# PRECONDITIONS FOR THE FORMATION OF THE INVESTMENT POLICY OF UKRAINE AS A KEY SET OF MEASURES TO ENSURE ECONOMIC DEVELOPMENT

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#### **ABSTRACT**

The article focuses on investments as a tool for solving economic development problems of the national economy. Based on the analysis of macroeconomic systems' development factors, it is concluded that it is necessary to accelerate economic development to ensure national competitiveness within the current global economy. The necessity of forming the organizational mechanism for the country's economic growth at a transitional stage of development is substantiated. The analysis of foreign investments in Ukraine is carried out. The paper defines the key points, tools, and measures for forming the corresponding mechanism on the example of Ukraine as an economic system in the transitional stage of development. The organizational scheme for economic growth by executive authorities is proposed. One of the critical roles in this mechanism is assigned to the Investment Department and Independent National Science Council; tasks and functions of these units in the structure of the agency are described.

**Keywords:** economic development, investments, foreign direct investments, investment attractiveness, organizational mechanism, acceleration

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#### INTRODUCTION

In today's economy's dynamic and contradictory conditions, it is essential to achieve positive qualitative transformations based on structural changes in the economy. Therefore, more and more attention is paid to economic

development, which combines restructuring of the economy's critical mechanisms and restoring the identity and independence of the country's economic system (Deaton, 2010). Besides, it is generally recognized that economic development largely depends on the investment attractiveness of the country. The attraction of foreign capital into the economy improves the national economy's state, introduces innovative technologies, and increases export potential. Examples of the highest economic development rates resulting from investment activity are the economies of the United States, Germany, Great Britain, and France. Additional example can be the success of the accelerated economic growth of "Asian tigers" countries - China, South Korea. Japan, Singapore, Taiwan, Hong Kong and others. This underlines the importance of attracting investment as one of the drivers of economic development for countries with transformational economies, in particular, for Ukraine. At the same time, over time, Ukraine has been unable to solve either problems of increasing investment attractiveness (Bokhonko, Zhygalo, & Slobodiuk, 2020; Vengurenko & Plakhotniuk, 2020), or restructuring the mechanisms of the economy, taking into account the restoration of its identity (Stepyko, 2019). Within our research framework, the state's investment policy deserves special attention because it urgently needs an updated mechanism for its implementation, consistent with the system of modern state organizational mechanisms. Today, the Ukrainian economy needs significant investments, but the state is almost unable to provide them. Therefore, there is a need to restructure the investment support infrastructure, investment resources, and other factors that significantly affect investment attractivity and the management of investment risks. At the same time there is an idea that the general potential for FDI is considered to be overestimated and aggravated by substandard management and poor productivity (Shynkaruk et al., 2017). In this regard, the author, earlier in her previous study (Yahelska, 2016), showed the dependence of economic development and investment processes on clearly defined and organized executive authorities, industry, and science, which actualizes the search for mechanisms for effective institutional regulation of economic development processes, including investment politicians.

The country's low investment attractiveness, along with the liberalization of foreign trade, a number of agreements on foreign free trade, foreign exchange regulations, the minimum fiscal deficit in 2017-2019, and other government measures, makes us ask the main question: why does this not work? In search of

answers to this question, it seems most likely that this is largely due to the ineffective state policy of the country, which, in particular, is mentioned in the studies of L.Dmytrychenko et al. (Dmytrychenko, 2014). It is obvious that Ukraine, which for a long time experienced a significant shortage of domestic financial resources, needs to revise the model of economic development, the mechanisms of economic policy, in particular, and the investment policy itself. That is, problems related to attracting investment, sound investment regulations, and investments in strategic areas relevant for Ukraine to solve.

