant commodity market [1].

At the same time, so globalized economic systems become dependent on many adverse consequences of both global and domestic national scale. Precisely in order to overcome such challenges and preserve general well-being, the United Nations (hereinafter referred to as the "UN") in 2015 formed a special regulatory and management approach to the forms, means and methods of international

and state regulation of the globalized world economy. This approach was defined as "sustainable development", and the system of regulatory measures was defined as "sustainable development policy".

In general, the policy of sustainable development can be characterized as a global balanced attempt to ensure stable global economic growth, taking into account the general public interests of all mankind. This is an approximate model of the influence of the state on its society on the domestic economy, based on the basic democratic values and principles of the market economy. The comprehensiveness of the specified model of state influence determines the fact that it determines many aspects of social life, including the rules of functioning of the production sphere. How and under what conditions technology transfer should function cannot be bypassed by such rules.

The rules of technology transfer in Ukraine were defined for the first time at the level of the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer", adopted in 2006 [2]. Since their official approval, the requirements and rules for the technology transfer have not undergone drastic changes, they have only been modified to meet the needs of making certain management decisions. The system of measures for the regulation of technology transfer in Ukraine needs updating and improvement, one of the directions of which should be to bring them into line with the existing concept of sustainable development policy.

All this allows to state that it is expedient to conduct a study aimed at forming proposals for improving the regulation of technology transfer in Ukraine. Formed proposals should ensure a higher level of its effectiveness. The conclusions formed within the scope of this research can become the basis for further scientific developments, as well as the basis for the formation of promising international and national regulatory acts.

The aim of this research is the formation of directions for improving the methods of management and regulation of technology transfer in Ukraine, in the part related to bringing it into line with the international policy of sustainable development. This will make it possible to form recommendations for the state authorities of Ukraine when they implement management decisions within the framework of the state technology policy and form the basis of proposals to change its national regulatory acts.

2. Materials and Methods

The object of this research is a set of management and regulatory methods of state influence on the technology transfer of Ukraine in the context of the implementation of the global model of sustainable development policy. Methods and techniques of public regulation of technology transfer in Ukraine and its compliance with the requirements of sustainable development are studied.

During the research, a hypothesis was formed that the existing regulatory techniques and methods of determining the technology transfer in Ukraine do not correspond to the concept of sustainable development.

During the implementation of this research, a simplification was allowed, within which the regional peculiarities of the implementation of sustainable development policy at the level of regional systems and within individual countries were not taken into account. Approaches that are common and common to such an international policy as a whole were adopted as a basis.

In the course of research, the decisions of the institutions of the UN, the European Union, statistical information and other public information were used.

When conducting the research, general scientific methods were used, namely: deduction, induction, synthesis, analysis, comparison, abstraction, generalization, system and functional methods, modeling methods.

3. Results and Discussion

The idea of sustainable economic development began to be actively discussed in scientific circles since the 60s of the 20th century. Already in 1972, within the framework of the UN Stockholm Conference on Environmental Problems, a need was formed to limit the harmful impact on the environment by product manufacturers, due to the need to ensure the general needs of society [3].

In 1987, the UN created the World Commission on Environment and Development (WCED), better known as the Gro Harlem Brundtland Commission [4]. Within the functioning of this international institution, the main principles and indicators of the concept of sustainable and balanced economic development were formed. It was during this period that the understanding of the need to limit the absolute rights and freedoms of all participants in international relations in order to ensure the general needs of humanity was initiated.

The modern version of the concept of sustainable development was formed in September 2015, within the New York session of the UN General Assembly [5]. It was here that the main goals of sustainable development were formed (hereinafter referred to as the "SDG"), which later formed the basis of most management decisions of state bodies of the world countries, including Ukraine. Among them were 17 sustainable development goals, which defined 169 responding tasks. The classification of the main goals of sustainable development is shown in Fig. 1.

