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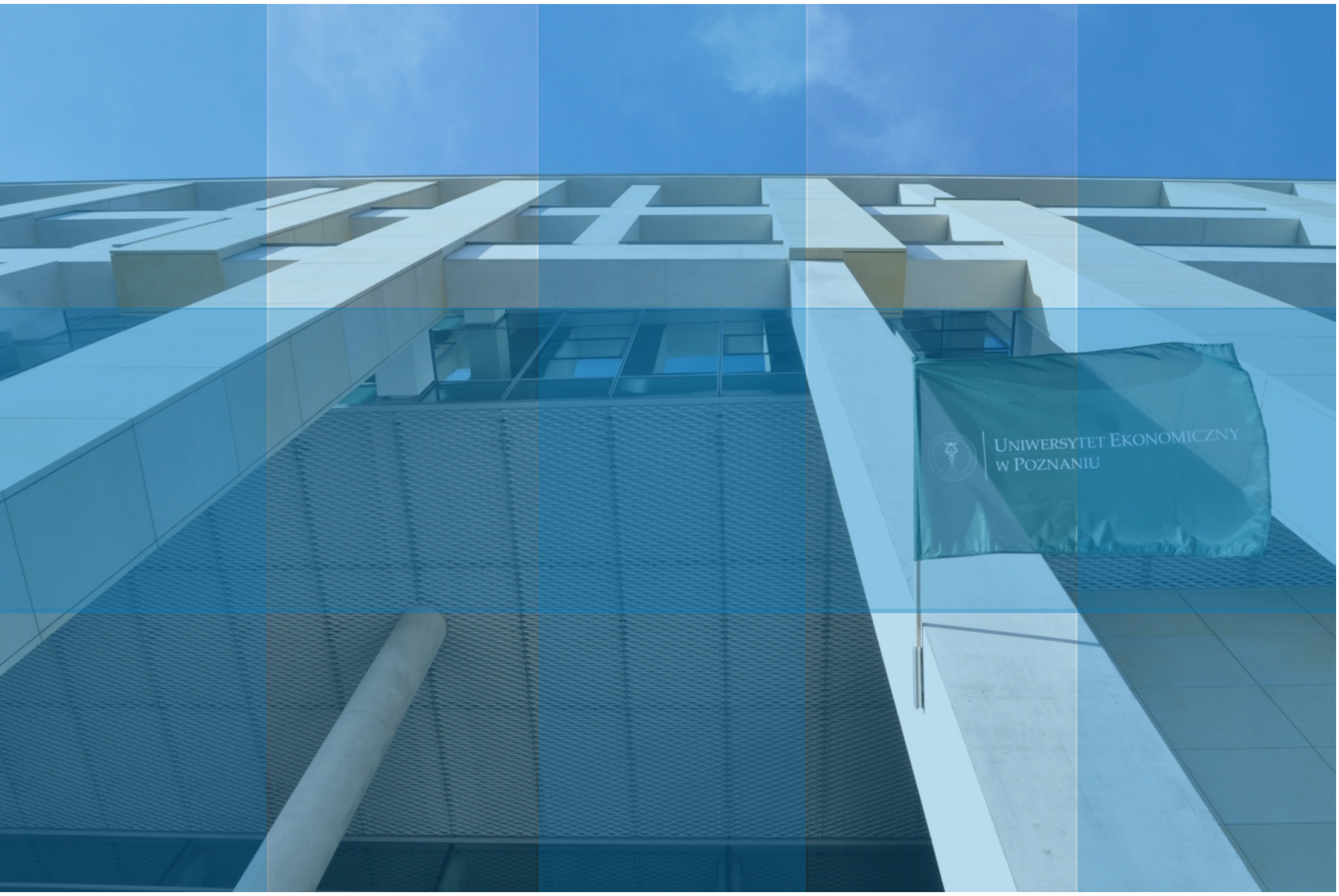

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PREFACE

Dear Readers,

We are pleased to present the next issue of the Research Papers in Economics and Finance published by the Poznan University of Economics and Business. We have selected five papers from different parts of Europe.

This issue opens with a great paper, which received very good reviews, written by **Tetyana Marena** from Mariupol State University in Ukraine, entitled ***"Poland's financial sector development in terms of global financial transformations"***. Research of individual countries by scientists from outside the country could be very cognitively valuable. While integrating into the global financial system, Poland will increasingly feel the impact of global transformations. The effects of these processes for Poland's financial sector could appear in a loss of confidence and a decline in private consumption and investment due to increased financial uncertainty, increasing exchange rates and capital flows volatility.

The second paper entitled ***"Global experience in providing social protection of population"*** has been written by two authors: **Oleksandr Tregubov**, **Larysa Holovina** from Vasyl' Stus Donetsk National University and Donbass State Engineering Academy in Ukraine. In this paper the authors point out that the effective system of social protection of population is based on the efficient interaction and cooperation of state structures, business sector and involvement of public organisations. The main aims of social policy should be ensuring a stable standard of living, increasing the employment level, reducing income inequality, enhancing social protection and reducing poverty.

The next paper ***"Basic income: economy and psychology"*** has been written by **Larysa Hevlych**, **Ivan Hevlych** and **Natalia Dutova** from Vasyl' Stus Donetsk National University in Ukraine. The authors argue that unconditional basic income is not only a humanistic idea, but also a practical tool for building a civilised society. The positive results include the involvement of people with disabilities in public life, the experience of creating a welfare state and greater confidence in the future. Furthermore, implementation of the idea of basic income may be a solution to the world's problem of mass layoffs due to the robotic business processes.

The fourth paper has been created by **Selim Corekcioglu** from Szent Istvan University in Turkey and concerns ***"Economic Freedom and FDI: Co-Integration Analysis"***. This paper attempts to explain that Foreign Direct Investment and Economic Freedom were related in Turkey for the period between 1996-2018. The test result also showed that the variables are co-integrated, so they move together in the long run. Foreign direct investment inflows play an important role in solving investment problems arising from the domestic savings shortage.

Last but not least, this issue of REF ends with a paper entitled ***"Polish zloty as an instrument to support the economy in the era of coronavirus"*** which has been written by **Eryk Łon** from the Poznan University of Economics and Business in Poland. This paper, apart from the analytical layer, contains a wide discussion and an expressive opinion of the author of the study. In particular, the analysis focuses on monetary sovereignty. This paper shows the positive role of the National Bank of Poland in counteracting the economic crisis caused by the coronavirus epidemic. According to the author, monetary authorities in Poland during the coronavirus epidemic managed to stop the decline in Gross Domestic Product and the rise in the unemployment rate.

Yours faithfully,

dr hab. Piotr Lis, prof. UEP – Editor in Chief

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RESEARCH PAPERS
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Poland's financial sector development in terms of global financial transformations

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ABSTRACT

The paper deals with the study of global financial transformations impact on the financial sector in Poland. Two types of tendencies of the global financial space development that create new conditions for national financial systems are defined, including: trends that lead to qualitative shifts in countries' financial systems and do not necessarily imply a negative impact on the national financial systems; threatening challenges that shatter financial markets and restrain their sustainable development. The current positions of Poland's financial sector in the world and regional financial systems are evaluated. The shifts in the national financial sector in terms of global financial transformations are found out. It is stated that while integrating into the global financial space, Poland will increasingly feel the impact of global transformations that will determine further scenarios for the domestic financial sector development. Exogenous factors that can aggravate challenges threatening the stability of Poland's financial sector in the near future are identified.

Keywords: global financial transformations, financial sector, financial market, financial assets, financial depth, international reserves.

1. Introduction

The impact of globalisation is increasingly felt by the global financial system as a whole and by countries' financial sectors. Previously, the functioning of national financial systems, as well as their efficiency and stability were determined mainly by the internal conditions of the countries' financial and economic development, as well as their monetary and currency policy. Today, as a result of shaping a global financial market, a growing scale and speed of financial capital flows, financial integration deepening, linkages between national financial systems are intensifying. Consequently, the countries' financial sectors are becoming increasingly dependent on the exogenous factors of the impact, and the ability of monetary authorities to influence national financial systems is becoming rather limited.

The financial sector in Poland, like the financial systems of other Central and Eastern European countries, is characterised by contradictory features and trends. On the one hand, Poland's economy and, accordingly, its financial market, have already gone through times of structural transformation and deep reform, reaching the level of a market economy. On the other hand, in terms of the indicators of financial development, statistical databases of some international economic organizations (in particular, the Bank of International Settlements) consider the national financial market as an emerging one, which is characterised by less depth, transparency and, at the same time, greater volatility and risks. However, in 2018, the FTSE Russell and STOXX index agencies reclassified the Polish capital market to Develop Market Status. Given the mixed nature and sufficiently high vulnerability of Poland's financial sector, its response to the global challenges of the financial environment can prove to be rather ambiguous and vague. Therefore, there is an increasing necessity to find out the peculiarities of the impact of current patterns of global financial environment development on the financial system in Poland and identify the changes occurring in the national financial sector in terms of global financial transformations.

2. Literature review

Research papers devoted to the study of Poland's financial system and financial market are quite numerous and diverse. A great part of these studies focuses on the analysis of the current state, problems and trends of development of the financial sector of Central and Eastern European countries, including Poland.

N. Cevik, S. Dibooglu, and A. Kutan have presented a paper aimed at systematising and generalising scientific achievements in the field of study of the CEE countries' financial sector. They note that the global financial crisis of 2007-2009 drew the researchers' attention to the effect of the financial markets "contagion" and caused an increase in the number of studies on the financial market linkages and the spread of financial shocks in terms of financial integration. The authors note that many studies of CEE banking systems show that, as a rule, banks with foreign capital perform better than domestic banks; at the same time, the presence of foreign banks in the financial system can be accompanied by increased risks of volatility transmission from leading financial markets (Cevik, Dibooglu and Kutan, 2016).

Studying the reforms, through which the CEE financial sectors and markets have gone during the transition period, M. Balling, F. Lierman and A. Mullineux identify the impact of the size and efficiency of domestic financial markets on economic growth in transition countries of the region. A large part of the study is devoted to the efficiency of banking systems in CEE. It is stated that "Central and Eastern European countries' banking sectors are aspiring to the processes of consolidating into a single European market and their successful convergence can both be influenced by and have an influence on the enhancement of European integration in the financial services industry" (Balling, Lierman and Mullineux, 2004).

R. Matousek et al., while assessing the development of financial markets in CEE countries and the impact of the global crisis on national financial sectors, highlight the main obstacles to the full integration of countries' financial markets in EU market (Matousek, 2010). M. Redo states that Central and Eastern European countries are strongly linked to the international economic and financial systems, which results in their dependence on foreign capital and on the upturn in the global markets (Redo, 2018).

Taking into consideration the results of the examination of capital markets in EU members of the CEE region, R. Silvestri indicates that their equity and bond markets are relatively small compared to those in the EU's Western European countries. To solve the problems of capital markets in the countries of the region, the author proposes to diversify the sources of economy financing, to provide small and medium-sized businesses with better access to financing, to improve the financial supervision systems in order to increase investor confidence (Silvestri, 2019).

O. Orylski identifies factors that have a positive impact on the development of the capital market in the CEE region. In his paper the positions of some cities of the region, in particular Warsaw, in the ranking of global financial centres are analysed. Based on the analysis of the capitalisation and the average rate of return, the study of the stock exchanges functioning (in particular, the Warsaw Stock Exchange), the assessment of mergers and acquisitions in the capital market, the author offers a scenario for the development of capital markets in Central and Eastern Europe and determines the prospects for capital market further consolidation (Orylski, 2009).

B. Egert and E. Kočenda focus on studying the linkages between the European financial markets. They analyse intraday comovements among three developed (France, Germany, and the United Kingdom) and three emerging (the Czech Republic, Hungary, and Poland) European stock markets. The authors point out that very little systematic positive correlation during a trading day can be defined between the developed and emerging stock markets, or within the emerging group itself. Hungary demonstrates higher correlation with the emerging markets and its dynamics show an increasing trend; Poland and the Czech Republic show less clear-cut results (Egert and Kochenda, 2011).

J. Barunik and L. Vacha, contributing to studies on international stock market comovements and contagion, apply wavelet tools to high-frequency financial market data, which allows them to understand the relationship between stock markets in a time-frequency domain. They apply techniques to uncover specific dynamics of correlations between the Central and Eastern European stock markets and the German DAX. As the data for the analysis, they use 5-minute high-frequency data of the Czech, Hungarian and Polish stock indices with a benchmark of the German stock index. The researchers argue that there was significantly lower contagion between the CEE markets and the German DAX after the stock market crash in 2008 (Barunik & Vacha, 2013).

S. Gardó and R. Martin analyse the impact of the global economic and financial crisis on the financial markets of Central, Eastern and Southeastern European countries, focusing on the countries that are the EU members but are not members of the Eurozone (including Poland). The authors concluded that the crisis had a strong impact on exchange rates in the countries studied; their stock markets piled up huge losses and bond spreads increased to elevated levels, while becoming more volatile. Alongside, researchers note that the impact of the global crisis on the financial sectors of the CEE countries was rather heterogeneous; the countries having the greatest economic imbalances have suffered most (Gardó and Martin, 2010).

M. Bukowski, A. Śniegocki and Z. Wetmańska dwell on the specific features of sustainable finance and ESG (environmental and social governance) integration in Poland. They concentrate on three segments of the Polish financial sector (pension funds, insurance sector, asset management) and study current state of sustainable finance in Poland (Bukowski, Śniegocki and Wetmańska, 2019).

Thus, the current scientific achievements in the field of research mainly focus on the issues of financial market segments functioning in CEE countries, including Poland. Today, Poland seeks to fully integrate its financial system into the global financial space. It should be taken into consideration that further integration will be accompanied by an increasing dependence of the national financial market on global financial trends and challenges. This requires intensified studies on the permanent monitoring and systematic assessment of the country's financial sector development under the influence of global financial transformations.

3. Methodology

This study is aimed at determining the peculiarities of the impact of the global financial environment development on Poland's financial system, identifying current positions of the national financial sector in the global and regional financial systems and reasoning the shifts occurring in the country's financial sector in terms of global financial transformations. In the context of this study, the global financial transformations are considered to be the global trends that reflect qualitative changes and quantitative shifts in the architecture of the global financial system, in the structure, terms and tendencies of the financial markets development in the process of their evolution under the impact of globalisation.

While determining the trends of the global financial space development, which create new conditions for the national financial systems, and reasoning exogenous factors that can aggravate challenges threatening the stability of Poland's financial sector, historical and logical methods, methods of systematic analysis, generalisation and abstraction were used. To estimate the indicators of the national financial sector of Poland, to identify its positions in the global and regional financial systems and to reason the changes occurring in Poland's financial sector in terms of global financial transformations, methods of analysis and synthesis, comparative and structural analysis, statistical and economic and mathematical methods were applied. By means of econometric tools application, parameters of the regression models that reflect the financial assets impact on real economy in Poland and CEE countries were calculated.

As absolute indicators characterising the financialisation of the economy and international liquidity, data on the size of financial assets (according to the IMF methodology, they include stock market capitalisation, debt securities and bank assets) and official international reserves were used. Relative assessments are presented by the following financial depth indicators: general (calculated as the ratio of total financial assets to nominal GDP) and sectoral (banking sector depth, stock market depth, debt securities depth) indexes.