The purpose of this article is to determine the prerequisites for the formation of an updated and improved investment policy of Ukraine, which would solve the indicated problems by implementing the following:

- the investment attractiveness of Ukraine, the dynamics of foreign direct and capital investments, and the structure of investment flows to Ukraine are analyzed;
- on the basis of econometric modeling, the degree of influence of financial and economic indicators on the amount of capital investments as a key condition for the development of all economy was determined;
- the directions of investment policy to increase capital investment and investment attractiveness of the country as a whole are proposed, taking into account the identified factors:
- the rationality of introducing a new mechanism for ensuring national economic development has been substantiated and its scheme has been proposed.

To solve the indicated tasks, in the work we used analysis of methods and synthesis, econometric modeling (with software packages Statistica and MS Excel), a graphical method, and a method of analogies. The work used statistical data from the official websites of the National Bank of Ukraine, the National Statistics Service of Ukraine, as well as data from international rating agencies. The main scientific result of the work is the determination of the prerequisites for the formation of the investment policy of Ukraine, which, unlike the available analyses, take into

account the degree of influence of the country's economic and financial indicators on the amount of capital investment as a key condition for the development of the economy, which allows a more reasonable approach to determining the directions of investment policy and choosing appropriate methods and tools.

#### LITERATURE REVIEW

The latest large-scale economic transformations are characterized by their quickpaced dynamics, high instability, and uncertainty of socio-economic impacts. Therefore, attempts national economies' development problems are traced in many scientific works. Researchers use various scientific approaches and methods, combining traditional analytical tools with newly created methods from different scientific fields such as deep learning networks and cloud data mining. The latest economic developments in relevant countries are described in particular in the works of Le and Binh (2018); Sheng and Gu (2018); Zhou, Zeng, Jiang, and Xue (2018); Vianna and Mollick (2018); Athukorala and Narayanan (2018); Nakabashi (2018); Hanushek (2013); Johnson (2006); and Kottaridi and Stengos (2010) with focus on various factors facilitating macroeconomic systems' economic development, such as corruption minimization, R&D support, tax relief, education development, and others. Among other factors of economic development, particular attention is paid to investments.

So, analysis of other scientific works (Chengchun & Sailesh, 2019; Xiaoping & Xiaming, 2005; Sebastián, Cuevas, & Manzano, 2015; Apostolov, 2016; Buchanan, Le, & Meenakshi, 2012; Xu, 2019) shows that the conditions for active investment activity significantly influence the degree of investment attractiveness, and, consequently, the effective socio-economic development of the economy as a whole. At the same time, the results of studies (Kaplan & Strömberg, 2009) shows that although direct investment has spurred the growth of companies and innovation in the advanced market economies of North America, Western Europe and Asia, sometimes such growth was achieved by reducing staff, costs, and/or investments in capital assets. Similar findings (Vasa, & Angeloska, 2020) demonstrate that FDI does not necessarily reduce unemployment, and

that their inflow does not always stimulate significant economic growth. The first question that arises in this regard is the influence of which factor has such a negative effect on investment and how to avoid such an ineffective trajectory? Obviously, there is no unique recipe, and a number of studies (Ziyadin, Suieubayeva, Kabasheva, & Moldazhanov, 2017; Dudić, Dudić, Smoleň, & Mirković, 2018; Ndikumana & Sarr, 2019; Guimarães, Figueiredo, & Woodward, 2000; Anetor, Esho, & Verhoef, 2020; Arndt, Jones, & Tarp, 2015), prove the need for an individual approach to the form of state regulation scheme for promotion of FDI and adaptation of successful foreign experience to the internal environment of the national economies.

However, the search for such a scientific approach for Ukraine is due to a number of difficulties. First, many scholars dwell on a structural analysis of investment flows (e.g. Vengurenko & Plakhotniuk, 2020; Bohonko, Zhygalo, & Slobodiuk, 2020; Ripa, 2021; Guk, Mokhonko, & Shenderivska, 2021), which does not provide a sufficient basis for developing an effective investment policy. Secondly, problems associated with perpetual economic transformations and the lack of credible statistical data hinder accurate and objective scientific research and complicate investment decision-making in practice. Thirdly, the factors affecting the efficiency of investments remain a blank spot. In this direction, of particular interest is the work of Getzner and Moroz (2020), where an attempt is made to establish the relationship between FDI and indicators of financial results of GRP and the level of employment in the regions of Ukraine. However, the authors conclude that it is difficult to find a long-term predictable relationship between FDI and selected indicators, which is almost unrelated to the level of employment.

