
Management of innovation potential of telecommunication enterprises in conditions of economic instability

Natalia Yevtushenko

Educational and Scientific Institute of Management and Entrepreneurship, State University of Information and Communication Technologies, Kyiv, Ukraine

ORCID: 0000-0001-8865-8365

Ruslan Ryazantsev

Management Department, Educational and Scientific Institute of Management and Entrepreneurship, State University of Information and Communication Technologies, Kyiv, Ukraine

ORCID: 0000-0002-0140-8310

To cite this article:

Yevtushenko Natalia, Ryazantsev Ruslan. Management of innovation potential of telecommunication enterprises in conditions of economic instability. *International Science Journal of Management, Economics & Finance*. Vol. 3, No. 1, 2024, pp. 81-89. doi: 10.46299/j.isjmef.20240301.08.

Received: 11 20, 2023; **Accepted:** 12 27, 2023; **Published:** 02 01, 2024

Abstract: Within the framework of this article, an analysis of economic entities of different sizes on the Ukrainian market in conditions of economic instability was carried out, taking into account their innovative activity. The peculiarities of the functioning of enterprises in the field of telecommunications in conditions of economic instability have been determined, and the conceptual bases of their management within the framework of the components of the management system by levels and the support system have been substantiated. On this basis, a mechanism for managing the innovative potential of telecommunications enterprises was developed and its components were described. It is proven that the formation and implementation of the mechanism for managing the innovative potential of communication enterprises within the framework of the proposed management system will affect their activities in accordance with the development goals and the chosen strategy. This will allow the management of telecommunications enterprises to ensure the effectiveness of management decisions, to increase competitive advantages based on innovation and increase their competitive position in conditions of economic instability.

Keywords: innovative potential, management, mechanism, system, principles, tools, telecommunications enterprise, enterprise.

1. Introduction

In today's conditions, new economic systems actively being formed in the global market. The driving force behind their formation is the creation of a system for the reproduction and use of knowledge, translating it into innovation, which becomes a key factor in the development of most enterprises. Considering this, Ukrainian enterprises strive to conduct their activities within the framework of an innovative model of economic development, which will help Ukraine increase its competitiveness in the world market.

In pre-war Ukraine, enterprises developed within two disparate segments, the needs of which in the business environment partially coincide, but are largely different (Fig. 1). On the one hand, these are about 500 large enterprises with a turnover of more than 100 million dollars USA. A large number of them are state-controlled or belong to diversified conglomerates, the largest of which are controlled by groups historically known as "oligarchs". On the other hand, there are about 400,000 small enterprises and 1.6 million private entrepreneurs.

