Artificial Intelligence in the Mirror of Innovative Changes in the Conditions of a Mobilization Economy

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Received date: May 7, 2024, revision date: June 14, 2024, Accepted: July 2, 2024

ABSTRACT

Digitalization of the economy is considered as the most important component of the intellectualization of innovative technical and technological changes in the mobilization economy. It is argued that artificial intelligence exhibits a dichotomous character when it is implemented at various "points" of life in society and business. The aim of this article is to explore the role of digitalization of the economy within the context of the mobilization economy and to investigate the implementation and impact of artificial intelligence (AI) as a tool for managing economic growth. The article seeks to highlight the dichotomous nature of AI when applied across various aspects of society and business within the mobilization economy. Additionally, the article aims to expand the terminology and conceptual framework related to understanding AI's role in driving economic growth in a mobilization economy. Furthermore, the article proposes a model for activating AI within the framework of managing innovative changes, with the goal of ensuring the implementation of various transformations in value chains to enhance the competitiveness of stakeholders and to strengthen the economic sovereignty of the country. Overall, the article aims to contribute to the understanding and effective utilization of AI within the mobilization economy to drive sustainable economic development and competitiveness.

Keywords: mobilization economy, innovative changes, artificial intelligence, intelligence-producing "phagocytes," "hormones" of artificial intelligence, "cycotins" in the artificial intelligence system, virulence of artificial intelligence, communication multiplier, business competitiveness, economic and technological sovereignty.

1. Introduction

Scientific achievements and promising developments available in scale in a wide range of industrial sectors of the economy should form the basis of "breakthrough technologies of the new era" (Sun et al., 2023), which are already today in certain areas in the field of intellectualization production and technological, organizational and managerial and other processes are at a high level and correspond to the achieved the level of modern developments in Western countries. European Union, outlining the tasks for the implementation of large-scale programs for the technical re-equipment of the economy at the national level to gain leading positions in the most important scientific-technological areas, noted that such a program "should be launched in the field of artificial intelligence" (Stahl et al., 2023). Artificial intelligence, a field within computer science, focuses on creating systems capable of performing tasks that typically necessitate human intelligence. These tasks include but are not limited to visual perception, speech recognition, decision-making, and more (Ganie et al., 2021; Meidutė-Kavaliauskienė et al., 2021). It requires an acceleration in the creation of an advanced scientific infrastructure and the intensification of creative activities of a human-centric resource with a highly innovative ability to carry out transformations of various directions and scales, allowing to stop crisis processes and phenomena arising as a result of various economic difficulties from the war in Ukraine and resource restrictions of various natures (Kimhi et al., 2023). Shifting the attention of business and government authorities to the development of technologies

that will ensure the acceleration of economic growth in business, as well as the creation of conditions for increasing the competitiveness of the national economy as a whole, requires improving the understanding of artificial intelligence (AI) (Burinskienė & Lingaitienė, 2023). On the one hand, it acts as a technology that imitates human perception of certain signals, capable of optionally solving the tasks assigned to it, but does not have consciousness and its internally dependent configuration; on the other hand, it represents an information-program system configured for manipulation (Salvagno, Taccone, & Gerli, 2023), which are similar to the actions of a person, controlled by his brain and realizing his personal internal creative potential in its various manifestations (Zhang, Zhu, & Su, 2023), and thirdly, it is a tool for increasing the efficiency of activities in various components of the socio-economic life of society, creating a multiplier effect in value chains and in the resulting indicators of the functioning of the economy (Batiashvili & Gondauri, 2023).

The mobilization economy marks new frontiers in the interaction between humans and intellectualized technology, emphasizing the fact that the drivers of development should be industry, retail and the financial sector, the most adaptive to the requirements of the AI market at the initial stage of its development, characterized by weak structure, low awareness of business entities about specific types and capabilities of technologies, as well as a low level of decision-making on the artificial intelligence platform. European businesses responded to the new economic conditions after the war in Ukraine and began to rebuild their entrepreneurial mentality to fulfill the tasks of the country's technological development. There is a growing understanding that the leitmotif of the movement in the intellectualization of certain areas of activity and the most important condition for the existential survival of the national economy is the acquisition of production and technological sovereignty (Yadav et al., 2024).

