

# “Investment policy of the state as a tool for economic growth of the country”

## AUTHORS

Valentyna Makohon  <https://orcid.org/0000-0002-2331-8455>

 <http://www.researcherid.com/rid/P-3053-2017>

Yurii Radionov  <https://orcid.org/0000-0002-1691-1090>

 <http://www.researcherid.com/rid/AAV-3875-2020>

Iryna Adamenko  <https://orcid.org/0000-0002-5951-2145>

 <http://www.researcherid.com/rid/B-3587-2018>

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Iryna Adamenko, 2020

Valentyna Makohon, Doctor of  
Economics, Senior Researcher,  
Department of Finance, Kyiv National  
University of Trade and Economics,  
Ukraine. (Corresponding author)

Yurii Radionov, Doctor of  
Economics, Head of the Adaption  
and Implementation of International  
Standards Unit, Department of  
International Cooperation, the  
Accounting Chamber, Ukraine.

Iryna Adamenko, Ph.D. in Economics,  
Senior Researcher, Budget System  
Department, Research Financial  
Institute, Kyiv National University of  
Trade and Economics, Ukraine.



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Valentyna Makohon (Ukraine), Yurii Radionov (Ukraine),  
Iryna Adamenko (Ukraine)

# INVESTMENT POLICY OF THE STATE AS A TOOL FOR ECONOMIC GROWTH OF THE COUNTRY

**Abstract**

The investment policy of the state is an important tool for diversifying the economy. This paper analyzes the share of capital investment in GDP, the index of fixed capital investment for 2015–2019, and assesses the investment policy determinants of the state of developed countries and emerging countries. Correlation-regression analysis methods were used to determine the relationship between real GDP, the share of industrial output in GDP, and the index of fixed capital investment in countries with economies in transformation. As a result, it was determined that in the vast majority of countries studied, the increase in investment in fixed assets contributes to the acceleration of economic growth, and the level of economic growth determines the investment potential of countries; that the heterogeneity of the impact of investment on the level of economic growth in countries with transformational economies is due to their raw material orientation, insufficient level of validity and predictability of the implemented investment policy of the state; the state's investment policy is an important tool for ensuring macroeconomic stability and stimulating economic growth in a recession. Using the data of the panels for the period from 2015 to 2019, it is substantiated that the creation of conditions for macroeconomic balance will increase business activity of enterprises, which is the result of purposeful influence of state investment policy on economic processes by ensuring quality transformation and innovation of the national economy. The obtained results show that the level of influence of the state investment policy on the level of economic growth varies significantly depending on the level of development of financial institutions in the country and the infrastructure of the financial market.

**Keywords**

investments, investing, finance, economy, recession

**JEL Classification**

E20, H54, P33, P45

**INTRODUCTION**

Investment policy of the state plays an important role in the deep foundations of economic activity. The importance of developing a reasonable investment policy of the state explains the growing challenges and increased risks violating the financial system's stability. Accordingly, it increases the need for state support to economic entities that implement investment and innovation projects and use innovative technologies. The issues of changing the vectors of the investment policy of the state and increasing its effectiveness are relevant in the context of globalization processes to intensify domestic investment projects since changes in world prices in commodity markets complicate the situation for the financial and economic condition of individual entities and the national economy.

One of the most effective reviving investment activity methods in developed and emerging countries is importing international investment. This is due to the lack of financial resources for implementing institutional transformations in the financial and budgetary sphere,

based on the need to maximize the restructuring of the economy in the context of intensified crisis processes and rising inflation. Also, in modern conditions, in the vast majority of emerging countries, the position of a significant range of economic entities is changing by reducing the share of the economy's public sector. These changes raise the issue of improving the system of public management of investment processes as a basis for accelerating economic growth, increasing the level of competitiveness of economic entities.

## 1. LITERATURE REVIEW

The movement of capital inside and outside the country, investment policy attracts significant attention of politicians and researchers in developed and emerging countries (Göndör & Nistor, 2012). Public investment belongs to the category of expenditures most directly related to the acceleration of economic growth. However, their productivity largely depends on the implemented investment policy of the state and sources of investment financing (European Commission, 2012; Ricco, Callegari, & Cimadomo, 2016).

