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## **ASSESSMENT OF THE PROFITABILITY OF INNOVATIVELY ACTIVE ENTERPRISES OF UKRAINE**

The article proposes a methodology for assessing the profitability of innovatively active enterprises of Ukraine. The evaluation of the actual annual profit of the business using the indicator of economic added value (economic profit) is argued, since the accounting profit is not a qualitative characteristic of innovative development. An important remark in the context of this study is the assessment of innovative development, more specifically, the innovative activity of enterprises – in a relatively stable economic time that preceded the war in Ukraine. Because it is clear that a return to the previous indicators and surpassing them is possible only in a relatively stable economic environment. It remains obvious that the increase in the added value of products can be achieved by reducing the volume of intermediate consumption, with the help of improving integration processes, in the creation of chains of added value of products, renewal of production assets, scalability of enterprises, increasing the level of technical and technological equipment of Ukrainian enterprises. Proposals have been made regarding the general system of assessing the business value of innovatively active enterprises of Ukraine. This study is designed to outline the main prospects for the development of innovatively active enterprises of Ukraine. It is emphasized that for the analysis of the mutual influence of innovative activity and indicators of economic efficiency, it is worth applying more progressive indicators for profit, such as economic added value, market added value, managerial added value, a balanced system of indicators.

**Key words:** innovative activity, profitability, efficiency, innovatively active enterprises, assessment, economic added value.

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## **ОЦІНКА ПРИБУТКОВОСТІ ІННОВАЦІЙНО АКТИВНИХ ПІДПРИЄМСТВ УКРАЇНИ**

У даній статті проаналізовано ефективність діяльності інноваційно активних підприємств на прикладі найбільш успішних функціонуючих українських підприємств. Аргументовано оцінювання дійсного річного прибутку бізнесу за допомогою показника економічної доданої вартості. Розроблено пропозиції щодо загальної системи оцінки вартості бізнесу інноваційно активних підприємств України. Підкреслено, що для аналізу взаємного впливу інноваційної діяльності та показників економічної ефективності варто застосовувати більш прогресивні показники за прибуток, такі як економічна додана вартість, ринкова додана вартість, управлінська додана вартість, збалансована система показників.

**Ключові слова:** інноваційна діяльність, прибутковість, ефективність, інноваційно активні підприємства, оцінка, економічна додана вартість.

**Introduction.** After the start of the pandemic and later post-pandemic, business froze in anticipation of better times. However, these expectations were not destined to come true due to the beginning of the third stage of the Russian-Ukrainian war. Instead, a business front was created, where new useful and free initiatives for citizens are launched even in difficult times, huge funds are transferred to support the army, employees are supported and wages are paid, startups and innovatively active enterprises are created. The business and economic front is aimed at returning to the pre-war performance indicators of entrepreneurship at the first stage of economic recovery, subsequently to the pre-pandemic indicators of 2019, and ultimately to the establishment of growth trends in the post-war

period. That is why the problematic issues of analyzing the state of the business environment in the context of innovative activity do not lose their relevance and require new approaches to study in accordance with today's realities.

**Analysis of recent research and publications.** The problems of modern business, entrepreneurial and resource potential are highlighted in the national report on the state of the innovative country by V. Heiets, A. Hrytsenko, A. Danylenko, I. Yehorov, M. Kyzyma, E. Libanova, O. Makarova, I. Odotiuk; in the works of foreign scientists P. Drucker, F. Nixon, M. Porter, B. Santo, J. Howe. Innovative activity of Ukrainian enterprises and related issues were studied by O. Amosha, L. Antoniuk, B. Burkynskiy, M. Voinarenko, V. Herasymchuk, D. Horovyi, T. Hrynko, S. Illiashenko, O. Kalinin, O. Kovtun, L. Kovchuha, V. Liashenko, L. Loiak, K. Zhadko, L. Fedulova, A. Cherep. In our opinion, the most successful studies of the effectiveness of innovative activity were conducted by O. Lavryk, S. Ross, R. Westerfield, B. Jordan, P. Strassman and other scientists.

**Selection of previously unsolved parts of the overall problem.** At the same time, today there are no systematic studies of the innovative development of business and entrepreneurship, especially the issues of their effectiveness. Therefore, the main purpose of this study is to analyze the prospects for the development of innovatively active enterprises of Ukraine and to develop proposals for the general system of assessing the value of their business.

