SZAKASZ I.
GAZDASÁGTUDOMÁNYOK

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GRAPHIC MODEL OF THE INVESTING IN AN INNOVATIVE PRODUCT AT DIFFERENT STAGES OF ITS LIFECYCLE

RESEARCH GROUP:

Olena Petryk
Doctor of Economics, Professor, Head of the Audit Department
Kyiv National Economic University named after Vadym Hetman

Andrii Samiilenko
Candidate of Economics, Associate professor,
Associate professor of the Department of Economic Theory
Kyiv National Economic University named after Vadym Hetman

Ihor Kuksa
Doctor of Economics, Professor, Professor of the
Department of Accounting, Finance and Information Technology
Luhansk National Agrarian University

Mykola Zos-Kior
Doctor of Economics, Associate professor,
Professor of the Management Department
Poltava State Agrarian Academy

Iryna Hnatenko
Candidate of Economics, Associate professor, Doctoral student
Kyiv National University of Technologies and Design

Viktoriia Rubezhanska
Candidate of Economics, Senior Lecturer of the Finance,
Accounting and Banking Department
Luhansk Taras Shevchenko National University

UKRAINE

The integration of science and production in innovative industrial enterprises is one of the modern problems of the world economy. Experts are increasingly considering the innovation potential as a decisive factor in economic progress, while the "material" factors (size of the territory, population growth, climate, availability of minerals, etc.), which prevailed earlier, have receded into the background. It is innovation and related scientific and technological investment, rather than investment, that are increasingly becoming the most important factor in the competitiveness of enterprises (especially in the world market), and at the macro level - the main factor of intensive economic growth [1-3].

Accordingly, the key parameters of investment in innovative projects are the project budget, its financial support (structure and volume of financial sources), the level of innovation risks, the internal rate of the projectrpofitability and the duration of

the project cycle [4-6]. These parameters allow to create a descriptive graphical model of investment in an innovative product at different stages of its life cycle, presented in Fig. 1.

It should be noted that the life cycle of an innovative product covers the period from the origin of a scientific idea to the moment of withdrawal from production of the product (which is the result of commercial development of this idea). That is, this concept is broader than the concepts of "innovation project life cycle" and "product life cycle" [7-10].