According to the research, the effective use of investment policy of the state instruments contributes to the stabilization of macroeconomic processes (Olanubi, Osode, & Adegboye, 2019; Lv, Li, Mi, & Zhao, 2020); public investment has not only a positive but also a stable and significant impact on private investment flows (Deleidi, Mazzucato, & Semieniuk, 2020); public investment stimulates domestic demand in the short run and increases production in the long run. Simultaneously, the expansionary effects of a larger share of public investment are significantly enhanced by adaptive monetary policy (Elekdag, Muir, & Wu, 2020; Abiad, Furceri, & Topalova, 2016; Chugunov, Pasichnyi, & Nepytyaliuk, 2019). At the same time, the uncertainty of the investment policy of the state has a negative impact on economic activity (Kim, 2019; López, Galinato, & Islam, 2011; Bom, 2018).

The validity of public investment as a tool to overcome the recession and stimulate long-term growth is determined. In particular, it is noted that during an economic downturn, increased public investment has a positive effect on production, employment, wages, and consumption; creates conditions for the growth of demand for labor in the private sector, which leads to higher real wages and increased consumption. In the medium

term, an increase in public investment increases private investment, thus creating the effect of adverse supply. Simultaneously, public investments financed by the formation of the budget deficit do not increase the share of public debt in GDP because they are self-financed. At the same time, the increase in public consumption does not stimulate economic processes and leads to an increase in the share of public debt to GDP (Petrović, Arsić, & Nojković, 2020).

There is a strong causal relationship between the level of uncertainty in the investment policy of the state and foreign direct investment flows. The importance of predictability of investment policy of the state for investment decisions by transnational corporations is substantiated (Hsieh, Boarelli, & Vu, 2019; Deleidi, Iafate, & Levrero, 2020); the validity of the redistribution of public investment between the leading industries (Aray & Pacheco-Delgado, 2020; Zhang, Xie, Huang, Li, & Dai, 2020). It is noted that in the conditions of uncertainty of the investment policy of the state, the interrelation between the cost of capital and investments decreases. The unfoundedness of the state investment policy, its uncertainty, and multi-vector cause a decrease in the level of sensitivity of investments to the cost of capital, especially for businesses dependent on public funding, especially in countries with transformational economies and a significant share of the public sector. It is determined that the growing level of uncertainty in the investment policy of the state destroys the relationship between the cost of capital and investment (Drobetz, El Ghoul, Guedhami, & Janzen, 2018).

It is substantiated that the development of the social and institutional environment affects the change in the economy's architecture. Accordingly, the impact of public investment on economic growth varies depending on the level of development of financial institutions (Papagni, Lepore, Felice,

Baraldi, & Alfano, 2019; Chugunov & Pasichnyi, 2018). In particular, the dynamic economic transformations at this stage of social development have led to the search for balanced approaches to investment policy, determining effective methods of reproduction and development of the scientific and technological potential of the country, which involves a combination of public and private investment (Pierrakis & Saridakis, 2017). It is advisable to note that the impact of public investment on private investment differs across countries based on the level of risk the failure of the security of private investments. Accordingly, an important task to stimulate economic growth is to reduce the impact of relevant risks (Ouédraogo, R. Sawadogo, & H. Sawadogo, 2020; Bahal, Raissi, & Tulin, 2018), ensuring the optimal level of public investment, which may vary depending on the level of socio-economic development of the country (Chen, Yao, Hu, & Lin, 2017; Turnovsky, 2015).

## 2. GENERALIZATION OF THE BASIC PROVISIONS

At the current stage of development of society, the investment policy of the state plays an important role, as it is an effective tool for the effective development of leading sectors of the economy, stable functioning of basic infrastructure, achieving macroeconomic stability, and stimulating economic growth. At the same time, the productivity of public investments is important, which can be characterized as the degree of influence of their involvement in the change in capital productivity.

The formation and implementation of the investment policy of the state is a set of steps to identify trends in the investment environment and investment conditions forecasting, analysis, and evaluation of problems that prevent escalating investment potential, their structure and study areas, indicators, mechanisms for implementing this policy. The model of public management of investment processes is carried out based on special methods of direct and indirect financial and managerial regulation.

The priority tasks of the investment policy of the state are specified in the relevant development strategies of the countries, taking into account the real nation-

al conditions of economic development. In particular, the State Program of Industrial and Innovative Development of the Republic of Kazakhstan for 2020–2025 aims to “stimulate the competitiveness of the manufacturing industry, aimed at increasing productivity and increasing exports of processed goods. Important measures to saturate the domestic market with the necessary funds are the implementation of a new policy to attract foreign investment, focused on improving both targeting and efficiency of work with foreign companies, creating an attractive investment climate” (State Program of Industrial and Innovative Development of the Republic of Kazakhstan for 2020–2025, n.d.). Under the Kazakhstan Strategy 2050, the direction “of the financial sector development policy to improve the investment climate based on the modernization of regulation and interaction with investors, strengthening the protection of their rights, projective attraction of domestic and foreign investments, improvement of infrastructure for attracting investments” (Kazakhstan Strategy 2050, n.d.).