Effects mapping the dramatic influence of Covid-19 infection on FDI are researched in Bobrovska et al. (2021), and an important factor of military conflict with Russia and its dramatic effect on investment attractivity is studied in detail in Vasylkivskyi et al. (2020). Obviously, all these factors, general socio-psychological effects, low-quality legislation, and future economic ambiguity also negatively affect FDI conditions in Ukraine, however, the clearly defined strength of the influence of certain factors would make it

possible either to concentrate on minimizing their influence, or on adaptation, which, in fact, is the focus of this study.

#### **METHODOLOGY**

General scientific methods of cognition have traditionally been used to analyze the dynamics of investments. To determine the degree of influence of financial and economic indicators on the amount of capital investment, the author's econometric model is proposed. The advantage of econometric modeling is given in connection with its wide capabilities, including obtaining quantitative results based on statistical data. To build the author's econometric model, 9 main financial and economic indicators of Ukraine were selected, which will affect the amount of capital investment in domestic enterprises (Table 1).

**Table 1:** The main financial and economic indicators of Ukraine that affect the amount of capital investment in domestic enterprises

| Marking | Indicator   | Unit of measurement |  |  |
|---------|---|---------------------|--|--|
| Y       | Capital investments in legal entities   | million USD         |  |  |
| X1      | Volume of sold products (goods, services)   | million USD         |  |  |
| X2      | Financial results (balance) of enterprises before taxation                              | million USD         |  |  |
| Х3      | Foreign direct investment in Ukraine on the principle of assets / liabilities (balance) | million USD         |  |  |
| Х4      | Export of goods and services  | million USD         |  |  |
| X5      | Loans to non-financial corporations   | million USD         |  |  |
| Х6      | Securities other than shares issued by non-financial corporations                       | million USD         |  |  |
| X7      | Industrial production index (up to the previous year)                                   | %                   |  |  |
| X8      | Consumer price index (up to the previous year).   | %                   |  |  |
| х9      | Unemployment rate (previous year)   | %                   |  |  |

This econometric model will be built as a model of multiple linear regression, which will establish a quantitative relationship between the amount of capital investment in legal entities of Ukraine and a number of variables which affect the value of the performance. In the general case, the model of multiple linear regression has the form

$$y = a_0 + a_1 X_1 + a_2 X_2 + ... + a_m X_m.$$
 (1)

Data of capital investments and the main financial and economic indicators of Ukraine for 2010-2020 are sourced from the database of State Statistics Service of Ukraine. These data are used to build a regression model describing dependence of capital investments Y on the main financial and economic indicators of Ukraine  $x_j$ , j = 1,...,9.

## **RESULTS**

Based on correlation analysis, dependence of Y on independent variables was justified. To avoid multicollinearity in the model, highly correlated independent variables were reduced. The resulting regression model is given in Table 2. This model is of high quality (coefficient of determination 0.977), and it is statistically significant (p < 0.001). Classical assumptions of regression are fullfilled (variable X3 is placed in the model to show it is not significant), spurious regression is not present.

|          | Coefficients | Standard error | t-statistics | p-value |
|----------|--------------|----------------|--------------|---------|
| constant | 34302.6      | 7260.3         | 4.72         | 0.003   |
| X2       | 0.341        | 0.047          | 7.32         | <0.001  |
| х3       | -0.372       | 0.311          | -1.20        | 0.277   |
| X5       | 0.352        | 0.032          | 11.09        | <0.001  |
| х7       | -293.34      | 74.31          | -3.95        | 0.008   |

Table 2: Estimation of multiple linear regression model

Analysis of investments in Ukraine allows us to state the following: a long-time stagnation and even decline in Ukraine's investment attractiveness in 2019 is identified (Figure 1) mainly due to the ineffective measures against

corruption and distrust in the justice system, and a significant share of the shadow economy is fixed (Davydenko et al., 2020).

