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### **PUBLIC FINANCE IN THE ERA OF CHANGING ECONOMY IN POLAND**

#### **Abstract**

*Finance has always been under close scrutiny. Public finance is considered to play a particularly paramount role in world economies. Public finances are complex phenomena that are subject to assessment both within a given country, but also on the basis of an EU methodology (universal for Member States). The aim of this article is to conduct an extensive research on the significance and the development of public finance in the Polish economy over the years 2010 – 2020. The analysis shows that the statistical reference points to persistent imbalances in Poland's public finances, which manifest themselves in cyclical public deficits. Overall, both the level of income and expenditure in relation to GDP in Poland is at a moderate level in comparison with many European Union countries. The paper includes a critical analysis of the scientific literature and empirical data. This analysis is considered to be vital from the perspective of economic development of countries.*

**Keywords:** finance, public finance, public revenue, public expenditures, deficit, public debt.

**JEL classification:** E600, H600, H620

**Paper type:** Theoretical research article

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## **Introduction**

Nowadays, finance represents a major aspect of functioning of all entities in the economy. It occurs wherever money appears, so practically speaking in all processes taking place in the economy. There is a number of market economy entities which contribute to efficient and effective functioning of financial system in given countries or worldwide. The main entities are households, businesses, financial institutions, banks and the state. It has to be noticed that financial system of a country is determined by the efficiency of allocated funds. Undoubtedly, this subject appears to be important and still valid which is the reason why there is a great number of studies on this aspect. The field of studies related to finance is rapidly changing, which is mainly due to the socio-economic development of the whole world. The state is reckoned to be the main entity that stimulates the functioning of all entities in a market economy.

The purpose of this article is to demonstrate the importance and the development of public finance in the Polish economy over the years 2010–2020. Achieving this goal required answering the following research questions:

- How is the importance of public finances measured?
- Are public finances in Poland characterized by persistent imbalance?
- How are public revenues and expenditures in Poland compared to other countries?
- Is the value of public debt in Poland getting closer to the value of the convergence criterion contained in the Maastricht Treaty?

The article is composed of two parts substantively related to each other. The first part revolves around the theoretical approach to finance, while the second concerns the meaning of public finance in the modern economy and trends related to these changes. The article was written on the basis of Polish and foreign literature, applicable legal acts, and own research.

### **I. Public finance in the field of financial sciences**

Finance is considered to be one of the most frequently studied phenomena these days. It is perceived as the basic foundation of an efficiently and effectively functioning market economy. Financial phenomena apply to all economic processes in which money appears (Podstawka M., 2021, p. 18). There is a considerable number of definitions of finance in the literature. The topic has been discussed by various authors, including M. Podstawka (2021, p. 18), A. Borodo (2019, p. 13), C. Kosikowski and E. Ruśkowski (2008, p. 15), D. Korenik and S. Korenik (2010, p. 13), S. Owsiak (2002, p. 21). Initially, the term “finance” was identified with public finance, which concerned tax burdens and spending of funds accumulated by the state. Along with the socio-economic development, the view on the term “finance” has evolved

(Podstawka M., 2021, p. 19). Lawrence J. Gitman (2015, p. 4) presents a novel approach to finance and he defines it as the art and science of managing money. According to M. Podstawka (2021, p. 18) finance concerns “the totality of monetary phenomena and processes related to the creation (issue), flow, accumulation and spending of funds”. A number of researchers perceives finance in this way. A. Paździor (2014, p. 12) indicates that finance is a complex phenomenon, and it has not been exhaustively examined yet. One of the reasons of such situation is the fact that finance is marked with enormous diversity. In the subject nomenclature there is a division of finance according to the subjective criterion. According to this criterion there are:

- household finances;
- business finance;
- public finance;
- banking;
- financial market (Korenik D., Korenik S., 2010, p. 15-18).

The division of finance according to the subjective criterion makes it possible to classify financial phenomena due to the individuality of the entities that conduct business. A. Cenquier indicates that, the entity structure related to the financial system has not changed over the years, which is presented in Table 1.