The EU External Investment Plan aims to “stimulate investment in partner countries’ economies to increase economic growth, create jobs, and sustainable development. Significant attention is paid to targeted investment in socio-economic sectors: transport; energy; water supply; information and communication technologies; social infrastructure; environmental protection; human capital” (European Commission, 2017).

According to the Strategy for the Development of Innovation Activity for the period up to 2030, Ukraine’s important tasks are “increasing the share of investments in intangible assets in capital investments; creating a favorable investment climate to stimulate the development of high-tech industries” (Strategy for the Development of Innovation Activity for the period up to 2030, n.d.).

Given the limited public financial resources at this stage, an important area of the investment policy of the state in both developed countries and emerging countries is to increase the share of investment in GDP and direct them to support pilot sectors and real economy projects to stabilize and revive production. In 2015–2019, the share of investments in the EU countries’ GDP was 21.27% (Table 1).

**Table 1.** Share of investments in GDP of individual EU countries, %Source: Based on the data from the official site of the Statistical Office of the European Commission – <http://ec.europa.eu/eurostat>

Countries	2015	2016	2017	2018	2019
EU – 27 countries (from 2020)	20.59	20.81	21.12	21.43	22.38
EU – 28 countries	20.05	20.36	20.66	20.86	21.67
Euro area – 19 countries (from 2015)	20.15	20.51	20.82	21.09	22.17
Italy	16.94	17.17	17.48	17.84	18.05
Portugal	15.52	15.49	16.78	17.54	18.29
Romania	24.77	22.87	22.41	20.97	23.63
Slovakia	23.72	21.00	21.16	20.94	21.53
Finland	21.23	22.72	23.24	23.89	23.67
Sweden	23.76	24.18	25.16	25.85	25.13

**Table 2.** The share of investment in GDP of individual CIS countries, %Source: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	2015	2016	2017	2018	2019
Azerbaijan	29.34	26.10	24.78	21.52	21.04
Armenia	9.55	8.08	7.73	7.02	7.96
Belarus	23.04	19.84	19.89	20.44	21.83
Kazakhstan	17.18	16.53	16.13	18.00	18.19
Kyrgyzstan	29.57	28.45	27.37	26.48	27.42
Uzbekistan	21.32	21.13	23.85	30.55	37.11
Ukraine (Member until 19.05.2018)	13.73	15.06	15.03	16.25	15.70

In emerging economies, this figure varies significantly. In particular, in Uzbekistan, the share of capital investment in GDP for 2015-2019 is 26.79%; in Armenia – 8.07% (Table 2).

The revival of economic growth in emerging countries involves the optimal use of fixed assets, replacing obsolete funds with new, more productive, and less capital-intensive funds. In this view, investment in fixed capital, which is needed to renew and expand production, is the most important

factor in reviving business activity and stimulating economic growth (Table 3).

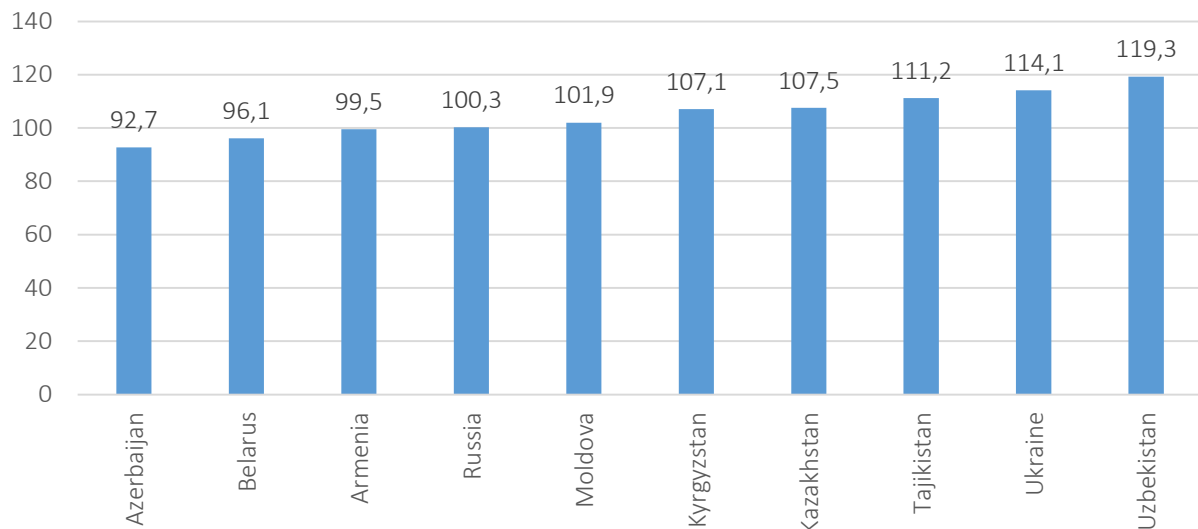
Among the emerging countries over the past five years, the highest investment growth rates are observed in Kyrgyzstan, Kazakhstan, Tajikistan, Ukraine, and Uzbekistan.

