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PLANNING AND IMPLEMENTATION OF PUBLIC INVESTMENT PROJECTS IN THE FACE OF UNSTABLE MACROECONOMIC CONDITIONS¹

Summary

Purpose – The aim of the article is to draw attention to possible limitations and potential difficulties related to the implementation of public investment projects in the face of crisis phenomena and in particular the possible impact of macroeconomic factors on public investments.

Research method – During the research, the method of critical analysis of the literature as well as analytical and descriptive methods were used in relation to the source data obtained during the empirical research, which allowed determining the impact of changes in macroeconomic factors on the planning and implementation of public investments.

Results – Theoretical and empirical studies prove that macroeconomic instability has a significant impact on the course of investment processes in the public sector. The increase in inflation and interest rates of central banks has become a major threat to development processes; it may limit investment activity and reduce the effectiveness of public spending.

Originality /value /implications /recommendations – The article discusses the current issues of planning and implementing investments in the face of changes in macroeconomic factors in crisis conditions. The recognized instability of investment processes in the public sector requires a detailed analysis of the current conditions and the impact of potential threats on long-term economic development. The research shows that there is a need for a thorough and extensive analysis of macroeconomic conditions and their potential influence on the conditions of implementation, including the financing of public investment projects in the future.

Keywords: economic development, development stability, macroeconomic factors, public finance

JEL classification: H4, H54, O11

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1. Introduction

The conviction that investments in the public sector constitute a specific category of activity of public sector entities, which is oriented towards expanding the scope and improving the quality of public services, has been established for a long time. In the conditions of market economy, the importance of public investments has not decreased, which could result from the very concept of market functioning, where basically most matters of economic importance are entrusted to entrepreneurs operating in accordance with the rules of the economy. Public investment continues to play a key role both in meeting household needs and in the economy.

Implementation of public investments is a duty of public authorities in relation to all citizens, which means specific actions to improve living conditions, as well as conditions for conducting business activity based on components of technical and social infrastructure. When it comes to the implementation of public investments, the precise definition of the scope of public needs is of key importance. It can therefore be assumed that there is a general regularity that imposes a specific activity on public sector entities, a mode of operation that should bring the possibilities of meeting the needs in the sphere of public services closer to social and economic expectations.

In the conditions of a market economy, we are dealing with the cyclical nature of development processes. Sometimes it is possible to mitigate the effects of economic fluctuations and flatten out the negative consequences of such fluctuations in time. The consequences of crisis phenomena should be perceived in a slightly different way. They appear in an unforeseen way and are characterized by a wider scope and varying strength of impact. Primary factors destabilizing socio-economic processes should be indicated, such as political, demographic, social, economic and other factors, which may lead to broader macroeconomic changes.

The diversified directions of activities of public entities and the high complexity of the undertaken investment projects cause a strong relationship between the planning of future activities and the possibilities of implementing investment projects. Crisis phenomena and the resulting instability of macroeconomic factors lead to a deterioration in the possibilities of financing investments within the budgets of public sector entities, to limiting the scope of planned investments, to difficulties related to the implementation of already started, and to lowering the compliance of the developed plans with the possibilities of their implementation. Therefore, there is an increased risk of financing investment projects related to the risk of excessive inflation and excessive increase in interest rates. This, in turn,

can lead to an increase in debt and the risk of public debt. As a result, there may be a risk of limiting the material scope of the investment [Domokos et al., 2015, p. 9; Platon et al., 2014, p. 206]. As a consequence, it may be necessary to verify and update the developed strategic plans in terms of the implementation of the selected tasks. There may be a situation that forces public investors to verify their investment plans, postpone investments and limit the scope of investment processes. Crisis phenomena may therefore limit the pace of socio-economic development with all the consequences for both the social and economic spheres.

The mechanism of the impact of macroeconomic factors on individual investment projects in the public sector is complex. On the one hand, it includes the need to take into account the aforementioned macroeconomic changes in relation to individual projects in the implementation phase and projects in the planning phase. This causes unpredictable changes in the course of projects, which lead to a number of negative effects. On a larger scale, changes in individual investment projects may lead to negative effects perceived in the system of communes, regions and in the state.

