

# Management of Innovation and Investment Activities of Enterprises in the Conditions of Digitalization to Increase Their Competitiveness in the International Market

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## Abstract

The article analyzes the features of innovation and investment activities of enterprises in the context of digitalization to increase their competitiveness in the international market. Ukraine's position on the Global Innovation Index is assessed. The interrelation of management functions in the context of innovation and investment activities of enterprises is substantiated. The structure of sources of financing of innovative activity of industrial enterprises is analyzed. Trends in changes in the volume of foreign direct investment and capital investment in Ukraine are assessed. It is determined that the level of innovative development of enterprises is determined by the level of their investment support, which is determined by the level of their investment attractiveness. The components of the strategy of investment attractiveness of enterprises are outlined. Determining factors in the implementation of innovation and investment policy of enterprises are identified and the main stages that should include the processes of managing innovation and investment activities of enterprises in the context of digitalization.

## Key words:

*innovations, innovative activity of enterprises, management, innovation and investment activity, digitalization.*

## 1. Introduction

Modern transformation processes, dominating global trends cause significant changes in all areas, including the activities of enterprises. Dynamic development of modern technologies, innovation and digitalization trends necessitate the development of innovation and investment activities of enterprises. Generation of innovative products will serve to reduce economic costs and help increase the competitiveness of enterprises in the international market. In general, the establishment of innovation and investment activities of enterprises will help strengthen strategically important sectors of the economy in general and increase the competitiveness of economic entities in particular, both in the domestic and international markets. The lack of financial resources forces companies to look for new potential opportunities to strengthen their competitive

position, among which an important role is played by innovation processes with appropriate investment security. All this together highlights the need to study the features of management of innovation and investment activities of enterprises in the digital economy.

The issue of management of innovation and investment activities of enterprises, in particular in the realities of the digital economy is actively studied by scientists. However, given the dynamism of the external environment, the need for further analysis of the main aspects of the management of innovation and investment activities of enterprises in the context of digitalization remains relevant.

The purpose of the article is to study the theoretical and methodological aspects of management of innovation and investment activities of enterprises in the context of digitalization to increase their competitiveness in the international market.

## 2. Literature review

Innovation and investment development of enterprises is an extremely relevant and important area of research. Many scientists have studied these processes in their scientific works, as well as much attention today is paid to the processes of digitization, namely: Abramova A. (2021) [1]; Collins J.(2017) [2]; Cosmulese C. (2019) [3]; Del Pozo D. (2021) [4]; Doroshenko Y. (2016) [5]; Girma S. (2009) [6]; Grigashkina S. (2018) [7]; Grigoraş-Ichim C. (2018) [8]; Ivanova N. (2016) [9]; Kublitska O. (2021) [10]; Khanin S. (2022) [11]; Kholiavko N. (2021) [12]; Melnychenko A. (2022) [13]; Bazhenkov I. (2021) [14]; Kholod S. (2021) [15]; Kiselitsa E.(2021) [16]; Marhasova V. (2017) [17]; Garafonova O. (2020) [18]; Pohrebniak A. (2021) [19]; Tkachenko T. (2021) [20]; Qu Y. (2017) [21]; Samiilenko H. (2021) [22]; Khudolei V. (2021) [23]; Kyrychenko S. (2021) [24]; Sheveleva O. (2020) [25]; Shkarlet S. (2019) [26]; Dubyna M. (2017) [27]; Tarasenko A. (2017) [28]; Snitko L.

(2014) [29]; Tkalenko N. (2017) [30]; Tulchynska S. (2021) [31]; Vovk O. (2021) [32]; Wang D. (2020) [33]; Wang Y. (2020) [34] and other.

The article by scientists [6] is based on a study of the impact of foreign direct investment on the innovation processes of Chinese enterprises. The authors analyzed and substantiated that higher innovation activity at the enterprise level is associated with attracting foreign capital. The article by scientists [4] demonstrates the results of assessing the effectiveness of investing in innovative activities of the enterprise. Researchers have found that boosting innovation increases employment rates. The aim of the article [2] is to study the influence of top managers on the formation of innovation and investment activities of Indian enterprises. As a result of the study, the authors prove the significant influence of the opinion of top managers on the relevance, timeliness and feasibility of attracting investment in innovative projects.

