PROVIDING OF ECONOMIC POTENTIAL OF THE ENTERPRISE USING THE CIRCULAR MODEL OF INVESTMENTS IN INNOVATIVE ACTIVITIES

ORCID ID: 0000-0003-2313-3984 **Oneshko Svitlana**
PhD of Economic Sciences, Associate Professor,
Professor of the department of Economics and Finance
Odesa National Maritime University

UKRAINE

The economic potential of the enterprise from the standpoint of its essence is quite actively researched by scientists [1, 2, 3, 4] and includes quite a variety of components, among which the investment component is of great importance, which contributes to the ability of the enterprise to attract capital in sufficient quantities to ensure the maximum possible or sufficient the size of the financial result in the form of profit.

In the economic analysis, which is the basis of the assessment of economic potential, this category is interpreted as "relationships that arise at the enterprise regarding the achievement of the maximum possible financial result", while one of the conditions is "the possibility of attracting capital, in the amount necessary for the implementation of effective investment projects" [3]. The study [4] considered to ensure production and economic reserves to intensify innovation and investment development in the context of monitoring the state of their economic potential.

Recently, a significant decrease in the innovative component of their activity has been observed in the economy of Ukrainian manufacturing enterprises. The reason is that the economic environment for innovative activity can be assessed as non-competitive, unstable and risky, as a result of which there is a decrease in the number of investments directed to innovation.

The main difficulties of the innovation process are related to the stage of the implementation of the innovation project, which requires the investment of significant financial funds in the conversion of production, conducting marketing research, etc. The peculiarity is that the costs at this stage are not paid off and the investment is made for the future. The innovative merits of financial and industrial corporate structures deserve attention because within the framework of such groups it is easier to finance the implementation of innovations.

The advantages of mathematical modeling are that it allows: to substantiate the phenomena under investigation and the connections between them (descriptive function); predict the future development of innovation processes (forecasting function); choose optimal development scenarios (normative function). Thus, S. Yermak in his work, summarizing and systematizing inclusive business models, comes to the conclusion, "... that the understanding of innovative activity by scientists has evolved from an incomplete understanding and lack of attention to innovation against the background of the ignorance of the ideologues of epoch-making inventions to the general recognition of innovative activity as the basis economic development and the main catalyst of progress" [5, p. 351].

In view of the above justification of the investment cycle model in the corporate financial and industrial structure, which is trying to intensify its innovation process, is an urgent task.

The model of the investment circulation process in the modern innovative activity of an industrial enterprise must be considered taking into account the time factor. The basis of the functioning model of the elementary corporate group of the movement of investment funds aimed at financing innovative activities includes:

– industrial enterprise A (manufacturer of the main products);

– bank B;

– production enterprise B (consumer of the main products in an integrally integrated chain);

– enterprise C, which implements innovation (can be a department in the structure of enterprise A).