The aim of the article is therefore to draw attention to possible limitations and potential threats to public investment in the face of crisis phenomena, in particular the macroeconomic factors. An extension of the illustrative considerations is the presentation of the results of empirical research in the field of inflation, base interest rates in selected countries and also public investment outlays in Poland. This choice was dictated by many factors: lack of continuity of data in European systems and on a global scale, low reliability and lack of completeness of data, varied scope of detail of basic macroeconomic data and in the field of public investment.

2. Theoretical background of the study

The implementation of public investments is a broad issue and includes activities related to the comprehensive preparation and operation of various projects. Considering the complexity of investment projects in the public sector, one should remember not only about organizational, technical or economic conditions, but also about social conditions and consequences. The objective scope of public investments covers all issues related to the process of identifying public needs already at the planning stage, identifying ways to meet them and taking organisational, technical and economic measures that may lead to the achievement of the set goals [Ocolisanu et al., 2022, p. 2; Here, 2018, pp. 39–41]. The complexity of public investment projects is related to the need to analyse and assess the effectiveness of

the expenditure incurred, to take into account the priorities and the established hierarchy of goals, conditioning the undertaking of further actions, which, as a rule, should be aimed at meeting broadly understood needs of a public nature [Satoła, 2015, p. 212].

Initiating public investment projects is the competence of public administration entities at various levels, at the level of local and regional government units, as well as entities at the government administration level. The degree of complexity of investment projects depends on the size of public needs and the scale of investments as well as the range of their impact [Cavallo, Daude, 2008, p. 24; Ziółkowski, 2015, p. 155]. It is necessary to point to very local investments, focused on meeting the needs of local communities, but we can also point to large investments carried out by state governments related to overcoming general development limitations in the sphere of national infrastructure, such as in the field of energy, communication, transport, or in the environmental sphere [United Nations, 2009, p. 5].

The diverse scope of activities of public sector entities resulting from a number of obligatory tasks means the need to use complex planning tools. The method of strategic planning is widely used, which enables a comprehensive reference to all potential directions of development of a given public sector organisational unit and facilitates a good identification of public needs that already exist, as well as needs that may appear in the future. The strategic planning method allows, therefore, to build a hierarchy of needs and socio-economic goals and to determine the methods of action leading to meeting public needs in the long-term perspective [Domański, 1999, p. 57; Elbanna et al., 2016, pp. 1018–1019]. The strategic planning process assumes full use of already existing own resources as well as resources that may appear in the future. As a result, a high degree of compliance of the selected tasks can be achieved, which can then take the form of finally defined investment projects to be implemented [Bryson, Edwards, 2017, pp. 2–5]. Recognition of needs using the strategic planning method makes it possible to organize and prioritize individual tasks in accordance with the set goals [Bonn, Christodoulou, 1996, p. 543], while scenario planning makes it possible to define tasks in variants in conditions of unpredictable economic and social changes [Amer et al., 2013, p. 24].

The established set means the need to gradually transform the tasks selected in the planning process into individual investment projects, which will then be directed for implementation. In practice, the development strategy is implemented through the implementation of subsequent investment projects [Crawford et al., 1999, pp. 612–614]. Therefore, the implementation of the strategy through pro-

jects has the features of a systemic approach to development processes [Jarosiński, Opalka, 2021, pp. 149–150]. In this process it is characterized by a relatively large number of tasks and significant public resources are allocated for their financing. While the indication of implementation tasks may be disordered, the selected investment projects should be prioritized and included in the form of a project portfolio [Wysocki, 2013, pp. 387–388; Project Management Institute, 2013, p. 24], which would allow to maintain the principle of rationality of project selection and efficiency of management on the scale of the entire public administration unit [Drobnik, 2005, p. 60].

As for the factors influencing the implementation of public investments in an unstable environment, a number of conditions are observed. The most important determinants that have a macroeconomic dimension include inflation and its changes over time, the level and stability of central bank interest rates (reference rate, lombard rate, deposit rate, rediscount rate and reserve requirements), budget deficit and public debt, fiscal policy of the state, credit policy investment banks, the situation on the labour market, legal and organizational factors, such as the possibility of unforeseen regulatory changes regarding the principles of organizing social and economic life [Fischer, 1993, pp. 486–488; Chirwa, Odhiambo, 2016, p. 35]. A significant threat when it comes to planning and implementing public investment projects in the conditions of changes in macroeconomic factors may be the shortage of available financial resources within the budget of the entity to ensure sources of financing investment projects. A change in macroeconomic factors causing effects in the sphere of the real economy may lead to a decrease in budget revenues in the public finance sector [Batóg, Batóg, 2019, p. 3].