The logic of implementing a mobilization economy, as opposed to the opposing economies of the Western world, suggests that the introduction of artificial intelligence should encompass all sectors of the economy, the social sphere, and the public administration system. This implementation aims to increase the competitiveness of businesses, enhance the system as a whole, and strengthen the production and economic sovereignty of the country (Vicente, Sinovets, & Theron, 2023). This means that it is necessary to reconsider the understanding of the economic nature of artificial intelligence and the essence of its most important components in the context of solving new problems in the development of the European socio-economic system, strengthening the competitiveness of its business entities and other market agents, as well as radically increasing economic independence.

Business entities and the corporate communities they build are transforming their marketing strategies with consumers in the new reality, improving logistics channels for resource distribution and supply of materials and goods for various purposes, focusing on the nature of external challenges and the need for large-scale import substitution. Marketing analysis is important, as it needs to be updated, necessitating the identification of existing competitive advantages in developing businesses. This process aims to construct effective business models that align with the present time and can realize entities' internal potential to enhance the quality of impact on consumers and partners through justified value propositions. This evolution occurs within the increasing influence of the emotional-behavioral factor and the transition of businesses toward utilizing the emotional-behavioral concept in selecting leadership models (Wu & Monfort, 2023). Such orientation prompts a reconfiguration of information flows from various sources by business entities and the external environment, enabling unprecedented exploitation of the emotional capacity of market participants, including consumers, to perceive signals directed towards them at both conscious and subconscious levels.

A harmonized integrity of a set of different-character components—such as functional-role, communication-behavioral, motivational, innovative-cognitive, and social-transformative—is imperative in business activities. Achieving this requires formalization in the form of a pragmatic, argumented leadership model capable of adapting to the new conditions of the geo-political and geo-economic environment. Such adaptation is crucial for addressing innovative and technological transformations within business structures

and society, thereby mitigating the impact of instability and facilitating accelerated economic growth (Trammell & Korinek, 2023). The prospects for attaining a new level of development lie in creating a new system quality through the intellectualization of processes of innovative changes, including modernization, restructuring, and production-technological advancements across the entire spectrum of social components of economic life. However, these processes must consider the variability among European states' societies and the multifaceted nature of their implementation into real production, technological advancements, and economic products. The key vector of these efforts should prioritize increasing socio-economic well-being, enhancing security, and promoting social justice for citizens (Buccella, 2023).

The purpose of the study is to expand the understanding of artificial intelligence and its components, as well as to develop a model for activating artificial intelligence, reflected in the mirror of innovative changes, in the interests of the national economy gaining economic sovereignty and increasing the competitiveness of business in a mobilization economy.

The research will utilize scientific literature analysis as a fundamental tool to investigate the role of artificial intelligence (AI) within the mobilization economy. Through comprehensive literature review and analysis, the study will examine existing research findings, theories, and conceptual frameworks related to AI's integration into socio-economic systems. Various research methodologies, including quantitative, qualitative, and mixed-method approaches, will be employed to gather and analyze data from scholarly articles, academic journals, conference proceedings, and relevant publications. Additionally, the research will employ advanced text mining and natural language processing techniques to extract insights, identify patterns, and synthesize information from a wide range of sources. This rigorous literature analysis will serve as the foundation for developing a comprehensive understanding of AI's economic implications and its potential for driving innovative transformations within the mobilization economy.

2. Managing business competitiveness in a mobilization economy based on artificial intelligence

The subordination of the national economy to its transition to accelerated development can only be justified when efforts are made to concentrate enormous resources, including those accumulated in the banking sector with technologies for expanding the use of artificial intelligence, and involve them in the real sector of the economy. This involves directing resources towards the development of the latest productions driven by modern technologies such as information, quantum, nanotechnologies, laser, and additive technologies (Chao-Sung et al., 2023).