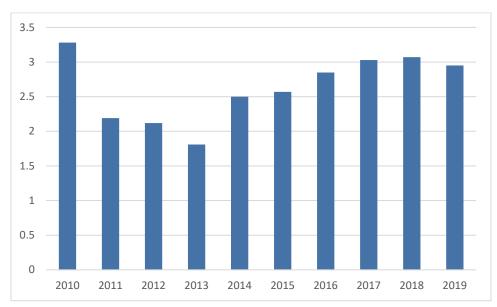


Figure 1: Investment attractiveness index of Ukraine in 2010 - 2019

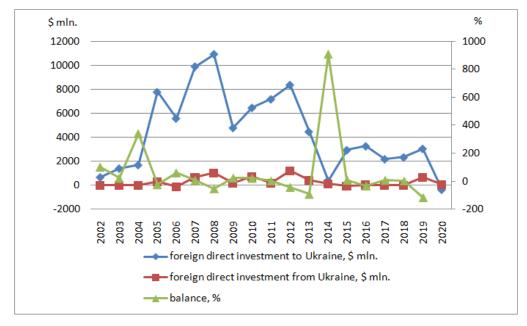
Source: based on data of European Business Association

In addition to these problems, systemic problems in ensuring investment attractiveness include the outflow of labor, talent, capital, slow de-bureaucratization of business processes, distrust in the banking system, pressure from law enforcement agencies, and potential disruption of cooperation with the IMF.

An indicator of foreign investors' confidence in the country's economy depends on FDI dynamics. The FDI enables the implementation of large projects, introduction new technologies, new corporate governance practices, and others. Besides, FDI has not only economic but also social and political significance (Sun, 2014), and provides access to export markets, includes competitive incentives, expands management tools, promotes technological leadership, and potentially creates jobs. This practice shows that foreign companies can promote economic development through increased competition in domestic markets, increased productivity, lower prices, and more efficient resource allocation. This, in turn, results in the investment in the modernization of equipment and stipulates R&D activities to obtain competitive advantages. For example, FDI usually provides accelerated development of telecommunications and financial services and promotes the creation of a

knowledge-based economy (Zelinska, et al., 2020). However, the FDI dynamics analysis does

not reveal any straightforward, systematic patterns (Figure 2) except for 2014.



**Figure 2:** Dynamics of FDI in Ukraine

Source: based on data of National Bank of Ukraine

According to the official data, the volume of FDI investment increased until 2014. The decrease in 2014 is due primarily to the country's military conflict (*State Statistics Service of Ukraine, 2020*). The accelerated stabilization of the economy occurred in the pre-war period in

2010–2013 despite increased debt, primarily in the public sector. Although the economy has been slowly recovering since 2016, there has been a significant shortage of capital inflows (Figure 3).

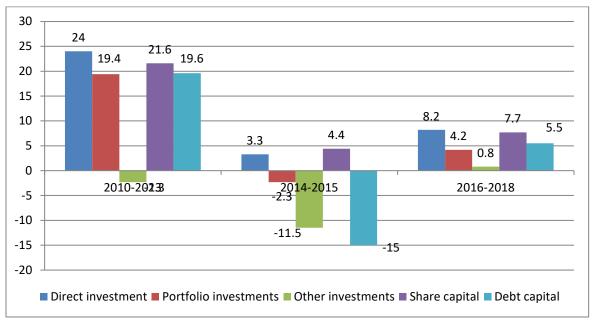
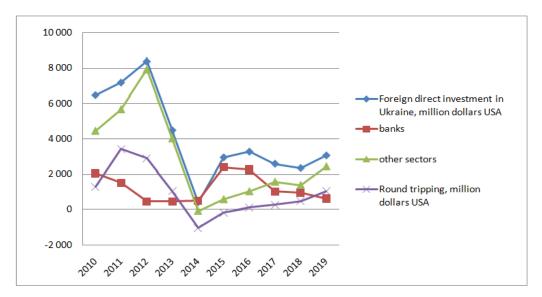