Increases in inflation and interest rates can affect the performance of investment projects. Inflation directly affects the discount rate used in analysing the effectiveness of investment projects using discounted evaluation methods. If a public investment project has been evaluated under stable macroeconomic conditions, it may be that just the increase in inflation and the change in the level of interest rates, may lead to changes in the project and deterioration of efficiency [Jarosiński, 2021, p. 772]. It may be necessary to revise design assumptions and re-examine the entire project. Public investment projects show less susceptibility to the impact of macroeconomic factors. Even the deterioration of financing and operating conditions in the operational phase does not necessarily lead to the abandonment of planned projects. In certain situations, there may be a need to increase public spending on the implementation of an investment project, but this may depend on the need to achieve the stated public objectives of the investment.

Macroeconomic changes in global terms, initially caused by the COVID-19 pandemic and then related to the armed conflict in Ukraine, contributed to the destabilization of the global economy and the effects of these phenomena may have a long-term impact on investment projects that are in the implementation phase and on investment projects in the preparations [Jarosiński, Opałka, 2021, pp. 4137–4139], which are difficult to predict and result from the crisis phenomena mentioned above.

The instability of the socio-economic situation may result in an increase in the overall risk of investment projects and, consequently, may lead to aversion to new investments. As a result, other negative phenomena may occur leading to a deterioration in the efficiency of management in the economy. In the operational phase of the project, changes in the management conditions may cause changes in the relationship between revenues and costs affecting the efficiency of the project determined using various assessment methods (*NPV*, *IRR*, *MIRR* and others) [Sawyer, 2011, pp. 3–24]. Consequently, it may be necessary to adjust the planned total value of the project by changing the net present value of the projects. The indicated changes may lead to a deterioration of financial results and a deterioration of capital efficiency.

In a market economy, the implementation of public investments remains closely related to macroeconomic indicators. Changes in the macroeconomic situation, including in particular an increase in inflation and an increase in interest rates, must lead to a deterioration of the internal situation of projects and changes in the effectiveness of planned investment projects.

A particularly important role in the impact of macroeconomic factors can be observed in dynamic methods of investment project evaluation (*NPV* and derivatives), where the discount rate included in the discount factor formula is applied. The discount rate is the result of a combination of a number of factors, the most important being the interest rate, risk premium and inflation rate.

Cash flows in dynamic methods of appraisal of investment projects are calculated in current prices. This means that it is necessary to take into account variable interest rates affecting the value of the discount rate and the discount factor. It is the aforementioned macroeconomic factors, interest rate and inflation that have a decisive influence on the course of investment projects in the public sector. It should be remembered that the preparation and evaluation of projects is performed in a priori deterministic conditions, as it is difficult to determine the course of future economic changes. Crisis phenomena increase the risk of failure to achieve the design assumptions of planned investment projects. A sudden change in the factors that were taken into the analysis, an increase in interest

rates on loans, an increase in inflation significantly affect changes in the value of projects. This is typical of the situation in the enterprise sector. As far as entities and organizational units of the public sector are concerned, they function in slightly different realities, and therefore it is necessary to use different methods of analysis and evaluation as well as selection criteria. Taking into account the use of dynamic methods, also in such cases it may turn out that the actual implementation of the project will be inconsistent with the planned assumptions. This constitutes a serious threat to the budgetary economy of particular types of public sector entities, and also carries the risk of failure to achieve the assumed tangible results.

In the case of public investments, their specificity should be indicated, which is associated with high capital intensity of investments, solid shape, longevity of facilities, long implementation cycles and a relatively long operation phase. This means that the preparation and implementation of public investments is subject to evaluation based on other criteria. A broader analysis is needed, going beyond the criteria of financial efficiency, taking into account various economic and social factors, enabling the measurement of inputs and outputs in a broader non-market dimension [Drobniak, 2012, p. 61; Belli et al., 1998, pp. 71–82]. When evaluating public investment projects, different methods are used than those customarily used in the private sector. A more extensive quantitative and qualitative analysis of the planned projects is necessary [Rodríguez Bolívar et al., 2021, pp. 97–114]. The methods of economic analysis using the economic net present value (*ENPV*) formula, methods based on cost-benefit analysis (*CBA*) and cost-effectiveness analysis (*CEA*) should be mentioned here. Weighted cost-effectiveness analysis (*WCEA*) and multi-criteria analysis (*MCA*) may also be used. The main advantage of these methods is that they can be used to compare projects with a different range of expected results [Farell, 1957, pp. 253–290].