The architecture of the system ensuring the strategic competitive stability of the national economy must change, especially in the context of global aspirations to dominate technological development, which includes the introduction of elements of a large-scale artificial intelligence system. Society should embrace the idea that Europe cannot allow aggressive countries like China or Russia to compromise its sovereignty and must ensure that the pace of innovative changes in system-forming sectors of the economy is contained. Intellectualization across various segments of the national economy is closely related to the accumulation and utilization of creative, pragmatic, and innovative capital and resources. These resources should be utilized to increase public utility and added value by integrating the "growth" of the "knowledge" factor into the process of interaction of production factors, thereby strengthening the priority of national interest (Hine & Floridi, 2024). The innovation factor that determines the nature of changes in the production and technological sphere of the economy is closely related to the idea of the role and significance of artificial intelligence as a tool for ensuring accelerated growth of the national economy. There is another opinion regarding the influence of artificial intelligence on labor productivity. A National Bureau of Economic Research (NBER) report by McKinsey consultants, entitled "Artificial Intelligence and the Modern Productivity Paradox: The Clash of Expectations and Statistics" (Brynjolfsson, Rock, & Syverson, 2019), identifies the emergence of a mysterious phenomenon called the "productivity puzzle (or paradox)," caused

by the transition to a digital economy. This transition is based on the total digitalization of various processes through the use of technologies that have the highest parameters in the development of society, namely: a) the degree of transformation (DT), reflecting the scale of economic transformation and institutional recomposition; b) the degree of globality (DG), reflecting the scale of its breadth in the context of the potential use of the latest technologies in the digital economy in various industries and areas of society. At the initial stage of digital transformation, growth problems can be ambiguous since they can only contribute to the growth of capitalization of "new monopolists" "with little effect on increasing the productivity of the entire economy" (Brynjolfsson, Rock, & Syverson, 2019). In their opinion, the potential of the latest technologies in the DT and DG system can ensure accelerated growth in labor productivity only "in tens of years." The introduction of AI in key sectors of the economy "leads to an increase in indicators such as speed, quality, personalization, and economic efficiency by five to seven times" (Growiec, 2023).

It should be noted, unfortunately, that the conclusions drawn by Stahl et al. (2023) in their systematic review of artificial intelligence impact assessments do not address the role of the individual, particularly in the implementation of a wide range of transformative efforts affecting various aspects of life and well-being. There is a lack of consideration for the motivational and competency requirements of personnel in specific developmental tasks across different sectors, as well as a broader understanding of the ordinary employee's place within the planned changes, spanning economic to socially oriented domains. The insufficient attention given to investing in "human capital," where education plays a pivotal role in solving a country's sovereignty-related challenges, can result in a loss of national identity and dampen societal expectations for shaping a new "future image." Presently, those who shape this image and drive trends towards creating new industries, including those integrating human-centric resources in developing artificial intelligence systems, stand to gain an advantage in global geo-political and geo-economic arenas (Schmidt, 2023). Conversely, the absence of such capacity stems from shortcomings, for various reasons and circumstances, in education and human capital development.

The shadow side of artificial intelligence is the exaggeration of the importance of money and power over a person's independence in making certain decisions, as well as the purposeful subordination of a person to an invisible and hidden "ruler." Convenience, which is placed at the center of innovative changes in various components of business and government activities based on AI, is sometimes a false "bait," which in the real system of the socio-economic state of subjects leads to the uncontrolled use of AI in someone's personal interests (for example, when it is necessary to depopulate various processes as much as possible and remove personal contact with individuals) (Wach et al., 2023). This can be dubious in a variety of senses, and can be dangerous when such an innovation is aimed at managing the public and personal consciousness of societies and is aimed at total control over all the actions of a person (individual) and his reactions to those broadcast in his address controlling influences.

Progress, being confined to digital computer technologies, loses its original understanding as the original socio-economic category. The model of endless consumption in all its hypertrophied forms and scales destroys society and its values. It is spiritual and moral values that act as a guideline for people's life activity and mutual understanding; they are the basis for the formation of stereotypes and models of human behavior in society (Hermann, 2023). And they are not able to integrate into systems of machine intelligence, which is the ability of technical and similar devices to reproduce (obtain) the desired result within the framework of target tasks in the simplest way, which does not require self-analysis of the need to perform certain actions. On the contrary, strict adherence to processes is required in accordance with given parameters. It should be recognized that a neural network is just a tool and nothing more. Furthermore, the tool should facilitate the execution of routine and similar operations (works, processes) as components of a large-scale complex of actions combined into some kind of holistic system (Cao et al., 2023).