The purpose of the paper [16] is to study and analyze the processes of stimulating innovation in the agro-industrial complex. Scientists have outlined the prospects and highlighted the problems that hinder the implementation of innovative projects and developed a model for intensifying the innovative activities of agricultural enterprises. The aim of the article [5] is to analyze investment and innovation processes in small and medium-sized businesses. The authors propose and prove the practical feasibility of the proposed ways to improve measures of state support for small business. The article by scientists [4] demonstrates the results of assessing the effectiveness of investing in innovative activities of the enterprise. Researchers have found that boosting innovation increases employment rates.

According to the study [34], the authors proposed a model for studying the impact of natural resources of the host country on the choice of location of foreign investment by Chinese enterprises. According to the authors, the developed model has a positive impact on determining the feasibility of foreign investment by Chinese enterprises. The authors of the article [25] study the features and analyze the importance of investment and innovation activities of the coal industry. According to the results of the study, scientists have identified factors that inhibit investment and innovation development of enterprises, which include: a slight increase in investment

in fixed assets, low level of innovation in the coal industry, non-compliance with technical standards, procedures and rules.

The scientific work of the authors [33] is devoted to the study of foreign direct investment in enterprises. Scientists are convinced of the high degree of risk in the investment process, due to the influence of a large number of uncertain factors. The result of the researchers' research is practical recommendations aimed at reducing the risk of foreign direct investment. Article [21] is based on a study of the role of regional formal institutions in the innovation process in Chinese enterprises. The authors argue that regional formal institutions, financial institutions, educational and tax institutions promote the development of innovation in Chinese enterprises. Scientists [29] analyzed the mechanism of formation of investment resources of the enterprise. The authors describe the principles of creation and operation, define the tasks and outline the main functions of the mechanism.

### 3. Results

Current trends in economic development necessitate the development of an innovative component in the activities of enterprises to ensure their successful operation and strengthen strategic advantages. To ensure the appropriate level of effectiveness of innovation activities of enterprises, it is necessary to have sufficient sources of funding for innovation, which is possible through investment sources. Digitalization trends necessitate increased investment in innovation to ensure stable economic growth.

International indices determine the level of innovative development of the state, in particular, and take into account the level of innovation of enterprises and their innovative competitiveness.

According to the Global Innovation Index, Ukraine's position has deteriorated somewhat due to the global economic downturn and the impact of the COVID-19 pandemic (Fig. 1).

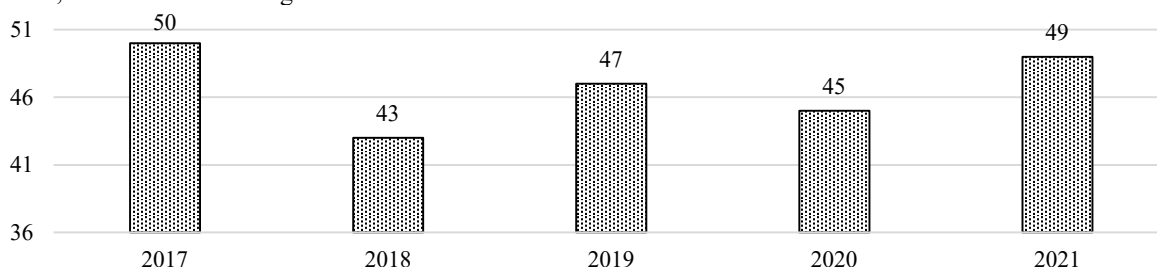


Fig. 1 Ukraine's position according to the Global Innovation Index, 2017-2021  
Source: compiled according to [35-37].

Management of innovation and investment activities of enterprises in modern conditions characterized by significant global changes involves the management of investment investments in diverse processes aimed at implementing scientific and technical developments and innovative areas of management to develop innovative competitive products and improve its quality relative to competitors in the international market, constant

improvement of technology of manufacturing and occupation by the enterprise of the corresponding niche in the domestic and world markets.

Management of innovation and investment activities of enterprises should be considered in terms of management functions (motivation, control, planning and organization) (Fig. 2).