For most public investment projects, it is difficult to obtain positive evaluation results using financial analysis methods. This regularity applies both to simple methods of project evaluation and to more complex methods, using the aforementioned discounted cash flow account. It is precisely with regard to public investment projects that it is difficult to obtain a positive *NPV* in the analysis of flows, which would normally give grounds for project rejection. Rather, the rule is to obtain *NPV* values less than zero, which in the case of selection criteria for the *NPV* method should result in the rejection of such a project. We may also be dealing with projects for which the calculation of the *NPV* value is not possible at all due to the lack of revenue as part of the operating activity. As

a rule, however, such projects are not rejected [Beqiraj et al., pp. 238–248] and further research is carried out due to the social and economic importance of the conducted activity, so there are many situations where the project cannot be abandoned and it should absolutely be implemented. This applies to many projects in the critical infrastructure sector at the state level as well as at the regional and even local level.

In the public sector, the above conditions have a slightly lower impact due to a different function of the objective of public projects. Here, specific tangible and qualitative effects are expected to be achieved, while attention is paid to the monetary side of the achieved effects to a lesser extent, the more so that some investment projects do not allow determining the value of the revenue side. This requires the adoption of a specific efficiency assessment model. It is therefore about the use of adequate methods that would allow determining in some cases the cost-effectiveness of the undertaken investments based on the cost-effects account in material terms.

The risk of changing the structure of budget expenditures during the financial year should be indicated, broken down into expenditures for current and investment tasks [Doval, 2019, pp. 101–111], while current tasks may be of an unplanned nature, for which no funds have been provided in the budget revenues [Spikin, 2013, pp. 89–126]. Unplanned expenses related to the consequences of crisis phenomena may lead to adjustments to the revenue and expenditure plan of the state and local government units, and may lead to a reduction in investment outlays. Such a scenario may be unfavourable due to the risk of failure to achieve tangible and financial effects of investment projects.

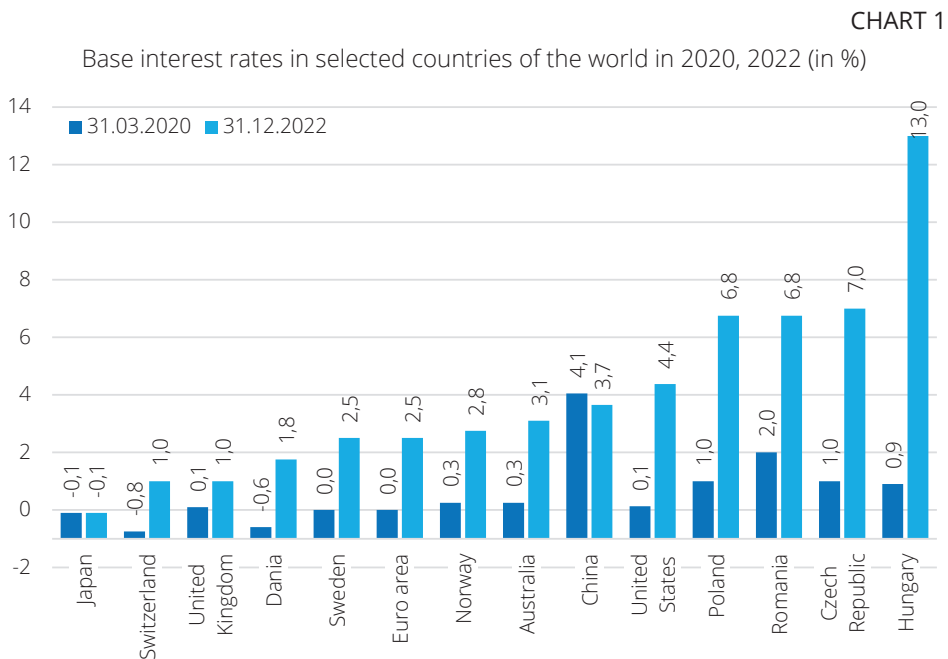
3. Results of empirical research

The empirical research was conducted with a view to presenting actual changes in macroeconomic indicators that may affect the course of implementation of public investment projects. In accordance with the conditions established during the theoretical considerations, source tables were developed for the purposes of the research, containing detailed data on inflation in selected countries of the world, interest rates and public investment outlays. With regard to local government in Poland, changes in the level of investment outlays in the spatial arrangement of subregions in 2019–2021 were presented. The resulting tables were used to prepare the starting material to illustrate changes in investment outlays in the public