It is necessary to develop a clear understanding of the ethics of using artificial intelligence, taking into account its influence on the intellectual and cognitive self-expression of a person's personality and behavior

determined by himself. It should be recognized that a person becomes a target for manipulation (Federspiel et al., 2023) of both his personal and public consciousness through the use of virtual and other tools (Carroll et al., 2023). Replacing knowledge reproduced by creative and innovative-creative self-expression of a person is fraught with significant failures in the system of professional self-realization and leads to the degradation of an ordinary person who loses the ability to think and make independent decisions. It is questionable whether the managerial potential of a professionally trained specialist can be replaced with artificial intelligence, especially in areas in which the human factor plays an important role (Kim & Im, 2023). There are also results of studies of the attitude of European citizens to technologies in the field of medicine (Scantamburlo et al., 2023). The following was discovered:

a) 30% of Europeans would feel more confident when providing medical services and making a diagnosis using artificial intelligence;

b) 29% of patients – when the operation was performed by a robot;

c) 38% – with implantation of a hearing restoration chip.

These results are similar to the data obtained in other countries that are leaders in innovative development (Beets et al., 2023). The innovative environment in its development presupposes an orientation towards the concept of "creative management" (Paesano, 2023), which provides for the implementation of the possibilities of creative thinking as such, leading to the creation of new material and spiritual values, as well as to the generation of various original (innovative) ideas and the formation of intellectual products. The accumulation of intellectual capital is always accompanied by transformation processes that accumulate knowledge, information, experience, organizational skills, motivation, and embodied innovative abilities of the most active level of the labor resource. The complex transformational transition to the mobilization economy expands the possibilities of a new model of social motivation, which is based on the concept of "expressivism," which characterizes a wide set of values (for example, creativity, autonomy, the priority of self-expression over social status, the desire for something new, self- improvement, internal growth, involvement in decision making, etc.) (Pentina et al., 2023). A high quality of life can be achieved by those individuals who can self-realize, satisfy their ability to express themselves and embody their innovative and other scarce abilities, as well as those who are endowed with the ability to develop their creative potential (Jia et al., 2024). This is the set of properties and qualities that is necessary for the involvement of the individual in the process of creating artificial intelligence. It should be noted that in our time, about 60% of the population of the European Union worked in low-professional jobs, where it was enough to be able to read and write. And they acquire skills and abilities while doing practical work. Highly qualified specialists who form the human-centric resource of society (this includes engineers, scientists, and doctors) make up no more than 5–6% of the population (Huguenot-Noël & Corti, 2023). These specialists have genuine higher education, and they are dominated by the desire to obtain knowledge and its real implementation in various spheres of the country's life. Therefore, in the conditions of a mobilization economy, the creation of a new education system aimed at innovative solutions to the problems of development of system-forming sectors of the economy becomes the key to overcoming the country's technological and economic sovereignty (Lupu & Nuță, 2023).

The cultural factor remains in the shadow of large-scale declared tasks for technical renewal, but it is at the center of the focus of the designated changes. It defines the essence of the moral and ideological component of a working person, which cannot be formalized in the elements of a machine system. A neural network has such a negative property as the ability to "erase" personality and form fundamental errors in the emotional and moral reflection of a person's perception of information signals (in the form of manipulative and simulation messages, in the form of responses objectively reflecting reality), configured by business to establish interactions with individuals who are active consumers of goods and services offered to them, but in the digital space (Murugesan et al., 2023). Control over certain areas of AI use is needed since it weakens a person's ability to make independent decisions that differ from the settings "hardwired" by AI. Formed