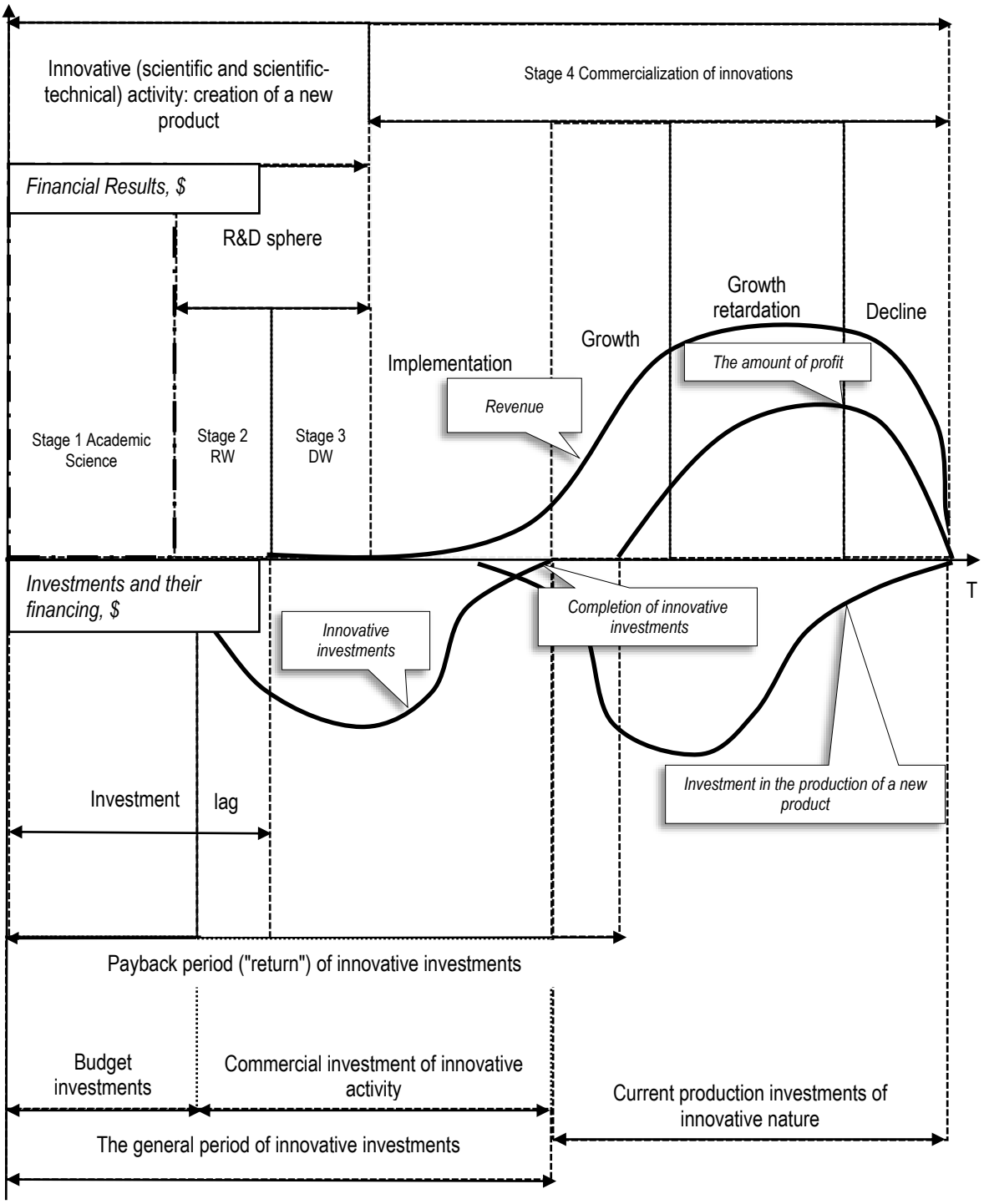

Fig. 1. **Graphic model of the process of investing in an innovative product at different stages of its life cycle**

Source: built by authors

In the graphical model of the process of investing in innovation presented in Fig. 1, the emphasis is on the actual innovative investments aimed at developing a new, innovative product. Innovative investments are separated from "ordinary" production investments of non-innovative nature, carried out at the stage of commercialization of an innovative scientific and technical product. The specifics of the innovation process is that first (in the first phases of the life cycle) it is innovative investment that is carried out, while the subsequent income and profits that pay them off, are generated jointly by innovative and "regular" investments. In some cases, this may make it difficult to determine the return on innovation.

One of the advantages of the model presented in Fig. 1, is that the costs of development and subsequent production of a new product are shown in it in two ways. In the lower quadrant, they are shown directly - as investments, broken down into innovative and "ordinary". In the upper quadrant, they are shown indirectly and generalized - as the difference between income and profit, which represents the total cost of production, taking into account the discounted costs of R & D (i.e. discounted innovation investment). Taking into account the depreciation of fixed assets (involved in both R&D and production), the total cost of production will be less than the amount of investment.

As a result of the research it is established that the development of new and improvement of existing methods of evaluation and modeling of investments in technological and product innovations will solve the problem of technological modernization of industry, increase production of competitive innovative products, transition to innovative type of economic growth.

References:

[1] Kuksa, I., Shtuler, I., Orlova-Kurilova, O., Hnatenko, I. & Rubezhanska, V. (2019). Innovation cluster as a mechanism for ensuring the enterprises interaction in the innovation sphere, *Management Theory and Studies for Rural Business and Infrastructure Development*, 41(4), 487-500. Retrieved from: https://doi.org/10.15544/mts.2019.39

[2] Hnatenko, I., Orlova-Kurilova, O., Shtuler, I., Serzhanov, V. & Rubezhanska, V. (2020). An Approach to Innovation Potential Evaluation as a Means of Enterprise Management Improving. *International Journal of Supply and Operations Management*, 7 (1), 112-118. Retrieved from: https://doi.org/10.22034/ijsom.2020.1.7.

[3] Samborskyi, O., Isai, O., Hnatenko, I., Parkhomenko, O., Rubezhanska, V. & Yershova, O. (2020). Modeling of foreign direct investment impact on economic growth in a free market. *Accounting*, 6(5), 705-712. Retrieved from: https://doi.org/10.5267/j.ac.2020.6.014

[4] Hanushchak-Efimenko, L., Hnatenko, I., Parkhomenko, O. & Rubezhanska, V. (2019). Competitive Advantages of the Cluster as a Factor in Increasing the Investment Activity of Innovative Entrepreneurship. *Bulletin of the Kyiv National University of Technologies and Design. Series: Economic sciences,* 6 (149), 8-17.

[5] Petryk, O., Semenov, A., Hnatenko, I., Samiilenko, A., Rubezhanska, V. & Patsarniuk, O. (2020). Conceptual model for assessing the investment attractiveness of innovative projects of industrial enterprises. *Accounting*, 6(6). Retrieved from: 10.5267/j.msl.2020.8.015

[6] Hnatenko, I., Rubezhanska, V. (2018). Architectonics of the concept of the national labour market regulation. *Journal Management*, 1 (27), 79-90.

[7] Гнатенко, І. А. & Рубежанська, В. О. (2017). Логіка впровадження інноваційних заходів на регіональний ринок праці в умовах його циклічного розвитку. *Бізнес Інформ*, 8, 110-115.

[8] Гнатенко, І. А. & Рубежанська, В. О. (2018). Державне регулювання ринку праці з позицій стратегічного та стейкхолдерно-орієнтованого підходів. *Бізнес Інформ*, 8, 100-105.

[9] Гнатенко, І. А. & Рубежанська, В. О. (2016). Вплив глобалізації на національний та регіональні ринки праці в Україні. *Вісник Одеського національного університету імені І.І. Мечникова*, 3(21), 109-112.

[10] Гнатенко, І. А. & Рубежанська, В. О (2018). Регіональний ринок праці Луганської області: сучасний стан та причини незадовільного функціонування. *Науковий економічний журнал «Інтелект XXI»*, 1, 39-44.