**Table 1. Subjective structure of finance.**

<b>Subjective classification</b>	<b>Before the age of modern finance</b>	<b>The age of modern finance</b>
Household finances	+	+
Business finance	+	+
Public finance	+	+
Finance of financial institutions	+	+

Source: own analysis based on Cenquier A., *Finanse nowoczesne. Wybór refleksji*, Research papers of Wrocław University of Economics and Business, Nr 533/2018, p. 61.

According to M. Podstawka (2021, p. 20), finance plays a subordinate role in relation to market economy entities. The following functions of finance are presented in the literature:

- allocative;
- redistributive;

- stabilizing;
- reconversion of ownership.

The state is considered to be the creator of these functions, whose task is to ensure the effective and stable functioning of the entire economy (Samuelson P.A., Nordhaus W.D., 2021, p. 33). The main aim of the state is to ensure the security of its citizens, and so all entities operating in the real economy (Gwardyński R., 2021, p. 99). E. Ruśkowski (2018, p. 23-24) points out a number of differences between public and private finance. They are presented in the table 2. The main distinguishing features are the purpose, organisation and management, as well as the nature of the operation. It has to be highlighted that all those features confirm a paramount meaning of public finance in the field of financial studies.

**Table 2. The character of public and private finance**

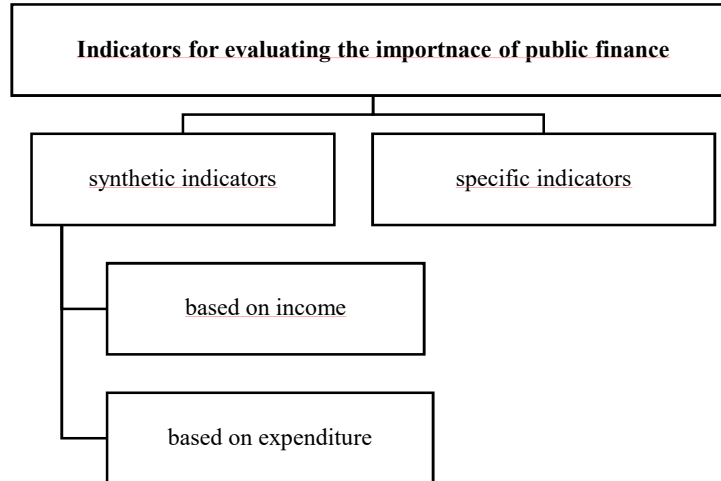
Feature	Public finance	Private finance
Purpose	meeting social needs	maximising profit
Organisation	separation of funds	fragmented
Management	centralisation	decentralisation
The nature of operation	compulsory, gratuitous	voluntary, non-gratuitous

Source: own analysis based on Ruśkowski E., *Finanse publiczne i prawo finansowe. Instrumenty prawnofinansowe i warunki ich stosowania*, Temida 2, Białystok 2018, p. 23-24.

Public finance is a broad field that mainly concerned with the collection and distribution of public funds. Public finance is strictly regulated in the legal act. The main binding act in Polish law is the Public Finance Act of 2009. The basis of the state's budgetary economy is the Budget Act (Borodo A., 2019, p. 43).

According to E. Ruśkowski (2018, p. 25) public finance is a complex and dynamic term. The definition of public finance depends on the personal concepts of the authors. In the literature concerning the subject various approaches to defining were presented by Richard W. Tresch (2022, p. 3), David H. Rosenbloom, Robert S. Kravchuk and Richard M. Clerkin (2022, p. 20), Podstawka (2021, p. 138), A. Borodo (2019, p. 21), H. L. Bhatia (2018, p. 21), Carl S. Shoup (2017, p. 3), Ronald C. Fisher (2016, p. 1), Stephen J. Bailey (2004, p. 3-5), S. Owsiak (2002, p. 21). The significance of public finance depends on the level of:

- public revenue in relation to GDP;
- public expenditure in relation to GDP;
- public debt in relation to GDP (Ruśkowski E., 2018, p. 31).

**Figure 1. Indicators for evaluating the importance of public finance**

Source: own analysis based on Czempas J., *Kilka uwag do mierzenia skłonności do inwestowania w jednostkach samorządu terytorialnego*, Economic Studies, University of Economics in Katowice, Nr 177/2014, p. 59.