by certain beneficiaries (most often hidden from the public eye), tasks for neural networks are set according to the desired result they determined in advance, which is beneficial to a narrow group of people. The latter is determined by the fact that the problems of bringing together the interests of different stratification classes and certain groups of different statuses and hierarchies have so far been poorly resolved (Okhunov et al., 2023). The creation of a wide profile of neural networks, filled with certain meanings and tools for achieving set goals, creates conditions that contribute to the elimination of the creative abilities of people in their professional fields. Zeroing out the creative potential of a wide range of people is a possible result of the thoughtless involvement of AI in the processes of managing the functioning and development of a business and its individual areas of activity. Unfortunately, the influence of the entire set of factors that determine a rational set of tools for managing business activity and business competitiveness (including those included in methodological support) is poorly taken into account (Liu et al., 2023). AI must be tuned to such influences of interacting market agents that, on the one hand, can change the internal state of a business in the direction of implementing large-scale innovative changes and, on the other hand, contribute to marketing and other adaptation of the behavior of people and businesses to the requirements of growth dominators in accordance with newly emerging technical and technological capabilities to ensure the effective development of the national economy in the mode of its mobilization (Qin et al., 2023).

The use of AI remains fragile in addressing key issues of socio-economic growth. AI can lead to degradation instead of progress since it can interfere in those areas of society that go beyond the usual technologization of production and similar processes. "Chat bots no longer write only diplomas, but also sentences for judges and speeches for politicians. Is this really the point of new technologies? (Bahrini et al., 2023). And there is no answer to this question yet. Algorithmization of conscience and morality in the construction of rational models of behavior by businesses and other entities cannot be a real object within an AI system since it cannot replace a person with his perceptions and sensations and does not detract from his importance as a bearer of value and moral characteristics enshrined in the public consciousness within the boundaries of a particular civilization (Wach et al., 2023). Artificial intelligence, as the most important link in the expanding field of digital technologies, must be used to create real economic benefits for all participants in the developing communication space and to increase the social well-being of the country's citizens along the entire vertical of the stratification pyramid. It should be aimed at strengthening the technological and economic sovereignty of the country and not at destroying the attitudes of internal dominators and people's actual trust in the innovations being promoted. The degradation of human intelligence and the inhibition of personal development become the price that will have to be paid for the thoughtless and silent implementation of artificial intelligence systems (McLean et al., 2023).

The ability of a person to be creative and self-developed through intellectual and creative self-affirmation, and then AI can acquire a new systemic quality that will not suppress a person's personality and will not replace him in the most important moral, ethical, and emotional-behavioral reactions to external challenges and threats, and will also strengthen the motivational and communication immunity of business structures and the socio-economic system as a whole (Federspiel et al., 2023). There should be no digital slavery, which can destroy the individual and his participation in solving the problems of social society. Econocentrism should not prevail over logic and common sense when it comes to the implementation of artificial intelligence.

3. Model of Activation of Artificial Intelligence in the Mirror of Managing Innovative Changes in the Conditions of a Mobilization Economy

In our research, we propose to clarify the conceptual apparatus that deciphers the idea of artificial intelligence and its key elements, as well as to interpret new concepts. It is important to determine their place in the system of formed communication and other interactions of various parts of a single whole, which constitutes the essence of the socio-economic system, functioning in the new economic reality and

determined by the requirements of the mobilization economy and the comprehensive development of the individual.

The model of activation of artificial intelligence in the mirror of managing innovative changes in the conditions of a mobilization economy designations are (Fig. 1):

1 – creation of artificial intelligence (AI) objects by a human-centric resource;

2 – highlighting the components of the AI object;

3 – the impact of external environmental factors on the nature of innovative changes;

4 – formation of quasi-components* changes through AI;

5 – feedback signals based on the results of using AI;

6 – feedback signals to business entities;

7 – communication multiplier;

8 – a reflection of the AI object in the mirror of innovative changes;

-o-o-o-o- – a negative reflection of innovative changes as a result of the implementation of AI.

The model for activating artificial intelligence, displayed in the mirror of innovative change management, guides businesses to implement a wide range of innovative transformations in the components of value chains in the interests of strengthening its competitiveness in the conditions of a new mobilization-oriented reality and the existential need to win economic sovereignty.

