

must take into account the potential sales volume of the company - exactly the volume that the market can absorb.

We must also take into account the costs of production and storage of products and, in addition, depreciation of fixed assets.

Thus, the company's profit can be expressed as:

$$M(t) = (1 - \tau_r)[(1 - \tau_d)R(t) - cV(t) - FC - \mu A(t) - L(t)]$$

where τ_r – profit tax rate; τ_d – value added tax rate; c – cost price in the product price; FC – fixed costs; μ – depreciation rate.

So, the overall business model will look like:

$$\begin{aligned} R(t) &= CS_i(t) \\ C &= \sum_{j=1}^J W I_j q_j k_j, \\ S_i(t) &= \frac{\exp f_i(t)}{1 + \sum_{k=1}^N \exp f_k(t)}, \\ L(t) &= \left(K + \frac{V(t) - R(t)}{W} \right) h + z, \\ V(t) &= \varphi A(t), \\ \frac{dA}{dt} &= \varepsilon M(t) + I, \end{aligned}$$

$$M(t) = (1 - \tau_r)[(1 - \tau_d)R(t) - cV(t) - FC - \mu A(t) - L(t)].$$

Thus, the proposed model allows us to take into account several important parameters of the enterprise's activities at once: the total size of the market; the fluctuating nature of market prices; the company's position in the market and competitive interaction; the enterprise's profit, taking into account storage costs; and most importantly, the model allows us to build a connection between the parameters of product demand and the real position of the enterprise in the market.

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FEATURES OF FORMATION OF THE VALUE OF KNOWLEDGE IN THE INNOVATION ECOSYSTEM

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Globalization processes significantly influence formation and development of international economic, political, social, and cultural relations, and determine the trends of national economies. Taking into account global transformations, most developed countries are reorienting their economies from scientific and technical to innovation. Since innovation is currently one of the strategic priorities of production and organization of economic activity, which forms the vector of the country's development. It should be noted that innovations contribute to the development of enterprises

and the country as a whole only under the condition of their effective use in the conditions of a favorable environment, i.e. innovation ecosystems. Therefore, today it is relevant to study the peculiarities of the formation of the value of knowledge in innovative ecosystems, since knowledge is the basis for the development of innovations.

To determine the specifics of knowledge formation in the innovation ecosystem, it is advisable to determine what exactly is attributed to it. The ecosystem includes a wide range of participants such as research institutions, universities, enterprises, startups, investors, government agencies and other stakeholders. The main goal of the innovation ecosystem is to create conditions for effective exchange of knowledge, technologies and resources, which leads to rapid development of new solutions and technologies.

The innovation ecosystem consists of several components, among the main are as follows: research institutions and universities, business structures, investors and financial institutions, technology parks and incubators, government institutions and regulators, business community, consumers and users.

Research institutions and universities are the source of fundamental and applied research, which often serve as the basis for new technologies and innovations. The main institutions involved in the commercialization of innovations through start-up projects are large corporations, small and medium-sized enterprises that turn ideas and research into concrete products or services.

To implement innovative projects and startups, significant financing of such developments is needed, for which there are not enough own sources, therefore it is necessary to attract external investors. Most often, venture capitalists, business agents, state funds and other sources of financing that support startups and technology companies at various stages of their development act as investors in innovative projects. To successfully attract suitable investors, it is necessary to create an appropriate investment climate, which largely depends on regulatory and legal support that stimulates innovation. The state can support development of innovative projects by providing grants, subsidies and other financial support.

Today, development of entrepreneurial initiatives aimed at the exchange of experience and knowledge in the areas of innovative development, startup projects, and digital technologies is widespread. Feedback from consumers and users of innovative products is important to determine the effectiveness of innovative projects, as they contribute to improvement of goods and services and are a source of innovative ideas.

The set of components of the innovation ecosystem has relevant characteristics, which include joint interaction between all participants to achieve the set goals. Implementation of the specified goal is carried with available favorable conditions for development of startups and small businesses, in particular through access to financing, mentoring and infrastructure. An important characteristic of the innovative ecosystem is flexibility and adaptability, which allows you to quickly respond to changes in technologies, market conditions and consumer needs, supporting development of new solutions. The more participants in the ecosystem, the greater its value [1]. For the expansion of innovative products and services, openness to innovation is important, which involves the development of new technologies both within companies, and with active involvement of external ideas and technologies, based on cooperation with other ecosystem participants. Today, there is an active innovation ecosystem in the USA (Silicon Valley), which includes global innovation centers, universities, and technology companies. In China (Shenzhen) there is a technology hub that is rapidly developing both based on investment resources and government support. In Germany (Berlin), the European center of startups and creative industries is developing, the basis of which is technological entrepreneurship.

Regardless of its importance and relevance, knowledge is subjective, as its value depends on the level of training, experience and interests of a particular person or group of persons. Using interdisciplinary approaches that combine different fields of knowledge, new innovative solutions and discoveries are formed. Thus, there is a transformation of knowledge that is useful for business and / or society. In business, knowledge is the key asset that can provide competitive advantages. Organizations that know how to effectively manage their knowledge (knowledge management), can better adapt to changes, innovations and market challenges.

The value of knowledge largely depends on its availability. Open sources of knowledge, such as scientific publications, online courses and information platforms, make knowledge available to a wide range of people, which facilitates its dissemination and practical application. At the same time, the value of knowledge can be related to the protection of intellectual property [2].

Thus, the value of knowledge is determined not only by its content, but also by how it is used, distributed, integrated with other knowledge and transformed into practical results. For successful implementation of cooperation between all participants of the innovation ecosystem, it is necessary to take into account the key aspects that arise during the formation of the value of knowledge.

Technological platforms play an important role in such interaction, which should be considered as a mechanism for effective cooperation of all participants of the innovation ecosystem, whose activities are aimed at the creation and commercialization of innovative developments. For Ukraine, the use of technological platforms is justified, since the economy is characterized by a high level of competition, a low level of technological development, management inefficiency, and import substitution of technologies. Therefore, the use of technological platforms should be aimed at ensuring effective interaction between developers of innovations and representatives of the real sector. At the same time, important attention should be paid to the normative and legal protection of intellectual property rights, taking into account modern realities of development of digital technologies. The state should be interested in development and commercialization of innovative developments in the middle of the country and promote the development of intellectual potential.

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Transformation of enterprises through digital innovations: economic benefits and risks

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Today, the world is undergoing transformations associated with the realization of Industry 4.0 — a global initiative adopted at the World Economic Forum in 2014. It aims to accelerate technological transformations, integrate production, and reduce management costs. The transition to Industry 4.0 requires the modernization of industrial systems using innovative, sustainable solutions. In recent years, digital technologies such as the Internet of Things (IoT), big data, robotics, blockchain, artificial intelligence, augmented reality, and rapid prototyping have been actively introduced into production processes in leading countries. [1]

For instance, 72% of companies plan to use artificial intelligence by 2024, a significant increase compared to 20% in 2017. [2] In Ukraine, this trend is also gaining momentum due to the development of the IT sector and government initiatives in the field of digitization.

Ukraine's performance in implementing digital innovations remains relatively low. According to 2021 indicators, Ukraine shows weak positions in key ICT infrastructure indicators. [1] This