Figure 3: Net investment inflow, \$ billion

Source: based on data of National Bank of Ukraine

As for round-tripping operations (*National Bank of Ukraine, 2020*, Figure 4), the largest volumes of round-tripping investments were observed during 2010-2013 - on average at 32.7% of the total. 87% of such investments were directed to real sector enterprises. In 2014-2015, there was an outflow of Ukraine funds for such operations related to political changes and hostilities in eastern Ukraine. In 2016-2019,

there was a gradual increase in the net inflow of funds from round-tripping operations, but in smaller amounts than before the crisis. In 2016, round-tripping operations provided 4.1%, in 2017 – 10.4%, in 2018 – 20.6% of the inflow of FDI in Ukraine. In 2019, round-tripping operations were estimated at \$1 billion, which accounts for 34.1% of FDI inflows to Ukraine (88.9% of which are investments in the real sector)



**Figure 4:** Round tripping estimation

Source: formed on data of National Bank of Ukraine

**Table 3.** FDI inflows to Ukraine – per country, billion dollars USA

| Year /<br>Country | Cyprus | Netherland<br>s | Austri<br>a | United<br>Kingdom | Russian<br>Federation | Total | Δ. %  |
|-------------------|--------|-----------------|-------------|-------------------|-----------------------|-------|-------|
| 2015              | 0.6    | 0.8             | 0.5         | -                 | 1.7                   | 4.3   | -     |
| 2016              | 0.4    | 0.3             | 0.2         | 0.4               | 1.7                   | 4.4   | 1.9   |
| 2017              | 0.5    | 0.3             | 0.1         | 0.3               | 0.6                   | 2.5   | -43.0 |
| 2018              | 0.5    | 1.0             | 0.2         | 0.1               | 0.5                   | 2.9   | +14.3 |
| 2019              | 1.0    | 0.3             | 0.1         | 0.1               | 0.2                   | 2.5   | -11.8 |

Source: based on data of State Statistics Service of Ukraine

In recent years, the largest investor countries have been Cyprus, the Netherlands, Austria, the United Kingdom, and the Russian Federation (Table 3).

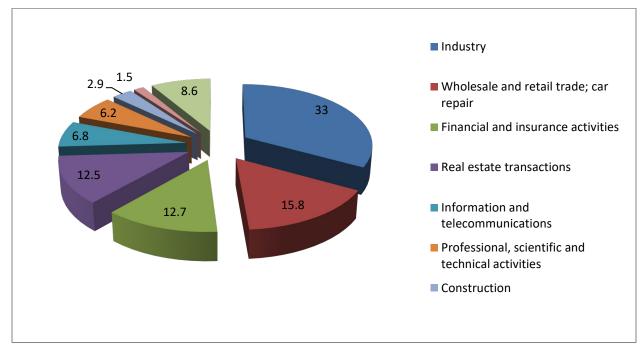
Although FDI is slowly reorienting from industrial production investment to new high-

tech enterprises, science, green technologies, and IT in Ukraine, they are still far behind the finance and insurance industry. (Table 4, Figure 5)

Professio Finance Trade, nal, Real estate Year Industry of IT scientific, and repair direction transactions insurance transport technical activities 2015 2.7 0.3 0.1 0.6 0.2 0.3 2016 2.8 0.5 0.1 0.5 0.1 2017 1.3 0.5 0.1 0.2 0.1 0.1 2018 1.2 0.3 0.4 0.6 0.1 02 2019 0.9 0.6 0.2 0.2