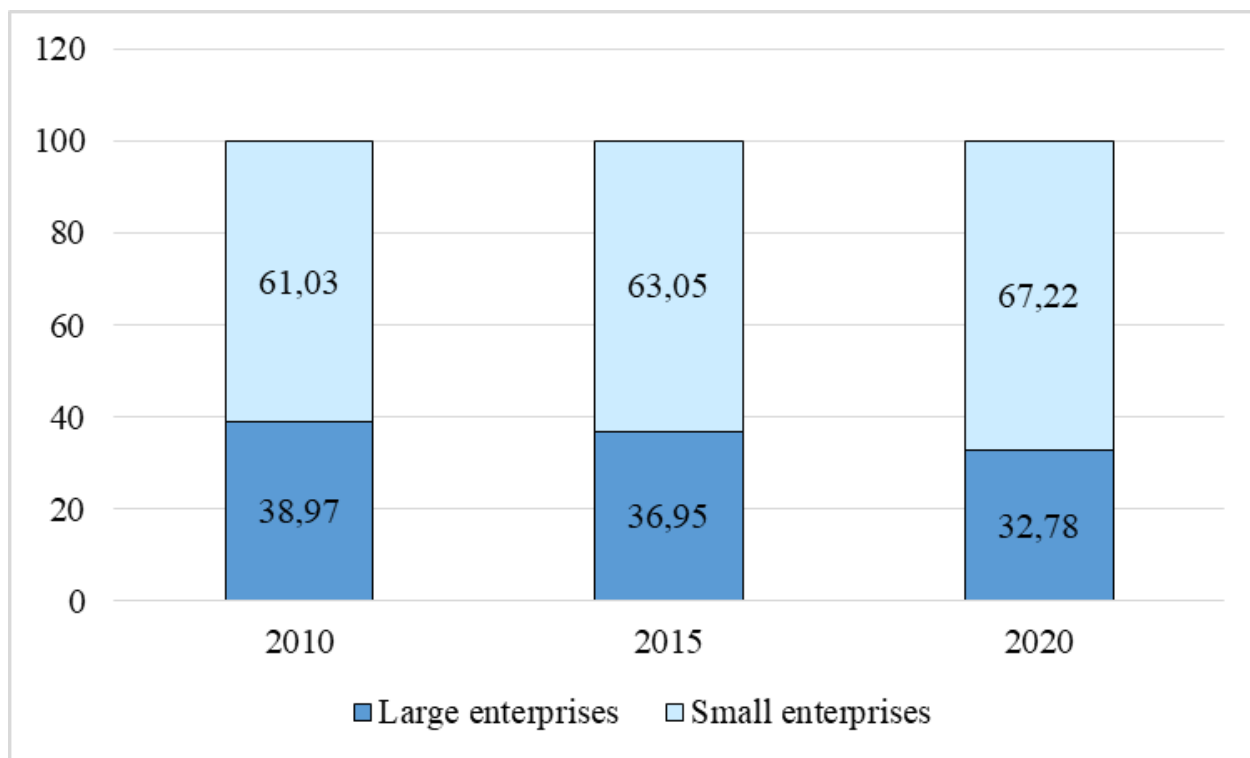


Figure 1. The share of large enterprises and small enterprises in the total turnover of enterprises of Ukraine for the period 2010-2020.[1]

It has been established that the share of large enterprises in the overall structure of enterprises in Ukraine in the period 2010-2020 tended to decrease. Thus, in 2010, the share of large enterprises was 39% (586 large enterprises), while at the end of 2020 their share decreased by 6% and represented approximately 30% (512 large enterprises) of the total turnover of the corporate sector. On the contrary, the share of small companies has a positive trend during the period under review. The share of these enterprises increased to 70% of the total turnover of Ukrainian enterprises.

In the course of research, it found that the reduction in the number of large enterprises on the Ukrainian market accompanied by a decline in their innovative activity. So, for the period 2016-2020 the number of large domestic enterprises carrying out innovative activities decreased by 5,892 enterprises. The share of innovatively active large enterprises in the total number of enterprises decreased from 28.1% in 2016 to 8.5% in 2020 (Fig. 2). A significant drop in innovation activity during the analyzed period was observed among:

- industrial enterprises (from 4060 enterprises in 2016 to 1550 enterprises in 2020);
- enterprises of the processing industry (from 3626 enterprises in 2016 to 1452 enterprises in 2020);
- wholesale trade (from 2174 enterprises in 2016 to 300 enterprises in 2020).