For the purpose of a comprehensive assessment of the financial sector, integrated indicators are analysed including: the WEF Financial Market Development Index and the IMF Financial Development Index. According to the World Economic Forum methodology, the Financial Market Development Index is a component of the Global Competitiveness Index. Until 2018, the calculation of the Financial Market Development Index was based on an assessment of indicators of performance (availability and affordability of financial services, financing through local equity market, ease of access to loans, venture capital availability) and confidence (soundness of banks, regulation of securities exchanges, legal rights index). Starting from 2018, the "Financial System" sub-index of the Global Competitiveness Index includes the indicators of depth (domestic credit to private sector, financing of SMEs, venture capital availability, market capitalisation, insurance premiums) and stability (soundness of banks, non-performing loans, credit gap, banks' regulatory capital ratio). The Financial Development Index, developed by the IMF, summarises how developed financial institutions and financial markets are in terms of their depth (size and liquidity), access (ability of individuals and companies to access financial services), and efficiency (ability of institutions to provide financial services at low costs and with sustainable revenues and the level of activity of capital markets).

The statistical base of the survey is represented by the official reports and statistical databases of the International Monetary Fund, the Bank for International Settlements, the World Economic Forum, UNCTAD, the National Bank of Poland.

4. Results

The national financial systems have always functioned under the influence of a large number of factors that have been shaping the outlines of the financial markets and the conditions of the financial environment. Globalisation has appeared to be the catalyst for many processes that are qualitatively changing the world and national financial systems, creating new conditions for their functioning or directly threatening their stability. These processes have started relatively recently, but they are rapidly getting a persistent long-term nature and taking a shape of global financial transformations. Global financial transformations do not necessarily imply a negative impact on the national finances, but rather lead to qualitative shifts in the countries' financial systems. These are global trends and patterns such as increasing level of financial depth of the economy; formation of new centres of global financial influence; regionalisation of the global financial space; increasing influence of transnational banks on financial markets; permanent redistribution of financial assets between different segments of the financial market. Alongside it, a number of global trends have the character of real challenges, shaking up financial markets and restraining their stable development, including:

- periodic aggravation of financial crises, the growth of their global scales;
- the continued uncertainty and volatility of the global financial environment;
- aggravation of competition for financial resources, corresponding increase in unevenness of their spatial distribution;
- overall increase in countries' debt, including the external one;
- inadequate size of countries' international reserves;
- increasing predisposition of economies to the effect of financial "contagion";
- activation of cybercrime in the financial sector, etc.

Assessing the current state of Poland's financial system, IMF experts identify the reduction of risks in the long term and note that a stable macroeconomic situation is the basis for the country's financial market sound development. Lending is moderately increasing, although its greater share goes to more risky segments. The banks financial soundness, with some exceptions, is generally improving. The financial sector is characterised by the presence of many small cooperative banks and credit unions. The insurance sector is small compared to most EU markets, while the stock market is a well-developed segment of the capital market (International Monetary Fund, 2019). At the same time, in terms of financial depth, the level of Polish economy financialisation is significantly behind world indicators: the financial depth of the national economy does not exceed 173%, being on average at the level of 152% for the period of 2007-2018 (Table 1).

During the analysed period, the average level of the world economy financial depth was 405%, peaking in 2017, when financialisation reached 460%. However, by the same indicator, Poland is ahead of the level of the CEE countries' financial depth, which averaged 138% for the region during 2007-2018. Therefore, the level of financial depth of the Polish economy is moderate. This indirectly indicates that the country's financial sector is not too inflated and has not lost a linkage with the real sector. The calculation of the coefficients of correlation be-

Table 1: General and sectoral indicators of the Polish economy financial depth, 2007-2018, % of GDP

Indicator	2007	2009	2011	2013	2015	2017	2018
Financial depth of economy	146.90	150.36	138.53	170.89	153.43	173.36	153.26
Banking sector depth	44.86	60.73	62.12	63.77	67.81	70.11	73.40
Stock market depth	49.32	34.33	26.14	39.02	28.85	38.27	27.40
Debt securities depth	52.72	55.30	50.27	68.10	56.77	64.98	52.46

Source: author's calculations based on BIS Debt securities statistics, CEIC Data, IMF World Economic Outlook Database, The Global Economy, UNCTADstat.

tween financial assets and nominal GDP also shows that the relationship between the financial and real sectors of the economy in Poland remains sufficiently noticeable: a correlation coefficient amounts to 0.58, that is slightly higher than the average coefficient of 0.53 for the CEE countries (for comparison: in Croatia, the coefficient is 0.1; in Slovenia – 0.2; in Hungary – 0.4).

The data presented in Table 1 show that the banking sector in Poland is the most profound segment of financial system, which financialisation index increased by 28.5% from 2007 to 2018. The smallest amount of financial assets is concentrated in the stock market, which financial depth has decreased by almost 22% over the same period. On the whole, the indicators characterising the financial depth of the Polish economy by the degree of its saturation with equity and debt securities differ from the similar indicator of bank assets in terms of considerable volatility. This is a sign that the domestic securities market to some extent serves as speculative mechanism for attracting short-term capital, which movement is rather volatile.

For additional verification of the relationship between the size of financial assets and GDP, as well as for the quantitative assessment of the financial assets impact on the real sector of the Polish and CEE countries' economies, regression models are offered. The parameters of the regressions, calculated by means of econometric tools application, are presented in Table 2.

Table 2: Regression models of financial assets impact on real economy in Poland and CEE countries

Country	Regression model	R2
	Financial Assets in Total	
CEE countries	GDP = 0.206 FA + 1007.773	0.5001
Poland	GDP = 0.245 FA + 316.076	0.3329
	Financial Assets by Types of Assets	
CEE countries	GDP = 0.938 BA + 0.130 SMC – 0.200 DS + 658.455	0.7681
Poland	GDP = 0.769 BA + 0.068 SMC – 0.215 DS + 307.098	0.7231

* GDP – Gross Domestic Product, FA – Financial Assets, BA – Bank Assets, SMC – Stock Market Capitalization, DS – Debt Securities.
Source: author's calculations.

According to the regression models, financial assets do not have a significant impact on the nominal GDP in Poland, which is confirmed by the regression parameters and the low value of the R2 coefficient. Alongside, the parameters of the regression models by types of financial assets demonstrate that the greatest impact on the real sector of Poland and CEE countries in general is made by the indicator of bank assets. The impact of stock market capitalisation on GDP is rather insignificant, and the growth of the debt securities indicator makes a negative impact on nominal GDP. Thus, the regression analysis confirms the previously stated fact that the securities markets of the CEE countries still have speculative features and do not efficiently perform their function of the real sector support.

In terms of the role of Poland's financial sector in the financial system of Central and Eastern Europe, until recently the country was the undisputed leader of the region by the concentration of financial resources: in 2017, almost 43% of financial assets and over 28% of international reserves of the region were concentrated in Poland (financial assets and international reserves of the region are calculated as the sum of the corresponding indicators in 12 CEE countries – Albania, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia). In 2018, there was a redistribution of financial assets between the countries of the region, resulting in reduction of Poland's share of financial assets to nearly 29% (Table 3).

Table 3: Poland's positions in the CEE countries' financial system in terms of share in financial assets and international reserves of the region, 2007-2018, %

Indicator	2007	2009	2011	2013	2015	2017	2018
Financial assets	37.79	37.79	39.76	42.74	42.42	42.77	28.78
Bank assets	30.22	31.73	34.23	35.84	39.71	40.54	40.59
Stock market capitalization	40.12	44.91	47.63	55.57	49.57	52.51	12.72
Debt securities	44.93	42.54	44.84	44.88	42.75	40.74	38.40
International reserves	27.99	29.91	34.02	33.45	33.80	28.43	29.05

Source: author's calculations based on BIS Debt securities statistics, CEIC Data, IMF World Economic Outlook Database, The Global Economy, UNCTADstat.

It should be noted that this reduction was the consequence of an impact of both endogenous and exogenous factors. On the one hand, in 2018, Poland saw a decrease in the stock market capitalisation (by 20% compared to 2017) and the volume of debt securities (by 10%). Taking into account the continued increase in the size of bank assets by 16%, the total size of financial assets of the country decreased by 2%, which is a relatively insignificant cutback. On the other hand, in 2018, the Czech Republic experienced an unprecedented increase in the stock market capitalisation, which has increased by 18 times, reaching 399% of the country's GDP. This was a key factor that caused a decline in the share of Poland's financial assets in the region.

The data, presented in Table 3, demonstrate that Poland keeps its position as a regional leader in terms of bank assets, accounting for almost 40% of CEE's bank assets in recent years. According to the National Bank of Poland, despite the fact that some medium-sized banks still look weak, the banking system in the aggregate demonstrates resilience to adverse shocks due to accumulated capital and low leverage (Narodowy Bank Polski, 2019). The improvement of the domestic banking system is clearly shown by the main indicators of its stability and efficiency. In particular, bank credit to the private sector is increasing: the ratio of bank loans to the private sector to GDP has ranged from 52% to 54% in recent years (in the pre-crisis period it was at the level of 13-37%). The share of non-performing loans in the total amount of bank loans declined from 5.2% in 2012 to 3.85% in 2018 (this indicator was 2.82% in 2008 and grew rapidly during the first post-crisis years).

The overall level of financial sector development is reflected by integrated indicators, in particular the WEF Financial Market Development Index and the IMF Financial Development Index. Given the experience of the occurrence and development of the global financial crisis in the context of its impact on banking systems, and the growing importance of bank lending in economies' financing (in 2018, the share of bank assets in global financial assets reached 51%), the stability of the banking sector is recognised by the WEF as the basis for the stability of the financial system. This has been reflected in a revision of the indicators used for calculation of the "Financial System" sub-index of the Global Competitiveness Index in 2018. According to the Financial Market Development Index, Poland's financial sector got the highest rating in 2010, ranking 32nd out of 139 countries (Table 4).

According to the data, provided by Table 4, later, the WEF Financial Market Development Index began to deteriorate, which was accompanied by Poland's move to the 55th position in 2018. At the same time, the country's financial sector positions in terms of the IMF Financial Development Index, which was in the range of 0.47-0.49 during the period of study, are relatively stable.

Given the global tendency to periodic aggravation of financial crises, the countries' financial markets should be able to recover rapidly from financial turmoil. Figure 1 presents a map of the CEE countries' financial sectors positioning by the criteria of financial depth and Financial Market Development Index in 2008 and 2018.

Analysis of the states of Poland's financial sector in crisis and current periods shows a significant improvement in its position compared to other countries in the region. In 2018, in terms of financial depth and Financial Market Development Index mapping, Poland ran second, giving way only to the Czech Republic.

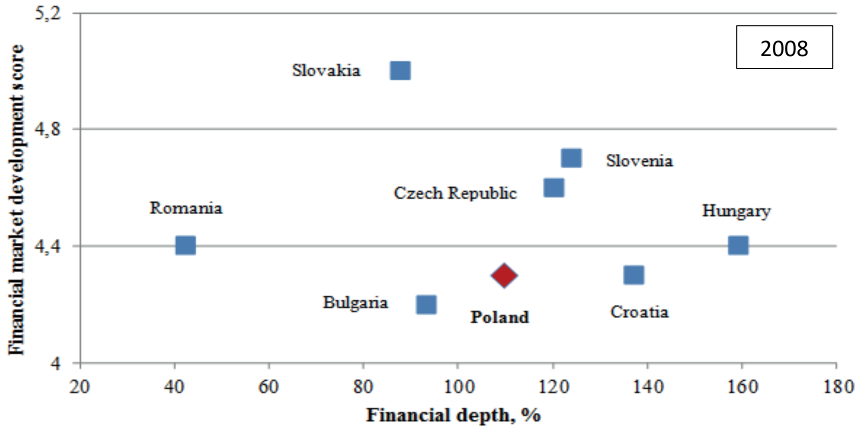
Among the global financial transformations that threaten the stability of financial markets there are the increasing volatility of the global financial environment and the overall increase in the external debt burden in terms of growth in lending globally. Given these trends, there is an increasing need in availability of sufficient international reserve assets in countries. The availability of international reserves is not a

Table 3: Poland's positions in the CEE countries' financial system in terms of share in financial assets and international reserves of the region, 2007-2018, %

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Financial Market Development (WEF score)	4.3	4.6	4.7	4.6	4.6	4.5	4.6	4.3	4.2	4.2	63.4*
Financial Market Development (WEF rank)	68	44	32	34	37	38	35	43	46	53	55
Financial Development Index (IMF)	0.48	0.47	0.47	0.49	0.48	0.48	0.47	0.48	0.47	0.47	n/a

* The Financial Market Development score for 2018 is presented according to a new methodology that assumes a maximum value of 100, unlike the previous one, where the index ranked from 1 to 7.

Source: IMF Financial Development Index, WEF Global Competitiveness Reports.



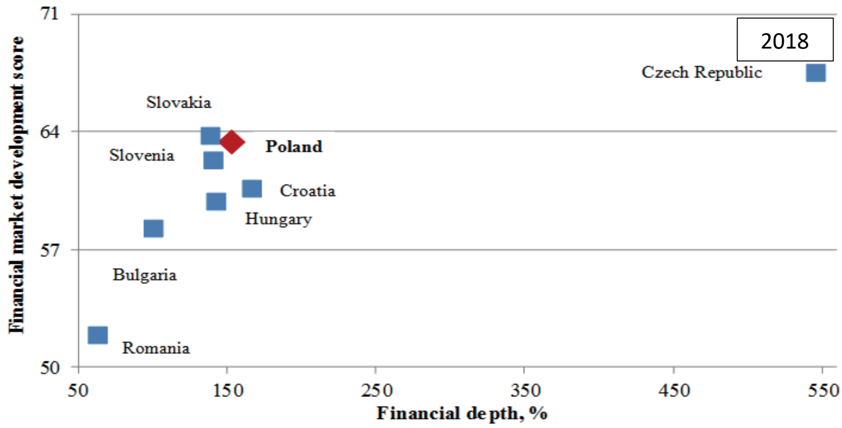


Figure 1. Map of the CEE financial sectors positioning by the criteria of financial depth and financial market development in 2008 and 2018

Source: WEF Global Competitiveness Reports and author's calculations based on BIS Debt securities statistics, CEIC Data, The Global Economy, UNCTADstat

direct indicator of the financial sector state. However, the primary purpose of international reserves is to provide the central bank with the ability to directly regulate the balance of payments deficit or to indirectly influence the volume of such a deficit. Therefore, by affecting the balance of payments, the exchange rate and characterising the country's ability to meet external obligations, international reserves are an important factor of the national economy and financial sector stability.

Poland holds the second largest official reserves among the CEE countries, accounting for 29% of the region's reserves while the share of the Czech Republic is 35% (see Table 3). In 2018, Poland's official reserves, including gold, amounted to the historical maximum of 116.96 USD billion and increased by 78% compared to 2007. In the same period, international reserves covered 4.6 months of Polish imports of goods and services, demonstrating their adequate size and sufficiency to ensure the stable functioning of the economy and, in particular, the financial system.

Taking into consideration the current state of global transformations, exogenous challenges can aggravate in the near future, threatening the stability of Poland's financial sector. The general economic risk factor is the deterioration of the global economic environment and the slowdown in economic growth expected in all countries. These trends will lead to shaping harder and more volatile conditions of the global financial environment, which can entail a decline in credit supply, worsening banks' profitability and increasing their risk of default. A global recession can increase credit and market risks and deteriorate asset quality. The need for more restrictive regulation for banks will increase, negatively affecting their already low profitability. Some banks searching for income-raising possibilities can take up excessive short-term risks in terms of increased financial environment volatility.