Simultaneously, based on the built models according to the annual indicators of 2015-2019, there is a

**Table 3.** Indices volume of investment in fixed capital (% to previous year)Source: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	2015	2016	2017	2018	2019
Azerbaijan	88.9	78.3	102.8	95.7	97.7
Armenia	98.8	87.5	102.4	104.4	104.6
Belarus	81.2	82.6	105.1	106.0	105.7
Kazakhstan	103.7	102.0	105.8	117.5	108.5
Kyrgyzstan	114.0	105.8	106.6	103.4	105.8
Moldova	96.6	87.2	103.5	112.9	109.4
Russia	89.9	99.8	104.8	105.4	101.7
Tajikistan	128.3	114.7	101.7	117.5	93.7
Uzbekistan	109.4	104.1	119.4	129.9	133.9
Ukraine	98.3	118.0	122.1	116.4	115.5

Source: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>



**Figure 1.** Dynamics of investment in fixed capital (% to previous year) on average for 2015–2019, %

**Table 4.** Indicators of regression statistics on the interdependence of real GDP and the investment index in fixed capital

Source: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	Multiple R	R-square	Normalized R-square	Standard error
Azerbaijan	0.74	0.55	0.39	1.61
Armenia	0.90	0.82	0.76	1.54
Belarus	0.97	0.94	0.92	0.88
Kazakhstan	0.67	0.46	0.27	5.19
Kyrgyzstan	0.22	0.05	–0.27	0.43
Moldova	0.18	0.03	–0.29	2.32
Russia	0.99	0.97	0.96	0.35
Tajikistan	0.67	0.45	0.27	0.54
Uzbekistan	0.51	0.26	0.01	1.06
Ukraine	0.94	0.89	0.85	2.18

linear relationship between real GDP, the share of industrial output in GDP, and investment in fixed capital (Table 4).

The strongest correlations between real GDP and the fixed capital investment index are observed in Russia, Belarus, Ukraine, and Armenia. The lowest correlations are in Moldova, Kyrgyzstan, and Uzbekistan. The F-test value in the vast majority of countries exceeds the corresponding level of significance so that the corresponding regression models can be meaningfully interpreted (Table 5).

Thus, with the growth of the fixed capital investment index by one percentage point, real GDP grows: Azerbaijan – by 0.16 percentage points; Armenia – by 0.40 percentage points; Belarus –

by 0.23 percentage points; Kazakhstan – by 2.42 percentage points; Moldova – by 0.04 percentage points; Russia – by 0.29 percentage points; Ukraine – by 0.58 percentage points.

With the growth of the fixed capital investment index by one percentage point, the share of industrial products in GDP increases: Azerbaijan – by 1.18 percentage points; Armenia – by 1.81 percentage points; Belarus – by 3.66 percentage points; Kazakhstan – by 1.65 percentage points; Russia – by 1.51 percentage points; Uzbekistan – by 1.49 percentage points (Tables 6-7).

The strongest correlations between the fixed capital investment index and the share of industrial output in GDP are observed in Uzbekistan, Belarus, and Kazakhstan.