The ratio of public expenditure to GDP is defined as socialisation index, while the fiscal indicator is the ratio of public revenue to GDP. E. Ruśkowski (2018, p. 31-32) indicates that, the importance of public finances has to be considered in relation to the ratio of public expenditure of the analyzed country to its GDP.

## II. Research methodology

The study will attempt to conduct own analysis of the importance of public finance in Poland in comparison to other countries. This empirical research can be divided into three main parts, which concern three aspects:

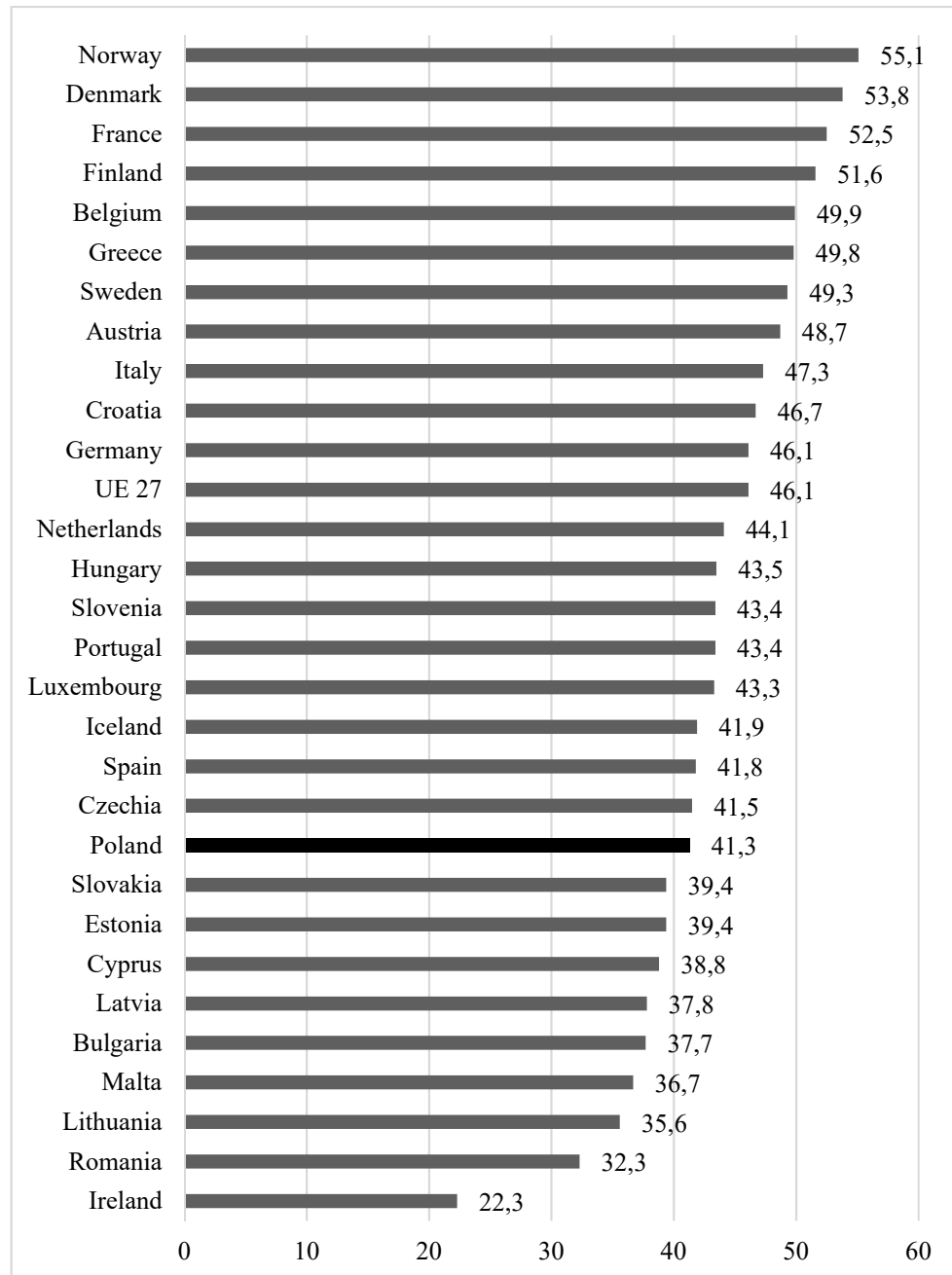
1. Analysis of statistical data related to public revenue.
2. Analysis of statistical data related to public expenditure.
3. Analysis of statistical data on public debt.