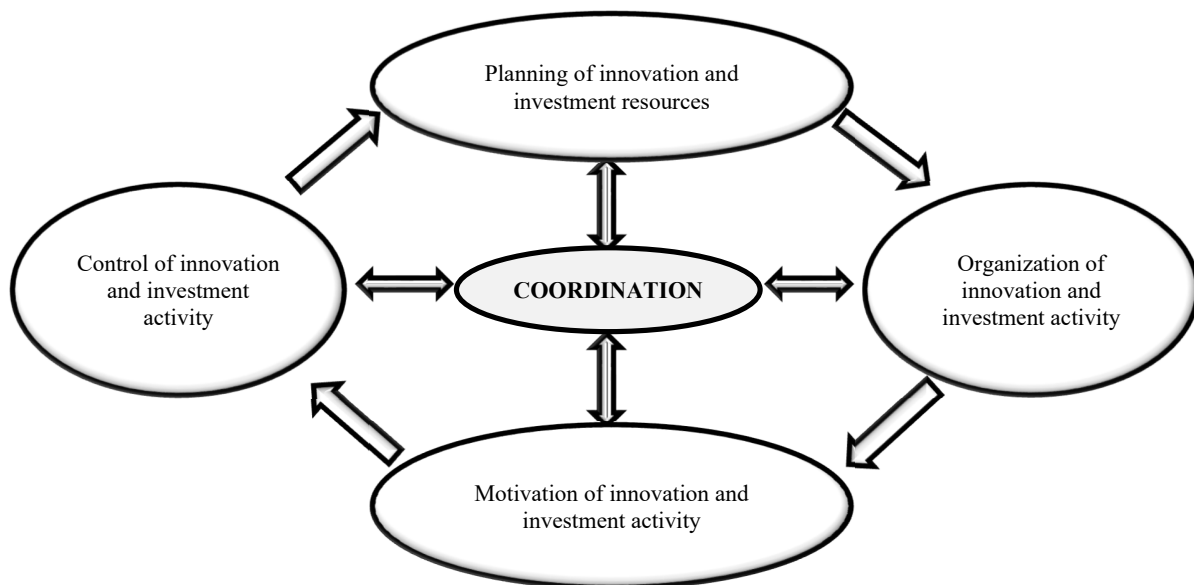


Fig. 2 Interrelationship of management functions in the context of innovation and investment activities of enterprises  
Source: developed by the authors.

In the context of planning, it is important to find and assess the factors of innovation and investment development. In the planning process, the sources of financial and resource support for innovative development are assessed. Labor and information resources are important resources for innovation development.

Business modeling is important for the organization of investment and innovation activities. Various models of management of innovation and investment resources are being developed based on the type of enterprise activity. In the conditions of digitalization of the economy, proper information support allows to form an effective business model of development, labor resources are a source of innovative development, financial resources - a source of technical and technological support.

Control and motivation are aimed at maintaining the relevance of the existing business model. Controlling aspects allow constant monitoring of trends in the effectiveness of the established model of financial resources management.

Coordination provides interaction and coordination of all processes carried out in the enterprise, which allows you to create a single whole.

Based on this, in order to intensify the innovative activity of enterprises and increase their competitiveness in the international market, the necessary steps should be the development of financing, in particular in attracting investment, including international, to ensure the development of strategic scientific and technological potential rapid and effective implementation of innovations.

The analysis of the structure of sources of financing of innovative activity of industrial enterprises in Ukraine shows that despite the activity of attracting diverse sources of financing own funds of enterprises continue to be the main source of innovative development of enterprises (Fig. 3). In order to expand the financial support of innovative development, it should be important to maintain an appropriate level of investment attractiveness.