**Table 5.** Indicators of variance analysis (regression) and correlation coefficients between real GDP and the investment index in fixed capitalSource: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	F	Significance F	Y-section	Variable X 1
Azerbaijan	3.61	0.15	85.35	0.16
Armenia	13.40	0.04	65.30	0.40
Belarus	45.69	0.01	78.03	0.23
Kazakhstan	2.51	0.21	-142.13	2.42
Kyrgyzstan	0.15	0.72	106.49	-0.02
Moldova	0.10	0.77	99.65	0.04
Russia	108.01	0.01	71.56	0.29
Tajikistan	2.48	0.21	110.53	-0.03
Uzbekistan	1.04	0.38	110.85	-0.04
Ukraine	24.11	0.02	33.63	0.58

**Table 6.** Indicators of regression statistics on the interdependence of the investment index in fixed capital and the share of industrial output in GDPSource: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	Multiple R	R-square	Normalized R-square	Standard error
Azerbaijan	0.53	0.28	0.04	9.28
Armenia	0.51	0.26	0.02	7.06
Belarus	0.87	0.76	0.68	7.40
Kazakhstan	0.83	0.68	0.57	3.98
Kyrgyzstan	0.52	0.27	0.03	3.97
Russia	0.64	0.40	0.20	5.58
Tajikistan	0.81	0.65	0.54	9.23
Uzbekistan	0.92	0.85	0.80	5.65
Ukraine	0.28	0.08	-0.23	10.16

The F-test value in the vast majority of countries exceeds the corresponding level of significance so that the corresponding regression models can be meaningfully interpreted.

The heterogeneity of the positive impact of the fixed capital investment index on the share of industrial output in GDP and real GDP confirms the position on the negative impact of uncertainty in the investment policy of the state on the level of economic growth. This is also determined by the validity of the implemented investment policy of the state. Therefore, the important tasks of the transition to a new economic growth model in developed countries and emerging countries are the mobilization of investment and their effective use, justification of socio-economic sectors of targeted investment, and specific targets for investment taking into account globalization.

It should be noted that, to some extent, the disparities in the investment policy of emerging countries are explained by its raw material orientation.

Thus, at present, in the vast majority of emerging countries, a significant share belongs to foreign investment, which is carried out mainly by subsoil users. These investments have a low level of multiplier effect on the economy.

Thus, an important investment policy task in countries with transformational economies is to increase their investment potential. Successful implementation of the goal of the investment policy of the state requires, first of all, the solution of the following tasks: the creation of an effective system of protection and mechanisms to stimulate savings of the population and business entities; development of institutional support for investment activities, increasing the level of investment activity and improving the infrastructure of the financial market. It is advisable to conduct a targeted investment policy of the state aimed at developing priority sectors of the economy, the range of which should be more clearly justified.

The need to develop institutional support for investment is due to the state of the national econ-

**Table 7.** Indicators of analysis of variance (regression) and correlation coefficients between real GDP and investment in fixed capitalSource: Based on the data from the official site of the CIS Interstate Statistical Committee – <http://www.cisstat.com/>

Countries	F	Significance F	Y-section	Variable X 1
Azerbaijan	1.15	0.36	27.92	1.18
Armenia	1.07	0.38	46.82	1.81
Belarus	9.34	0.06	-219.23	3.66
Kazakhstan	6.40	0.09	40.13	1.65
Kyrgyzstan	1.12	0.37	154.55	-1.08
Russia	2.03	0.25	6.11	1.51
Tajikistan	5.70	0.10	189.34	-2.52
Uzbekistan	17.49	0.02	40.90	1.49
Ukraine	0.26	0.65	150.82	-0.52

omy and the impact of the world economy. To increase investment activity, it is necessary to create specific macroeconomic conditions that provide for an increase in capacity utilization, a revival of business activity, an increase in real incomes, and the currency's stability.

The specificity of the inflation recovery in overcoming the general economic downturn is the use of short-term investments. Large and long-term investments require a longer period of capital accumulation, a cheaper long-term loan market, or an active equity market. The level of development of the banking system and the stock market plays an important role in this process, which contributes to attracting additional capital to economic development. Venture capital also plays a role in intensifying investment activity. In emerging countries, venture capital is insufficient and is mainly used at the state level.

One of the conditions for increasing investment activity is developed investment infrastructure that includes: reducing transaction costs; improvement of selection, maintenance, the realization of investment projects in the financial and credit structures; activation of the stock market; establishment of mechanisms for attracting funds of individuals for investment purposes; creation of enterprises and their involvement in investment processes as participants. Economic conditions and prerequisites for growth can be the basis for increasing investment in fixed capital. This will keep consumption growth, although much slower. It is advisable to note that the growth in consumer demand provides the current produc-

tion dynamics, but the steady growth of the industry is only possible through intensification of investments. The growth of investment activity will be facilitated by strengthening countries' investment attractiveness (industrial potential, efficiency of investment development programs, the ability to generate cash flows). In particular, raising the country's credit rating can be an important tool for attracting investment.