In the process of implementing this innovation by the corporate group, a cycle of investments in fixed capital arises (Fig. 1).
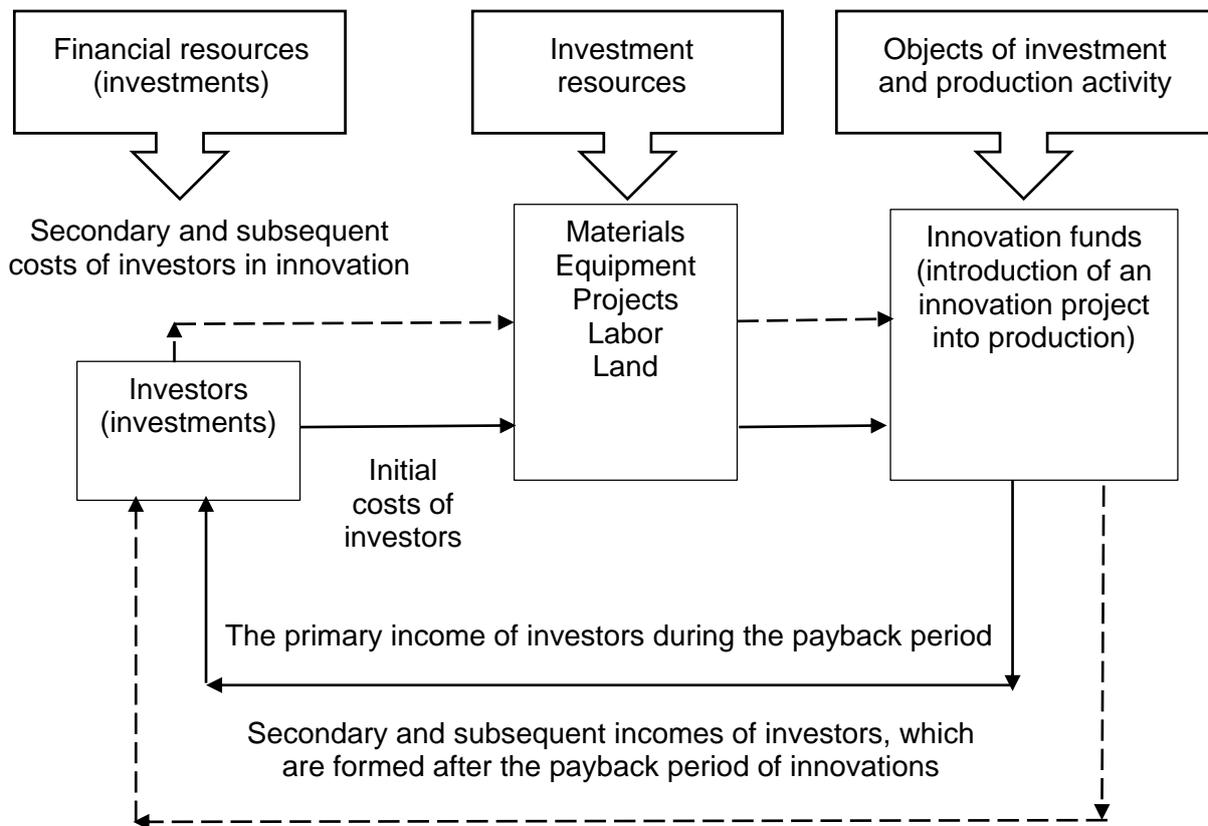
Fig. 1. **Scheme of circulation of investments at an industrial enterprise during the implementation of innovations** *(the author's idea)*

The relations that arise in connection with the implementation of investments in innovative activities (according to the given scheme) can be presented as follows:

$$J \rightarrow R \rightarrow [(F), (T)] \rightarrow D, \tag{1}$$

where *J* – investment in innovative activity (monetary form);
R – investment resources in which advanced investments are made;
(F), (T) – objects of investment activity (*F* – introduction of new technology, transition to new equipment);
T – release of new products using existing production facilities);
D – income from investments in innovative activity.