We propose to introduce the following concepts into scientific circulation:

a) artificial intelligence (AI) in the socio-economic space is a set of properties of artificially created intelligent systems with a problem solver in the "man-machine" chain, endowed with the ability to perform creative (creative, uniquely original, creative, inventive, etc.) functions and rationally use a set of different methods, models, and constructs (A complete representation of the essential state of the real world in all its components: mate-real, psychological, economic, social, etc. (auth.)) that integrate and synthesize information in the required formats (types, scales, etc.), and also effectively use a set of information technologies (forming neural networks based on software) to perform (support) various operations and actions in the interests of beneficiaries. AI acquires the properties of a tool for managing economic growth in a transformed socio-economic system within the framework of certain restrictions and frontiers established by society in marketing activities (Raudeliūnienė, Albats, & Kordab, 2021; Wu & Monfort, 2023) and when it embodies value systems, beliefs, preferences expressed in personal and social consciousness and in subjective behavior;

b) intelligence-forming "phagocytes" are components of artificial intelligence inherent in the immune (motivational and communication) system of a business to strengthen its competitive position, which is capable of providing "protection" of a business entity in a diversely changing market environment from negative influences in the internal and external circuits it is functioning by weakening (extinguishing or limiting) their influence on the functioning and development of the business (Krakowski et al., 2023);