At the same time, the concept of sustainable development policy has acquired a complete character and plays the role of a certain limiting tool, taking into account all management decisions, without exception, concerning one or more sectors within which the SDGs have been defined. As follows from the data shown in Fig. 1, such spheres include the economic system, a component of which is the production sector.

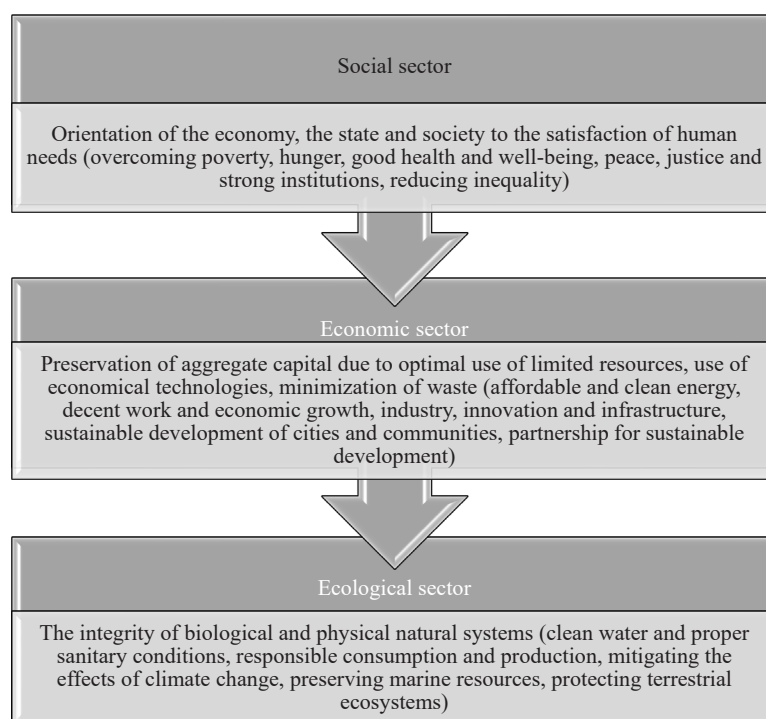


Fig. 1. Classification of the main goals of sustainable development, approved by the UN General Assembly in 2015 [5]

Due to such a model, SDGs begin to act within the limits of the rules for the use of means and technologies of production, thereby influencing their management algorithms and their transfer. Such influence can be characterized as based on a systematic and inextricable combination of restrictive and encouraging measures of regulatory and managerial influence. When the private interests of a business entity in exclusively obtaining profit due to the exploitation of a certain technology must be limited in order to ensure the interests of society and humanity.

A similar model of sustainable development was implemented within the European Union (hereinafter referred to as "EU"). However, the EU started developing its concepts of sustainable development in 2001 [6]. In 2010, within the EU, a 10-year development strategy was approved – "Europe 2020: a strategy for smart, sustainable and inclusive growth" [7]. Within this program, the following SDGs for the EU for the period from 2010 to 2020 were defined:

- *Smart growth*: development of an economy based on knowledge and innovation.
- *Sustainable growth*: promoting a more efficient, green and competitive economy.
- *Inclusive growth*: promoting an economy with high levels of employment that ensures social and territorial cohesion.

The SDGs formed from this moment are taken into account in all, without exception, management and regulatory decisions made within the EU. The regulation of technology transfer and stimulation of innovative development is no exception to this rule. Thus, the Framework Program "Horizon Europe" determined that the SDG is the criterion by which innovations and technologies aimed at their achievement receive the priority right to support and stimulation [8]. Given that the Horizon Europe Framework Program is the main regulatory document of the EU in the field of circulation of innovations and technology transfer, such a limitation significantly affects the determination of the directions of innovative and technological development [9].