The cycle of investments in innovative activities implemented by the corporate group is shown in fig. 2.
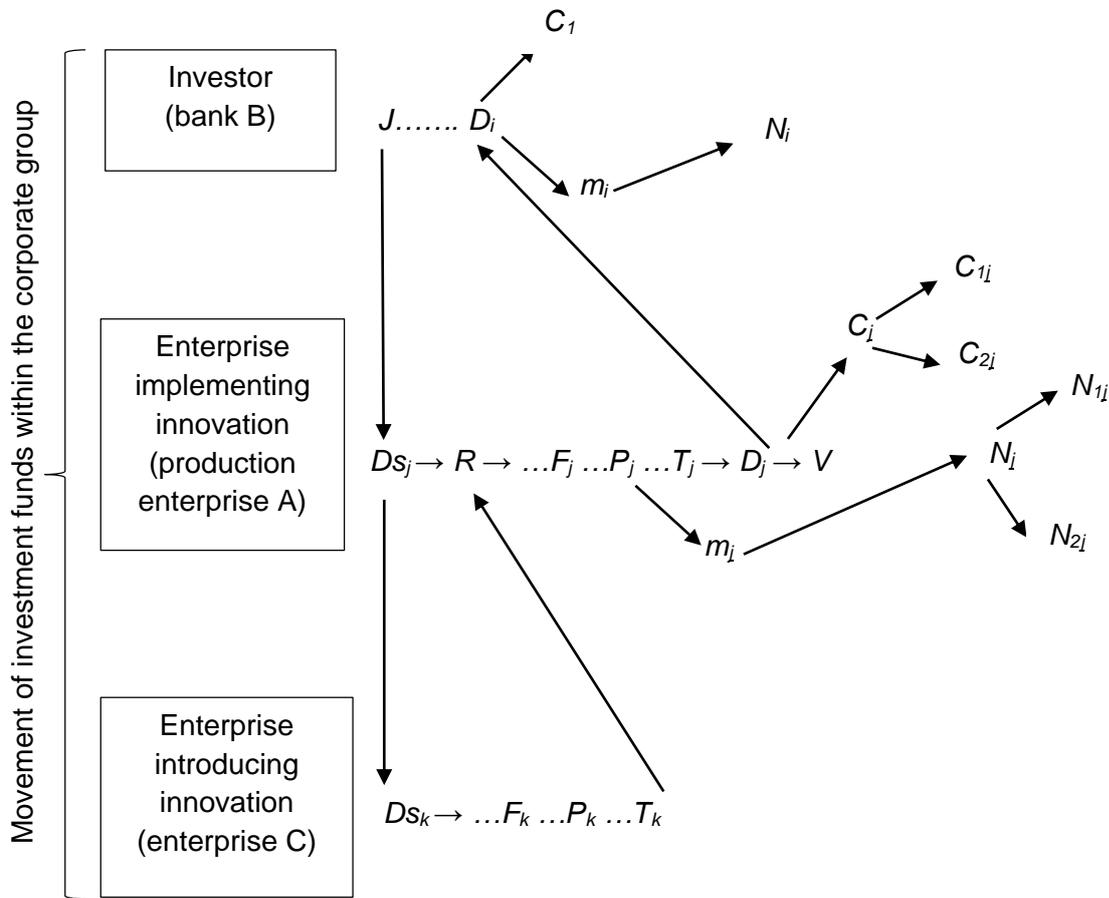
Markings on the diagram:

i, j, k – indices, respectively, of the investor, the manufacturing enterprise that implements the innovation, and the enterprise that implements the innovation; Ds_i, Ds_k – funds received from the investor; F_j, F_k – funds invested in equipment, materials, products and structures, necessary for the implementation and realization of innovation; P_j, P_k – processes of technology, organization and production management at the levels of innovation implementation and implementation; D_i, D_j – funds received as a result of the exploitation of the innovation; m_i, m_j – net income in the form of profit; C_i, C_j – funds directed to the reimbursement of consumed investments for innovative activities; C_{1j} – fund for reimbursement of material and technical costs included in the production costs of production enterprise A; C_{2j} – depreciation fund; N_i, N_j – accumulation funds; N_{1j}, N_{2j} – accumulation funds, respectively, are directed to the reimbursement of consumed investments for innovative activities and for new investments for the production enterprise A.

Fig. 2. **The model of investment circulation in the corporate financial and industrial structure** *(author's suggestion)*

All considered investment transformation processes are carried out taking into account the time factor. The model includes investors who do not directly participate in the company's operations, but finance it with their own funds or manage funds.

Conclusions. The economic potential of the enterprise includes various components, among which the investment component is of great importance. The algorithm in the form of a model of the investment circulation process in the modern

innovative activity of an industrial enterprise, taking into account the time factor, allows: to substantiate the phenomena under investigation and the connections between them (descriptive function); predict the future development of innovation processes (forecasting function); choose optimal development scenarios (normative function). Based on this, it is possible to recommend to specialists, acting in cooperation with scientists of economic and mathematical modeling, to make maximum use of its descriptive, prognostic and normative potentials.

References:

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