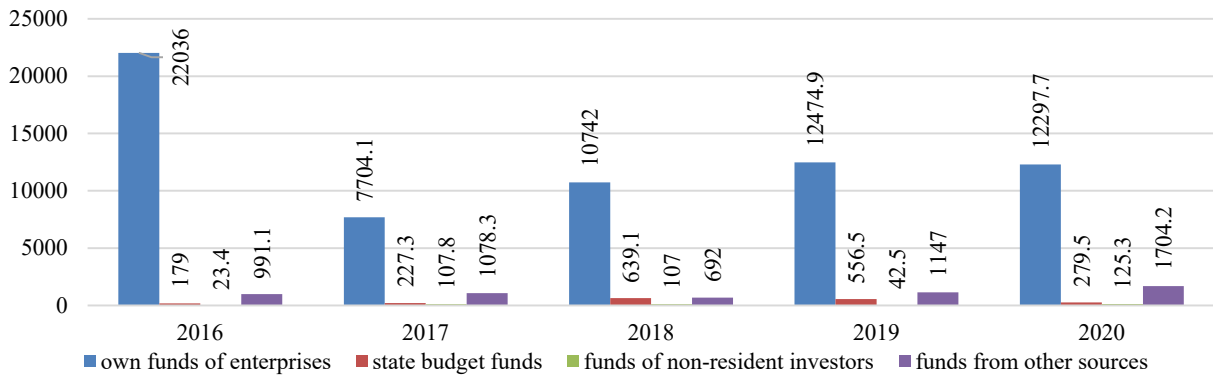


Fig. 3 Structure of sources of financing of innovative activities of industrial enterprises, 2016-2020, UAH million  
Source: compiled according to [38].

The growth of investment, both foreign and domestic, contributes to the formation of a general favorable investment climate, the development of the potential of enterprises, especially in the context of expanding the

digitalization of the economy. The change in the dynamics of foreign direct investment and capital investment in 2006-2020 is shown in Fig. 4.

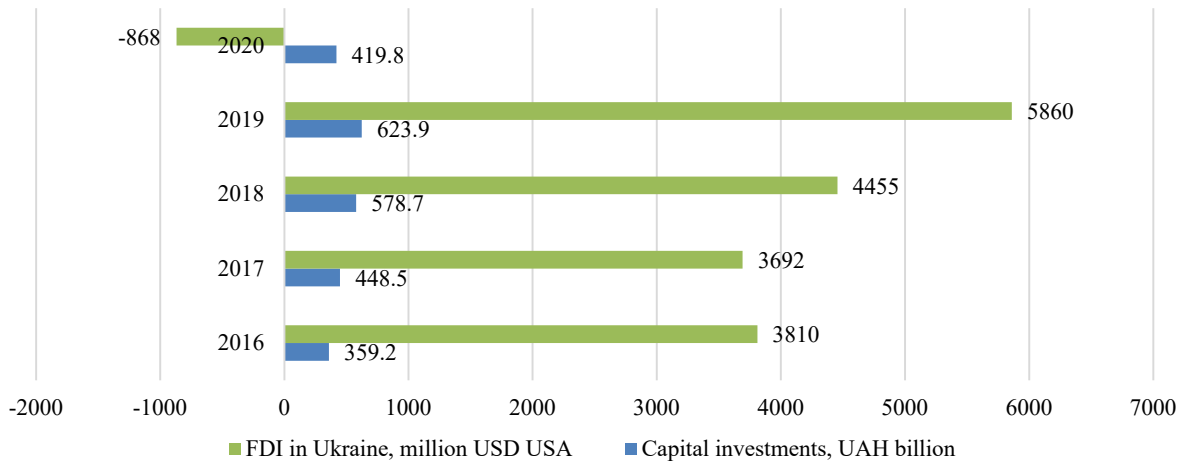


Fig. 4 Trends in changes in foreign direct investment and capital investments in Ukraine, 2016-2020  
Source: compiled according to [38; 39].

The data of Fig. 4 indicate a volatile situation with regard to foreign direct investment due to the changing environment, including the pandemic. There is also an unstable trend in capital investment, in particular the volume of capital investment in 2017 increased by 24.9% compared to the previous year, in 2018 - increased by 29%, in 2019 - increased by 7.8%. However, in 2020 the volume of capital investments decreased by 32.7%.

The level of innovative development of enterprises is determined by the level of its investment support. In turn, the investment development of enterprises is determined by the level of their investment attractiveness.