### 3. DISCUSSION

Financial globalization, which is developing at this stage of social development, the intensification of financial and economic crisis processes, the Covid-19 pandemic cause disparities in the world economy. Under such conditions, determining the way out of the crisis and creating conditions to ensure macroeconomic stability and accelerate economic growth is an important task. Under such conditions, discussions on the choice of investment policy instruments of the state become relevant. Various arguments are put forward on the factors and level of influence of state investment policy, public investment on economic growth (Aschauer, 1989; Zhang & Xie & Huang & Li & Dai, 2020; Petrović & Arsić & Nojković, 2020; Lv & Li & Mi & Zhao, 2020). The question of the optimal share of public investment in GDP remains debatable. Aschauer D. A. defines this figure at about 60% of GDP (Aschauer, 2000). Kamps S. - about 40% (Kamps, 2005). Checherita-Westphal C., AH Hallett and P. Rother - from 50% to 80% of GDP (Checherita-Westphal, Hallett, Rother, 2014.



However, many studies simultaneously claim a nonlinear relationship between public and private investment (Ari & Akkas & Asutay & Koç, 2019) and the linear relationship between public and private investment (Chugunov & Pasichnyi, 2018). growth will contribute to the formation and implementation of sound investment policy of the state.

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## CONCLUSION

The study makes it possible to determine that attracting investment in the economy is considered as the most important tool for its competitiveness and forms the prospect of accelerating economic growth. An important task of investment policy in countries with transformational economies at this stage is to increase their investment potential. The results show that in the vast majority of countries studied, the increase in fixed assets' investment contributes to the acceleration of economic growth, and the level of economic growth determines the investment potential of countries. The heterogeneity of the positive impact of investment on the level of economic growth in emerging countries is due to their raw material orientation and insufficient level of validity of the implemented investment policy of the state. One of the main deterrents to the effective use of investment is political instability, the imperfection of institutional support in the investment and tax spheres.

Disclosure of theoretical, methodological and practical aspects of formation and implementation of state investment policy as a tool of economic growth allows us to conclude that the important tasks of transition to a new model of economic growth in countries with transformational and developed economies are not only investment mobilization but also their effective use. The reasonable relationship between real GDP, the share of industrial output in GDP, and the index of fixed capital investment in countries with economies in transformation and the assessment of state investment policy determinants indicate the need to implement public investment policy based on global economic cycles. At the stage of stagnation, in a recession, it is advisable to increase the share of public investment in GDP. At the stage of development and growth – the market can self-regulate and intensify investment development through private investment.

Future research should be carried out in the direction of finding new scientific approaches and models for the formation and implementation of the investment policy of the state, taking into account the peculiarities of the development of public relations.

## AUTHOR CONTRIBUTIONS

Conceptualization: Valentyna Makohon, Yurii Radionov, Iryna Adamenko.

Data curation: Valentyna Makohon.

Formal analysis: Yurii Radionov, Iryna Adamenko.

Funding acquisition: Valentyna Makohon, Yurii Radionov, Iryna Adamenko.

Investigation: Yurii Radionov.

Methodology: Valentyna Makohon.

Project administration: Valentyna Makohon.

Resources: Valentyna Makohon, Yurii Radionov, Iryna Adamenko.

Software: Yurii Radionov.

Supervision: Valentyna Makohon.

Validation: Iryna Adamenko.

Visualization: Valentyna Makohon.

Writing – original draft: Valentyna Makohon, Yurii Radionov, Iryna Adamenko.

Writing – review & editing: Yurii Radionov, Iryna Adamenko.