The aim of this article is to conduct an extensive research on the significance and the development of public finance in the Polish economy over the years 2010–2020. The data in this part of the work is taken from Eurostat and the Ministry of Finance.

### **III. The scope and role of public finance in Poland compared to other countries**

The first part is devoted to the statistical analysis of public revenue in various countries. It is noteworthy that this statistical reference in 2020 indicates a differentiation of results. This indicator ranges from twenty-something to fifty-something percent of the gross domestic product. The data comes from Eurostat and the Ministry of Finance.

Figure 2 illustrates the size of the fiscal indicator (public revenue in relation to GDP). It is notable that the highest public revenues in relation to GDP in the surveyed countries in 2020 were: Norway (55.1%), Denmark (53.8%), France (52.5%), Finland (51.6%). On the other hand, the fiscal indicator was at the lowest levels in Iceland (23.2%), Romania (32.7%), Bulgaria (36.7%), Lithuania (37%), Malta (37%), Estonia (39%). Poland is ranked 10th out of 29 analysed countries. The fiscal indicator for Poland in 2020 was 41,3%. It is worth mentioning that this indicator in Poland in comparison with other countries was at a moderate level. In the European Union (EU 27), in 2020 the ratio of public revenue to gross domestic product was 46.1%.

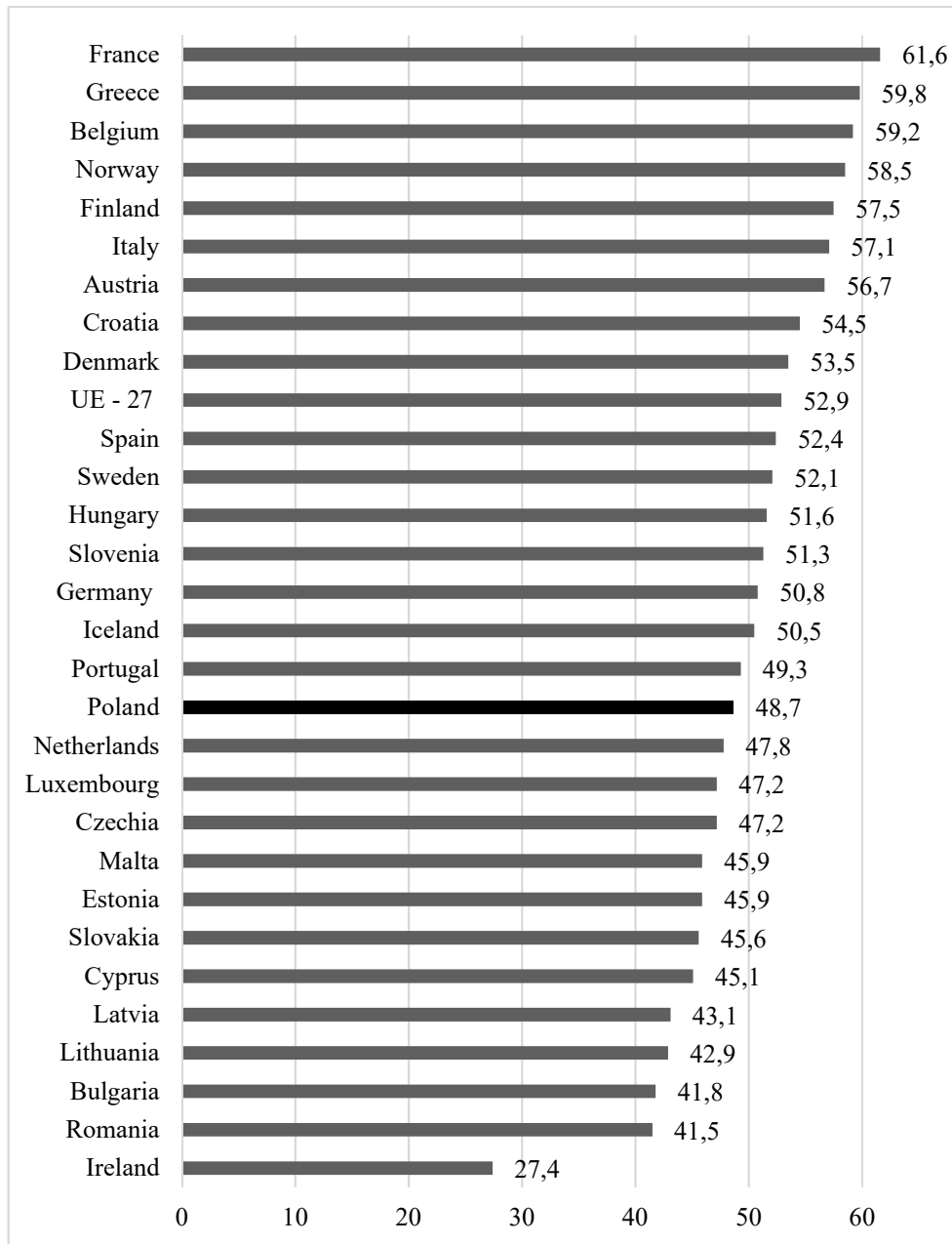
**Figure 2. Ratio of public revenue to GDP in 2020 (in %)**