The development of the strategy of investment attractiveness of enterprises includes the following components (Fig. 5):

- definition and justification of strategic goals;
- implementation of strategic diagnostics and proper management of financial resources to ensure compliance with the relevant conditions for achieving innovative support;
- strategic forecasting of production potential through resource optimization;
- increase the level of investment attractiveness by providing operational and strategic management decisions.

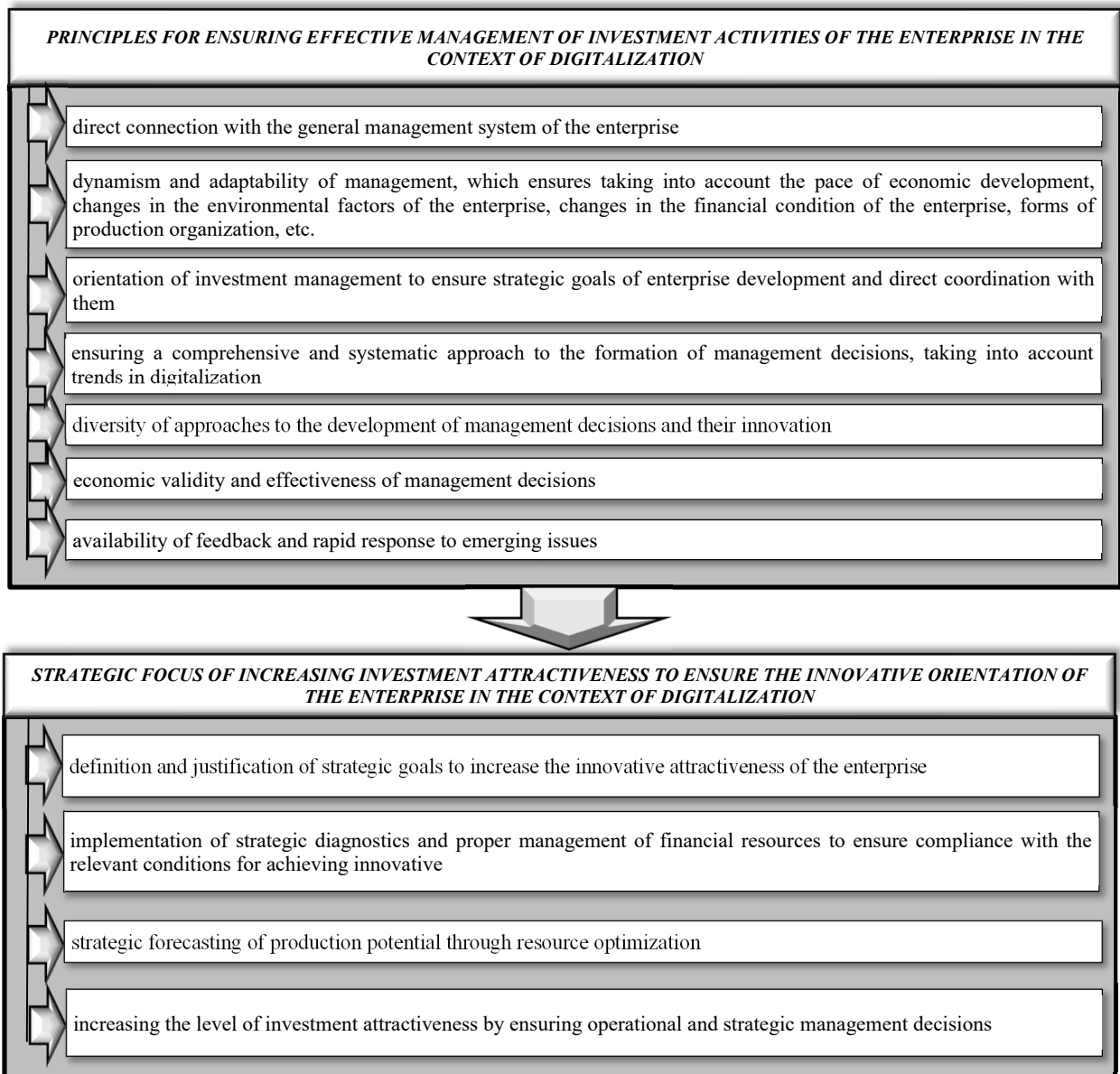


Fig. 5 Principles and strategic focus of increasing investment attractiveness to ensure innovative orientation of enterprises in the context of digitalization  
Source: compiled according to [38; 39].