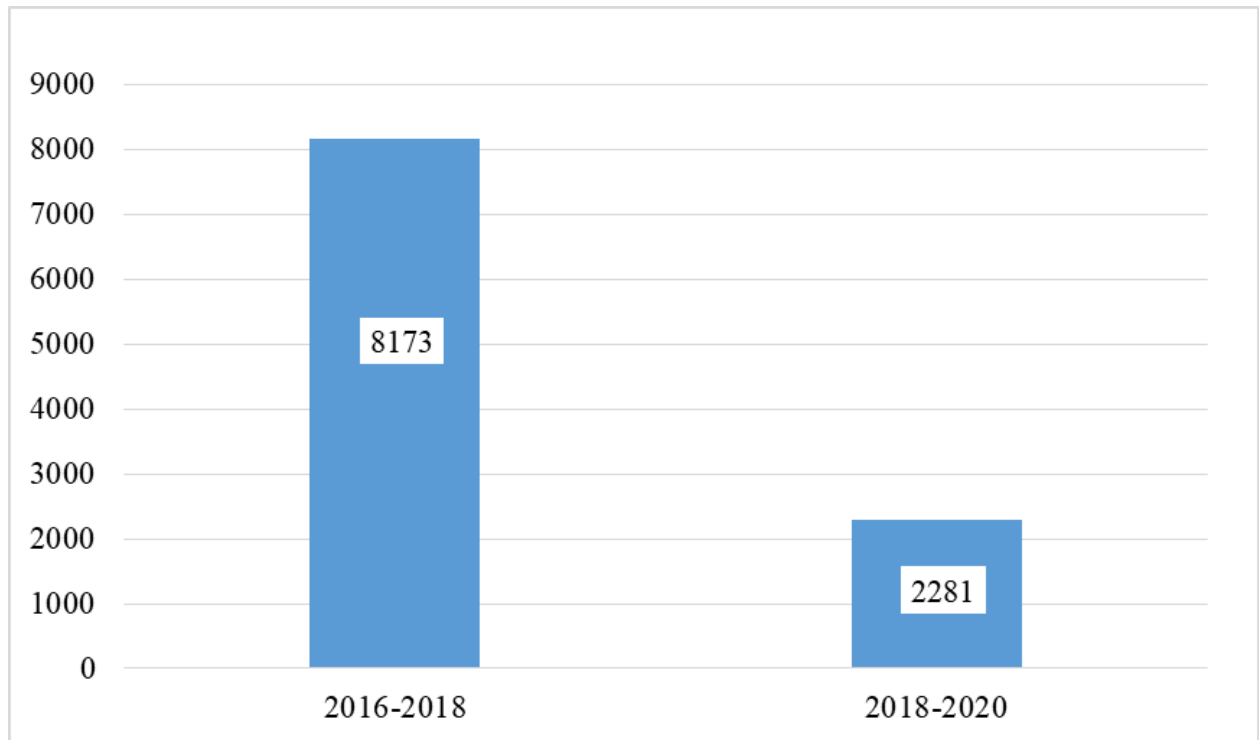


Figure 2. Dynamics of the number of innovatively active enterprises in Ukraine for the period 2016-2020.

Built from the source [2]

However, it is not so simple with small enterprises; their creation and activities take into account their own characteristics. Most small businesses exposed to the influence of the external environment and large corporations. According to studies by Ukrainian consulting companies, only about 60% of registered small and medium-sized enterprises are actually operational, while approximately 40% do not conduct regular commercial activities. The latter may be satellite enterprises of large businesses created to optimize taxation, “sleeping” companies, etc.

This large number of small businesses is mainly due to the high turnover rate. However, the average life cycle of businesses remains short and some survive their first year of operation. Thus, about 70% of enterprises do not survive the startup stage, which is due to the insufficient financial capabilities of the owner of the enterprise, partners and sponsors, if any. Only 15–21% of new small and medium-sized enterprises reach the stage of maturity when their goods or services become in demand, which manifested due to an increase in profitability and solvency.

Despite the above circumstances, the relevance of creating small enterprises has been steadily growing since 2014 according to the main indicators: share of turnover, employment, average sales volume. Significant priority in these processes belongs to small enterprises with the active development of IT and services, which helps to increase their innovative activity (Fig. 3).