Table 4. FDI inflows to Ukraine – per industry, billion dollars USA

Source: based on data of State Statistics Service of Ukraine



**Figure 5:** Structure of FDI by types of economic activity in Ukraine in 2020, % Source: based on data from State Statistics Service of Ukraine

According to the official data, at the end of 2019, the stock of FDI in Ukraine increased from \$48.9 billion to \$51.4 billion (33.2% of GDP), and from Ukraine - it decreased from \$8.0 to \$3.5 billion (2.3% of GDP). However, insufficiently rapid progress in implementing structural reforms, particularly on overcoming COVID-related issues, has led to a further decrease in FDI in the Ukrainian economy. Therefore, the outflow of FDI from Ukraine in 2020 amounted to more than \$200 million, i.e., the inflow of FDI almost stopped.

According to the Ministry of Economic Development, Trade, and Agriculture, to reduce the depreciation of fixed assets from 60.6% to 48.0%, it is necessary to attract during five years FDI of at least \$50.0 billion, increase FDI per capita to \$2000, and increase annual domestic investment by more than two times.

Unfortunately, Ukraine is currently absorbed by solving the immediate tasks of managing the budget, obtaining loans, credits, and attracting FDI investment on a provisional basis, ignoring the fact that long-term provisions require significant executive structural changes and strategic planning.

Reducing capital investments requires special attention, as they are a key condition for economic development and growth, so it must be constantly in the field of view of economic policy. Unfortunately, in 2020, capital investment in the economy was declining: the level of gross fixed capital formation (GNI) to GDP was only 12.8% (it is a historic low indicator since the early 2000s). The results of econometric modeling allowed us to conclude the following:

- an increase the financial result (balance) of enterprises before tax by 1 million USD will lead to an increase in capital investment by 341 thousand dollars. USA;
- reduction in foreign direct investment in Ukraine on the principle of assets / liabilities (balance) by 1 million dollars USA will lead to a decrease in capital investment by 372 thousand dollars USA, which is quite logical, because capital investments are part of investments. However, it should be borne in mind that private equity funds often produce large-scale reductions in company assets (in particular, they can constrain capital investment and R&D spending, which frees up near-term funds, but harms the future profitability of the enterprise) (EBRD, 2015). The exception, in our opinion, is due to the policy of a particular corporation and the characteristics of the investor;
- an increase in loans to non-financial corporations of 1 million dollars USA will increase capital investment by 352 thousand dollars USA;
- reduction in the industrial production index by 1% will lead to a decrease in capital investment by 293,342 million dollars USA, that is, the rise in industrial production expands opportunities for further investment.

The obtained results should be taken into account when developing investment policy measures.

## **DISCUSSION AND CONCLUSION**

Thus, among the prerequisites that determine the need for a renewed investment policy are the following:

- chronic loss of Ukraine's investment attractiveness due to reduced competitive advantage in terms of doing business, including its value, reducing the amount of cheap skilled labor, slow debureaucratization of business processes, prolonged military conflict, etc.
- ineffective implementation of structural reforms in economic development, in particular, investment policy (insufficient incentives for investors and businesses);
- outflow of foreign direct investment from Ukraine and reduction of capital investment:
- strong dependence of capital investment on the financial result of enterprises before taxation, foreign direct investment, lending to non-financial corporations, the index of industrial production.

In general, the main prerequisite for the formation of an updated investment policy is that despite the effectiveness of the combination of fiscal and monetary mechanisms and other government instruments, the experience demonstrates the lack of efficiency and increases the domestic economy's further imbalance. This reflected in rising unemployment and inflation. deteriorating living standards, increasing external debt, and deepening economic crises. Based on the above and analysis of investment processes, it becomes evident that the current system of Ukrainian management of the national economy lacks an element aimed directly at ensuring long-term systematic and coordinated FDI support.