## REFERENCES

1. Abiad, A., Furceri, D., & Topalova, P. (2016). The macroeconomic effects of public investment: Evidence from advanced economies. *Journal of Macroeconomics*, 50, 224-240. <https://doi.org/10.1016/j.jmacro.2016.07.005>
2. Aray, H., & Pacheco-Delgado, J. (2020). Public investment allocation across Ecuadorian Provinces. *Socio-Economic Planning Sciences*, 71. <https://doi.org/10.1016/j.seps.2020.100830>
3. Ari, I., Akkas, E., Asutay, M., & Koç, M. (2019). Public and private investment in the hydrocarbon-based rentier economies: A case study for the GCC countries. *Resources Policy*, 62, 165-175. <https://doi.org/10.1016/j.resourpol.2019.03.016>
4. Aschauer, D. A. (1989). Does Public Capital Crowd out Private Capital? *Journal of Monetary Economics*, 24(2), 171-188. [https://doi.org/10.1016/0304-3932\(89\)90002-0](https://doi.org/10.1016/0304-3932(89)90002-0)
5. Aschauer, D. A. (2000). Do States Optimize? Public Capital and Economic Growth. *The Annals of Regional Science*, 34(3), 343-363. Retrieved from <https://link.springer.com/article/10.1007/s001689900016>
6. Bahal, G., Raissi, M., & Tulin, V. (2018). Crowding-out or crowding-in? Public and private investment in India. *World Development*, 109, 323-333. <https://doi.org/10.1016/j.worlddev.2018.05.004>
7. Bom, P. R. D. (2018). Fiscal rules and the intergenerational welfare effects of public investment. *Economic Modelling*, 81, 455-470. <https://doi.org/10.1016/j.econmod.2018.02.002>
8. Checherita-Westphal, C., Hallett, A. H., & Rother, P. (2014). Fiscal Sustainability Using Growthmaximizing Debt Targets. *Applied Economics*, 46(6), 638-647. Retrieved from <https://www.ecb.europa.eu/pub/pdf/scpwpwps/ecbwp1472.pdf>
9. Chen, C., Yao, S., Hu, P., & Lin, Y. (2017). Optimal government investment and public debt in an economic growth model. *China Economic Review*, 45, 257-278. <https://doi.org/10.1016/j.chieco.2016.08.005>
10. Chugunov, I., & Pasichnyi, M. (2018). Fiscal stimuli and consolidation in emerging market economies. *Investment Management and Financial Innovations*, 15(4), 113-122. [http://dx.doi.org/10.21511/imfi.15\(4\).2018.09](http://dx.doi.org/10.21511/imfi.15(4).2018.09)
11. Chugunov, I., Pasichnyi, M., & Nemytaliuk, A. (2019). Macroeconomic effects of inflation targeting in advanced and emerging market economies. *Banks and Bank Systems*, 14, 153-165. [http://dx.doi.org/10.21511/bbs.14\(4\).2019.15](http://dx.doi.org/10.21511/bbs.14(4).2019.15)
12. Deleidi, M., Iafrate, F., & Levrero, E. S. (2020). Public investment fiscal multipliers: An empirical assessment for European countries. *Structural Change and Economic Dynamics*, 52, 354-365. <https://doi.org/10.1016/j.strueco.2019.12.004>
13. Deleidi, M., Mazzucato, M., & Semieniuk, G. (2020). Neither crowding in nor out: Public direct investment mobilising private investment into renewable electricity projects. *Energy Policy*, 140. <https://doi.org/10.1016/j.enpol.2019.111195>
14. Drobetz, W., El Ghoul, S., Guedhami, O., & Janzen, M. (2018). Policy uncertainty, investment, and the cost of capital. *Journal of Financial Stability*, 39, 28-45. <https://doi.org/10.1016/j.jfs.2018.08.005>
15. Elekdag, S., Muir, D., & Wu, Y. (2020). Das Public Kapital: How Much Would Higher German Public Investment Help Germany and the Euro Area? *Journal of Policy Modeling*. <https://doi.org/10.1016/j.jpolmod.2020.02.002>
16. European Commission. (2012). *The Quality of Public Expenditures in the EU* (European Economy Occasional Papers. 125). Retrieved from [https://ec.europa.eu/economy\\_finance/publications/occasional\\_paper/2012/pdf/ocp125\\_en.pdf](https://ec.europa.eu/economy_finance/publications/occasional_paper/2012/pdf/ocp125_en.pdf)
17. European Commission. (2017). *EU External Investment Plan*. Retrieved from [https://ec.europa.eu/eu-external-investment-plan/home\\_en](https://ec.europa.eu/eu-external-investment-plan/home_en)
18. Göndör, M., & Nistor, P. (2012). Fiscal Policy and Foreign Direct Investment: Evidence from some Emerging EU Economies. *Procedia – Social and Behavioral Sciences*, 58, 1256-1266. <https://doi.org/10.1016/j.sbspro.2012.09.1108>
19. Gosudarstvennaya programma industrialno-innovatsionnogo razvitiya Respubliki Kazakhstan na 2020–2025 gody [State Program of Industrial and Innovative Development of the Republic of Kazakhstan for 2020–2025]. (n.d.). Retrieved from <http://adilet.zan.kz/rus/docs/P1900001050#z12>
20. Hsieh, H.-C., Boarelli, S., & Vu, T. H. C. (2019). The effects of economic policy uncertainty on outward foreign direct investment. *International Review of Economics & Finance*, 64, 377-392. <https://doi.org/10.1016/j.iref.2019.08.004>
21. Kamps, C. (2005). Is there a Lack of Public Capital in the European Union? *EIB Papers*, 10(1), 73-93. Retrieved from [https://ideas.repec.org/p/ris/eibpap/2005\\_003.html](https://ideas.repec.org/p/ris/eibpap/2005_003.html)
22. Kim, W. (2019). Government spending policy uncertainty and economic activity: US time series evidence. *Journal of Macroeconomics*, 61, 103124. <https://doi.org/10.1016/j.jmacro.2019.103124>
23. Lv, S., Li, J., Mi, J., & Zhao, C. (2020). The roles of heterogeneous investment mechanism in the public goods game on scale-free networks. *Physics Letters A*, 384(17). <https://doi.org/10.1016/j.physleta.2020.126343>
24. Ministry of Finance of Ukraine. (n.d.). Official site of Ministry of Finance of Ukraine. Retrieved from <https://minfin.gov.ua>
25. Official site of the CIS Interstate Statistical Committee. (n.d.). Retrieved from <http://www.cisstat.com/>
26. Official site of the Statistical Office of the European Commis-