The projected decline in European banks' profitability against the backdrop of strained bank balance sheets can provoke systemic problems in the banking system, even with possible knock-on effects, in particular sell-off in stock markets, which will have a corresponding negative effect on the capital markets in general. The imbalance of the national financial sector can occur due to financial market stress arising from politically driven deglobalisation initiatives in Europe and the USA. Policy divergence can lead to deeper global imbalances and entail an increase in exchange rate and capital flow volatility, which can cause exhaustion of countries' international reserves. Increasing uncertainty will affect financial market sentiment in Poland, leading to a loss of confidence and a decline in private consumption and investment.

5. Conclusions and discussion

Under the influence of globalisation, a number of new trends arise in the development of the global financial space, which are divided into two types:

1) trends that lead to qualitative shifts in countries' financial systems and do not necessarily imply a negative impact on them (increasing level of financial depth; appearance of new centres of global financial influence; regionalisation of the global financial space, etc.);

2) threatening challenges, shattering financial markets and restraining their sound development (aggravation of global financial crises; increasing uncertainty and volatility of the global financial environment; tougher competition for financial resources; increase in countries' external debt).

Global financial transformations create new conditions for national financial systems, exacerbate their instability, and lead to increase in volatility of financial assets dynamics, their uncontrolled redistribution between countries and financial market segments.

Poland's financial sector is still of a mixed type, demonstrating the features of both developed and emerging markets. Poland's financial system is characterised by a gradual reduction of long-term risks, a moderate increase in lending, and an improvement in banks' financial soundness. At the same time, in terms of financial depth, the level of financialisation of Polish economy is far behind the global indicators, yet outperforming the average level of financial depth of CEE countries. The moderate level of financial depth of the Polish economy, as well as the calculated coefficient of correlation between financial assets and nominal GDP, show that the country's financial sector has not lost linkage with the real sector.

Poland's banking sector demonstrates the highest depth, concentrating a large proportion of the country's financial assets. The stock and debt market segments and the corresponding sectoral financial depth indicators are characterised by significant volatility and wavy dynamics. The Polish and Czech financial sectors are leaders among the CEE countries in terms of financial resources concentration, and in terms of bank assets, Poland's banking system is the biggest in the region. The stability of the domestic banking system is achieved by accumulated capital, low leverage, decreasing share of non-performing loans.

According to the dynamics of the WEF Financial Market Development Index, the general level of the Poland's financial sector development showed the best result in 2010, but over the time this indicator deteriorated, which was accompanied by worsening of Poland's positions in the corresponding country ranking. The financial sector's position on the IMF Financial Development Index is relatively stable. Based on the map demonstrating the positioning of the financial sectors of CEE countries by the criteria of financial depth and Financial Market Development Index in 2008 and 2018, a comparison of the Polish financial sector state in the crisis and current periods has been provided. The results of the analysis show a significant improvement in Poland's financial sector position (which in 2018 ran second giving way only to the Czech Republic) compared to other countries in the region.

In terms of growing openness of financial markets, availability of international reserve assets is essential for the stability of the countries' financial sectors. Poland holds the second largest official reserves among CEE countries, which was sufficient to cover more than 4 months of imports of goods and services in 2018. Therefore, the size of the international reserves is adequate to resolve external imbalances that can threaten the stability of the financial system.

While integrating into the global financial space, Poland will increasingly feel the impact of global financial transformations that will determine further scenarios for the domestic financial sector development. The key exogenous challenges that will threaten the stability of Poland's financial sector in the near future include:

- the deterioration of the global economic environment, the slowdown in economic growth in all countries;
- tougher and more volatile conditions of the global financial environment;
- politically driven deglobalisation initiatives in

Europe and the USA, increasing global imbalances as a result of deepening policy divergence.

The effects of these processes for Poland's financial sector could appear in a loss of confidence and a decline in private consumption and investment due to increased financial uncertainty; increasing exchange rate and capital flows volatility, corresponding exhaustion of international reserves; curtailment of lending, banks' profitability deterioration and increased risk of their default; implementation of restrictive regulation for the banking system; transmission of banking system problems to other financial sectors, in particular, to the stock market. Predictive identification and assessment of the occurrence probability and the extent of the consequences of these and other problems of the national financial sector, which can be generated by global transformations, should be considered as an important component of policy for their efficient prevention and elimination.

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Global experience in providing social protection of population

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ABSTRACT

The aim of the article is to analyse the experience of providing social protection of population in the countries with socially oriented market economies for further implementation in Ukraine and other countries, which are in need of the social welfare reform. The need for social protection of population has been proved. It is noted that the modern social protection system should include a set of social guarantees, forms, methods and instruments of social assistance. The state's social expenditures in the countries that are members of the Organization for Economic Cooperation and Development are analysed. It is established that the social sphere of different countries is characterised by certain features of social welfare, which are caused by unequal level of state regulation and are reflected in relevant state policy. Basic models of social policy are described. The global experience of social welfare in the countries with socially oriented market economy is analysed. The main determinants of social protection of population in the world practice as well as measures, which contribute to the development of the social sphere are identified.

Keywords: social protection; social welfare; world experience; socially oriented economy; Social Insurance.

1. Introduction

The increase of social and economic risks which people face in the modern world (accidents, illnesses, unemployment, etc.) actualise the problem of forming the system of social protection of citizens, which is adequate to the new challenges and requires an increase of public attention to the problems of social protection of vulnerable sections of the population. Under present-day conditions, a socially oriented market economy has been built in many countries of the world. It requires attention to the level and quality of human life and the formation of appropriate accents for social reforms, adjustment of social standards and investments in human capital within the social policy (Biltsan, n. d.; Ilchuk, n. d.; Vasechko, 2003, p. 37).

It should be noted that the modern social protection system should include a set of social guarantees, forms, methods and instruments of social assistance (Hrynchyshyn, 2014, p. 300). The existing experience of the countries around the world is an important basis for further reforms in the field of social welfare and improvement of the corresponding processes. At the same time, in a number of countries, including Ukraine, there is a need for reforms in the social policy. Therefore, it is important to form and implement its own effective model of social protection of population.

The current global experience of forming the system of social protection of the population, especially in countries with a socially oriented market economy, is a serious material for study, analysis and adaptation for many countries. Therefore, the aim of the article is to analyse the experience of providing social protection of population in the countries with socially oriented market economies for further implementation in Ukraine and other countries, which are in need of the social welfare reform.

2. Literature review

The basis for the formation of social protection policy was described in the works of Hegel (1990), Kant (1994), Locke (1988), who determined the role of the state in ensuring the welfare of citizens. At different stages of the development of economics, different views relating to the reasonability of the state regulation of market processes have been formed. This also applied to social welfare. Thus, in the works of Petty (1992), Ricardo (1992) and Smith (1992), who are considered to be representatives of the classical school of economic theory, the need for state funding of only certain socially important needs is noted. Keynes (1992) emphasised the total state regulation of the economy. Hayek (1979), as a representative of the neoliberal direction of economic theory, supported the principles of economic freedom. He believed that the state should not deal with social insurance and provide social guarantees (the only exceptions may be old-age pensions and unemployment benefits).

Various models of the social policy are proposed in modern scientific works. They are classified according to certain characteristics. They take into account the strategic directions of the social policy and contain social values that are inherent in the national social protection systems. Thus, the British sociologist Titmus (1974) identified the following models of the social policy according to the principle of distribution of the state's social assistance: marginal (social protection is ancillary and it is aimed at the poorest population), institutional-distributive (the state is socially responsible for the welfare of citizens) and intermediate (combines the features of the previous two and allows to change the strategy flexibly). Leibfried (1992) identified the following models of social protection on the principle of "family resemblance": Anglo-Saxon; "Bismark" (institutional) model; Scandinavian (modern); Latin coast (rudimentary). Esping-Andersen (1994) proposed the following models of the social state and, accordingly, the social policy: Scandinavian (social-democratic), continental-European (conservative), Anglo-Saxon (liberal). Supplementing the approaches of G. Esping-Andersen, Lorenc (1997) distinguishes four models: Scandinavian (condition of implementation is in the employment provided by the state), residual (state social assistance is aimed at the low-income population), corporatist (delegation of responsibilities for social protection to professional, religious or charitable organizations) and rudimentary (social functions are mainly performed by non-governmental organizations). Sapir (2005) distinguishes the following social models: northern (with a high level of social protection and universal nature of assistance), Anglo-Saxon (universal in exceptional cases), continental (the amount of social benefits depends on the amount of contributions paid by the employee) and Mediterranean (with a predominance of pensions in social costs and significant differentiation of beneficiaries depending on the status).

Today a certain system of social protection of the population is formed and functions in each country. However, Goldenberg (2002), Deacon (2001), Epstein (2002), Hudson and Williams (2001), as well as Leibfried (1992) pay attention to the consideration of global processes in the formation of the national social policy. In turn, Weekers and Pijl (1998), Lorenz (1997) and other researchers emphasise the role of national characteristics in the formation of social protection system and the implementation of relevant programs. However, taking into account the changes in the social policy that have taken place over the last decade in the countries with socially oriented market economies, the problem of reforms in the field of social protection and the transformation of relevant models need further analysis and consideration.

3. Methodology

General scientific and specific for economics approaches, methods and techniques were used in the research, namely: monographs, system analysis, generalisation, comparative analysis was used to study the features of social welfare in different countries; method of instantiation and statistical analysis were used when analysing the state's social expenditures in the countries belonging to the Organization for Economic Cooperation and Development (OECD). The choice of the countries as objects of study was determined by the social orientation of the market economy.

The analysis of the state's social expenditures of the OECD countries shows that in the period of 2016-2018 they averaged about 20% of the GDP (Table 1). The top five countries in terms of social expenditures according to 2018 data include France (31.2%), Belgium (28.9%), Finland (28.7%), Denmark (28%) and Italy (27.9%). An increase in social costs (% of GDP) in 2018 was noted in Korea (4,72%), Latvia (2,53%), Lithuania (2,53%), Estonia (2,22%), New Zealand (1,61%), Norway (1,19%), Italy (0,71%), Ireland (0,7%), Iceland (0,63%) and Poland (0,48%).

Table 1: General and sectoral indicators of the Polish economy financial depth, 2007-2018, % of GDP

Country	Social Expenditure, % of GDP			Rate of increase, %	
	2016	2017	2018	2017	2018
Australia	17,8	...*	...	...	...
Austria	27,8	27,1	26,6	-2,5	-1,9
Belgium	29,2	29,2	28,9	0,0	-1,0
Canada	17,4	17,3	...	-0,6	...
Chile	11,0	10,9	...	-0,9	...
CzechRepublic	19,1	19,0	18,7	-0,5	-1,6
Denmark	28,7	28,1	28,0	-2,1	-0,4
Estonia	18,3	18,0	18,4	-1,6	2,2
Finland	29,8	28,9	28,7	-3,0	-0,7
France	32,0	31,8	31,2	-0,6	-1,9
Germany	25,1	25,1	25,1	0,0	0,0
Greece	25,7	24,8	23,5	-3.л50	-5,2
Hungary	20,8	20,2	19,4	-2,9	-4,0
Iceland	15,1	15,9	16,0	5,3	0,6
Ireland	14,9	14,3	14,4	-4,0	0,7
Israel	15,5	16,0	...	3,2	...
Italy	28,3	28,1	27,9	0,7	0,7
Japan	...	...	...	...	...
Korea	10,5	10,6	11,1	1,0	4,7
Latvia	16,1	15,8	16,2	1,9	2,5
Lithuania	16,0	15,8	16,2	-1,3	2,5
Luxembourg	22,2	22,6	22,4	1,8	-0,9
Mexico	7,5	...	...	...	...
Netherlands	17,5	17,0	16,7	-2,9	-1,8
NewZealand	18,9	18,6	18,9	-1,6	1,6
Norway	25,7	25,3	25,0	-1,6	1,2
Poland	21,2	21,0	21,1	-0,9	0,5
Portugal	23,7	23,7	22,6	0,0	-4,6
SlovakRepublic	17,8	17,3	17,0	-2,8	-1,7
Slovenia	22,2	21,4	21,2	-3,6	-0,9
Spain	24,3	23,9	23,7	-1,7	-0,8
Sweden	26,4	26,1	26,1	-1,1	0,0
Switzerland	15,9	16,1	16,0	1,3	-0,6
Turkey	12,5	...	...	...	...
UnitedKingdom	21,2	20,8	20,6	-1,9	-1,0
UnitedStates	18,9	18,9	18,7	0,0	-1,1
OECD - Total	20,5	20,2	20,1	-1,5	-0,5

*Data not available.
Source: Source: Organization for Economic Cooperation and Development, https://stats.oecd.org/Index.aspx?datasetcode=SOCX_AGG.

4. Results and Discussion

It should be noted that the social spheres of different countries are characterised by certain features of social welfare, which are specified by the unequal level of state regulation and are reflected in the relevant state policy. The global experience proves the significant role of the state in the processes of forming the socially oriented market economy, which consists in the implementation of legislative, regulatory and controlling influences aimed at forming effective social policy and social protection system.

It should be pointed out that the models of the social welfare state were the basis for the social policy in many countries. The models were proposed by Esping-Andersen (1994): Scandinavian (social-democratic), continental-European (conservative), Anglo-Saxon (liberal). They determined the features and strategic guidelines of the social welfare (Table 2).

Table 2: Models of social policy

Model Name	Countries of implementation	Features
Scandinavian (Social Democratic)	Denmark, Norway, Sweden, Finland, Holland, Switzerland	High level of social protection of citizens against misery, unemployment, poverty. The universal nature of state aid in the form of direct financial aid. The priorities of the state social policy include income levelling and total employment. It is characterised by a significant fiscal loading on the labour market (Antropov, 2005, p.72; Bolotina, 2005)
Continental European (Conservative)	France, Germany, Belgium	Reduction of state intervention in the social policy and increase of the role of the non-state sector, development of partnerships between the state, the private sector, public and charitable organisations. Financing is at most moved from the state into the private sector and public organizations. Implementation of social programs for different occupational and status groups, depending on the paid contributions. Social assistance is proportional to the person's incomes and is satisfied by the possibility to compensate the risk of loss of incomes by means of insurance coverage (Hrynchyshyn, 2014, p. 305; Servatynska, 2014, p.170)
Anglo-Saxon (Liberal)	USA, Japan, UK, Canada, Australia	Limited state intervention in the social sphere. Absence of universalism and targeting of social payments. Strengthening cooperation between the public and private sectors in implementation of social programs. Social assistance is provided at the expense of an advanced system of insurance for low-income population within the certain social needs. A compulsory condition for assistance is the inability of the individual to provide the means of subsistence (Hrynchyshyn, 2014, p. 306; Servatynska,2014, p.171; Ilchuk, n. d.)

Source: Source: formed on the basis of literature.

Global practice has shown that an effective system of social protection of the population in a democratic society is based on the effective interaction and cooperation of governmental structures, business sector and non-governmental organisations (Koval, n. d.). It should be noted that the main guidelines for social policy of the European Union (EU) countries are the following: ensuring the stable standard of living, increasing the employment rates, reducing income inequality, enhancing social protection and reducing poverty. At the same time, social insurance is one of the main instruments of the social protection system. The EU Charter of Fundamental Rights states that "anyone residing and legally moving within the EU is entitled to the social insurance and social benefits in accordance with the rules laid down in the Community law and national laws and practice" (EU Charter of Fundamental Rights, as cited in Opryshko, Omelchenko and Fastovets, 2002. p. 34).

