

Theoretical and Methodological Aspects for the Development of a Creative Economy in the Context of the Formation of an Innovative Business Ecosystem

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Abstract. The aim of the study is to analyze the theoretical basis of creative economy and its development trends in the context of innovative business ecosystems formation. The scientific novelty of the research consists in solving the most important scientific and applied problem - further development of theoretical provisions of creative economy, ecosystems, as well as substantiation of the conceptual approach to the formation of innovative business ecosystem as a coherent management model. In the process of research, general scientific and special methods were used: scientific abstraction, deduction, analysis and synthesis, system and critical analysis, structural-logical, ascending from the abstract to the concrete, and statistical analysis. It has been substantiated that the priority development of creative economy as a strategic driver of sustainable development is the formation of an ecosystem conducive to the development of complex non-linear dynamic innovation processes, development of value propositions and value chain. The analysis of theoretical and methodological aspects of formation and functioning of ecosystems indicates the lack of development of this problem and the need to develop scientific approaches to their identification. Generalization of the results of theoretical analysis allowed us to group ecosystems according to the identified attributes into five main types. It was substantiated that a sustainable business

ecosystem is a favorable environment for innovation to increase its value and contribute to the achievement of sustainable development goals. It is proposed to consider a sustainable "business ecosystem" as a coherent management model with established characteristics, which describes an aggregate system of business ecosystem modules that interact with each other and are focused on co-creation and co-production of value.

Keyword: *business ecosystem, innovation, coherent model, creative economy.*

I. INTRODUCTION

The global economy is currently undergoing processes of convergence associated with the creation of innovative technologies, digitalisation and exponential growth of knowledge, and increased intensity of international competition. The formation of an environment conducive to the development of complex non-linear dynamic innovation processes, the development of value propositions and value chains is among the priorities of the creative economy as a strategic driver of sustainable development. Its focus is now on building effective

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innovation ecosystems based on the Industry 4.0 paradigm. In this context, research into trends in creative economy development in the context of business ecosystem formation is becoming more relevant.

The papers of foreign authors Howkins [1], Higgs [2], Henry [3], Sung [4], Andres [5], Štreimikienė [6], Pratt [7], Rodrigues-Insuasti [8] provide a theoretical basis for the creative economy and, particularly, its conceptual approaches, formation mechanisms and intellectual structure development trends, assessment of its resources, degree of influence on competitiveness and other aspects. The concept of creative economy formed on the basis of the results of these studies acquires particular relevance in the context of interdisciplinary research into sustainable development and the socio-economic relations unfolding therein.

At the same time, the creative economy is changing traditional notions of economic development models, value proposition creation, environment and the mechanism of competitive business process management strategies based on the concept of ecosystems.

Moore was one of the first to use the term "ecosystem" in social sciences and humanities [9]. The problems of the formation and functioning of ecosystems are devoted to the works of Cennamo [10], Jacobides [11], Tsujimoto [12], Pidun [13], Senyo [14], Ehrensperger [15], Gueler [16], Dima [17] and other authors.

At the same time, the incomplete nature of the theoretical and methodological foundations of the ecosystem in the scientific literature indicates the lack of unified approaches to its terminology, definition of the structure formation factors, insufficient description of the essential characteristics and their impact on the development of creative economy, determines the relevance of further systematic research in this area.

The aim of the research is to analyze the theoretical basis of creative economy and trends of its development in the context of innovative business ecosystems formation.

The objectives of the study are to summarize the theoretical and methodological support of the investigated issues and substantiate the conceptual approach to the formation of innovative business ecosystems.

The scientific novelty of the research consists in solving the most important scientific and applied problem - further development of theoretical positions of creative economy, ecosystems, as well as substantiation of the conceptual approach to the formation of innovative business ecosystem as a coherent management model.

The research period is 2022-2023.

II. MATERIALS AND METHODS

Achievement of the research goal and solution of the tasks set determined the use of general scientific and special methods of scientific knowledge: scientific abstraction, deduction, analysis and synthesis (to conceptualise the essential content of creative economy as a paradigm of modern economic development), systemic

and critical analysis of the interpretation of the concept of "ecosystem", structural-logical, ascent from the abstract to the particular (to substantiate the conceptual approach to forming innovative business ecosystems)

III. RESULTS AND DISCUSSION

Over the last three decades the term "creative economy" has attracted increasing interest worldwide [4] as a way of adapting the economy and society to globalisation changes [4], [18]. Moreover, it is because of its adaptability that the creative economy is the driving force behind national economies to achieve sustainable development goals [6], [7], [17] by structuring the entire economic system on an intellectual basis and creating conditions for the unlocking of personal potential [4].