Accordingly, the level of efficiency of investment management in the context of digitalization of enterprises is provided by the implementation of the following principles:

- direct connection with the general management system of the enterprise;
- dynamism and adaptability of management, which takes into account the pace of economic development, changes in environmental factors of the enterprise, changes in the financial condition of the enterprise, forms of organization of production, etc.;

- orientation of investment management to ensure the strategic goals of enterprise development and direct coordination with them;
- providing a comprehensive and systematic approach to the formation of management decisions;
- diversity of approaches to the development of management decisions;
- economic feasibility and effectiveness of management decisions;
- availability of feedback.

Progressive development of enterprises is facilitated by the intensification of their innovative activities, which allows to increase the scientific and technical level of production, strengthen competitive advantages, increase the level of resource efficiency. In this context, the intensification of innovation and investment activities will contribute to the following measures (Fig. 6):

firstly, finding and evaluating opportunities for investment support for innovation. In this context, access to sources of investment resources and sufficient own funds to finance innovations are important factors in ensuring the innovative development of enterprises;

secondly, a real assessment of the ability of enterprises to invest to ensure the implementation of innovations. The ability of enterprises to develop innovative activities is determined by the quantitative and qualitative characteristics of the innovative potential of the enterprise, the defined strategic direction of innovative development, specific economic conditions;

thirdly, state support for innovation and investment development of enterprises. To ensure the proper level of management of innovation and investment activities at both micro and macro levels, it is important to ensure adequate support from the state.