Germany is one of the EU countries where social insurance has been most developed and is introduced in the classical form. The following types of insurance contracts are supposed in this country (Vasechko, 2003, p. 38; Pavlenko, 2002, p. 39; Bezuhla, Zahirniak and Shapoval, 2011; Nadtochii, 2003, p. 22):

- state health insurance (provided by the state health authorities). A compulsory voluntary health insurance system, which is used by the majority of the population, is practically independent of the state budget and operates autonomously. The contributions vary depending on the solvency of the insured persons, and health services are provided according to the state of health, regardless of the amount of insurance payments;
- state compulsory insurance against the need for care due to illness or old age (provided by the state medical insurance funds);
- pension insurance (is implemented by the land or federal insurance companies to the employees). There is a dependence of pension payments on the level of labour income of all insured persons before the retirement age, on the level of labour income of the insured person during his/her employment and length of service. There are four types of retirement pensions: ordinary pension; retirement pension for persons with long length of service; pensions for old-age and disabled persons; pensions for miners with significant underground work experience. An important supplement to the state pension insurance is the "enterprise pension", which many companies pay voluntarily to their employees as additional benefits upon reaching the old age;
- unemployment insurance (guaranteed by the Federal Office of Labour);
- state compulsory occupational accident insurance.

It should be noted that the German social insurance system is based on the certain principles. Among the main ones there are the following (Sukhanova, 2011; Stepanova, 2016, p.78):

- the principle of compulsory insurance. Insurance deductions are compulsory for all categories of employees, regardless of their incomes;
- financing through contributions (insurers and insured persons);
- the principle of solidarity – all persons insured equally, regardless of the amount of insurance premiums;
- the principle of self-government provides for the funds functioning according to the system of self-government (legal, financial and organisational independence from the institutions of public administration), as well as their full responsibility for their activity;
- the principle of free movement provides for the right of free movement of persons through the EU countries, regardless of the place of work;
- principle of equivalence means that the payments at the time of the insured risk are equivalent to the contributions that were before the risk (it is used when calculating the pension).

However, taking into account the principle of self-government, it should be pointed out that one of the main functions of the state is the creation of the legal framework and control over the activities of social protection bodies. The whole set of social protection regulations are consolidated in the Social Code.

Financing of the social protection system in Germany is carried out by means of contributions from the insured persons and employers or the state budget, as well as by means of the combination of both. The state is the guarantor of the fulfillment of the social obligations; it redistributes the part of the funds to cover expenditures in the form of state subsidies.

General social insurance, which includes all the residents, regardless of occupation, forms the basis of social protection policy in Sweden. At the governmental level, it is stated that the state should provide economic protection to the person in case of illness, medical care, childbirth and old age (general insurance), and in case of industrial accidents or vocational illnesses (accident insurance) and unemployment (Karlin and Borysiuk, 2013). Social insurance funds are financed through the payments made by the employers, self-employed persons, insured persons, as well as shares of state funds and tax revenues. A number of financial paymens of social insurance are fully funded by the central government (Malovanyi, 2011, p. 254). Social insurance in Sweden provides for the following (Sukhanova, 2011):
- health insurance – covers almost the entire list of standard health care services. It is mainly funded by the public funds. It allows to compensate for the major part of medical costs;
- unemployment insurance – is carried out through cash registers organised by the trade unions. They operate throughout the country and include certain professional categories;
- system of national pensions – includes basic (national), supplementary (labour) and partial (incomplete) types of pensions. The pension system is still in solidarity, but in the future the amount of pension will depend on the amount of payments.

Generality is also typical for the national insurance system of the UK. A single social protection program that covers all social insurance programs is its feature. Therefore, there are no special institutions in the country that deal with the insurance of specific types of social risks. Insurance premiums paid by the employees and employers are not differentiated by the designated use. Financing of social protection system in the UK has the following specific features (Bezuhla, Zahirniak and Shapoval, 2011):
- national health care accounts 90% of the budget. The health insurance system is state-owned and highly centralised;
- national social insurance is carried out from the insurance payments of the employees and entrepreneurs.

It is important to point out the significant role of the UK public authorities in providing social protection, which distinguishes it from most countries, where the importance of public organisations in the social service of citizens is increasing. However, it provides a high level of quality of social services as well as the proper and timely financing. In addition, determining the needs of the population for social services, monitoring their quality takes place at the local level. This actualises the relevant indicators and allows for adjusting them in time. Therefore, we believe that such experience is noteworthy.

Social protection in France is based on insurance and includes pensions, unemployment benefits, family and housing aids, as well as employment assistance. It should be noted that the social protection system in France is characterised by the features of the continental model. Social insurance offices, which are responsible for a particular type of social protection, carry out social protection control at the national and regional levels. Social insurance offices (both at the regional and local level) operate on the basis of self-government. Each of them has its own board, which consists of the representatives of the insured persons and employers. Offices are managed by the Ministry of Social Affairs, Labor and Solidarity. All national offices are managed by the Central Agency for Social Welfare. It also controls their expenditures (Karlin and Borysiuk, 2013, p. 38). Payments of workers and employers (with the exception of unemployment insurance and family benefits, where the share of government subsidies is higher than in other social welfare sectors, as well as accident insurance, which is financed solely by the employer) are the main sources of social protection funding in France. Among the main features of the French system of social protection of the population, researchers pay attention to the following (Berezin, Bezpartochnyi and Nikilieva, 2013, pp. 50-51):

- an extensive system of occupational sectoral schemes of social insurance;
- a developed system of family payments,
- a significant role of supplementary social protection systems, especially in the field of pension and health insurance;
- introduction of decentralisation in the field of social services, which is increasing the importance of private (non-profit) organisations. They take initiatives to the government and manage the provision of social services by means of financial support of state bodies.

However, we believe that the complexity of the organisational structure, built on the principle of hierarchy, complicates the implementation of such a system.

Social protection in the Netherlands is represented by the systems of social insurance and social assistance. Social insurance is carried out in two organisational and financial forms:

- state insurance exists for the entire population of the country (pension, loss of the breadwinner, disability). Contributions are paid directly by the insured person. State insurance assistance can be provided both in cash and naturally (vacation packages, boarding houses accommodation);
- Employee insurance - contributions are paid by employers and employees by means of the wages fund. Contributions are collected by the industry insurance associations, managed by employers' and employees' representatives (Polde Noier, 1999, p. 30).

Providing citizens with minimum income is consolidated at the legislative level. Therefore, social assistance is awarded under the following conditions: in case of emergency (it is provided by municipalities); in cases when insurance payments are less than the guaranteed income (it is provided by the industrial insurance companies). In general, the legislation of the Netherlands defines the following types of social assistance: child support; additional assistance to the unemployed and disabled persons; assistance to the aged and partially disabled persons; assistance to the unemployed persons; assistance to wage workers (Polde Noier, 1999, p. 28).

Insurance premiums, which are paid in equal parts by the employer (in the case of work injury and occupational disease) and the employee (for old-age social insurance, in case of illness) are the main sources of financing of social insurance funds in Poland. The Institute for Social Insurance, a state organisation with legal rights, collects approximately 50% of state budget expenditures, benefits and pensions (Yarova, 2012, p. 123). An addressed cash assistance system is implemented in Poland. The main functions related to the organisation of social welfare (identification of persons, assistance awards and payments), formation of the legal framework, development and implementation of the relevant programs are considered to be the prerogative of public authorities at various levels. However, non-governmental organizations are involved in the implementation of certain functions in the social welfare system.

The US social welfare system is implemented in different areas of social insurance and social assistance. They have various sources of funding. It should be noted that there is no single national social insurance system in the country. Employees and entrepreneurs pay the appropriate taxes that form insurance funds. Payments are made from these funds. In addition, researchers (Biltsan, n.d.; Voytenkova and Lebedeva, 2007, p. 100) point to a very sophisticated system of corporate, individual insurance or paid services. There is a significant number of private (commercial) social organisations (agencies) funded through the charitable contributions and governmental funding for certain programs. Pension insurance is divided into public and private (it is highly developed and widespread). In this case, pension funds are widely attracted in the form of investments in the national economy. Scholars (Malovanyi, 2011, p. 254; Sukhanova, 2011) point out rightly the peculiarities of the social insurance system in the health care sector. Namely, the fact that voluntary and private insurance successfully supplements public health funding. It allows providing additional medical services, expanding sources of financing for industry development. State aid is paid exclusively from the budget funds: the federal budget, state budgets or local authorities. It should be noted that the formation of the social welfare system in the United States is based on the policy approach. Its implementation involves the realisation of various programs, which are regulated at different levels of government (federal, state or local). In our opinion, this approach is noteworthy. As it allows providing a clear definition of the basic tasks and means of realisation.

Social welfare in Japan is provided to support citizens in case of temporary or permanent disability and it is based on insurance. At the same time, financing is provided at the expense of insurance payments of the population, employers, as well as public funds. Japanese social welfare system is implemented in the following areas: pensions and health insurance, childbirth cash payments, nursing care, and funeral costs. It should be pointed out that the Japanese pension system includes the following elements:

- employment insurance at the place of work – both workers and employers pay insurance premiums. It is provided for retirement payments in case of disability and loss of breadwinner;
- insurance at the place of work of certain categories of workers is provided by mutual aid companies.

Health insurance is mainly financed through the special funds. Researchers [Feschenko and Nuykina, 2006; Malovanyi, 2011, p. 256) distinguish two effective insurance systems in this area: the Employment Insurance System (production feature) and the National Life Insurance System (domiciliary), which cover the vast majority of the population.

5. Conclusions and discussion

Global practices in the field of social protection of the population of the countries with socially developed market economies prove that the social sphere is one of the priority directions of the public policy.

The effective system of social protection of population is based on the efficient interaction and cooperation of state structures, business sector and involvement of public organisations. The level of such interaction depends on the model of social policy, chosen as the basic one. However, it should be noted that the most effective tools inherent for different models are often used to maximise the benefits and to level the disadvantages. This creates additional opportunities for improving the effectiveness of social policy, taking into account the current challenges and strategic social welfare guidelines.

The study of the experience of the countries with a socially oriented market economy has revealed that the main guidelines of their social policy are the following: ensuring a stable standard of living, increasing the employment level, reducing income inequality, enhancing social protection and reducing poverty.

Social insurance is considered to be one of the main tools of social protection system. It should be emphasised that studying the positive world experience of social protection of the population and its adaptation to the conditions of the countries, where the social policy requires modern reforms (especially with the transformational economy), will allow forming the modern and effective basis for making effective state policy in this sphere.

Ukraine should pay attention to the world experience and global trends in this field. This will allow us to consider alternative ways to reform the social protection system and form our own modern model of social welfare. However, it should be noted that implementation of the experience requires an appropriate adjustment of the legal framework, reformation of the social services institution, adjustment of mechanisms for implementation of state policies in the field of social services. These directions form the prospects for further research.

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Basic income: economy and psychology

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ABSTRACT

Basic income is a social idea appealing to humanist philosophers and politicians. Numerous experiments on the introduction of the concept of basic income occurred in countries with varying degrees of economic development. Surveys are being conducted around the world on the need to introduce basic income. Dynamics of economic processes and social sentiment in individual countries require generalisation of modern factors influencing the possibility of practical implementation of the concept of basic income. This paper studies the economic and psychological factors for supporting the idea of basic income in terms of its practical implementation, analyses the interpretation of the UBI idea by various researchers and provides a characteristic of the modern vision of basic income. The arguments for and against the practical implementation of this idea with their structuring in the following directions are formed and considered: influence on the economy, change of social relations and possibility of practical realisation. The authors present generalised results of the experiments on the introduction of basic income from the 1960s to the present day in South America, Africa, Europe, Asia, as well as the results of the poll and referendum on the introduction of basic income in Switzerland in 2016.

Keywords: economics, psychology, basic income, unconditional income.

1. Introduction

Basic income (unconditional income, guaranteed minimum) is a social idea, which for centuries has been attractive to both human philosophers and politicians. Since the sixteenth century, it was proposed for use by Juan Luis Vives, Thomas Paine, Bertrand Russell and Clifford Douglas. For the last 50 years, experiments on the introduction of the concept of basic income have taken place in different parts of the world for individual regions of countries with varying degrees of economic development (Kenya, Namibia, India, Italy, Finland, Germany, Netherlands, Canada, USA). Since 1986 BIEN (Basic Income European Network, now – Basic Income Earth Network) has been founded for being a stakeholder platform for basic income issues. Base income surveys are conducted in different countries (Switzerland, USA, etc.) and raised by politicians from different parties during the election campaign. Therefore, the question of applying the idea of basic income is urgent and interesting to study.

Despite the long history of the concept of basic income, its careful study of the possibility of application in general and within a specific country, in particular, almost did not occur. Pranab Bardhan (2013) argued for the feasibility of using basic income in low-poverty countries. Researchers O. Dluhopolsky and T. Dluhopolska (2017) analysed the advantages and disadvantages of the concept of basic income in terms of the possibility of conducting an experiment on its application. However, the dynamics of economic processes and social sentiment in individual countries and numerous experiments on the application of this idea require generalisation of modern factors influencing the possibility of practical implementation of the concept of basic income. Therefore, exploring the possibility of introducing basic income today is an interesting theoretical and practical task.

The purpose of this paper is to study the economic and psychological factors for supporting the idea of basic income in terms of its practical implementation.

2. History of the development of the idea of basic income

The idea of basic income that arose in the 16th century has not changed over the centuries, although the intentions of its introduction, the expected results and the ways of realisation differed significantly. The first proposals for the provision of unconditional social assistance were made by humanists Thomas More (1516) and Johannes Ludovicus Vives (1526). Thomas More (1963) viewed basic income as a more effective means of combating high rates of theft than executing thefts: "…no penalty on earth will stop people from stealing, if it's their only way of getting food". Vives in a letter to the Mayor of Bruges "On the Assistance to the Poor" (De Subventione Pauperum) suggested the municipality to provide a living wage for all residents not for the sake of justice, but for the sake of "the effective exercise of charity". At the same time, he emphasised the need for recipients to demonstrate such "willingness to work" and demanded that those who lost their lives due to negligence or immoral behaviour receive "smaller rations and more irksome tasks": "Even to the old and the stupid, it should be possible to give a job they can learn in a few days, such as digging holes, getting water or carrying something on their shoulders" (Vives, 1998). Vives' position was later used to develop a social assistance scheme by the Flemish Municipality of Ypres. This is considered the first experiment to put into practice the concept of basic income.

Antoine Caritat, Marquis de Condorcet, in their work "Esquisse d'un tableau historique des progrès de l'esprit humain" (published posthumously by his widow in 1795) laid the concept of basic income at the heart of social insurance as a means of reducing inequality, insecurity and poverty. It is his ideas of helping to reach a certain age or the loss of a breadwinner underpin modern health and retirement insurance. But in the Condorcet interpretation, the payments had to be based on the amount of contributions made by the recipients or philanthropists and, in general, there was no basic income. At the same time, Condorcet expressed the idea of unconditional giving of capital "to those children who become old enough to work by themselves and found a new family" (Condorcet 1988).