**Results of research.** The highest innovation activity until 2021 was observed at the enterprises of the Eastern Economic District (on average by district), the lowest – by the Carpathian Economic District (on average by district). However, in terms of regions, the highest and lowest activity is in the Podilsk Economic District among enterprises of the Ternopil and Khmelnytskyi regions, respectively. It is worth noting that recently the situation has changed significantly in many regions. As an example, the share of innovative enterprises in the Mykolaiv region decreased from 31.2% in 2015 to 23.2% in 2019. A significant decrease in the indicator occurred in Ivano-Frankivsk, Lviv, Zakarpattia and other regions. The situation will continue to change, especially with the relocation of businesses today. Unfortunately, despite the growing interest of domestic scientists, practitioners, and the business elite in the problems of building an innovative space in Ukraine, understanding the importance of information support for innovative development, at the state level, the periodicity of state statistical monitoring of the innovative activities of industrial enterprises has been changed from «annual» to «once every two years», starting from 2015.

Most scientists consider innovatively active enterprises as those that spend a lot of money on innovation, have many projects and continuously contribute to the training and development of personnel engaged in innovative activities, noting the moment or period of time to which statistical observation data on innovative activity refer as objective. Specialists of the State Statistics Service of Ukraine, on the contrary, focus only on the period during which data are collected, that is, on subjective time, defining this concept as «an enterprise that engaged in innovative activities ... during a certain period of observation». In any case, innovatively active enterprises are a type of innovative enterprises that have positive tendencies to increase innovative activity. The concept of enterprises carrying out innovative activities is also used synonymously in the scientific field.

The innovations of the most successful functioning Ukrainian enterprises were [1]:

- opening of the third innovative terminal, launch of air delivery (Nova Poshta);
- construction of new lines for the production of railway wheels and production of casing pipes with premium threaded connections at the Interpipe NTZ;
- certified ISMS, automation of business processes on bpm'online, SOC service, «Safe City» products, «Electronic Medicine» and others (Datagroups);
- modernization of the corporate network of Poltavagazvydobuvannya, Antonov enterprises, implementation of the smart&safe city system in Zaporizhzhia (IT-Integrator);
- a single innovative ecosystem of modern agricultural production DigitalAgriBusiness, and an analytical GIS portal (Kernel);
- rapid development of the 4G network with the highest speed of mobile data transmission (Kyivstar);
- solar power plants «Scyfia-Solar», «Port-Solar», «Hudzovka-Solar», «Artsyzy-Solar» (UDP Renewables);
- the first online credit service in Ukraine, where you can quickly get money to the card of any Ukrainian bank (moneyveo);
- blockchain, smart agriculture, robotics, MHP accelerator startup development program (MHP);

– updated WOG Pride mobile application with integrated Apple Pay payment method, optimization of processes with the help of Apple business solutions, etc.

To assess the state of the business environment of Ukraine in the context of innovative activity, the following innovatively active enterprises were selected:

– State enterprise «Prozorro» with the status of effective state enterprise according to the data of the Ministry of Economy [2]. The main types of activity are web portals; activities in the field of computer programming; consulting on informatization issues;

– State enterprise «Southern State Design, Construction and Research Institute of the Aviation Industry» (SE Pivdendipron-diaviaprom), which has the status of an effective state enterprise in accordance with [2]. The main types of activities are activities in the field of engineering searches and provision of technical consultations; other research and development in the field of natural sciences and engineering;

– LLC «Scientific and technical complex «Metalurh» (STC Metalurh LLC), engaged in planning and development of computer systems that combine hardware, software and communication technologies. The main types of activities are activities in the field of computer programming; consulting services in the field of computer and information technologies;

– Nova Poshta LLC, which is one of the top three innovative enterprises of Ukraine, is the leader among enterprises specializing in CEP Service in Ukraine and most successfully combines marketing and logistics innovations;

– An exporting enterprise that is included in the TOP-20 domestic exporters [3] – PJSC Interpipe NTZ. Main types of activity – production of pipes, profiles, pipelines; activity in the field of engineering, geology and geodesy, provision of technical consulting services;

– Farmak JSC, which manufactures high-tech products – pharmaceutical preparations and materials, is one of the five largest innovative enterprises of Ukraine. The main types of activity are the production of pharmaceutical preparations and materials; wholesale and retail trade in pharmaceutical goods.

The cost of equity capital reflects the riskiness of investing in the company's equity capital, while the cost of debt capital is the risk of default by the company and the tax benefits associated with the use of borrowed funds [5].

Table 1

**Analysis of the profitability of innovatively active enterprises, thousand UAH, 2020**

Enterprises	Weighted average cost of capital, %	EVA	Gross profit	Net financial result	ROA, %
SE Prozorro	9,95	- 8447,6	+ 39923	+ 6544	22,16
SE Pivdendipron-diaviaprom	9,98	- 2625,3	+ 11	0	0,04
STC Metalurh LLC	9,89	-107,28	+ 451	+30	8,85
Nova Poshta LLC	9,89	+172061,9	+ 4025771	+ 991292	55,14
PJSC Interpipe NTZ	9,88	- 529413,7	+ 2666978	+ 22905	14,40
Farmak JSC	9,96	+353701,6	+ 4280211	+ 1207855	49,45

Source: calculated by the author based on financial statement data.