Source: own analysis based on Eurostat (access date: 02.01.2023).

A statistical analysis of the size of public expenditures in various countries will be presented in the further part of the study. Figure 3 presents the results of the research on the socialization indicator. It is to be noted that this statistical reference in 2020 indicates the diversity of results. This indicator ranges from twenty-something to almost sixty percent of the gross domestic product.

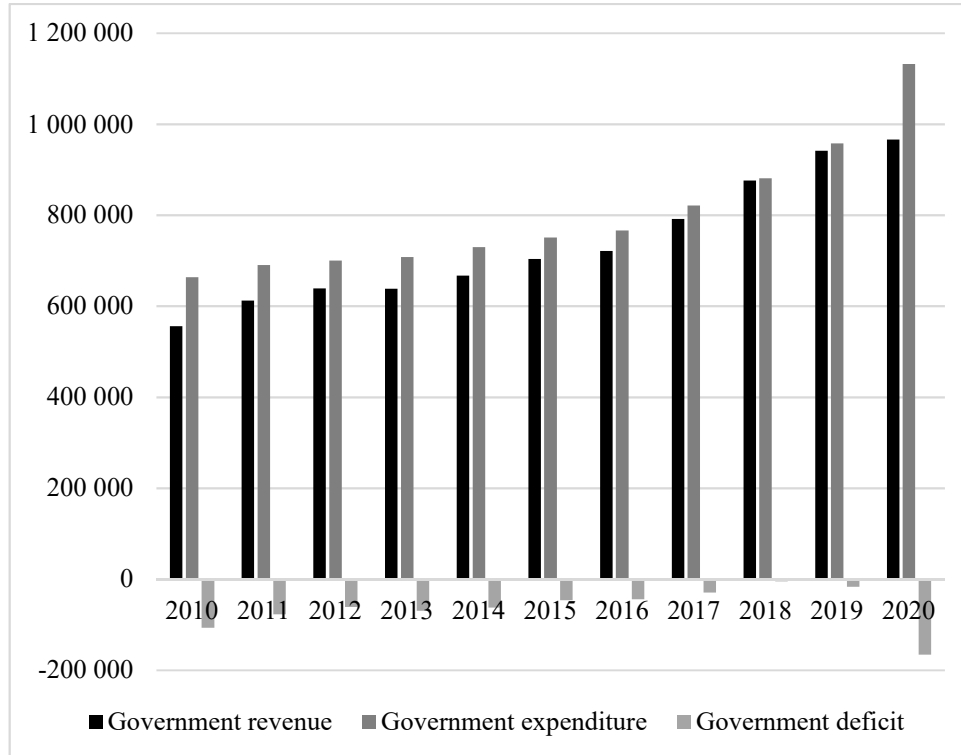
The greatest importance of public finance in the surveyed countries in 2020 was in: France (61.6%), Greece (59.8%), Belgium (59.2%), Norway (58.5%), Finland (57.5%), Italy (57.1%). On the other hand, the socialization rate at the lowest levels was in Ireland (27.4%), Romania (41.5%), Bulgaria (41.8%), Lithuania (42.9%) and Latvia (43.1%). Poland is ranked 14th out of 29 analyzed countries. The socialization rate for Poland in 2020 was 42.4%, which means that Poland is among the countries with a small scope of public finances.