For the first time, Thomas Paine offered a specific source of basic income – rent payments paid by a landowner for the use of the land. He considered it necessary to pay cash benefits regardless of the recipient's social status or income: "to every person, when arrived at the age of twenty-one years, the sum of fifteen pounds sterling, as a compensation in part, for the loss of his or her natural inheritance, by the introduction of the system of landed property. And the sum of ten pounds per annum, during life, to every person now living, of the age of fifty years, and to all others as they shall arrive at that age" (Basic Income …, 2020). Charles Fourier developed this idea later by demanding life support (housing and free lunches) for those who were deprived of the "fundamental natural right of every person to hunt, fish and harvest fruits" by having ownership of the land (Fourier, 1967). But his "natural" interpretation nevertheless became "less good" than the proposals of his predecessors.

Joseph Charlier proposed the use of the term "dividende territorial" as an unconditional systematic (monthly) monetary payment, the amount of which would be determined annually by a representative national council, and considered the payment itself a necessary social guarantee for the absence of "the domination of capital over labor": "Society's duty does not reach beyond securing each a fair share of the enjoyment of what nature puts at his disposal, without usurping anyone's rights" (Basic Income …, 2020).

These theories, with rare exceptions, were regarded as humanistic ideas that did not materialise. The development of the concept of basic income in the 20th century was already devoid of utopian features and aimed at finding the possibility of practical implementation at least as a local experiment. The ideas of "social dividend", "state bonus" and "national dividend" were discussed in the UK, the schemes "demogrants" and "negative income tax" were being developed in the USA. In "Roads to Freedom" (1918), Bertrand Russell first insisted on the use of basic income as a means not of charity, not of social justice, but of the development of the individual: "a certain small income, sufficient for necessaries, should be secured to all, whether they work or not … When education is finished, no one should be compelled to work, and those who choose not to work should receive a bare livelihood and be left completely free" (Russell, 1918).

Dennis Milner in his "Scheme for a State Bonus" (1918) demanded the introduction of the "State bonus" for all UK subjects, since everyone has a moral right to livelihoods, and any obligation to work is not compulsory. And a few years later, in 1924, Clifford H. Douglas analysed the prospects of overproduction of the British industry after World War I and proposed the introduction of "social credit" through payment to all households of a monthly "national dividend". It is on this idea that George Cole builds on the definitions of "base income" and "social dividend" (1935): "Current productive power is, in effect, a joint result of current effort and of the social heritage of inventiveness and skill incorporated in the stage of advancement and education reached in the arts of production; and it has always appeared to me only right that all the citizens should share in the yield of this common heritage, and that only the balance of the product after this allocation should be distributed in the form of rewards for, and incentives to, current service in production" (Basic Income ..., 2020).

Introducing the factor of technology development in the debate about basic income took place in the United States in the 1960s. Robert Theobald emphasised productivity gains through automation and the logic of rewarding workers. Milton Friedman proposed a linear negative income tax as a scheme to realise the idea of basic income. James Tobin called for additional benefits to be provided to each household at a rate determined by family composition. In 1968, a petition to Congress to adopt a system of income and allowance was supported by James Tobin, Paul Samuelson, John Kenneth Galbraith, Robert Lampman, Harold Watts and more than a thousand economists, and led to the creation of a Family Assistance Program (FAP) that guaranteed some income for employees who came close to the negative income tax scheme. This was the reaction of the political elite to the social sentiment of the society, and although the Program was adopted by the House of Representatives and rejected by the US Senate Commission (finally in 1972), the idea of a guaranteed minimum ceased to be purely theoretical and became the basis of practical experiments.

In parallel, a debate on basic income ideas resumed in Europe: "Revolt from the Center" (1978) was launched in Denmark with the proposal to introduce a "citizen's wage". In the Netherlands Kuiper (1976) recommended the abolition of employment through its dehumanised nature and the introduction of a decent "guaranteed income" that would enable people to develop. In 1977 Politieke Partij Radicalen became the first European political party with a parliamentary representation to formally include UBI (baseinkomen) in its election program. The idea was defended by the Voedingsbond Food Business Union, which brought together mostly women and part-time workers. In 1985, the Scientific Council for Public Policy unambiguously recommended "partial basic income" (basic income at a level not sufficient to meet the needs of one person).

Developments in the idea of basic income in the UK and Germany have been less successful due to certain social events, including the fall of the Berlin Wall and the reunification of Germany, although the Basic Income Research Group (BIRG) was created in Britain and Joachim Mitschke launched the campaign of the introduction of a negative income tax was (1985).

In France, André Gorz initially protected lifetime basic income combined with a twenty thousand hours general social service (1985), but later abandoned the second component (1997). Alain Caillé advocated unconditional income "as the expression of society's fundamental trust in those excluded from the labour market" (1987-1996). Jean-Marc Ferry proposed to introduce unconditional income as a right of citizenship at the European Union level, since full employment is currently unattainable and socially useful activity needs development (1995, 2000).

The interpretation of the UBI idea by various researchers is presented in Table 1. All the above-mentioned researchers of the concept of basic income have created the preconditions for the establishment of a platform for world discussion on this topic, which was implemented in September 1986 in Louvain-la-Neuve (Belgium) by creating a European base income network (BIEN). The existence of such networks in the US, South America and South Africa, Australia, New Zealand has led to the interpretation of BIEN as a worldwide network (2004).

As Table 1 shows, most authors viewed unconditional basic income as a means of combating poverty and eliminating social inequality through the provision of unconditional or partially unconditional social assistance (Vives, Condorcet, Paine, Charlier, Friedman, Tobin, Mitschke, Gorz, Caillé). However, both with the emergence of this humanistic idea and later, researchers saw in basic income a way to develop the individual (Russell) and society as a whole (More, Milner, Kuiper, Ferry), and some (Douglas, Theobald) predicted the problem of underemployment through automation business processes. However, only part of the authors were concerned with the problem of finding sources of financing for the practical implementation of the concept of basic income (Paine, Charlier, Theobald), and a wide experimental test of the concept of basic income began in the 20th century.

Table 1: Interpretation of the UBI idea by various researchers

Model Name	Features
Th. More	A way to combat high crime, more effective than punishment
J. L. Vives	Social assistance tool (charity)
A. C. Condorcet	The basis of social insurance as a means of reducing poverty
Th. Paine	Implementing the idea of social justice through life-long retention through rent payments
J. Charlier	Social guarantee of absence “the domination of capital over labour” through payment “dividende territorial”
B. Russell	The means of development of the individual
D. Milner	An instrument for the realisation of the moral right to livelihoods
C. H. Douglas	A tool to prevent overproduction through the payment of “national dividend”
R. Theobald	A tool for employee social insurance against threats to business process automation
M. Friedman	A tool for implementing social assistance through a linear negative income tax
J. Tobin	Additional social benefit at a differentiated rate
J. P. Kuiper	A tool for implementing the idea of non-compulsory employment
J. Mitschke	A tool for implementing social assistance through a negative income tax
A. Gorz	A means of implementing the idea of social assistance
A. Caille	A means of implementing the idea of social assistance (“the expression of society’s fundamental trust in those excluded from the labour market”)
J.M. Ferry	Means of development of socially useful activity

Source: developed by the authors.

3. Arguments for and against unconditional basic income

Thus, the idea of unconditional basic income is now universally accepted and substantively unique. Unconditional basic income is regarded as “a periodic cash payment unconditionally delivered to all on an individual basis, without means-test or work requirement” (Basic Income …, 2020), and is characterised by the following features (Figure 1):

1) periodic – is provided on a systematic basis, rather than on a one-off basis;
2) individual – addressed at a specific person, not a household;
3) universal – paid for by everyone without exception;
4) cash payment – does not involve the use of natural issue, receipts, vouchers, etc.;
5) unconditional – issued without testing the availability of work or intention to receive it, the amount of income, family composition, etc.

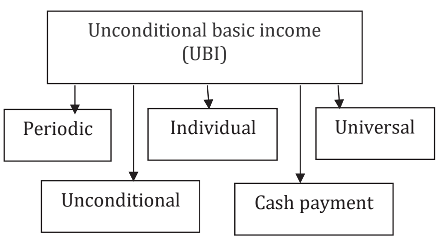

Figure 1:. Characteristics of unconditional basic income
Source: own research

Investigation of the five-hundred-year history of the existence of the concept of basic income has allowed us to form arguments for and against the practical implementation of this idea, summarised in Table 2. As can be seen from Table 2, the main arguments for implementing the idea of basic income can be structured in three directions: economic, psychological and practical implementation problems. Let’s take a closer look at them. At first glance, the economic problems of implementing the idea of basic income seem to be the most important and almost insurmountable. Indeed, providing basic income at the subsistence level is a serious financial challenge for state and local budgets. Partial basic income is not able to replace the existing social assistance system, which, by the way, seems to be insufficient to overcome poverty. Therefore, it seems that the realisation of the concept of basic income will definitely be an unbearable financial burden. If we imagine that the basic income provided will reduce the motivation to work and cause problems for providing enterprises with labour resources, then the revenue part of the budgets will also be reduced due to tax evasion. Payment of basic income exclusively in cash threatens to increase inflation and overall destabilise the economic situation.

Table 2: Arguments for the practical implementation of the concept of basic income

Arguments "for"	Arguments "against"
Economic development through: - stimulation of domestic demand; - no budget expenditures for administering social assistance; - small business development; - development of the investment market; - reducing health care budget expenditures	Economic problems due to: - large financial expenses for the payment of income at the level of the subsistence level; - inflationary processes; - reduction of budget revenues; - curtailment of business activity
Improvement of social relations through: - solving the problems of need and gender inequality; - the elimination of the corruptive component of the purpose of social assistance and the overall reduction of crime rates; - motivation of human capital development and increase of overall life satisfaction level; - changes in the relationship between employers and employees, in particular, in the context of business processes roboticisation, increasing the level of support in families; - improving the health of the population	Deterioration of social relations due to: - growing paternalistic sentiment; - destruction of motivation to work; - social tension from the dismissal of employees of social bodies; - increasing the number of migrants; - rising crime rates
Possibility of practical implementation: - transparency and simplicity of application; - reduction of expenditures of the state and local budget for the maintenance of social assistance bodies; - obtaining income from the sale of fixed assets of social assistance bodies; - receiving taxes from small business development and rising wages	Impossibility of practical implementation: - large financial costs; - reduction of the budget revenue base in the fall of business activity; - the society's rejection of the idea of unconditional payments and the lack of political will to implement it; - legal obstacles

Source: own research.

In fact, such an apocalyptic picture is refuted by the available calculations: Pranab Bardhan, a professor at the University of California, Berkeley, argues that basic income payments are fiscal-real, at least in low-poverty countries. Structural problems, complexity of checking income levels of self-employed persons, as well as the corruption component make the social assistance systems in India economically inefficient. According to Pranab Bardhan's estimates, if each of India's 1.25 billion citizens receives an annual base income of 10,000 rupees (about $ 150), a quarter below the official poverty line, total payments will be about 10% of GDP at that time, when, according to the National Institute of Public Finance and Policy (Delhi), the Indian government annually allocates significantly larger amounts of direct and indirect subsidies to the underprivileged segments and corporate sector tax breaks. Withholding these payments in whole or in part, one can accumulate funds to pay a reasonable unconditional basic income (Bardhan, 2013). In this sense, the absence of social expenditures of the state and local budgets for the administration of targeted social assistance (retention of officials who form the list of persons who are eligible for assistance, monitor compliance with them, take measures to recover illegally obtained assistance, retain the basic means aid – buildings, equipment) is an absolute argument for the use of basic income.

The thesis about activation of inflationary processes in the payment of unconditional income seems to us also impossible: setting the level of payments at the subsistence level will not create a critical money supply in comparison with the existing social assistance systems: payment of pensions, scholarships, social assistance to single mothers, people to which state support is granted. Thus, the magnitude of basic income payments will not allow for the formation of unsecured demand, and psychological confidence in the continuity of such assistance will allow citizens to think about investing in the development of small business and will contribute to the formation of an active "consumer" stock market.

Theses on reducing budget revenues while increasing social spending and curtailing entrepreneurial activity are interrelated and relate to the work motivation of the population. Having a monthly income that meets the minimum needs really frees an employee from forced employment. At the same time, according to a survey by Dalia Research (2016), ten thousand people from 28 countries of the European Union, only 4% of respondents intended to stop working with basic income and 7% would reduce working hours (Europe, 2020). Moreover, the introduction of basic income would provide an opportunity to intensify entrepreneurial activity by obtaining the funds to change the profession, training additional skills, developing their own business. Therefore, there is no prerequisite for reducing the tax part of the budgets by reducing employees (income tax for individuals) and entrepreneurial activity (corporate income tax, social contribution, partially value added tax). Small business development, together with the ability to meet domestic demand, can generate not only employment, but also taxes (single tax, personal income tax, pension and insurance payments).

An additional economic bonus to introducing a single basic income may be a reduction in public health spending, which will be discussed below. Thus, the emergence of economic problems in implementing the idea of unconditional income is not obvious or compulsory. But it seems to us more important to consider the factors of psychological perception of the concept of basic income and its influence on the relations of members of society in the future.

Already stated fears of opponents of the concept of basic income regarding the destruction of motivation to work are refuted by the results of the above survey (Europe, 2020). In addition, a large proportion of people involved in volunteer, charitable projects will have the opportunity to expand their field of activity. "Overachievers" will not abandon their work simply because they will receive minimum income, and covering the latter only with basic needs will prompt them to receive high remuneration for their labour to meet personal needs beyond the scope of the "consumer basket". Therefore, the risk of developing paternalistic attitudes in the application of the concept of basic income seems to us insignificant, given the existence of a broad system of targeted support for socially vulnerable groups in all countries of the world. However, in many countries around the world, there is still a serious gender inequality, where a working woman gets lower positions or less pay compared to men with the same skills and knowledge. Housewives today also do not have financial independence from their partners, because their work is not paid, and lack of insurance experience does not give the right to expect retirement. This situation is a direct motivation for the gender inequality system and domestic violence against women, and the idea of basic income is capable of solving this problem.

The idea of increasing social tensions in the case of applying the concept of basic income is based on the assumption that the population will spend on the purchase of "anti-benefits": alcohol, drugs, etc., a wave of migrants will flow into the country with such a social security system, and the elimination of social protection bodies will lead to social protests of dismissed workers. Let us disassemble these issues in turn. With regard to the dismissal of social workers; their communication skills with the socially vulnerable and therefore psychologically difficult sections of the population are in demand in society today and are predicted by sociologists to be in high demand in the future. But even in the conditions of loss of demand on the labour market, they will have basic income and will be able to afford to re-profile activities like other members of society. Migrants as non-citizens cannot claim basic income in this country, and regulating the circulation of dangerous substances is a realisation of the state function of protecting the population and, by and large, has an inverse dependence on the level of income: if the population suffers from poverty, the crime situation worsens. Therefore, the introduction of basic income can solve the problem of need and in the future reduce the crime rate.

The main social advantage of applying the concept of basic income in practice, in our view, is the change in interpersonal relationships: in labour relations, in families, in society as a whole. Thus, the availability of unconditional income, covering the basic needs, will allow hired workers to pay attention to updating their existing skills through additional training and advanced training, will provide the opportunity to find a better job offer, as well as remove the subordinate position of the hired employee in relation to the employer. This will fundamentally change the labour market both in terms of increasing the quality of labour resources through the development of human capital and in terms of wage growth.