sector by subregions. The presentation of the results was prepared in the form of a choropleth map with grouped results.

In the course of the research, various macroeconomic factors were analysed, the paper was limited to presenting changes in selected macroeconomic factors and the situation in the field of public investment was presented. Considering the factors that have a large impact on investment projects, inflation and interest rates, but also the budget deficit and public debt should be pointed out.

Changes in base interest rates are visible in the global economy. Chart 1 presents the results of empirical research on interest rates set by central banks of selected countries around the world and interest rates set by the European Central Bank for euro area countries.



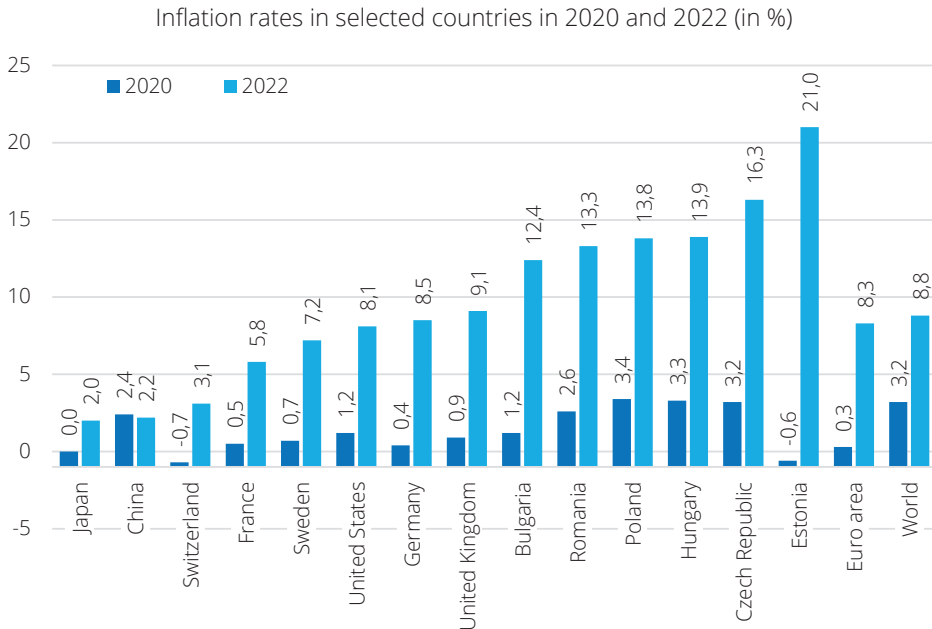
Source: author's own elaboration based on [www 3].

Interest rates in 2020 were shaped in the surveyed groups of countries as a result of the consolidation of financial markets in the face of an improvement in the economic situation at a relatively low level. Core interest rates remained low throughout the relatively long period of the pandemic in the euro area as well as in the US, Japan and Switzerland. Starting from March 2020, the situation has

changed. In some countries, there was a relatively rapid and significant increase in interest rates. It became impossible to maintain low interest rates in some countries of the world in 2022. In the group of countries surveyed, the highest increase was recorded in Hungary, where in 2022 the level of interest rates reached 13%. In the years 2020–2022, central banks applied differentiated interest rate policies. In the euro area, interest rates remained low until 2022. A similar situation occurred in the United States, while interest rates in Japan and Switzerland remained negative. At the end of December 2022, only Japan still had negative interest rates at the level of -0.10%. A significant increase was necessary due to the growing inflationary processes. This had a visible impact on the course of investment processes in the public sector presented in the further part of the study.

The extent of the impact of the crisis phenomena caused by the COVID-19 pandemic and the armed conflict in Ukraine is clearly evidenced by changes in the global inflation level recorded for 2020 and 2022. A graphic illustration of the discussed changes is presented in Chart 2.