The creative economy is a paradigm of modern economic development based on the creation and management of innovation, enabling the transformation of industries in which value creation is the creation of creative ideas turned into goods or services.

Creative economy is an analytical category that covers a very wide range of economic activities - from culture, art to software development, forming the digital economy and influencing the future of the whole society [19].

Experts estimate the contribution of the creative economy to the global gross domestic product to be about 3%, and roughly equivalent to its contribution to world trade. It is expected to increase due to the introduction of digitalisation and advanced technologies that characterise Industry 4.0 [20].

The development of a creative economy is crucial for increasing a country's export potential, income growth, job creation and international trade [2], [3]. Moreover, it not only stimulates the development of innovation, but also acts as a catalyst in industry, energy, transport, agricultural production, trade and other sectors of the economy, as well as contributing to the process of social inclusion.

Due to the evolution of digitalisation and the changing behaviour of both producers and consumers of innovative goods and services, the creative economy is universal in generating and implementing change in the economic and social life of society.

Such versatility and knowledge-intensive nature of the creative economy has attracted much attention from the global scientific community and business world [21], [22], and allowed the development of theoretical, empirical and practical application bases based on different approaches to its study [2].

Thus, the results of a December 2021 study of the intellectual structure of the creative economy, using the Scopus database (by the scientific publishing house Elsevier, Amsterdam, Netherlands) and the VOSviewer bibliometric software application (developed by Leiden University, Leiden, Netherlands) in the subject area of business, management and accounting, indicate that the creative economy is a growing research field with 687 articles, 1340 authors and 64 countries represented [8].

It should be noted that, until recently, such research has been conducted in the subject area of social sciences, humanities, culture, art and urban studies.

Since the mid-1990s, scientists, government agencies and public organizations have used the concepts of "new idea", "creativity", "creative idea", "creative activity", "creativity", "intellectual capital", "intellectual property", "innovation" as the basis for defining the creative economy. [1], [9], [23], [24], "business innovation" [25], "creative industries" [26].

Thus, UNCTAD considers the artistic, cultural and industrial aspects of the creative economy. In 2008, together with the United Nations Development Programme (UNDP) «summarise the definition of the «Creative Economy» as follows:

1. The Creative Economy is an evolving concept based on creative assets potentially generating economic growth and development;
2. It can foster income generation, job creation and export earnings while promoting social inclusion, cultural diversity, and human development;
3. It embraces economic, cultural and social aspects interacting with technology, intellectual property and tourism objectives;
4. It is a set of knowledge-based economic activities with a development dimension and crosscutting linkages at macro and micro levels to the overall economy;
5. It is a feasible development option calling for innovative multidisciplinary policy responses and interministerial action» [20].

The creative economy is also sometimes referred to as the 'orange economy', which is a broader concept that includes the interaction of companies with consumers and other business entities based on creative activities such as research and development (R&D), which is not classified as a creative industry.

John Hawkins, the world's leading researcher of the creative economy, emphasizes the importance of her field in creating an enabling ecosystem for creativity [27].

In the final report on the state and prospects of the creative economy in Germany, UK, France, Italy, Spain, Turkey, Japan, South Korea and Australia, prepared by Deloitte LLP for Netflix International B.V. for the period 2011-218, the authors view it as an ecosystem made up of a large number of activities, characterized by opportunities for income and job creation through individual creativity, development and use of intellectual property [28].

The results of our theoretical analysis of the various definitions of the creative economy led us to conclude that they are based, depending on the subject area of research, on the categories of "economic value", "sociological value", "business value" and their combinations.

However, in our view, globalisation processes in the world are proceeding so rapidly that there is a need to review and change the development paradigm of the creative economy. For example, the digitalisation and greening of business processes, which affect business performance, has necessitated a transformation in

company management strategies through the creation of successful innovation ecosystems. By operating on the basis of this concept, companies, transcending corporate boundaries, will be able to increase the speed of innovation, improve its quality and increase its value.

Over the last decade, interest in the concept of ecosystem as a new way of reflecting the competitive environment has increased significantly. Borrowed from biology, the term "ecosystem" is commonly used to describe a set of interacting and complementary companies that collectively generate ecosystem-level outcomes. It is widely used by academia and business in contexts related to strategic management, innovation policy, economic system development, industry and entrepreneurship. The concepts of industrial ecosystem, digital ecosystem, entrepreneurial ecosystem, innovation ecosystem and others have spread.

In our opinion, in order to understand the process of ecosystem formation, it is necessary to gain an understanding of the nature of its emergence, purpose, composition of participants, levels of formation and other specific characteristics.