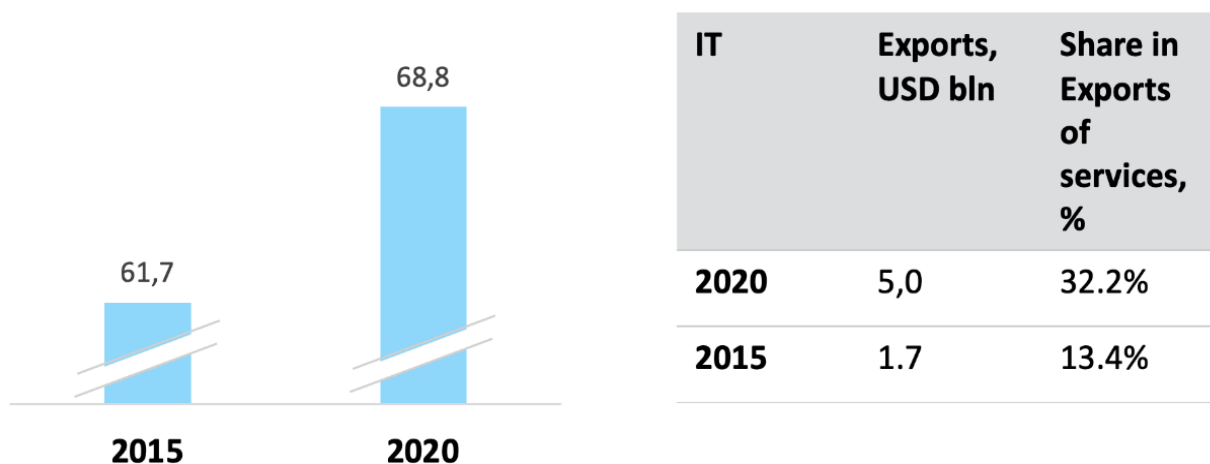


Figure 3. The share of small enterprises with active development of IT and the service sector in the total turnover [1].

It substantiated that the development and growth of small enterprises in Ukraine has its own difficulties. Firstly, the lack of accessible lending programs in the early stages of their development. Secondly, the low attractiveness of Ukraine for foreign investors hinders the attraction of investments that small enterprises so need at the stages of development of their business. Thirdly, small businesses use outdated management and competition practices, which makes it impossible to grow into large companies and enter new markets. Fourth, legal mechanisms focus on protecting large companies, although small businesses often lack the resources to resolve problems of this nature on their own. In the current circumstances, the innovative activity of small enterprises is insignificant.

However, there are certain sectors of the Ukrainian economy, particularly the services sector, that can overcome these obstacles because they have lower capital requirements and are often unable to protect their cash flows and assets by focusing on export markets. As a rule, the activities of such enterprises are related to digital Internet technologies, as well as consumer delivery services and creative industries in general.

In the conditions of the socio-economic and political crisis, which is accompanied by the deterioration of the general market conditions of the country, domestic enterprises of the telecommunications industry face the task of finding ways to effectively use and accumulate their innovative potential. This actualizes the need to form a conceptual basis for the management mechanism of the innovative potential of telecommunications enterprises in modern conditions.

2. Object and subject of research

The object of the study is the process of managing the innovative potential of telecommunications enterprises in conditions of economic instability.

The subject of the study is the theoretical principles, principles, methods and tools that ensure the formation and effective implementation of a mechanism for managing the innovative potential of telecommunications enterprises.

3. Target of research

The purpose of the article is to analyze economic entities of different sizes on the Ukrainian market, taking into account their innovative activity. Determination of the characteristic features of the functioning of enterprises in the telecommunications industry, substantiation of the conceptual foundations for their management. Development on this basis of a mechanism for managing the innovative potential of telecommunications enterprises.

4. Literature analysis

Significant contributions to the study of innovative potential, the formation of mechanisms for managing it, and the development of methodological approaches to assessing innovative potential were made by such well-known domestic scientists as: V. Aleksandrova [3], T. Vasilyeva [4], E. Galushko [5], V. Geits [6], A. Gudz [7], A. Glushenkova [8], N. Evtushenko [9], S. Ilyashenko [10], L. Lazorenko [11], N. Krasnokutskaya [12], L. Fedulova [13] and others.

Despite a significant number of scientific developments regarding the explanation of the peculiarities of the implementation of innovative activities of enterprises and directions of management of their innovative potential, it was established that a single management mechanism in this direction of research has not yet been developed. However, in foreign practice, knowledge, technologies and tools for managing innovative actions have especially intensively developed (cluster concept, network organization, innovative systems, innovative potential as the basis for an innovative company development strategy, etc.). Therefore, without taking into account the key theoretical, methodological, scientific and practical provisions that characterize the current state of innovative activity of business entities on the Ukrainian market, the development of an effective mechanism for managing the innovative potential of enterprises is impossible.