**Figure 3. Ratio of public expenditures to GDP in 2020 (in %)**

Source: own analysis based on Eurostat (access date: 02.01.2023).

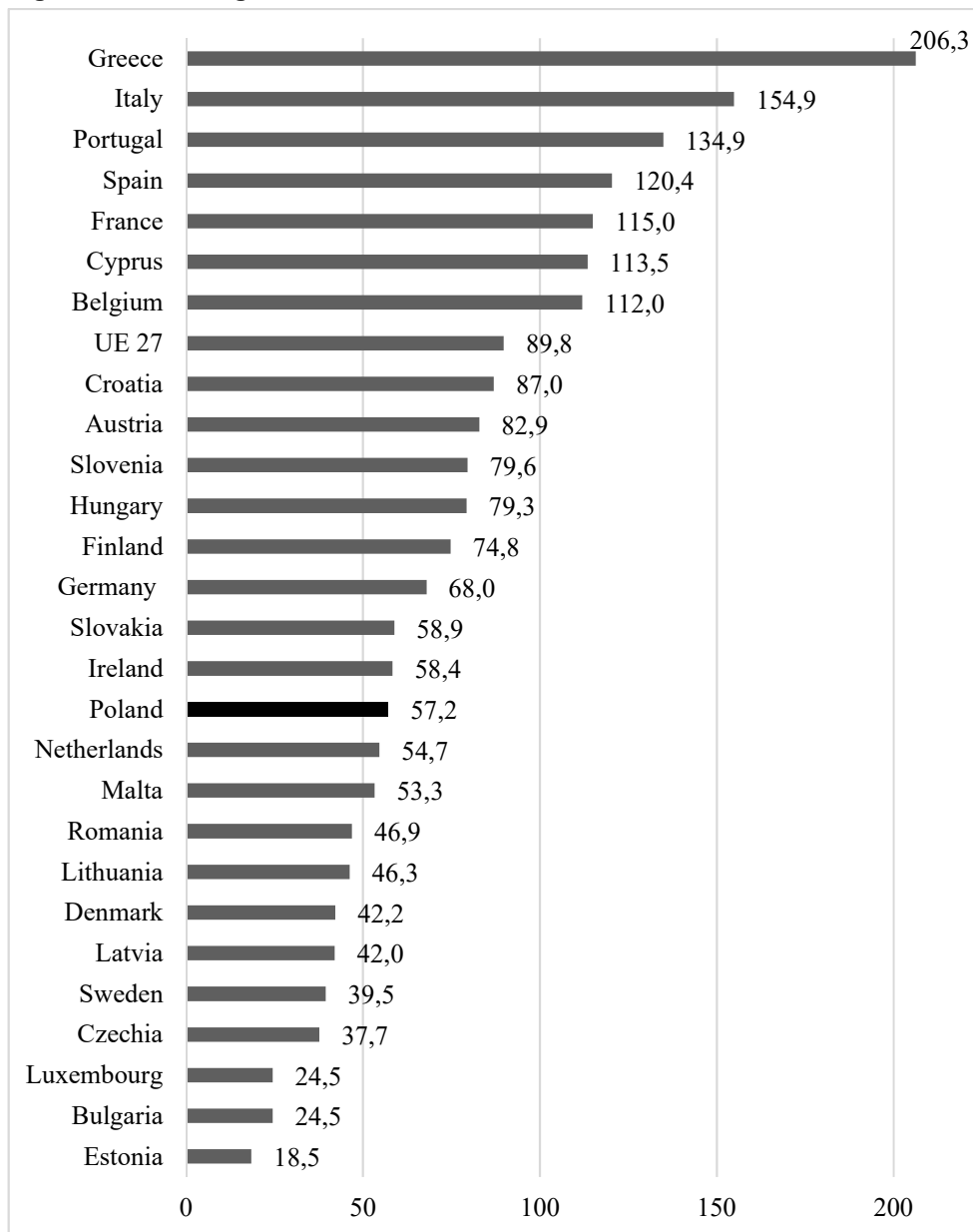
S. Owsiak (2017, p. 189) indicates that Poland's public finances are characterized by a permanent imbalance. Figure 5 presents the development of public revenues and expenditures in Poland in 2010-2020. There is an upward tendency that shall be observed in relation to both public revenues and expenditures over the years. The major reason for this systematic increase is socio-economic development of the country. Nowadays, economies are a mechanism that has to satisfy the needs and preferences of all entities. Both income and expenses correspond to the periods for which they were planned. Economic progress forces the public finance of a given country to develop, which in turn affects the stability of the functioning of the economy. Along with the development of the country greater expenses are inevitable, and thus an urgent need for larger income. An efficient public finance system ensures the effectiveness of the entire economy. It has to be noted that in the years 2010-2020 a permanent imbalance becomes visible. The lack of balance was manifested in the occurrence of a recurrent public deficit, which in general contributes to the increase in public debt. From 2010 to 2018, there is a sustainable downward tendency in the public deficit. In the analyzed period, the highest deficit was recorded in 2020. This was mainly due to the outbreak of the COVID-19 pandemic. The outbreak of the pandemic has affected the lives of many entities. The restrictions significantly limited interpersonal relations, which resulted in slowing down most of the processes taking place in the economy. Limiting the functioning of many economic sectors resulted in a decrease in public revenues, which mainly come from tax revenues (primarily VAT). Therefore, the situation indicates that all changes in the economy are reflected in public finances.