To this end, we have conducted a theoretical study of the interpretation of the concept of "ecosystem" by various authors (table 1).

TABLE 1 THEORETICAL ANALYSIS OF THE INTERPRETATION OF THE TERM «ECOSYSTEM» (COMPILED BY THE AUTHOR)

Authors	Interpretation of the Concept
Moore J. [29]	Companies facing the challenges of implementing innovation in their operations experience radical changes in the external environment, often negative ones. To avoid them, companies need to be seen not as participants in an industry, but as part of a broader business ecosystem. In such an ecosystem, organisations, institutions and individuals come together around a focal company, working together and competitively to create shared value and customer satisfaction. The ecosystem of any company (other than itself and its owners) includes consumers, suppliers, intermediaries, government agencies and other stakeholders evolving through competition, cooperation and interdependence.
Dima, A., Bugheanu, A., Dinulescu, R., Potcovaru, A., Stefanescu, C., Marin, I.; Gueler, M., Schneider, S.;	Business ecosystem is a group of companies that pool their expertise around innovation to develop innovative products and customer satisfaction.

Ehrensperger, R., Sauerwein, C., Breu, R.; Senyo, P., Liu, K., Effah, J. [14] – [17]	
Pidun, U., Reeves M., Schuessler M. [13]	A business ecosystem is a dynamic group of largely independent economic players creating goods or services that are the result of agreed solutions. The authors propose to see the business ecosystem as a solution to a business problem, a way of organising to realise a particular value proposition. For this, the business ecosystem is a management model that competes with other ways of organising the creation of a product or service, such as a vertically structured organisation, a hierarchical supply chain or an open market model.
Eisenhardt, K. & Galunic, D. [30]	An ecosystem can be seen as a network of corporate organisations whose various interests are united by a common goal, and the effectiveness of each organisation depends on the other participants in the chain.
Tsujimoto, M., Kajikawa, Y., Tomita, J., Matsumoto, Y. [12]	The ecosystem is a community of companies that is constantly transforming because it needs to create new value through cooperation instead of competing alternatives.
Jacobides, M., Cennamo, C., Gawer, A. [11]	An ecosystem is a complex of organisations (multifaceted, mutually reinforcing) that is not fully controlled hierarchically.
Pidorycheva, I. Yu. [31]	Innovation ecosystem is an open, holistic, dynamic network, consisting of a spatial community of organizations and individuals with different competencies and roles, coevolving in a particular institutional environment under the influence of influenced by business, regulatory and innovation environments, sharing knowledge and resources, and allocating obligations, risks and benefits in the process of creating innovation and benefits in the process of creating innovations in which consumers are interested.
Burda, Y., Volkova, I., Gavrikova, E. [32]	Innovation ecosystem is a network of legally independent economic agents of different compositions who may be direct competitors but cooperate to

	create a comprehensive value proposition for customers.
Wareham J., Fox P., Giner J. [33]	The authors suggest that ecosystems should be seen as digital platforms - 'semi-regulated markets' that facilitate entrepreneurial activity under the coordination and guidance of the platform sponsor.
Cennamo, C., Santalo, J. [10]	The authors suggest that ecosystems should be seen as digital platforms - "multistakeholder markets" that allow transactions among specific groups of users.
Stevencon, H., Jarillo Mossi, J. [34]	The authors view the entrepreneurial ecosystem as 'a process of creating value by combining a unique combination of resources to exploit an opportunity'.
Malecki, E. [35]	The author argues that the entrepreneurial ecosystem emerged in the early 1990s, identifying contributions from Moore J.'s 'business ecosystem', Van de Ven's 'infrastructure for entrepreneurship' and the concept of a 'local entrepreneurial system'.

Summarizing the results of the theoretical analysis, we can conclude that at present there is no unified view among the authors on the interpretation of the concept of "ecosystem", the vision of its essence and expediency of application, the number of structural elements of which it consists and the relationships between them.

However, based on the results obtained, the following main approaches to its definition can be identified as:

1. A "business ecosystem" in which the participants focus around the focal company and its surrounding environment without reference to a specific geographical area;
2. An "ecosystem" as an environment formed at different spatial levels without reference to focal companies or innovations;
3. An "innovation ecosystem" centred around a specific innovation or new value proposition, and a group of supporting actors;
4. An "ecosystem as a digital platform" around which other stakeholders focus;
5. An "entrepreneurial ecosystem", which is a set of actors interacting within a geographically bounded entrepreneurial environment and enablers of productive entrepreneurship.

One of the most important tasks in this study is to justify a conceptual approach to the formation of innovative business ecosystems.