5. Research methods

In the process of work, to solve specific scientific problems, general scientific and special methods of studying processes and phenomena in their interrelation and development used, namely:

Dialectical, analysis and synthesis, statistical and economic analysis, graphical (when determining the level of innovative potential of domestic enterprises);

Structural-logical and semantic analysis (when studying and generalizing the theoretical and methodological foundations for the formation of a mechanism for managing the innovative potential of telecommunications enterprises, the corresponding terminology was clarified and streamlined).

6. Research results

Telecommunications enterprises provide services for transmitting and receiving information using special equipment over long distances and are the connecting link in the service sector. Modern telecommunications services are becoming a necessary condition for creating social cohesion and cultural development of society, the growth of areas of which is one of the most important areas of national and economic development of any state.

In the modern market of telecommunication services in Ukraine, there are trends associated with new customer needs and business conditions, in particular in the field of collecting, moving, processing and storing information. Under their influence, new promising directions for the development of telecommunications companies formed. This industry has the following distinctive features that distinguish it from enterprises in other sectors of the economy: a high degree of dependence on the state, uniform standards for communication services and, as a consequence, uniform technological requirements for telecommunications equipment. These factors determine both the main limitations and directions of development of the telecommunications industry [14].

However, despite these features, the telecommunications market has high growth rates. This is due to the demand for fast and secure connectivity in both the domestic and industrial sectors through fiber optic cables. Thus, in the RETN Internet network, which provides a connection between the client's IP network and the global Internet, Ukraine has grown by 132,000 km of its own backbone network passing through 45 countries. In 2022, not only the capacity between Ukraine and Europe and the main hubs of the world increased, but also new countries added to the presence of Ukrainian infrastructure, in particular, Bulgaria, Romania, and Serbia [15].

These achievements influenced the growth rates in mobile communications and fixed Internet access income for 2022, set at 14%, and Internet penetration reached 90% of Ukrainian households. The latter became a reality thanks to the initiative of the Ministry of Digital Transformation: as part of an active subvention for remote rural areas, about 20,000 km of fiber optic networks built throughout the country in 2021. Despite the war and problems with Internet access due to Russian shelling and destruction of infrastructure, the level of Internet penetration in Ukraine in 2022 maintained at the level of 2021. The average Internet speed in Ukraine continues to grow and by the end of 2022 it increased by approximately 8.3 Mb/s compared to 2021 [15].

Identification of the peculiarities of the functioning of enterprises in the telecommunications industry makes it possible to reveal the conceptual foundations of their management.

In this regard, the authors substantiate and define the content of the basic concepts of “innovation activity” and “innovation potential”. Thus, “innovative activity of the enterprise” is understood as a set of business processes that have an innovative component, the functioning of which will contribute to the achievement of strategic goals by the enterprise and strengthening of competitive positions. The concept of “innovative potential of the enterprise” is proposed to be defined as a set of resources and capabilities of the enterprise, necessary for the creation, implementation and distribution of new ideas, technologies and innovative products that will contribute to meeting the needs of modern producers and consumers in conditions of constant change [16].

We believe that in the process of functioning of the enterprise, innovative activity is primarily aimed at increasing the competitiveness of its products, goods or services. This is due to the need to form innovative potential, the assessment of which will allow the enterprise to understand its place in the market, identify its competitors and develop the best innovation strategy.

To increase competitiveness, it is important for an enterprise not only to form its innovative potential, but also to determine the features of its management. It is proposed to characterize the management of the innovative potential of the enterprise as a set of means and methods of managing the socio-economic activity of the enterprise according to the levels of intensity of use, the purpose of which is to increase the innovative potential and prepare a program for the implementation of a separate innovation depending on the stages of its life cycle.

We believe that the effectiveness of managing the innovative potential of a telecommunications enterprise depends on the functioning of the structure of the management system, which includes the following subsystems:

- 1) Target system (provides for the formation of goals for a certain period, then assessment of their achievement through selected performance indicators and identification of employee performance through a clear and transparent motivation system);
- 2) Support system (is a complex of interconnected automated systems that provide technological preparation of production, system management using software systems and automatic distribution of production items and technological equipment);
- 3) Functional system (defined as a set of activities);
- 4) Process (characterized as the process of preparing and making management decisions);
- 5) The system of corporate control (represents a set of types of control over the financial and economic activities of an enterprise by the owners).