The indicator of economic added value (EVA) is a kind of indicator of profitability and quality of management decisions.

These calculations are based on the principle of operating profit exceeding the cost of capital.

As can be seen from the table 1, all analyzed enterprises were profitable in 2020 (the exception is the SE Pivdendipron-diaviaprom, where the gross profit was 11 thousand hryvnias, and the net financial result was 0).

The assessment of the actual annual profit of the business was carried out using the indicator of economic added value (economic profit), since the accounting profit is not a qualitative characteristic of innovative development.

The analysis made it possible to draw conclusions about the effective use of capital and the real growth of the value of such enterprises as Nova Poshta LLC and Farmak JSC. Accordingly, at these

enterprises, the return on capital significantly exceeds the weighted average cost of capital (by 5.58 and 4.96 times, respectively), which confirms the rapid growth of their business. These enterprises receive a net operating profit in an amount that exceeds the cost of capital used to obtain it. On the other hand, there is a decrease in the value of such enterprises as SE Prozorro, STC Metalurh LLC, SE Pivdendiprondiviavrom and PJSC Interpipe NTZ. The situation at these enterprises may indicate the intentions of the owners to withdraw the invested capital from the enterprises, because its value decreases as a result of the loss of alternative profitability.

Gross (accounting) profit is the sum of economic profit and economic costs after deducting the cost of production. Analyzing the impact of economic profit on accounting, we actually estimate the costs of internal resources.

In today's conditions, it is practically impossible for the majority of businesses to increase their pre-crisis gross added value on their own without the participation of the state. Sosibna, a large innovation-oriented business:

- enterprises that produce and export high-tech products (defense-industrial complex, aircraft construction, space industry, high-tech engineering);
- enterprises that previously specialized in the production of goods with a high share of added value, but due to the lack of modernization, became uncompetitive (enterprises of shipbuilding, automobile manufacturing, and instrument manufacturing);
- new types of high-tech production (enterprises for the production of solar batteries and other modern high-tech goods that are not manufactured in Ukraine).

In order to achieve high efficiency (profitability) indicators for Ukrainian enterprises, the state must create a favorable climate, in particular:

- maintenance of the state register of structures working in the field of venture investment;
- organization of the training system for innovation managers;
- ensuring guarantees of companies' rights to intellectual property;
- development of an effective mechanism for the formation and use of funds of the venture fund;
- development of a normative and legal framework that would regulate legal relations in the sphere of investment in innovation;
- development of the procedure for admission to the Ukrainian market of foreign capital;
- creation of a system of guarantees and investment insurance;
- development of a methodology for evaluating the market prospects of commercialization and scientific and technical products within the scope of startup implementation.

Support not only from the authorities, but also from medium and small businesses is extremely important for domestic innovatively active large enterprises. Startups, which are unique, scalable, risky and highly efficient micro-enterprises, can be the best option. In particular, such support can be expected by SE Prozorro, STC Metalurh LLC and other investigated enterprises.

The sectoral structure of industrial production should approach the proportions of economically developed countries and countries with a transition economy that have achieved economic growth as a result of the implementation of an active innovation and investment policy, making up for lost time and gaining valuable experience from cooperation. Today, we observe a very low level of integration of innovatively active enterprises of Ukraine into global production chains. The specific weight of industrial enterprises with technological innovations that cooperated with European partners is about 10%, with partners in other countries of the world – about 6%.

**Conclusions and prospects for further research.** It is proposed to estimate the actual annual profit of the business using the indicator of economic added value, which is correlated with the indicators of the efficiency of innovative activity. The analysis made it possible to draw conclusions about the effective use of capital and the real growth of the value of such enterprises as Nova Poshta LLC and Farmak JSC. Accordingly, at these enterprises, the return on capital for the analyzed period significantly exceeded the weighted average cost of capital (by 5.58 and 4.96 times, respectively), which confirms the rapid growth of their business. These enterprises received a net operating profit in an amount that exceeded the cost of capital used to obtain it. On the other hand, there was a decrease in the value of such enterprises as SE Prozorro, STC Metalurh LLC, SE Pivdendiprondiviavrom and PJSC Interpipe NTZ. The situation at these enterprises may indicate the intentions of the owners to withdraw the invested capital from the enterprises, because its value decreased as a result of the loss of alternative profitability.

To analyze the mutual impact of innovative activity and indicators of economic efficiency, it is worth applying more progressive indicators for profit, such as economic added value, market added value, managerial added value, a balanced system of indicators.

In the future, it is planned to investigate the factors of profitability of innovatively active enterprises of Ukraine and to develop methodological recommendations for increasing profitability in conditions of force majeure.

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