**Figure 4. Public revenues and expenditures in Poland in 2010-2020**

Source: own analysis based on Eurostat (access: 10.01.2023).

One of the main effects of recurrent public deficit is the increase in public debt. The study adopts the EU methodology - general government debt - to present the debt. E. Lotko and U. K. Zawadzka-Pąk (2018, p. 55) indicate that the ratio of general government debt to GDP is higher than the ratio of public debt to GDP, which is calculated using the national methodology. General government debt in relation to GDP in 2020 in selected countries is presented in Figure 5. The convergence criteria included in the Maastricht Treaty play an important role regarding public debt. This treaty is the basis for evaluating the fiscal policy of the European Union member states. In accordance with the provisions of the treaty:

- the public deficit should not exceed 3% of GDP;
- the ratio of public debt to GDP should be a maximum of 60% (Postuła M., Kawarska A., 2020, p. 115).

**Figure 5. General government debt in relation to GDP in 2020**

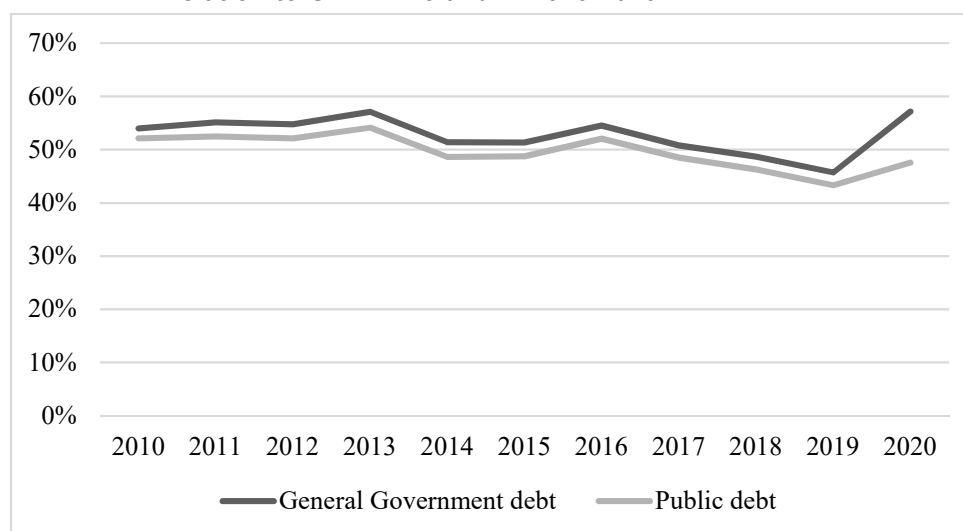
Source: own analysis based on Eurostat (access: 15.01.2023).