CHART 2



Source: author's own elaboration based on [www 3].

Table 1 presents data illustrating changes in the level of public investment outlays in selected countries in 2019–2021.

TABLE 1

Public investment expenditure in selected countries in total (bn EUR)
and per capita (EUR) in 2019–2021

Specification	2019		2020		2021	
	Total	Per capita	Total	Per capita	Total	Per capita
European Union	421.8	942.0	441.3	984.5	469.4	1048.0
Czechia	9.8	923.0	10.5	978.1	11.2	1047.8
Germany	83.8	1008.3	91.5	1100.6	93.6	1125.5
Greece	4.6	426.7	5.1	481.0	6.6	622.3
Italy	41.5	694.3	43.1	724.5	52.1	880.3
Poland	22.9	597.8	23.5	612.3	23.8	622.9
United Kingdom	70.8	1059.3	74.1	1105.2	82.5	1224.6
United States	634.1	1918.4	656.5	1978.8	645.8	1943.0
Japan	179.2	1420.2	188.7	1499.6	178.2	1417.9

Source: author's own elaboration based on [www 11].

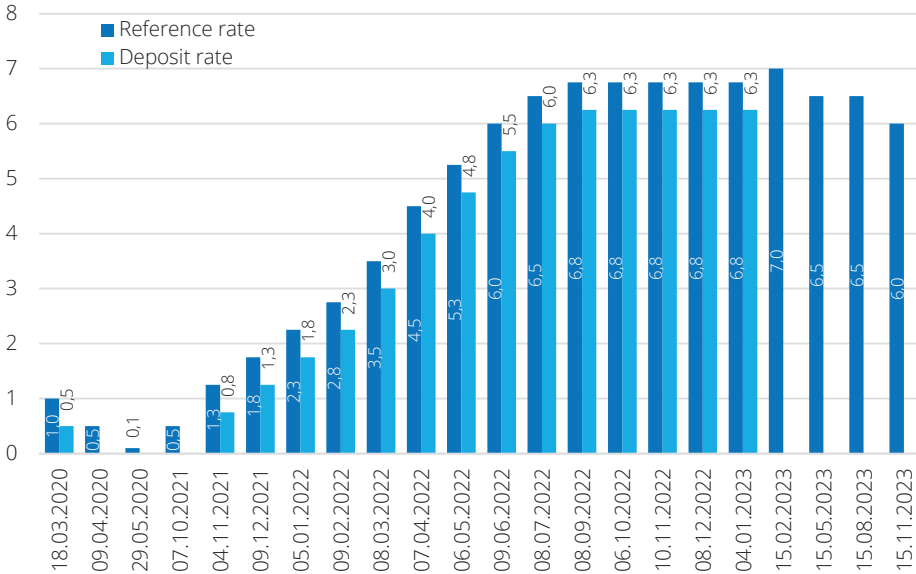
In selected countries, in 2019–2021, there were multidirectional changes in public investment spending; in some countries there was an absolute decrease, such as in the United States and Japan, in others a decrease in the growth rate of these investments was observed. If we take into account the inflationary increase in the prices of investment works in real terms, these indicators would be much lower. It is worth noting that in the European Union there was a slight increase in public spending due to the need to complete the already started investments.

In Poland, multidirectional changes in basic interest rates were recorded. In 2020, there was a stabilization and then a decrease, the situation changed in October 2020, in the period from October 7, 2021 to September 7, 2022, there were 10 increases in base interest rates. These changes testify to the deteriorating macroeconomic conditions. Until April 2020, interest rates in Poland were on a downward path. This process was the result of a relatively good economic situation and was an expression of the pro-investment policy of the central bank. From May 2020, an increase in interest rates was recorded, which took place in 2021 and 2022. It was a response to the deteriorating macroeconomic situation,

in particular rapid increase in inflation and threats to the market caused by excessive money supply. Chart 3 presents the basic interest rates of the National Bank of Poland in 2020–2023.

CHART 3

Basic interest rates of the National Bank of Poland in 2020–2022
and projected values for 2023 (in %)



Source: author's own elaboration based on [www 2].