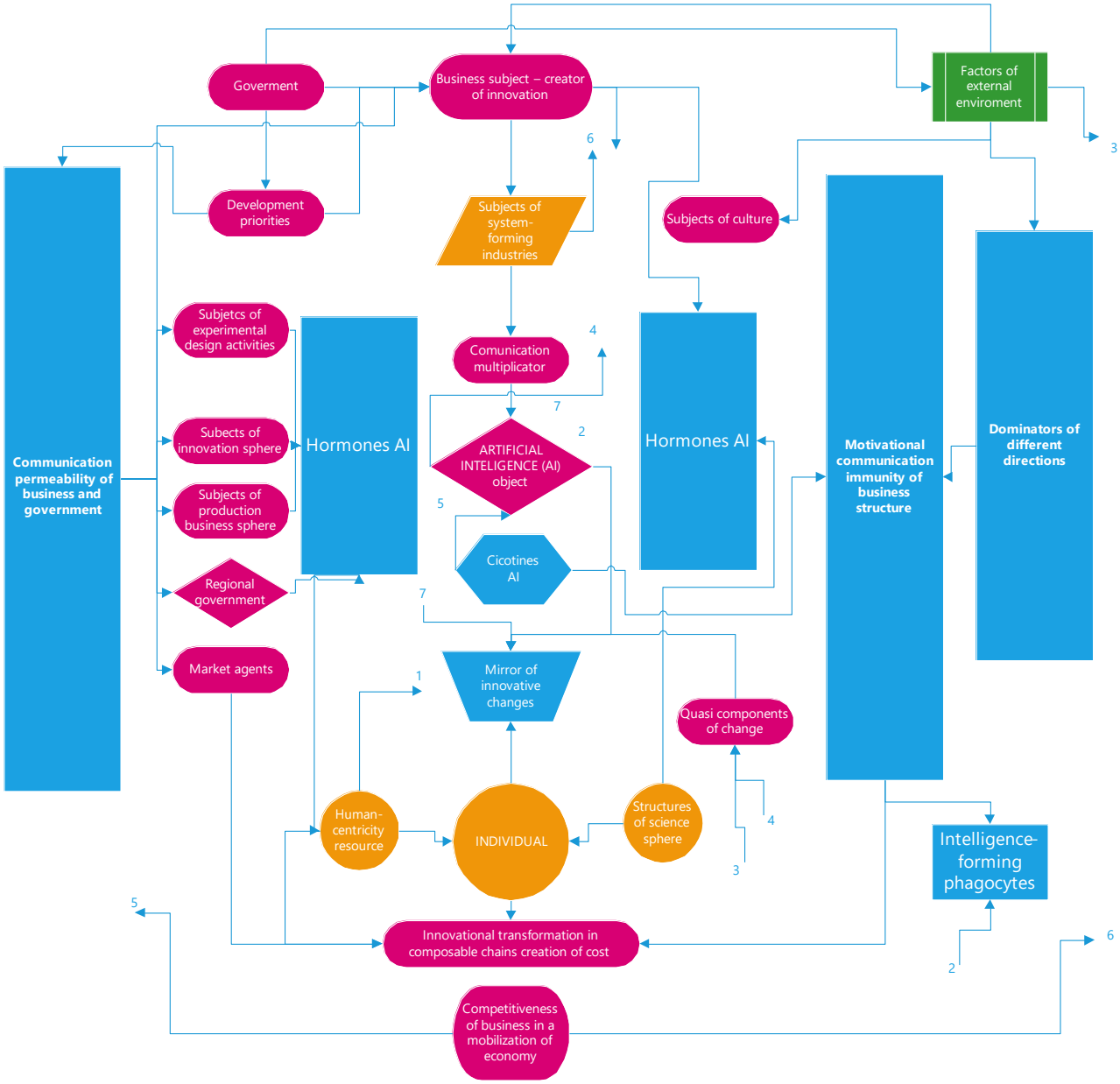

Figure 1: Model of activation of artificial intelligence in the mirror of managing innovative changes in the conditions of a mobilization economy

c) "hormones" (description for move, encourage, set in motion) artificial intelligence in the socio-economic system – the most active elements of the socio-economic system, "ripened" (created, formed) within subjects of market relations (business structures, authorities, research institutions, experimental design structures, research and cultural organizations and other market institutions), motivationally and communicationally permeable for participation in the processes of innovative transformations and in their implementation behavioral actions that ensure the desired result for society and business (Shelare et al., 2023);

d) "cicotins" in the artificial intelligence system implemented by business entities (and other entities of the socio-economic system) are a set of interconnected active elements of business structures and other links of the socio-economic system that create a "hormonal network" in its internal structures involved in the processes of innovative changes, supported by the marketing and behavioral activity of these elements, taking into account the level of their motivational and communication permeability for the implementation

of transformations to solve the tasks identified by the initiators of the impact and achieve targets (Perifanis & Kitsios, 2023);

e) virulence (from Latin virulentus - poisonous) of artificial intelligence in the socio-economic system and in business - such a property of it, which is characterized by its ability to negatively affect the motivational and communication immunity of the system and business, as well as upset the balance of interests between various stratification classes and subjects of relations, pushing the system to destruction (or death), and the business to the loss of its competitiveness. The virulence of AI is a measure of its pathogenicity (the ability to cause a deviation from the norm or the emergence of a particular problem (Li et al., 2023), which is its ability to undergo typical (characteristic, pronounced, usual) changes in certain elements, links, and components of the social economic system, carried out by the usual methods of their promotion and reflected (fixed) in the public and personal consciousness of subjects.

The communication multiplier accumulates the resource and intellectual-cognitive efforts of the most active elements of the socio-economic system and its human-centric resource when implementing processes of innovative transformations and rationalization of marketing and other behavior of subjects in artificial intelligence products -lecture, tuned to satisfy the balanced interests of society, the state and ordinary citizens, motivationally and behaviorally permeable to strengthening the competitiveness of business, the socio-economic system as a whole, as well as to increasing the production and economic sovereignty of the countries (Liu, 2023).

The main thing in intensifying the processes of intellectualization of various components of society's life should be compliance with the condition within which AI should not be customized "for itself" by certain groups of business and government. He must work to satisfy the interests of society, the state, and ordinary citizens.

4. Conclusions and Recommendations

The mobilization economy defines new frontiers in the interaction between humans and intellectualized technology, indicating the need to improve the understanding of the economic nature of artificial intelligence, revealing its complex nature both as a technology and as a computer information-software system, and as a tool for creating a multiplier effect created in value chains and in the resulting indicators of the functioning and development of business and the national economy as a whole through the activation of the innovative ability of a human-centric resource and its creative potential.