The business ecosystem is widely used to study a complex social and economic system from a business perspective. A key feature of such an ecosystem is that its members do not simply compete with each other using their own resources, but cooperate, interact and use shared resources, knowledge, networks and infrastructure to create value together.

The transition to a creative economy affects the shaping of the entire business ecosystem, as the process of managing the flow of value creation is based on the co-creation and capture of value.

It should also be noted that it is only recently that research into the creative economy has been carried out in the context of building a sustainable business ecosystem [23].

A sustainable business ecosystem is an enabling environment for innovation to add value, and therefore contributes to the achievement of sustainable development goals. Creating an aggregate framework not only provides a systematic approach to modelling the business ecosystem, but also provides a methodological basis for investigating the complex systems aspect of the business ecosystem.

We propose to consider the "business ecosystem" as a coherent governance model, which is characterized by:

1. Modularity. In contrast to vertically integrated models or hierarchical supply chains, in business ecosystems, supply options are designed independently of one another but function as a coherent whole. In many cases, the consumer can choose any or a combination of options.
2. Regulability. In contrast to the open market model, the contributions of ecosystem actors are usually adapted to the ecosystem and are mutually compatible. This means that participation in an ecosystem requires some investment in a particular ecosystem.
3. Multilateralism. Unlike open market models, the business ecosystem builds relationships between many partners that cannot be broken down into a set of simple bilateral relationships. This approach should be applied when it is important to achieve cohesion among all partners to create innovation as a common goal.
4. Coordination. Unlike vertically integrated models or supply chains, business ecosystems are not fully controlled hierarchically, but there is some mechanism for coordination - for example through standards, regulations or processes - outside the simple open market mechanism.
5. Cospecialisation. Partners are involved in the co-creation of new value (coproduction), but are involved in different but complementary activities. Each of the actors in the ecosystem contributes their inputs and resources to the development of the innovation.
6. Collaborative. Ecosystem members interact with each other by creating interactive collaborative

innovation networks (COINs) - self-organised, united by a shared vision, common goals and a shared value system, reflecting the growing complexity of the innovation process.

7. Coevolution. In business ecosystems, the activities of each actor cannot be viewed in isolation: changes in one part of the system can have long-lasting and often unanticipated consequences in other parts of the system. In such an environment, companies pool their capabilities around innovation - working together and competitively to meet consumer needs, support new products and ultimately take innovation to the next level.

Therefore, an effective governance model must establish an appropriate level of openness, balancing "open" elements (attracting partners, driving growth and enabling innovation) and "closed" elements (ensuring ongoing quality and consistency); be adaptive; be dynamic; and provide social, environmental or economic value to the business ecosystem.

It should also be noted that traditionally "a business model describes the rationale of how an organization creates, delivers, and captures value" [37]. [37], and our proposed coherent governance model describes an aggregated system of modules of an innovative business ecosystem that interact with each other and focus on co-creation and co-capture of value.

Companies that form such business ecosystems will be better able to innovate and improve capital efficiency while developing and implementing value propositions and value chains.

IV. CONCLUSIONS

Systematization of ideas about the creative economy as a paradigm of sustainable development made it possible to generalize the fundamental changes in innovation processes, their deployment and development associated with the acceleration of scientific and technological progress, digitalization and greening, the emergence of new conditions and models of cooperation between subjects of innovation activity, which created the basis for the emergence of the concept ecosystems.

As a result of a comprehensive study of the origins and views on ecosystems, the unformedness of scientific ideas about the essence and nature of ecosystems has been established, and the existing approaches to their identification have been grouped by us into five main types: "business ecosystem", whose participants are concentrated around the focus company and its environment without reference to a certain geographical area; "ecosystem" as an environment formed at different spatial levels without reference to focus companies or innovations; an "innovation ecosystem" centered around a particular innovation or new value proposition and the group of contributors that support it; "ecosystem as a digital platform" around which other interested participants are concentrated; "entrepreneurial

ecosystem”, which is a set of participants interacting within a geographic business environment and factors that contribute to the development of productive entrepreneurship.

Based on the analysis of the features of the ecosystem approach, it was found that a sustainable business ecosystem is a favorable environment for introducing innovations in order to increase its value, and, therefore, contributes to the achievement of sustainable development goals. The creation of an aggregate structure not only provides a systematic approach to business ecosystem modeling, but also provides a methodological framework for researching the complex systems aspect of the business ecosystem.

In this regard, we propose to consider the "business ecosystem" as a coherent governance model that will provide innovative approaches to assessing, comparing and effectively managing value streams, access to new knowledge, resources and the capabilities of all participants in the ecosystem, and as a result, will contribute to the achievement of a synergistic effect in managing the development of the intellectual environment.

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