The role and essence of each of the subsystems and the number of subsystems in the management structure depend on the type of enterprise, the scope and scale of activity, the degree of influence of the external environment and the results of the enterprise’s activities and other factors.

Effective management of the innovative potential of a telecommunications enterprise provides for a rational mechanism for managing it, capable of helping to obtain better results of innovative activities. Let's build a mechanism for managing the innovative potential of a telecommunications enterprise and present it in Fig. 4.

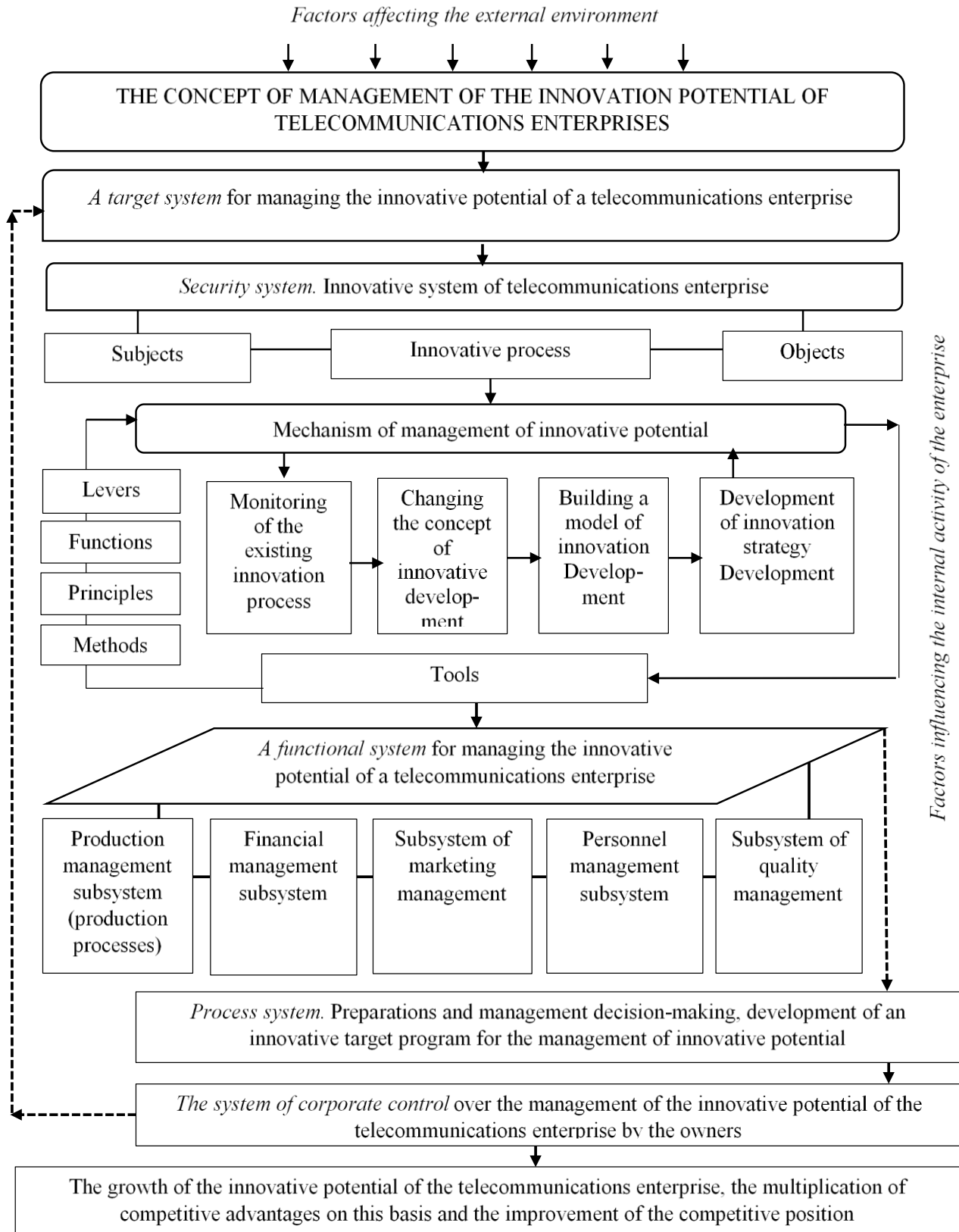


Figure 4. The mechanism for managing the innovative potential of a telecommunications enterprise using a systemic approach (*built by the authors*)

The process of forming and implementing a mechanism for managing the innovative potential of a telecommunications enterprise takes into account the following components of the management system:

1) Scientific approaches:

Systemic (ensures the integrity of the mechanism as a system with a certain structure (goals, resources, means, processes, methods)).

Process-based (creates conditions for the continuity of application of adaptation measures of the enterprise).

Situational (involves a constant assessment and analysis of the external and internal environment in order to identify certain patterns in the functioning of the enterprise, as well as determining the nature of its behavior in the relevant situation).

2) Levels: economic; legal; financial; technical and technological; managerial; organizational; social.

3) Functions: organization, coordination, planning, motivation, control.

4) Principles: consistency, scientificity, continuity, flexibility, controllability, consistency, priority, emergence, efficiency, differentiated motivation.

5) methods: program-target method, financial and economic assessment methods, forecasting and analytical methods, planning, expert assessment methods, methods of generating ideas, decision-making methods, incentive methods.