The crisis related to the COVID-19 pandemic and the war in Ukraine led to a further rapid increase in interest rates, in mid-2022 the base rate reached 6.75%. Base interest rates remained unchanged until the end of 2022. Referring to the forecasts [www 6], it should be expected that in 2023 there may be slight reductions in the base interest rates to the level of 6.5%, and it is possible that in the coming years there will be further reductions in the base interest rates.

Changes in the level of inflation, gross domestic product per capita, unemployment, public debt in relation to GDP as well as the general government deficit should also be pointed out. The figures characterizing the changes in the discussed measures in 2019–2022 and the forecasted values for the period 2023–2024 are presented in Table 2.

TABLE 2

Selected macroeconomic indicators in Poland in 2019–2024

Specification	2019	2020	2021	2022	2023*	2024*
Inflation, CPI (in %)	2.3	3.4	5.1	14.4	9.8	4.8
Construction and assembly production price indices (in %)	3.5	2.6	4.2	2.6	–	–
GDP, bn PLN	2288.5	2337.7	2623.9	3017.8	3317.7	3577.7
GDP per capita, thou. PLN	59.6	61.2	69.1	78.6	86.4	93.3
Registered unemployment (in %)	5.2	6.8	5.8	5.0	5.4	5.0
Public debt in relation to GDP (in %)	45.7	57.2	53.8	51.7	53.3	55.0
General government deficit in relation to GDP (in %)	-0.7	-6.9	-1.9	-4.7	-4.5	-5.2

* predicted values

Source: author's own elaboration based on [www 4; www 5].

Inflation in Poland varied between 2019 and 2022. Along with the increase in inflation, there was a risk of a significant reduction in the real income of the population, as well as negative effects related to the depreciation of money. Reference should be made to the inflation forecasts for 2023 and 2024 [www 6], which show that price growth may be slightly lower. However, the situation may still be difficult in the coming years.

One should pay attention to multi-directional changes in the value of GDP. According to the forecast of the Ministry of Finance, in 2023–2024, a lower GDP growth rate is expected compared to previous years (see Table 1). The main reason for the increase in public debt was unplanned current expenses incurred in 2020–2021, as well as related to public debt servicing. The debt ratio in Poland was relatively low in the period under review (see Table 1). In the following years, it may also remain at a relatively low level. The values of the indicator may be significantly lower compared to highly developed European countries. The general government deficit ratio as a ratio of the deficit to the value of GDP in 2019–2022 varied at different levels. As shown, it did not exceed the level of 5% by 2022. A similar level may be maintained in the following years.

The implementation of public investments is closely related to macroeconomic indicators. An increase in inflation and interest rates may lead to a deterioration in their effectiveness. When using the discounted net cash flow or derivative method to assess projects, we deal with both operating revenues obtained from the sale of goods and services, as well as the discount rate, which is related to inflation and interest rates. An increase in the value of these ratios contributes to an increase in the value of the discount factor and, as a result, leads to a deterioration in the efficiency of investment projects.

In the public sector, this type of relationship may have a slightly lower impact, due to a different function of the objective of public projects. Here, specific tangible and qualitative effects are expected to be achieved, while attention is paid to the monetary side of the achieved effects to a lesser extent, the more so that some investment projects do not allow determining the value of revenues. This requires the application of a specific efficiency assessment model. It is therefore about the use of adequate methods that would allow determining in some cases the cost-effectiveness of the undertaken investments based on the cost-effects account in material terms. Here, the cost-effectiveness assessment methods are used in accordance with the general formula presented below [Jarosiński, 2021, p. 781; Asian Development Bank, 2013, pp. 58–59]. Regardless, however, changes in base interest rates and an increase in inflation must always lead to a deterioration of the original results of the project analysis.