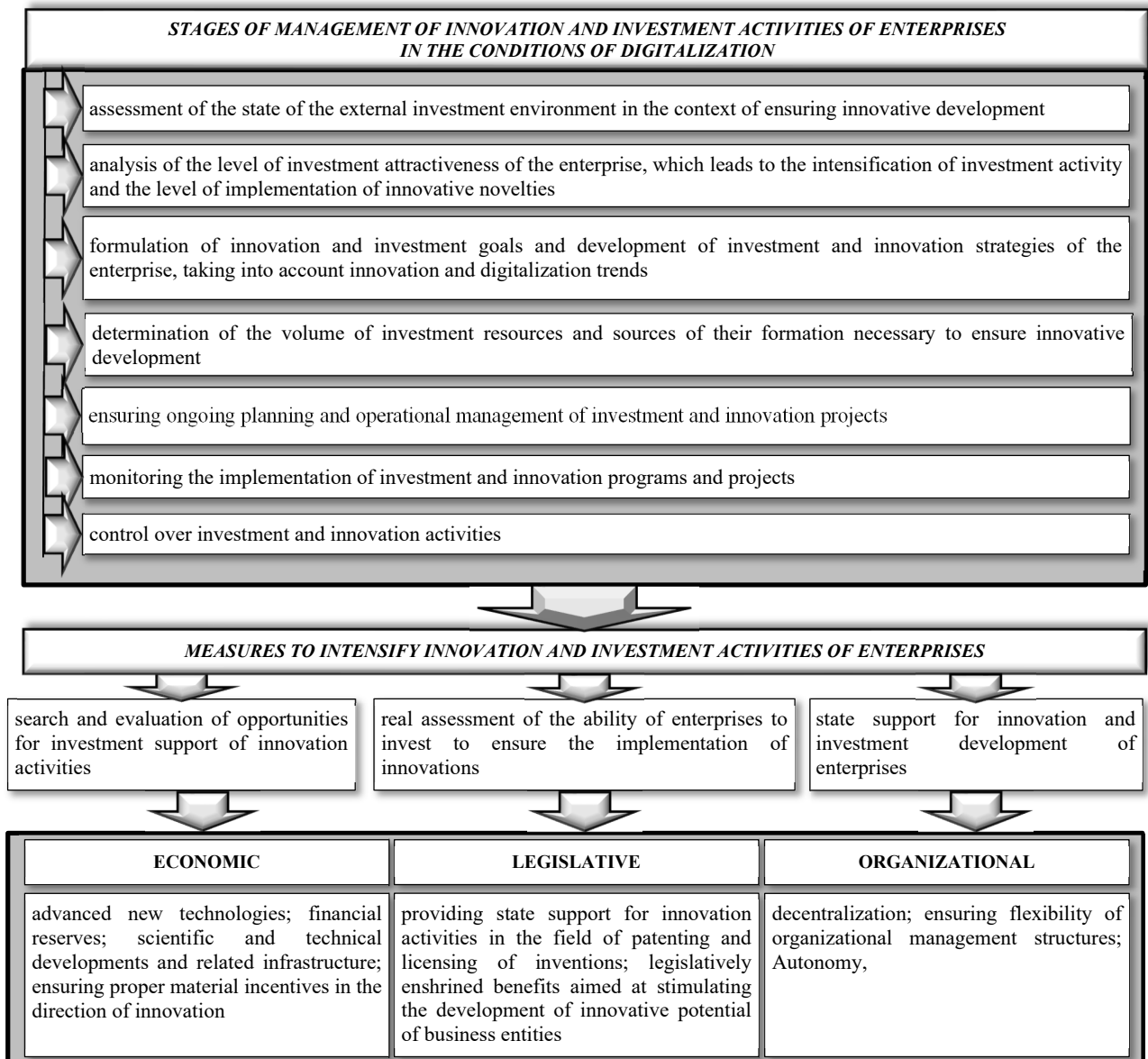


Fig. 6 Conceptual principles of management of innovation and investment activities of enterprises in the context of digitalization  
Source: developed by the authors.

In this context, the specific levers for the implementation of state support for the development of innovation potential of the country in the context of digitalization are the following:

firstly, economic: advanced latest technologies; financial reserves; scientific and technical developments and relevant infrastructure; providing appropriate material incentives in the direction of innovation.

secondly, legislative: providing state support for innovation in the direction of patenting and licensing of inventions; Legislatively enshrined benefits aimed at stimulating the development of innovation potential of economic entities.

thirdly, organizational: decentralization; ensuring the flexibility of organizational management structures; autonomy.

Unstable socio-political situation, corruption, bureaucratic and administrative barriers, variability of the external economic environment, high interest rates on loans, inadequate level of information openness, qualification level of specialists, etc. are restraining factors in the implementation of innovation and investment policy of enterprises in the conditions of digitalization.

Based on this, the processes of management of innovation and investment activities of enterprises in the context of digitalization should include the following stages:

- assessment of the state of the external investment environment in the context of ensuring innovative development;
- analysis of the level of investment attractiveness of the enterprise, which determines the intensification of investment activities and the level of implementation of innovative innovations;
- formulation of innovation and investment goals and development of investment and innovation strategies of the enterprise taking into account innovation and digitalization trends;
- determining the amount of investment resources and sources of their formation necessary to ensure innovative development;
- ensuring the current planning and operational management of investment and innovation projects;
- monitoring the implementation of innovation and investment programs and projects;
- control over innovation and investment activities.

#### 4. Conclusions

The appropriate level of efficiency of management of innovation and investment activities of enterprises in the context of digitalization is one of the most promising areas of enterprise development, aimed at increasing their competitiveness in both domestic and international

markets. Management of innovation and investment activities of enterprises should be provided in the context of synergy of basic management functions. It is important to ensure the innovation and investment activities of enterprises is the formation of a strategy of investment attractiveness, which will help restore and develop economic activity and maintain competitiveness in a changing environment.

The scientific novelty of this study is the substantiation of theoretical and methodological aspects of management of innovation and investment activities of enterprises in the context of digitalization to increase their competitiveness in the international market, based on the relationship of enterprise management functions, development of investment attractiveness strategy activities in the conditions of digitalization and development of stages of management of innovation and investment activity in the conditions of digitalization.

In order to increase the efficiency of innovation and investment activities of enterprises to ensure the proper level of their competitiveness, strategic areas should be: improving the management system, ensuring balanced renewal of components of production capacity, development of institutional environment of innovation and investment activities, proper information support, human development.

Further research is required to assess the impact of digitalization on the management of innovation and investment activities of the enterprise and increase its competitiveness in the international market.

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