6) Tools: project management, innovation engineering, financial controlling, benchmarking, franchising, insurance and diversification of innovation risks, motivation.

7. Conclusions

Thus, rebuilding Ukraine's economy after the war and creating new business opportunities will require solving both old and new problems. Revitalization can and driven by investment in revenue generating businesses and infrastructure. Particular attention in this regard paid to telecommunications enterprises, which, with a stable growth of subscribers and low prices due to high competition, are often unable promptly establish processes for increasing costs due to the depreciation of the hryvnia and reducing the costs of telecom operators due to reduction income of the population.

In the course of the study, a mechanism for managing the innovative potential of a telecommunications enterprise proposed and considered as an effective management system. The formation of this system occurs through the main subsystems and provided by levers, principles, methods and tools in accordance with scientific approaches, which will lead to an increase in the level of profitability and competitiveness of the enterprise.

The proposed mechanism for managing the innovative potential of a telecommunications enterprise will help streamline and systematize work while developing and using the intellectual capabilities of personnel. This will allow for a comprehensive approach to all processes occurring during the operation of the enterprise. Assess all existing factors (internal and external) that can influence the effectiveness of using the innovative potential of a telecommunications enterprise. Create all the necessary conditions to ensure that this influence is more favorable and contributes to consolidating competitive positions in the market.

References:

1) Kak posle voyny Ukraina dolzhna vosstanavlivat' ekonomiku i biznes. Bol'shoye issledovaniye [How after the war Ukraine should restore the economy and business. Big study]. Journal Forbes Ukraine. Available at: <https://forbes.ua/ru/money/yak-pisslya-viyni-ukraina-mae-vidnovlyuvati-ekonomiku-ta-biznes-velike-doslidzhennya-deloitte-15122022-10501> (accessed October 03.2023)