The concept of sustainable development policy was implemented into the national system of regulatory measures of Ukraine. Thus, on December 24, 1999, the Resolution of the Verkhovna Rada of Ukraine adopted the Concept of Sustainable Development of Settlements [10]. On April 26, 2003, the Cabinet of Ministers of Ukraine adopted the Comprehensive Program of Implementation at the National Level of the Decisions Adopted at the World Summit on Sustainable Development for 2003–2015 (expired) [11]. On July 10, 2019, by order of the Cabinet of Ministers of Ukraine, the Strategy for the development of the sphere of innovative activity for the period until 2030 was approved [12].

At the same time, those regulatory approaches to the identification of technology transfer, which were established in 2009, were not reviewed in accordance with the SDGs, which were established within the UN and the EU. Thus, according to the provisions of Article 1 of the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer", technology transfer is the technology transfer executed by concluding a bilateral or multilateral agreement between individuals and/or legal entities, which establishes, changes or terminates property rights and obligations regarding technology and/or its components [2]. The systematic analysis of the given regulatory act allows to establish that none of the SDGs, which were implemented into its regulatory system, are taken into account in the

management and state regulation of technology transfer in Ukraine. As a result, when making management decisions within the framework of the regulation of technology transfer relations, no participant in these social relations has either an obligation or even a recommendation to take into account those restrictive criteria established within the UN and the EU (systematized in Fig. 1). Because of this, technological and innovative development within Ukraine is not aimed at achieving the SDGs and does not directly or indirectly contribute to this.

This situation should be corrected by changing the fundamental regulatory approach. As a result of modeling the possible directions of change in the management and regulatory approach to the SDG implementation within the framework of technology transfer in Ukraine, it is possible to form the following indicative directions for the modification of official prescriptions in Ukraine, namely:

- implementation of its SDG list, which will be based on similar goals formed within the framework of the UN and the EU;
- imposing of an obligation on officials of the relevant state authorities and local self-governments when determining management decisions regarding the regulation of technology transfer relations, to proceed and be guided by the SDGs pre-approved within the framework of the official system of prescriptions;
- implementation of the provisions of the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer" of special restrictive principles of technology transfer, which can potentially have a negative impact on the SDG achievement, previously determined within the framework of state administration;
- implementation of forced buyout procedures (paid nationalization) of those technologies that, as a result of their final implementation, are able to achieve the SDG, determined at the state level, with their subsequent mass distribution among business entities.

The proposed directions for improving the existing managerial and regulatory approaches to technology transfer in Ukraine will allow to subordinate the general direction of innovative and technological development to global goals and objectives with the aim of achieving the SDGs defined within the UN and EU. Identification of such goals and concentration of efforts on their achievement will allow speeding up the overall process of economic development of Ukraine. Creating the prerequisites for achieving this result is the main advantage of the proposed directions for improving technology transfer in Ukraine. At the same time, the main drawback is that all the listed measures to one degree or another narrow or limit the interests of those business entities that have developed (created) or acquired technology on a legal basis. Like any other restrictive measures, these measures should be implemented according to a balanced procedure, which should be accompanied by compensation for the value of those assets that these subjects may be deprived of or may be restricted in their free use. This deficiency must be leveled with the help of compensatory mechanisms of a property nature.

4. Conclusions

It has been determined that the current legislation of Ukraine on technology transfer does not correlate with the SDGs defined at the UN and EU level.

The necessity has been proven and recommendations have been made regarding the areas of improvement of the current management and regulatory approaches in order to bring them into line with the global policy of sustainable development, namely:

- implementation of the SDG national list;
- when determining management decisions regarding the regulation of technology transfer relations, proceed and be guided by the SDGs;
- prohibit and/or limit the technology transfer, which can potentially have a negative impact on the SDG achievement;
- implementation of procedures for forced removal and mass distribution of technologies capable of achieving the SDGs.

Conflict of interest

The author declares that he has no conflict of interest in relation to this study, including financial, personal, authorship or other, which could affect the study and its results presented in this article.

Financing

The study was conducted without financial support.

Data availability

The manuscript has no associated data.

Use of artificial intelligence

The author confirms that he did not use artificial intelligence technologies when creating the presented work.

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