In the conditions of business process roboticisation there is a threat of dismissal of a large number of employees. Analysts at McKinsey & Co, a consulting firm, expect a fifth part of the world workforce to be released for this reason: "We estimate that between 400 million and 800 million individuals could be displaced by automation and need to find new jobs by 2030 around the world, based on our midpoint and earliest (that is, the most rapid) automation adoption scenarios" (Jobs lost, 2020). Having a basic income will allow these people to live in dignity during a forced re-profile of their business. Basic income can be a "buffer" that will smooth out life's troubles and challenges: provide education without borrowing, increase parental stay with the child, as well as provide temporary rest during illness and the possibility of rehabilitation after physical or psychological trauma. It can be summed up that basic income can become a serious tool for social protection of human beings and a factor of development of its creative potential. Finally, the individual will get a chance to develop their talents, commercialise hobbies and learn how to implement business ideas. Empowerment for self-development and self-fulfilment is a factor in improving the quality of workforce, small business development, raising the level of life satisfaction (Happy Planet Index), which in turn will reduce the incidence and complications of illness and the social costs of health care.

Scott Santens is convinced of the financial appeal of the UBI idea, which he estimates will cost the United States more than $ 1 billion: "The truth is that the costs of people having insufficient income are many and collectively massive. It burdens the healthcare system. It burdens the criminal justice system. It burdens the education system. It burdens would-be entrepreneurs; it burdens both productivity and consumer buying power, and therefore entire economies. The total cost of all of these burdens well exceeds $1 billion annually, and so the few hundred billion net additional cost of UBI pays for itself many times over. That's the big-picture maths" (Santens, 2017).

4. Experiments on implementation of basic income

However, the argument for or against the application of the concept of basic income will not be justified without consideration of the results of numerous experiments. Let us focus on the implementation of the idea of a partial basic income in the recent history of mankind set out in Table 3.

Table 3: Basic income pilots

Location	Period of holding	Results available
Indiana, Seattle and Denver (USA)	1960-70	Moderate reduction of work effort (17% among women, 7% among men), increased school attendance, money received was not spent on anti-benefits or luxury goods
Manitoba (Canada)	1974-1979	Absence of motivation for unemployment in the presence of UBI, reduced occupational injuries, level of road accident, domestic violence, needs for hospitalisation, increased time spent by mothers for children, by teenagers for education
Alaska (USA)	Since 1984	The lowest poverty rate in the United States
Otjivero - Omitara (Namibia)	2008-2012	Reducing poverty and crime, increasing economic activity, school attendance and improving children's health
Madhya Pradesh, (India)	2010-2013	A lack of frivolous spending, improving housing, nutrition, health, education, increasing savings and economic activity, increasing the inclusion of people with disabilities in public life
Germany	Since 2014	Increasing the sense of freedom of choice among the participants, developing their own business and getting a professional education, organizers` experience of creating a social state
Uganda	2015-2019	Preliminary results: increase of business assets by 57%, working time by 17%, earnings by 38%, creation of own enterprises
Livorno (Italy)	Since 2016	The results are considered positive, other cities are involved in the experiment (Ragusa, Naples)
Kenya	2016-2026	Results not announced, experiment is ongoing
Ontario (Canada)	2017-2019	Experiment terminated after government change, results not announced
Finland	2017-2019	Preliminary results: fewer stress symptoms, fewer difficulties concentrating and fewer health problems, more confident in the future and in the ability to influence societal issues
Utrecht (Netherlands)	2018-2019	The results are processed
Stockton (USA)	2019	Lack of motivation for unemployment in the presence of UBI has been proved, a lack of frivolous spending

Source: own research.

As Table 3 shows, Basic income pilots were conducted in countries with different levels of economic development, but proved insolvent against UBI opponents. In addition to the overall improvement of economic and social indicators, the positive results include the involvement of people with disabilities in public life, the experience of creating a welfare state and greater confidence in the future, highlighted by participants in experiments in India, Finland and Germany. Moreover, the results of short-term experiments have shown so encouraging results that they have been extended (as in Kenya) or "adopted" by other regions (Italy). At the same time, the result of the experiment in Ontario demonstrated that the success of applying the concept of basic income directly depends on the political will of the government.

And benefits such as transparency and simplicity of application, reduction of state and local budget expenditures on the maintenance of social assistance agencies, income from the sale of fixed assets of social assistance agencies, obtaining taxes on the development of small businesses and rising wages are not able to outweigh the reluctance to try. Indeed, in most cases, the implementation of the idea of UBI requires significant start-up costs and overcoming legal obstacles to harmonisation of legislation, which appear to be nothing compared to the public's unpreparedness for the idea of equal financial payments.

According to a poll (*Europe*, 2020) in April 2016, 58% of the population in European countries were aware of the concept of basic income, and 64% would vote in favour of its implementation in a referendum. Countries where the idea of basic income was most popular were Spain and Italy (71% and 69% of respondents, respectively, supported the introduction of basic income). At the same time, 40% of respondents said that basic income would reduce people's anxiety about meeting their basic needs, 31% said that it would better provide "equal opportunities", 16% said that the level of bureaucracy and administrative expenses of the state would be reduced. However, on June 5, 2016, 76.9% voted against this initiative in a referendum in Switzerland. According to Swiss analyst Claude Longchamp, the main reason for the failure of the vote was that the organizers did not present a clear payment scheme and did not explain how it would be funded (Basic Income, 2020). Indeed, at first glance, it is unfair to pay the same amount to a person with a disability, a person who does not want to work and a millionaire who has no financial problems. Therefore, advocates of UBI should be actively educated. And there are two facts in favour of the thesis that the future of basic income. In 2018, the Scottish Government agreed to provide 250,000 GBP to assess the feasibility of a basic income pilot in four areas: Glasgow, Edinburgh and the regions of Fife and North Ayrshire (Roberts, 2017). In France, 13 local departments (Revenu, 2020) have expressed the wish to experiment basic income in their territories. Therefore, the experiments continue unambiguously.

Mark Zuckerberg said at a speech at Harvard University: "We should explore ideas like universal basic income to give everyone a cushion to try new things. We're going to change jobs many times, so we need affordable childcare to get to work and healthcare that aren't tied to one company. We're all going to make mistakes, so we need a society that focuses less on locking us up or stigmatizing us. And as technology keeps changing, we need to focus more on continuous education throughout our lives" (Zuckerberg, 2017).

5. Conclusions

Thus, summarizing the above, we can draw the following conclusions:

i. Unconditional basic income is not only a humanistic idea, but also a practical tool for building a civilised society.
ii. Numerous experiments on the use of UBI have proved its positive economic and social impact.
iii. Implementation of the idea of basic income can be the solution to the world problem of mass layoffs due to the robotic business processes.
iv. The question of practical implementation of the concept of basic income is a problem of perception of this idea by the society and political will of the government.

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Economic Freedom and FDI: Co-Integration Analysis

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ABSTRACT

These days, economic growth is very important for all countries and this article will discuss the main factors associated with this problem and propose some possible solutions which can be implemented. The importance and relationship of foreign direct investment, economic growth and economic freedom are presented and evaluated by considering literature, and a long run relationship between foreign direct investment and economic freedom in Turkey is empirically analysed in the article. The time period covers the years 1996 to 2018. The data has been obtained from the World Bank and from the Heritage Foundation database. The analysis is based on the time series analysis. An Augmented Dickey-Fuller test has indicated that the variables are not stationary at levels, but they are stationary at the first difference. The Johansen test has shown that variables are co-integrated, which means that they move together in the long run.

Keywords: foreign direct investment, time series, economic freedom, Turkey.

1. Introduction

It is well-known that the key of the economic growth is investment and capital. As a matter of fact, capital movements are determined by risk and profit factors. Despite this fact, finding capital is a very hard issue, especially developing countries such as Turkey. Developing countries usually handle problems such as absence of financial resources, domestic savings deficit and foreign exchange shortages. If these problems are not solved, it is clear that foreign sources are needed.

By examining emprically the relationship between the importance of investment for economic growth and the relationship between economic growth and economic freedom, it is aimed to provide more complete understanding of these variables for the economy.

While the importance of technology increases day by day, the power of governmental intervention is being inevitable (Prause and Günther, 2019). By increasing productivity, technological development also increases the welfare of countries (Sikdar and Mukhopadhyay, 2018). Technology transfer provided by FDI can increase the technological capacity of host countries, so it enhances productivity of production and leads to economic growth. FDI inflows cause an increase in employment, facilities, access to new markets, meeting with new technology and management skills (de Mello, 1997). Thus, it may be said that FDI is largely beneficial for host countries, not only in a financial way, but also other ways.

In recent years, studies related to the effect of non-economic variables on FDI started to gain importance. Capital holders invest their money in other countries by considering economic freedom of the host countries (Blonigen, 2005).

When it is aimed to estimate economic improvement in economies, it is not possible to do that without emprical analysis (Facioni et al., 2019) To overcome these difficulties, emprical analysis such as the co-integration analysis, factor analysis and regression analysis are needed.

There are different definitons of economic frredom. Here, let us consider the definiton brought to the literature by Gwartney et al. (1996): "*Individuals have economic freedom when a property they acquire without the use of force, fraud, or theft is protected from physical invasions by others, and they are free to use, exchange, or give their property to another party as long as their actions do not violate the identical rights of others*" (Gwartney et al., 1996).

For the purposes of this essay, the term 'economic freedom' will be taken to mean "individual autonomy, concerned chiefly with the freedom of choice enjoyed by individuals in acquiring and using economic goods and resources". Economic freedom can be measured via an economic freedom index which has been calculated by the Heritage Foundation. This index includes economic and non-economic variables such as Open Markets, Regulatory Efficiency, Government Size and Rule of Law.

For this paper it is really important to reveal the relationship between the importance of investment for economic growth and the relationship between economic growth and economic freedom.

The paper is outlined as follows: first, the introduction offers brief informatin related to the subject. Next, the author presents a review of literature. The review includes theories, the empirical and theoretical context, importance and relationship between FDI, economic freedom and economic groth. Following these parts, the author presents the material and methods, as well as the results. Finally, summary, conclusion and recommendations are given.

2. Literature Review

In this part of the study, subject literature is divided into two parts, i.e. the theoretical part and empirical research. In another part, empirical research will be discussed with the different perspectives.

2.1. Theoretical Context

In the Theoretical Context, theories related to FDI and theoretical context regarding the importance of investment for economic growth and the relationship between economic growth and economic freedom will be given.

2.1.1. FDI Theories

According to product life cycle theories, there are some steps of the product on the market.

1 - Introduction of the product to the market and consumer

2 - Growth and maturity of the product

3 - Standardisation of the product.

In the first step, producers has their own production technology. The product is starting to be produced and launched to the market. The product is not widely known by the consumer. Thus, the producer needs to do promotional activities to increase the awareness of the product on the market. The scale of production is small and the product is sold on domestic markets.

In the second step, the awareness of the product on the market increases. There is demand for the product from other countries and companies start to export. Now, there are some producers which have a similar production technology. This case creates competition on the market and costs begin to gain importance within this period. In turn, production starts in developing countries, such as China, India and Indonesia, where labour costs are lower than in home countries (Dunning, 1981).

In the third step, the product becomes standardised and most producers know the production technology. The importance of cost increases and a large part of production shifts to developing countries.

In the theory of the product's life cycle, a reason for foreign direct investment is the desire of an innovative company to preserve its technological superiority and monopolistic advantage.

The internalisation theory says that a company must select one of the following two options. The first one is that a company can produce in the home country and export to other countries. The second choice is that instead of export, a company can make direct investments in the host country, and then produce and sell their goods in host countries (Buckley, 2000). There are a few reasons to make foreign direct investments:

– if there is a trade barrier, such as higher taxes
– if there is an asymmetric information between buyers and sellers
– if there is a higher cost of transportation

"Multinational companies internalise these foreign markets related to their production activities to get rid of an adverse influence on the market and existing production processes (Kurtaran, 2010)".

The Eclectic theory is more comprehensive than the other FDI theories. There are three important matters in this theory, i.e. ownership, location and internalisation.

– Ownership; MNEs have some advantages, such as production technology, access to financial resources, buying raw materials cheaply due to the large scale of the company with respect to host countries' companies. It also gives a competitive advantage, such as reputation for reliability.
– Location; one of the most important matters for investment. Taxes on import, industrial in-

frastructure, factory costs such as labor cost of host countries are taken into consideration for investment.

– Internalisation; in this part of the theory, profitability becomes important. As it is known, the main purpose of companies is to make profit. If the MNEs make more profit while they run their own companies in host countries, which is internalisaiton rather than externalisation such as licensing or franchasing activities, they will use this method (Boddewyn,1983). Besides, while MNEs make investments, they also take into account the efficiency, productivity of natural resources and workforce in host countries.

The capital market theory is one of the oldest theories used to explain foreign direct investment. Aliber says that the reason for the emergence of foreign direct investments is the imperfections in the capital market (Aliber, 1971). Another study claims that exchange rate differences between countries also have effect on this issue (Nayak and Choudhury, 2014). According to Aliber's (1971) theory, countries with a weak currency are more advantageous in attracting foreign direct investments. The reason is the difference in capitalisation between currencies. It is also a great advantage for multinational companies to borrow at low interest rates in home countries and invest in host countries. This cheap resource will provide a competitive advantage to MNCs in the host country.

In the Institutional FDI Fitness Theory, it is emphasised that the policies of countries and the quality of institutions are important while attracting foreign direct investment. If the quality of a country's institutions is high, the chances of atracting FDI are higher than in countries with low institutional quality. What is meant by institutional quality is that institutions are reliable, transparent, efficient and fair (Makoni, 2015). Besides, it is also important to what extent the policies implemented by the institutions are sensitive to external shocks or dangers, or the way they follow to take advantage of the opportunities that arise on the market.

2.1.2. Importance Of Investment For Economic Growth

Taking everything into consideration, theorotically this paper will discuss the main factors that are associated with neoclassical growth models, as endegenous growth models offer the basis with observational work on the positive relationship between FDI and GDP, although in different perspectives. In other words, the basic conceptional structure of production provides data on the external factors. In terms of the Solow framework (Solow, 1956), an overwhelming majority proposes that production is a specific contribution of a bodily part of the capital stock and if we go deeper to the root of this issue, in general, the model of endegenous growth assumes that FDIs in the GDP growth are more productive than internal investments, as they encourage incorporation of new technologies in the production function of the host country. İnterestingly, the general trend for some countries is that they can develop technology, but others may benefit from the spread of technology that is produced elswhere. Despite the considerable points, as Blomstrom et al. (2000) emphasize, the figure of FDI is the channel of this process. A further example is that endogenous growth models are pro long-term growth of the economy. According to them, these explanations complement each other and help to illuminate the fact that the phenomenon of FDI contributes to economic growth not only through capital formation and technology transfer (Blomstrom et al., 1996; (Borensztein et al., 1998), but also through an increase in the knowledge level, training of workers and know-how purchasing (de Mello, 1997). It is important to emphasise that several explanations have been offered about the benefits and costs of FDI. Moreover, empirical evidence shows that an increase in foreign direct investments is a contributor to positive and negative externalities. As an emprical phenomenon, where developing countries are positioned regarding the emphasised issues, it has been observed repeatedly (Cobb and Douglas, 1928) that FDI has a positive relation with the economic growth. Given this evidence for such a model that the SEE countries, an examination of factors that impact upon all beneficiaries of FDI but with a different macroeconomic history, seems warranted, from this perspective political regimes and patterns of growth would be quite significant. (univ-danubius tan aldım) bel ki buradan cobb douglas ta eklenebilir.