- 2) Innovatsiyna diyal'nist' pidpryyemstv [Innovative activity of enterprises.]. State Statistics Service of Ukraine. Available at: <https://www.ukrstat.gov.ua/> (accessed October 06.2023)
- 3) Aleksandrova V.P. (2004). Ekonomika znan' ta yiyi perspektyvy dlya Ukrayiny [Knowledge economy and its prospects for Ukraine]. K. : In-t ekon. prohnozuv. NAN Ukrayiny.
- 4) Vasyl'yeva T.A., Lyeonov S.V., Kryvykh YA.M. (2011). Kontseptual'ni osnovy formuvannya systemy upravlinnya potentsialom innovatsiynoho rozvytku pidpryyemstva na zasadakh marketynhu [Conceptual foundations of the formation of the management system of the potential of innovative development of the enterprise on the basis of marketing]. Marketing and Innovation Management, vol. 4 (I), 160.
- 5) Halushko YE.S. (1999). Pidvyshchennya efektyvnosti vykorystannya innovatsiynoho potentsialu v umovakh perekhodu do rynkovykh vidnosyn (na prykladi promyslovykh pidpryyemstv Donbasu) [Increasing the efficiency of using innovative potential in the conditions of the transition to market relations (on the example of industrial enterprises of Donbas)]: autoref. dis.... Ph.D. economy Sciences: specialist 08.06.02 – Entrepreneurship, management and marketing. Donetsk
- 6) Heyets' V.M. (2000). Nestabil'nist' ta ekonomichne zrostannya [Instability and economic growth]. K. : In-t ekon. prohnozuv.
- 7) Hudz' O.YE. (2015). Harmonizatsiya mekhanizmu stratehichnoho upravlinnya innovatsiynym rozvytkom pidpryyemstva [Harmonization of the mechanism of strategic management of innovative development of the enterprise]. Global and national economic problems, vol. 3, 273-277.
- 8) Hlushenkova A.A. (2017). Kontseptual'ni zasady rozvytku innovatsiynoho potentsialu telekomunikatsiynykh pidpryyemstv [Conceptual principles of development of innovative potential of telecommunications enterprises]. Scientific Bulletin of the International Humanitarian University, vol. 28, 74-78. Available at: http://nbuv.gov.ua/UJRN/Nvmgu_eim_2017_28_16 (accessed October 02, 2023)
- 9) Yevtushenko N.O. (2012). Mekhanizm formuvannya stratehiyi innovatsiynoho rozvytku u vitchyznyanomomu promyslovomu kompleksi [The mechanism of forming the strategy of innovative development in the domestic industrial complex]. Economic Bulletin of the University. Pereyaslav-Khmel'nyts'kyi, vol. 19(2), 31-37.
- 10) Illyashenko S.M. (2006). Marketynh i menedzhment innovatsiynoho rozvytku : monohrafiya [Marketing and management of innovative development: monograph]. Sumy : Universytets'ka knyha.
- 11) Lazorenko L.V. (2020). Zabezpechennya innovatsiynoyi diyal'nosti promyslovykh pidpryyemstv [Provision of innovative activities industrial enterprises]. Economy and society, vol. 22.
- 12) Krasnokuts'ka N.V. (2003). Innovatsiynyy menedzhment: navch. Posibnyk [Innovative management: education. manual]. K. :KNEU.
- 13) Fedulova L.I. (2014). Kontseptual'ni zasady upravlinnya innovatsiynym rozvytkom pidpryyemstv [Conceptual principles of management of innovative development of enterprises]. Marketing and innovation management, vol. 2, 122-135.
- 14) Yevtushenko N., Ryazantsev R. (2023). Pryntsypy upravlinnya innovatsiynym potentsialom pidpryyemstv telekomunikatsiy. Naukovi napryamy ta shlyakhy vyrishennya suchasnykh problem: Materialy XXVI mizhnarodnoyi naukovo-praktychnoyi konferentsiyi (04-07 lypnya 2023 r. m. La-Roshel', Frantsiya).
- 15) Lutsenko O. Kovana zi stali y tytanu: yak telekom-industriya Perezhyvaye viynu ta shcho yiyi chekaye u 2023-mu. speka.media [Kovan from steel and titanium: how the telecom industry survives the war and what awaits it in 2023. speka.media]. Available at: <https://speka.media/skuvav-iz-zaliza-i-stali-yakim-2022-rik-buv-dlya-telekom-industriyi-p2jmr> (accessed October 08.2023)
- 16) Yevtushenko N.O. Ryazantsev R.O. (2023). Sutnist' innovatsiynoho potentsialu pidpryyemstva: teoretychnyy aspekt [The essence of the innovative potential of the enterprise: theoretical aspect]. INTELLECT XXI, vol. 3, 51-58.