The concept of artificial intelligence (AI) in the socio-economic system has been expanded as a set of properties of artificially created intelligent systems endowed with the ability to perform creative functions and use a set of different methods, models, and constructs that integrate and synthesize information in the required formats, as well as accumulate and integrate the interaction of a set of information technologies based on neural networks involved in carrying out various processes, operations, and actions in the interests of various groups of beneficiaries. It is proposed to introduce the following concepts into scientific circulation: intelligence-forming "phagocytes," "hormones" of artificial intelligence, "cycotins" in the artificial intelligence system, virulence of artificial intelligence, which contribute to revealing the economic nature of the built-up interactions between subjects of multifunctional and multi-role activities in the process of digitalization of the economy in the context of the implementation of its mobilization vector.

A model is proposed for activating artificial intelligence in the mirror of managing innovative changes in the conditions of a mobilization economy, within the framework of which it is possible to ensure the implementation of innovative transformations in the components of value chains in the interests of strengthening the competitive stability of business, achieving a balance of interests of the totality of all

motivated to gain sovereignty by the socio-economic system of the parties (society, state, developers of artificial intelligence, owners of capital, human-centric resource, ordinary societies).

Based on the presented conclusions, several recommendations can be made to advance the understanding and application of artificial intelligence (AI) within the mobilization economy. These recommendations focus on improving economic understanding, integrating AI more effectively in socio-economic systems, and leveraging AI for innovative transformations.

Firstly, there is a need to enhance the economic understanding of AI. Conducting interdisciplinary research is crucial to better comprehend the complex nature of AI as a technology, an information-software system, and a tool for economic value creation. Developing economic models that capture the multiplier effects of AI in value chains and overall business and national economic performance is essential. Additionally, analyzing the impact of AI on human-centric resources is important, focusing on how AI can enhance the innovative and creative potential of individuals within the economy.

Secondly, the concept of AI in socio-economic systems should be expanded. Defining and standardizing new concepts related to AI, such as "intelligence-forming phagocytes," "hormones" of AI, "cycotins" and the "virulence" of AI, can help elucidate the economic interactions and roles of AI within the digital economy. Promoting the development and use of AI systems endowed with creative functions and the ability to synthesize and integrate information in various formats to serve different beneficiary groups is also recommended.

Thirdly, implementing innovative AI activation models is crucial. Developing and implementing models that activate AI to manage innovative changes within the mobilization economy can ensure that AI-driven transformations strengthen competitive stability and balance the interests of all stakeholders. The focus should be on innovative transformations in value chain components that enhance the sovereignty and economic stability of the socio-economic system, benefiting society, the state, AI developers, capital owners, and human-centric resources.

Furthermore, fostering collaboration and integration is essential. Encouraging collaboration between different sectors and stakeholders, including businesses, government entities, AI developers, and the workforce, can create a cohesive approach to AI integration. Supporting initiatives that promote the integration of AI technologies in various industries can enhance productivity, innovation, and economic growth.

Lastly, investing in AI education and skill development is vital. Investing in education and training programs to develop the skills needed to work with advanced AI systems is important, focusing on enhancing human-centric resources. Promoting lifelong learning and continuous skill development ensures that the workforce remains adaptable and capable of leveraging AI technologies effectively.

By implementing these recommendations, stakeholders can improve their understanding and utilization of AI within the mobilization economy, driving innovative transformations and enhancing economic performance and competitive stability.

Further research possibilities in the context of artificial intelligence (AI) within the mobilization economy are essential to advancing our understanding and application of AI. One critical area is the interdisciplinary examination of AI's complex nature, including its roles as a technology, an information-software system, and a tool for economic value creation. Researchers can develop economic models that accurately capture the multiplier effects of AI in value chains and its overall impact on business and national economic performance. Additionally, investigating AI's influence on human-centric resources, specifically its ability to enhance the innovative and creative potential of individuals, offers significant promise. Expanding the conceptual framework of AI to include terms such as "intelligence-forming phagocytes," "hormones" of AI, "cycotins," and the "virulence" of AI can provide deeper insights into the economic interactions and

roles of AI within the digital economy. Moreover, exploring models for activating AI to manage innovative changes can reveal strategies to strengthen competitive stability and balance the interests of all stakeholders. Overall, further research in these areas can significantly enhance the mobilization economy by driving innovative transformations and improving economic performance.

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