Comparing the size of the general government debt in relation to GDP in 2020, it needs to be noted that it is at a different level in the analyzed countries. The countries with the highest general government debt include:

Greece (206.3%), Italy (154.9%), Portugal (134.9%), Spain (120.4%), France (115%), Cyprus (113.5%), Belgium (112%). The countries with the lowest general government debt are: Estonia (18.5%), Bulgaria and Luxembourg (24.5%), the Czech Republic (37.7%) and Sweden (39.5%). The general government debt in relation to GDP in 2020 for Poland was at the level of 57.2%. The average debt of the EU-27 is 89.8%, which is 30 p.p. higher. with regard to the convergence criteria. Among the Member States, Greece has the highest coefficient, while Estonia has the lowest.

In Poland, the general government debt over the years 2010–2020 ranged from 45.7% to 57.2% of GDP. In the analyzed period, the values showed both an upward and a downward tendency. In 2020, the debt ratio was 57.2%, which means that the debt level is close to the reference value set out in the Maastricht Treaty. As a consequence, this may lead to difficulties in meeting the fiscal criterion in the future.

**Figure 6. Comparison of public debt and the general government sector in relation to GDP in Poland in 2010-2020**



Source: own analysis based on Ministry of Finance (access: 20.01.2023).

The comparison of the size of public debt and general government debt needs to be taken into consideration. Public debt in relation to GDP reached 47.6% in 2020, which is almost 10 p.p. lower than the general government debt to GDP ratio. In the period 2010-2019, this discrepancy was at a similar level, ranging from 1.9 to 3 p.p. Therefore, the existing differences in the assessment of the amount of debt, which depends on the methodology, may result in different assessments in the future. Discrepancies between individual methodologies should be unified. Harmonized methodology would

significantly improve the quality and credibility of the presented information. In addition, this aspect should be standardized for all countries.

### **Conclusions**

Nowadays, the socio-economic development of the country plays an essential role. Undoubtedly, this development is determined by a number of financial phenomena. According to the secondary source literature there are various types of finances. The study focuses on the subjective approach, which distinguishes finances of households, enterprises, financial institutions and the state. Public finance is considered to be the foundation of well-functioning economies. Sustainable public finance creates a stable basis for economic growth and development. Thus, state finances are largely determined by macroeconomic stability.

The analysis of the literature of the subject and statistical studies allowed us to answer the research questions posed. As a result of the conducted research, it should be pointed out that the presentation of the size of public finances is done by means of the socialisation index and the fiscal indicator. Therefore, it is significantly determined by the socio-economic development of a given country. The fiscal indicator for Poland in 2020 was 41.3%, which means that Poland is in the group of countries with a relatively moderate level of public income. On the other hand, the index of socialisation for Poland in 2020 was 42.4%, which means that Poland is among countries with a small scope of public finances. The analysis of statistical data shows that there is a permanent imbalance in Polish public finances. This imbalance remains clearly visible in recurrent deficits, which are considered to be the cause of public debt. In the analyzed period, the highest deficit was recorded in 2020. The main reason for the negative difference between public revenue and expenditure was the outbreak of the COVID-19 pandemic, which was associated with the emergence of the economic crisis. Public debt to GDP ratio in Poland in 2020 was 47.6%, while the general government debt in relation to GDP was 57.2% (the level of debt indicates that the ratio of public debt to GDP is approaching the limits set by the Maastricht Treaty). Discrepancies between individual methodologies need to be unified. Harmonized methodology would significantly improve the quality and credibility of the presented information. From an economic point of view, a standardised methodology would result in an objective basis for historical and comparative analyses. The high level of the deficit in 2020 and the growing public debt make consolidation measures obligatory. Those actions result from the limitations of national and European regulations. The procedure of repairing public finances in Poland should primarily concern balancing the state budget. It would be reasonable to say that the public finance system determines the country's economic and macroeconomic stability, as it is the basis of the country's financial mechanism.

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