According to Harrod, in short term, savings is the only changeable variable while others are constant. Thus, if economic growth wants to be achieved, capital accumulation has to be increased (Harrod, 1939). In countries which have a low savings rate, FDIs can contribute the economic development process. Neo-classical growth theories assert that FDI flows have an effect on economic growth by increasing capital accumulation (Nair-Reichert and Weinhold, 2001).

According to the neo-classical theory, foreign direct investments contribute positively to economic growth by increasing the amount and efficiency of total investments. The reason is that direct investments can lead to capital formation and an increase in employment, an increase in the export of capital goods. Additionally, they may bring resources such as capital, knowledge and experienced managers, and contribute to the development and diffusion of technology. In this way, both productivity will be increased and economic growth will be supported.

2.1.3. The Relationship Between Economic Growth And Economic Freedom

It was believed that some countries became rich and some countries became poor by cultural norms and institutions (Landes, 1998). It is understandable that the role of economic freedom is very important. What is the connection between economic development and economic freedom? Liberals say it will lead to faster development with the countries that liberated the economy after the collapse of socialism and the old system of government. According to the claims, if applied correctly under state control, it can stimulate development.

According to economic theory, economic freedom has an effect on the productiveness of resources, government subsidies. Indeed, from Adam Smith's time to the present day, though not before, economists and economic historians have argued that the idea of choosing and acquiring wealth, competition for work, trade with people, and personal rights are essential to economic development (North and Thomas, 1973). New development theories have increased interest in this field. Recent empirical research suggests that economic freedom may be crucial in revealing economic differences between countries (De Vanssay and Spindler, 1994).

It is widely accepted among economists that political freedom and liberty is crucial for the instutional structure, so instutions can be counted as an explanatory factor of living conditons among the countries. For instance, by considering economic growth in Africa, Easterly and (Easterly and Levine, 1997) said that it needs to be focused on the instutional factor instead of conventional economic factors, because conventional factors alone are not enough to explain the growth. As a result, to achive economic improvement, it is crucial to understand the importance of an institution and economic progress.

Multinational companies have an important role in foreign direct investments. Thanks to their developed capital structures, they aim to operate in many countries by investing in countries where they see an opportunity. Multinational companies are advanced in many aspects, not just in terms of capital (Dunning and Lundan, 1993). For example, their R&D expenses are high, so they are technologically advanced companies. They have qualified personnel to operate this advanced structure. In addition, they will bring new import-export strategies, market strategies and management strategies to their country of origin (Borensztein et al., 1998). This structure will contribute to the development of other businesses in that country by providing externality. Therefore, countries can follow policies to attract foreign direct investment. Although these policies differ from country to country, they are generally policies to facilitate investment, such as tax reductions and grants (Markusen, 1995).

Another benefit of foreign direct investments is the macroeconomic contribution, which includes closing deficits in the balance of payments, positive contribution to employment and capital supply. The fact that the companies to be established in case of investments will realise a part of the goods or service procurement of the factories in that country will enable the development of other small businesses in that country. The competitive structure of multinational companies will push other businesses in the same country to work more efficiently and use resources more effectively.

2.2. Empirical Research

In his study, (Barro, 1999) investigated the relationship between economic growth, income distribution and investments for 100 countries in the 1960-1990 period, using panel data analyses, and he stated that the rule of law, human capital, improvement in terms of trade and investments had a positive effect on growth, public expenditures and investments. The increase in the average inflation rate, which he considers as an indicator of macroeconomic stability, has an adverse effect on growth; the increase in the ratio of public expenditures to GDP and the increase in the inflation rate have a negative relationship with investments; the rule of law and investments have a positive relationship; terms of foreign trade, education level and he found that the relationship of democracy with investment is insignificant (Barro, 1990).

An analysis (Gwartney et al., 1996) by considering countries which have a higher degree of economic freedom than other countries between 1993–1995, resulted in an average annual growth rate of per capita real GDP of 2.4% in the period 1980–1994. In the same years, it was seen that an average annual growth of GDP per capita was -1.3%, when the data of 27 countries with a low economic freedom index was checked. The countries catching a steadily high economic freedom rate have had high income during last twenty years, so they concluded that economic freedom causes growth.

Wallis analysed the effect of FDI on the economic growth. According to him, there is a positive relationship between FDI and economic growth (Wallis, 1968).

In general, it was asserted that FDI is one of the explanatory variables of GDP. Neverthless, there are many papers contrary to this opinion. Ferrer and Zermeño (2019) studied this idea by considering such countries as China, the Republic of Korea, Mexico and Brazil, and they found that FDI has not directly affect GDP, because FDI is relatively small in total direct investment.

Makki and Somwaru also found that there is a positive relationship between FDI and the GDP growth. They said that if trade was increased by FDI, it would increase economic growth. However, if the shock come up in the market, it would cause lack of demand. It means that the growth rate would be lower than before (Makki and Somwaru, 2004).

Dogan examined the effect of FDI on the GDP growth by using the time series analysis. The paper covered the period between 1979-2011. The study reveals that FDI has a positive effect on the GDP growth. According to the Granger causality test results there is bi-directional relation between FDI and the GDP growth. In this study, it is also recommended that FDI may be the solution for sustainable economic growth (Dogan, 2013).

Blomstrom, Lipsey and Zejan conducted studies on 78 developing countries. The paper adopted a panel data analysis to find out whether a positive or negative relationship between FDI and growth rates. The finding of the study is that there is a positive relationship between FDI and economic growth for countries which have a higher income, but there is a negative relationship between FDI and economic growth for countries which have lower income (Lipsey, 2001).

Karagöz also assessed the relationship between the FDI inflow and employment in Turkey. He found that there is co-integration between the FDI inflow and employment. The test result of the empirical analysis also says that there is a relationship in the long run (Karagöz, 2007).

Axarloglou and Pournarakis analysed that whether FDI has an effect or not on employment in the US manufacturing sector. The time period covers the years from 1974 to 1994. According to their paper, FDI has a positive effect on employment in some sectors such as transport equipment, and a negative effect on employment in such sectors as leather and glass industries (Axarloglou and Pournarakis, 2007).

Sandalcılar conducted a study on the relationship between the FDI inflow and employment in Turkey in 1980-2011. An ADF test was executed and first difference of variables was found stationary. The Johansen co-integration test was also applied to the equation and the result showed that there was no co-integration or long run-relationship between the variables. As a result, he could not find a statistically significant relationship. In other words, the FDI inflow does not have a statistically significant effect on employment in Turkey (Sandalcilar, 2012).

Aizenman analysed the FDI and exchange rate volatility; he used both fixed and flexible exchange rate regimes. For a given volatility shock, he found that the fixed exchange rate regime leads to higher domestic investment, while the flexible exchange rate leads to higher foreign direct investment. He also found that nominal shocks cause a negative relationship between FDI and the exchange rate volatility, while real shocks cause a positive relationship (Aizenman, 1992).

Shinji Takagi and Zongying Shi analysed the exchange rate and FDI relationship in Japan for the period 1980-2011. They said if there is depreciation in the currency of host countries, it will increase FDI inflows to Japan. They also concluded that if it is hard to know the future exchange rate, FDI will take the place of exports (Takagi and Shi, 2011)

According to Agn`es B´enassy-Qu´er´e, the exchange rate volatility has an effect on FDI, and hence, for a stable financing of growth in emerging countries, especially for those countries which are close to the main investing country. They also found that exchange-rate regimes in developing countries should be defined in a global framework, given the externalities they encompass. More precisely, in the paper, it is also observed that monetary regionalism can be a way of increasing FDI in developing countries as a whole, although it would likely increase competition within each zone of the country. As a result, building on currency blocks can be beneficial as far as inward FDI and the related benefits of it for emerging countries (stability, technological progress) are concerned (Bénassy-Quéré et al., 2001).

Patrick Crowley and Jim Lee investigated whether the exchange rate affected FDI or not by using Panel Data Analysis Model with 18 OECD countries for 19 years, covering the period between 1980-1998. The results show that the exchange rate effect varies from country to country. They observed that as stability on foreign exchange markets may be caused by capital flows and investment, some degree of exchange rate flexibility, which may generate risks and uncertainty, does not seem to be such a crucial determinant of foreign investment as income growth and economic stability. "In other words, there may be a threshold effect in the sense that the exchange rate volatility – investment relationship is weak or absent if movements in the exchange rate are relatively small, but strong if movements in the exchange rate become excessively volatile"(Crowley and Lee, 2003).

Tsai examined the relationship between the FDI and trade balance. His results showed that the FDI inflows increase trade surplus, which – in other words – means that the FDI inflows decrease trade deficit. He also said that FDI is a very important determinant of trade balance (Tsai, 1994).

Economou (2019) conducted research on FDI and EF (economic freedom) for 4 countries – Spain, Greece, Portugal and Italy, for the time period between 1996-2017, and he found a positive relationship between FDI and EF.

Sayari et al. (2018), by considering the period between 1997-2014, analysed the relationship between EF and FDI for the long run by using panel data techinques for European countries. The outcome of the analysis showed that there is a positive relationship between FDI and EF.

Xu (2019) used gravity model to understand if there is a correlation among the bilateral trade, FDI and EF. The findings were not only for host countries but also for home countries. The results showed that there is a positive correlation among those 3 variables. As a result, the paper asserts that if economic freedom increases in a country, more FDI will be attracted from other countries.

Moussa et al. (2016) also investigated the relationship between EF and FDI by separating 156 countries into 9 regions. While the highest correlation was found in European countries, the lowest correlation was found in Oceania countries.

In another paper studied on multinational companies it was concluded that EF affect FDI positively. (Ghazalian and Amponsem, 2019)

Barro (1989), in his study, in which he examined 98 countries in the period between 1960-1985, stated that in the countries where the ratio of public consumption expenditures to GDP is high, the ratio of GDP per capita and private investments to GDP is low, there is a weak relationship between the quality of public investments and growth; he also found that there is a negative relationship between political instability and growth. Barro (1989), in his study, by using panel data analysis for 100 countries in the period between 1960-1990 determined a positive relationship between an increase in the rule of law, free markets, less public expenditures and high human capital, which are components of economic freedom, with economic growth.

Using data from 1976-1985, Torstensson (1994) analysed the relationship between the growth rates of economic development and economic freedom in 1994, covering 68 countries. This study considers two aspects of property rights. The first variable attempts to capture the degree to which property is state-owned and the other variable seeks to determine whether individuals are safe from arbitrary confiscation of their property. Torstensson believes that in 1994, the rate of state ownership did not affect the growth rate. However, an arbitrary seizure of property has a negative impact on growth. A serious shortcoming of this study is the limited concept of economic freedom used and a lack of sensitive analysis.

3. Material and Methods

The main goal of this study is to understand the relationship between the Foreign Direct Investment growth rate and economic freedom in Turkey. The time period covers the years between1996-2018 and while the FDI data were obtained from the World Bank database, economic freedom data was obtained from the Heritage Foundation database. As analysis, such techniques as time series analysis, which includes a stationarity (augmented Dickey-Fuller) test and the Johansen Test for co-integration were used.

3.1. Stationarity (Augmented Dickey Fuller) Test

The main goal of executing a unit root test is to understand whether the model is stationary or not. If there is a unit root in the model, it shows that it is not stationary. A non-stationary model causes statistically significant R2 (goodness of fit) even though there are no causalities among the variables. Thus, there would be a spurious result of the model (Gujarati, 2003). Therefore, all the variables in the model have to be checked whether they are stationary or not to get reliable results. In this study, the Augmented Dickey-Fuller method was used to see stationary variables (Dickey and Fuller, 1979). There are three different ADF equations as seen below. The first one is a random walk process which has no trend and no intercept, whereas the second one is a random walk with drift which has only intercept, and finally the third one is a random walk with drift around a stochastic trend which has both trend and intercept (Gujarati, 2003).

$$\Delta Y_t = \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-1} + \varepsilon t \quad (1)$$

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-1} + \varepsilon t \quad (2)$$

$$\Delta Y_t = \beta_1 + \theta_T + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-1} + \varepsilon t \quad (3)$$

Δ is a first difference operator, α, β, θ is constant, εt is a pure white noise error term, where $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$, $\Delta Y_{t-2} = \Delta(Y_{t-2} - Y_{t-3})$, etc. The number of lagged difference terms to include is often determined empirically, the idea being to include enough terms so that the error term is serially uncorrelated (Gujarati, 2003). Those three equations must give the same decision that variables are stationary or not. There are two hypotheses. H_0 = variable has a unit root or a variable is not stationary, H_1 = variable does not have a unit root, variable is stationary. If H_0 hypothesis is accepted, the first difference of variable is needed to make variable stationary. When the absolute value of test statistics is more than the critical value, H_0 hypothesis will be rejected and H_1 hypothesis will be accepted; on the other hand, when the absolute value of test statistics is less than the critical value, H_0 hypothesis will be accepted and H_1 hypothesis will be rejected.

3.2. Johansen Test for Co-integration

For running the Johansen Test, variables must be stationary at level, but when they are converted into the first difference, they must be stationary (Sandalcilar, 2012). According to the Augmented Dickey-Fuller test results, variables are stationary and the Johansen Co-Integration test can be run for the model.

The Co-Integration test shows that if there is a long run relationship among the variables or not (Engle and Granger, 1987). In other words, the Johansen test can be applied in the long run, so as to avoid spurious regression.

The Johansen multivariate co-integration test can be mathematically shown as below (Johansen, 1988).

$$\Delta Y_t = \mu + \prod Y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta Y_{t-1} + \varepsilon_i \quad (4)$$

In the equation, Yt shows n *1 vector of variables which are integrated of order one, Π and Parameter show that n*n matrix of coefficients must be tested. Then, rank must be checked. If the rank is zero, it means that there is no co-integration among variables. If the rank is one there is one co-integrating relationship, if it is two there are two co-integrating relationships and so on. Then, two hypothesis can be created. Ho= There is no co-integrating among the variables. H1= There is co-integration among the variables. If trace statistic is more than 5% critical values, Ho will be rejected and Hı will be accepted. It means that there is co-integration among the variables. If trace statistic is less than 5% critical values, Ho will be accepted and H1 will be rejected. If two time series are co-integrated, there is a long run relationship between them. So they cannot move separately and they move together (Dogan, 2013).

4. Results

In this section, the stationarity (Augmented Dickey-Fuller) test and the Johansen Co-integration test results are presented and evaluated.

4.1. Unit Root Test

When the absolute value of test statistics is more than the critical value, H_0 hypothesis will be rejected and H_1 hypothesis will be accepted. On the other hand, when the absolute value of test statistics is less than the critical value, H_0 hypothesis will be accepted and H_1 hypothesis will be rejected. Test results can be seen in Table 1 one below.

According to the ADF test results, all the variables, except GDPGR, are not stationary at level and they have unit root. It means that H0 hypothesis, which says that a variable has unit root or a variable is not stationary, will be rejected. Thus, the first difference of the variable must be taken. The ADF test results for the first difference of variables can be seen in Table 2 below.

According to the ADF test results, all first difference of the variables are stationary at level and they do not have unit root. It means that H0 hypothesis, which says that a variable has unit root or a variable is not stationary, will be rejected and H1 hypothesis, which says that variables do not have unit root, variables are stationary, will be accepted. The presentation of three models shows that the first difference of FDI does not have unit root, which means the models are stationary at least 5%.