The results of econometric modeling make it possible to identify the directions of the country's investment policy in terms of increasing capital investments:

 improving tax policy by simplifying the tax system, increasing the transparency and quality of tax administration to improve the country's investment climate (in particular, it will help increase the financial results of

- enterprises and, accordingly, capital investment);
- an increase in loans to non-financial corporations will lead to an increase in capital investment revision of monetary policy, and updating mechanisms for its implementation is important, including the establishment of key elements of the money market infrastructure (foreign exchange and interbank market, improving the efficiency of open market operations, optimizing refinancing processes, revising interest rate policy, etc.);
- formation of a systemic policy to encourage investment in the manufacturing sector, creation of a system of preferences for investors;
- intensification of domestic investment in the Ukrainian economy, primarily in strategic areas and, if possible, in the socalled "economics of the future".

Besides, in order to overcome the identified problems, it is first necessary to solve the systemic problem of lowered investment attractiveness. In particular, it is necessary to stabilize the tax regime and simplify tax mechanisms in order to minimize the level of the shadow economy.

Under these conditions, in our opinion, it is expedient to consider the experience of the Czech Republic as a post-socialist country in organizing investment activities, namely: to direct FDI in science and technology and to provide support for advanced technologies by the state.

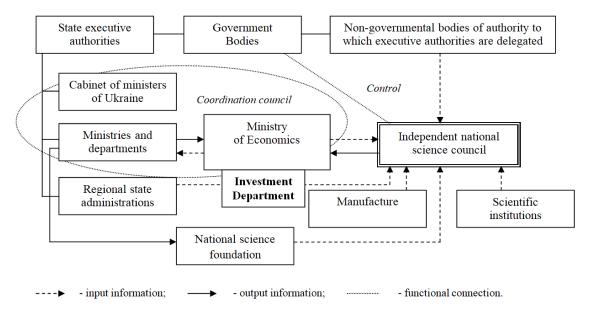
Therefore, it is necessary to consider adapted organizational structures that can effectively adapt to these fast-paced technological changes.

Coordination and management at the highest must be ensured for successful functionality, as demonstrated in the example of Industry 4.0 Initiative management in the Czech Unfortunately, Republic. the existing organizational scheme of governmental FDI management and support currently lacks such a level of coordination capability. Freed from the administrative pressures of a command economy, Ukraine has relied solely on market mechanisms for too long and recklessly. At the

same time, the existing strategies for economic development change radically with each change of government, which makes it impossible to implement a single long-term strategy. To solve this problem, it is proposed to create a single independent scientific department, which would coordinate the implementation of strategies regardless of the change of government, thereby supporting the interests of enterprises and the population of the country as a whole. Therefore, the implementation of state support directions for economic development could be carried out according to the following proposed scheme (Figure 6). As part of such a mechanism, the scientific and practical component of the country's investment department will be activated, in particular, the scientific validity of the targeted purpose of investments will increase. This, in turn, will allow planning investments in areas that contribute to the growth of capital investments (based on the factors identified above).

The newly proposed executive organizational mechanism of economic development aims to increase investment attractiveness through synergy effects due to close cooperation of scientific and industrial experts of various fields for more coordinated FDI management and focus.

The proposed scheme should positively disrupt the national economic development of Ukraine in the global economy and provide for a better and more transparent FDI management and focus. In order to achieve this goal, authors analyzed the current FDI situation in the world and Ukraine and, based on their previous research, proposed an enhanced executive scheme to promote investment attractivity in Ukraine through possibly more integrated and long-term robust FDI planning and coordination within governmental, research and administrative bodies.



**Figure 6:** Organizational scheme for ensuring economic development by new enhanced executive structure

Source: own results

The proposed scheme will be subject to future research to uncover the possible strengths and weaknesses through a simplified simulation model of the overall organizational scheme. This will be a subject of future complex socioeconomic modeling, evaluating the inherent dependencies and testing out the behavior of the complete system under external and internal disturbance factors.

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