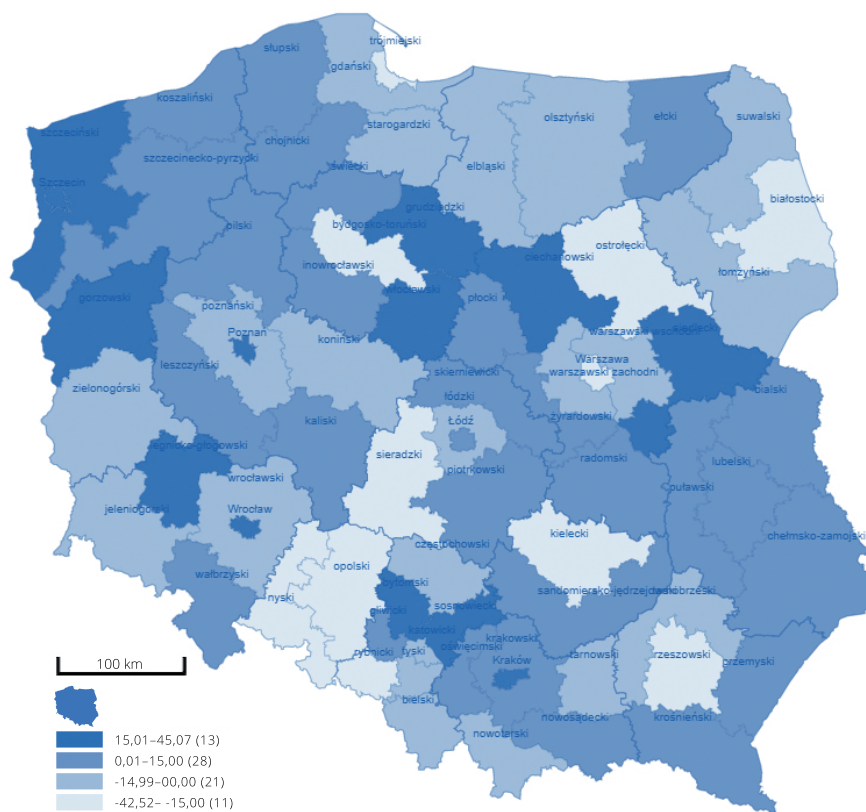
It should be noted that changes in the share of public investment in total investment took place in conditions of increasing public spending. Table 2 presents the share of public investment outlays in Poland in 2018–2021 in relation to total investment outlays in regional terms. In order to better illustrate the changes taking place in the sphere of public investment in 2018–2021, the delimitation of investment expenditures was made for municipalities and counties combined per capita by subregion. The resulting data are presented in graphical form in Chart 4.

The results of the study show that there are large differences in the level of investment outlays per capita. Between 2019 and 2021, 11 subregions saw declines in capital expenditures, while 13 subregions saw increases in the share of capital expenditures. An important addition to the analysis in terms of public investment in Poland would be figures for 2022. In view of the limited availability of data, it is necessary to refer to estimated values. Based on forecasts [www 5; www 4; www 9; www 10], it is not possible to clearly prejudge what the development scenarios will be in 2023 and beyond. There may be a reduction in inflation, but it will continue to affect the scope of total investment. It is possible to stabilize

and even increase investment spending in the public sector, which will be related to the need to continue investments started and new strategic investments.

CHART 4

Rate of change in investment outlays of municipalities and counties together per capita by subregions in 2021 in relation to 2019 (in %)



Source: author's own elaboration based on [www 8].

4. Conclusions

In 2020-2021 there was a significant deterioration in macroeconomic conditions, which had a definite impact on the conduct of economic activity, including the implementation of public investment projects. The increase in current spending caused by the need to finance tasks related to the fight against the COVID-19

pandemic led to a change in the size and structure of budget expenditures, including a reduction in the ability to finance public investments.

The research revealed difficulties and constraints when it comes to the ability to finance investments within the budgetary resources of diverse public administration entities. A stagnation or even a decreasing share of public investment outlays in total investment outlays in Poland was noted. Investment expenditures at the level of municipalities and counties were also unfavorable. Economic changes caused by primary causes of a crisis nature led to an increase in the budget deficit and public debt.

Due to the unstable macroeconomic situation, especially the increase in inflation and base interest rates, there was an increase in the cost of borrowing money, which reduced the possibility of financing investments. The crisis phenomena caused changes in the conditions for the implementation of public investment projects by increasing the discount rate adopted in various methods of investment project evaluation, and also caused changes in the level of operating costs of enterprises, which affected the mutual relations of cash flows in projects. A complex situation arose, characterized by the fact that it became necessary to verify the design assumptions of already implemented projects, and it was necessary to verify the possibility of undertaking new investments in the diverse budgetary situation of public entities as well.

Stabilization of the situation on the public investment market may take place, however, after meeting a number of accompanying conditions, mainly political ones. It should be remembered that the armed conflict in Ukraine is ongoing and this factor may be decisive when it comes to shaping the socio-economic situation of many countries.

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