- sion. (n.d.). Retrieved from <http://ec.europa.eu/eurostat>
27. Olanubi, S. O., Osode, O. E., & Adegboye, A. A. (2019). Public sector efficiency in the design of a euro-area social benefit scheme. *Journal of Policy Modeling*, 42(3), 615-627. <https://doi.org/10.1016/j.jpolmod.2019.10.001>
28. Ouédraogo, R., Sawadogo, R., & Sawadogo, H. (2020). Private and public investment in sub-Saharan Africa: The role of instability risks. *Economic Systems*, 44(2). <https://doi.org/10.1016/j.econsys.2020.100787>
29. Papagni, E., Lepore, A., Felice, E., Baraldi, A. L., & Alfano, M. R. (2019). Public investment and growth: Lessons learned from 60-years experience in Southern Italy. *Journal of Policy Modeling*. <https://doi.org/10.1016/j.jpolmod.2019.12.003>Get rights and content
30. Petrović, P., Arsić, M., & Nojković, A. (2020). Increasing public investment can be an effective policy in bad times: Evidence from emerging EU economies. *Economic Modelling*. <https://doi.org/10.1016/j.econmod.2020.02.004>
31. Pierrakis, Y., & Saridakis, G. (2017). Do publicly backed venture capital investments promote innovation? Differences between privately and publicly backed funds in the UK venture capital market. *Journal of Business Venturing Insights*, 7, 55-64. <https://doi.org/10.1016/j.jbvi.2017.02.002>
32. Pro skhvalennia Stratehii rozvytku sfery innovatsiinoi diialnosti na period do 2030 roku [On approving the Strategy for the Development of Innovation Activity for the period up to 2030]. (n.d.). Retrieved from <https://zakon.rada.gov.ua/laws/show/526-2019-%D1%80#Text>
33. Ricco, G., Callegari, G., & Cimadomo, J. (2016). Signals from the Government: Policy disagreement and the transmission of fiscal shocks. *Journal of Monetary Economics*, 82, 107-118. <https://doi.org/10.1016/j.jmoneco.2016.07.004>
34. Strategiya Kazakhstan 2050 (Kazakhstan Strategy 2050). (n.d.). Retrieved from <https://primeminister.kz/ru/gosprogrammy/strategiya-kazahstan-2050>
35. Turnovsky, S. J. 2015. Economic growth and inequality: The role of public investment. *Journal of Economic Dynamics and Control*, 61, 204-221. <https://doi.org/10.1016/j.jedc.2015.09.009>
36. Zhang, L., Xie, Y., Huang, C., Li, H., & Dai, Q. (2020). Heterogeneous investments induced by historical payoffs promote cooperation in spatial public goods games. *Chaos, Solitons & Fractals*, 133. <https://doi.org/10.1016/j.chaos.2020.109675>