Table 1: Augmented Dickey-Fuller Test Results at Level

Order of integration	Variables	Intercept	Trend and intercept	None
Level	L FDI	-2.113360*	-2.169003*	-0.784733*
Level	L EF	-1.370156*	-1.748287*	0.554525*

Notes: values with * indicate an insignificant variable at 5%
Source: own calculation based on available data.

Table 2: Augmented Dickey-Fuller Test Results at First Difference

Order of integration	Variables	Intercept	Trend and intercept	None
First Difference	D FDI	-4.151371***	-4.070945**	-4.232965***
First Difference	D EF	-4.514527***	-4.514786***	-4.614441***

Notes: values with ** indicate a significant variable at 5%. Values with *** indicate a significant variable at 1%
Source: own calculation based on available data.

4.2. Johansen Co-Integration Test

As seen in Table 3 below, for rank zero, H0 hypothesis will be rejected because trace statistics is more than 5% critical value. It means that there is no co-integration. When rank zero is rejected, rank one must be checked. For rank one, trace statistics 0.1485 is less than 5% critical value 47.21. It means that the variables are co-integrated, there is one co-integration, and they move together in the long run.

Table 3: The Johansen Tests Results for Co-integration Trace Statistics

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value	0.05 Prob.**
None *	0.435774	15.78615	15.49471	0.0452
At most 1	0.164246	3.767850	3.841466	0.0522

Source: own calculation based on available data.

5. Conclusions and recommendation

This paper attempts to explain that FDI and EF were related in Turkey for the period between 1996-2018. The relationship between these variables has been tested by using time series analysis. First, an Augmented Dickey--Fuller test was executed to see whether or not there is unit root among the variables. According to the test results, the variables have a unit root, which means that they are not stationary at level. But when the first difference of variables was checked, it was seen that all the variables were stationary. It means that the findings will not give spurious results. The test result also showed that the variables were co-integrated, so they move together in the long run. In recent years, the importance of FDI began to rise with increasing globalisation around the world. Developing countries such as Turkey face an inadequate amount of the savings rate, which leads inability to investment. Meanwhile, the foreign trade deficit, which causes a shortage of foreign cash is also one of the biggest problems in these countries. Foreign direct investment inflows play an important role in solving investment problems arising from the domestic savings shortage. In the economy, increasing investment makes a significant contribution to economic development and growth. MNEs want to sell their products not only on the markets of the countries in which they invest, but they also want to export to other countries. Export made by foreign investors enables currency inflow to countries and it provides an improvement in the trade balance. Thus, it prevents the crisis arising from the foreign currency shortage. Fiscal policies have a kind of objectives such as ensuring economic stability, economic growth and equitable distribution of income. The quality of fiscal policy will make Turkey more attractive from the point of domestic investors as well as foreign investors. In sum, there are many benefits of FDI, such as the fact that it ensures economic growth, helps to reduce the trade deficit and unemployment rate and increases welfare for host countries. FDI, which has an important contribution to the economic growth and development, needs to be implemented in both economic and non--economic policies.

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Polish zloty as an instrument to support the economy in the era of coronavirus

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ABSTRACT

The article presents arguments in favour of maintaining monetary sovereignty by Poland. The author expresses the view that having Poland's own currency and its own national monetary policy helps to alleviate crisis phenomena in the economy. The article shows the positive role of the NBP in counteracting the economic crisis caused by the coronavirus epidemic. The NBP lowered interest rates to the lowest level in history and purchased debt securities. The Polish monetary and budgetary authorities managed to stop the decline in GDP and the rise in the unemployment rate. Moreover, the easing monetary policy of the NBP prevented excessive strengthening of the domestic currency against foreign currencies. As a result, the exchange rate was favourable for domestic exports.

Keywords: interest rates, central banks, monetary policy, debt securities, Poland.

1. Introduction

The aim of the article is to present arguments in favour of maintaining the Polish zloty and its own monetary policy by our country. The article expresses the view that having Poland's own currency and its own national monetary policy helps to alleviate crisis phenomena in the economy. The article highlights the positive role of the NBP in mitigating the economic crisis caused by the coronavirus epidemic.

The Polish zloty as the national currency was introduced into the economic circulation after regaining independence as one of the pillars of the Polish state. Poles understood well how important it is for the independence of the Polish state to have its own money.

Furthermore, in the realities of the 21st century, independent states have their own currency and their own central bank. Own money is still a very important attribute of sovereignty. Own monetary policy is one of the two key elements of economic policy. In pursuing the Polish monetary policy, the National Bank of Poland applies the so-called direct inflation targeting. At the same time, it makes it as beneficial as possible for the real sphere of the Polish economy, supporting economic growth and protecting jobs.

It is worth noting that the liquidation of the Polish zloty is the next phase of the process that may consequently lead to the actual liquidation of the Polish state. By liquidating our national currency and transferring the competence to conduct monetary policy from Warsaw to Frankfurt am Main, we are almost completely shedding the sovereignty of the Polish state. We would then be only a part of a state-like organisation, which was pointed out by prof. Lech Morawski. We cannot allow this. I believe that the task of the present generation is to pass on the attributes of Poland's monetary sovereignty to future generations of Poles.

In the modern world dominated by multinationals, our homeland must develop and last. For this to be possible, the zloty should be defended. At the same time, I would like to emphasise once again the importance of the need to maintain one's own monetary policy and not to enter the euro area. I even think that it would be worthwhile to postulate the official exclusion of Poland from the obligation to adopt the euro. I think that it is worth pursuing this consistently in order to regain full sovereignty of Polish monetary policy. Poland should always stick to its own currency.

In this context, it is worth noting that a referendum was held in Sweden on September 14, 2003, in which the majority of the country's citizens voted in favour of keeping the Swedish crown and not joining the euro area. As a consequence of this event, on February 20, 2008, the former president of the Bank of Sweden, Lars Wohlin, during a debate in the European Parliament stated that "in the next treaty" it should be "clearly stated that Sweden is not obliged to participate in monetary cooperation".

It is worth noting that even under the current legal conditions, the zloty can be kept for any time. If only because it is not known whether the eurozone will one day collapse or dissolve. After all, in the past we had to deal with multinational monetary unions that were falling apart. I believe that the euro area is still an experiment.

Having a zloty and our own central bank, i.e., in fact having monetary sovereignty, we have the opportunity to conduct monetary policy in accordance with the interests of our own country. There are at least three advantages of monetary sovereignty. These are: the independence of deciding on the objectives of the central bank's operations, the independence of deciding on the instruments of monetary policy and the independence of deciding on the location of the central bank within the structures of Polish national authorities. These are very important competences of the Polish state, the defence of which should be the Polish raison d'etat.

Let us remember that the National Bank of Poland as the Polish central bank will take better care of the Polish economy than the European Central Bank. It is worth emphasising that the members of the Monetary Policy Council are morally obliged to care for Poland because they are Poles, while members of the ECB body are not obliged to do so. From the Polish point of view, the ECB is a foreign bank, the purpose of which is not to care for the Polish economy, but for the economy of the euro area.

2. Methods and results

Let us remember that the euro area has been an area of economic stagnation and relatively slow economic growth as well as high unemployment since its inception. It is worth emphasising that this is a permanent feature of the euro area. In almost all years of the 1999-2019 period, the economic growth rate in the euro area was lower than the economic growth rate in mature countries in general with their own national currencies. So far, there has been no case of a relatively poor country entering the euro area and becoming a rich country by operating in this area. It is worth giving the example of Portugal, which was the country with the lowest GDP per capita of the euro area among the 11 countries constituting this zone in 1999. Currently, Portugal is still the country with the lowest GDP per capita among these 11 countries.

Moreover, the recent financial crisis of 2007-2009 showed that the most effective measures were taken by central banks with their own national currencies. In order to mitigate the effects of the crisis for Poland, one must act quickly. Therefore, it is necessary that Polish state institutions retain their competences and not transfer them to foreign hands.

The economic crisis caused by the coronavirus epidemic also shows that countries such as Poland, which have monetary sovereignty, experience the coronavirus epidemic more gently than countries in the euro area.

It is worth following basic macroeconomic data such as: GDP, inflation and unemployment in Poland compared to the euro area in recent years. The conducted research shows that the real GDP rate in Poland in 2018-2020 showed a much higher growth dynamics than in the euro area (Figure 1).

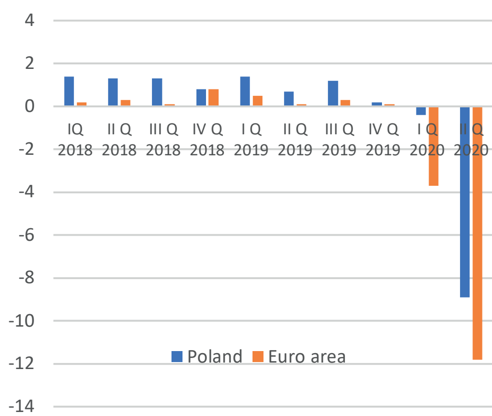

Figure 1: Real GDP growth in Poland and the euro area in 2018-2020 in %
Source: IMF database

Interestingly, during the coronavirus pandemic, the Polish economy was doing much better than the euro area. In the second quarter of this year, the real GDP rate decline in the euro area exceeded -10% and amounted to -11.8%. In Poland, the decline in real GDP growth was at the same time much lower (-8.9%).

Taking into account the unemployment rate, it can also be seen that in Poland in 2019-2020 there was a much better situation than in the euro area (Figure 2).

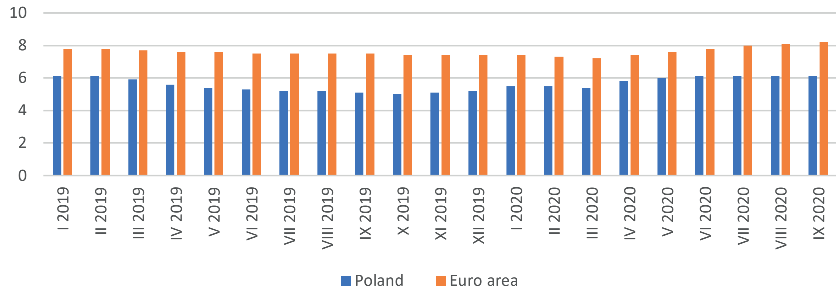

Figure 2: Unemployment rate in Poland and the euro area in 2019-2020 in %
Source: IMF database

During the coronavirus pandemic, the Polish monetary and budgetary authorities managed to curb the further increase in the unemployment rate (6.1%). Meanwhile, in the euro area, we have continued to see an increase in the unemployment rate (8.2%) since the outbreak of the economic crisis caused by the coronavirus pandemic.

Interestingly, the inflation rate in Poland is higher than in the euro area. However, what worries the monetary and budgetary decision-makers of the euro area is the deepening of deflationary tendencies in the area of the single currency since the outbreak of the coronavirus epidemic (Figure 3).

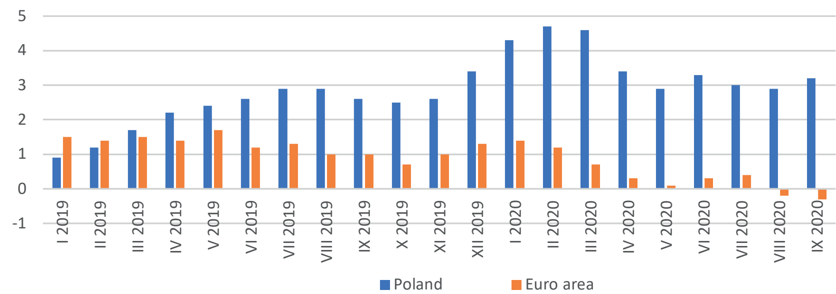

Figure 3: Inflation rate in Poland and the euro area in 2019-2020 in %
Source: IMF database

It is worth remembering that although in the case of the Polish central bank the direct inflation target of 2.5% with possible deviations of +/- 1 percentage point up and down is still in force, but it should be treated flexibly. Personally, I am a strong supporter of such an approach, according to which the inflation target should be implemented in such a way that it is as beneficial as possible for the real economy.

With its own currency and its own central bank, Poland can use monetary policy instruments to stimulate Poland's economic development. Experience shows that the National Bank of Poland has so far performed very well in supporting the Polish economy.

In the era of the coronavirus, the Polish central bank also helped the Polish economy. By pursuing a bold monetary and fiscal policy, temporary economic difficulties have been overcome. Thanks to the reduction in interest rates and the purchase of Treasury securities and debt securities guaranteed by the Treasury, there has been a gradual improvement in consumer sentiment. In addition, data on industrial production are also improving, which is also growing annually, and this is very positive. We need to continue these positive trends.

It is worth noting that the dynamics of industrial production in our country recorded positive values already in June this year. Meanwhile, in the euro area, industrial output growth continues to remain below 0 (Figure 4).

It is worrying that in the case of euro area countries, since July this year, the decline in industrial production has been deepening, despite the already very expansive monetary and budget policies.

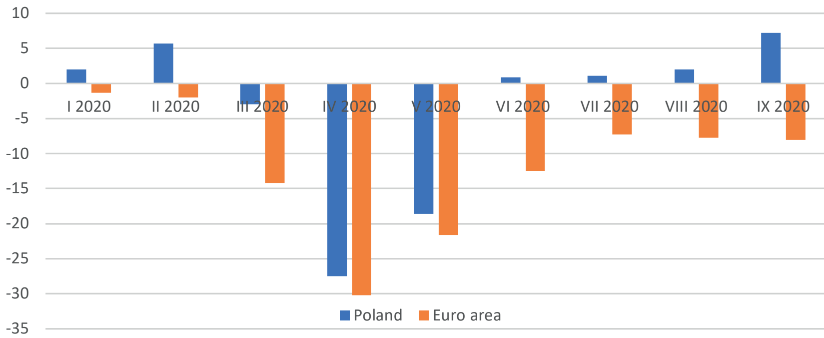

Figure 4 Industrial production growth in Poland and the euro area in 2020 in %
Source: IMF database

It is also worth noting that individual central banks lowered interest rates also to counteract the strengthening of exchange rates. The point is that excessive strengthening of the domestic currency may have a negative impact on the profitability of exports. It is very important that the NBP is examining the borderline profitability of exports. Currently, the level of the exchange rate in Poland is favourable for Polish exporters and ensures the profitability of Polish exports.

The point is for the exchange rate to support the economic development of the country. An element of GDP is not only consumption and investment outlays, but also the difference between exports and imports, i.e., net exports. If export is higher than import, it has a positive effect on GDP, and if there is higher import, it has a negative effect. Consequently, net export increases employment and protects jobs in Poland.

3. Conclusions and discussion

First, the Polish zloty is an attribute of Poland's independence. Having a zloty and our own central bank, i.e. in fact having monetary sovereignty, we have the possibility to conduct monetary policy in accordance with the interests of our country.

Second, there are three advantages to monetary sovereignty. These are: the independence of deciding on the goals of the central bank's operation, the independence of deciding on the instruments of monetary policy and the independence of the central bank's cooperation with government bodies of a given country.

Third, own monetary policy may be helpful in mitigating crisis phenomena. The recent economic crisis caused by the coronavirus epidemic has shown that the Polish central bank, in cooperation with the Polish government, has taken decisive measures to prevent further cooling of the real sphere of the Polish economy.

Fourth, countries such as Poland, which have monetary sovereignty, experience the coronavirus epidemic more gently than countries in the euro area. For example, during the coronavirus pandemic, the Polish monetary and budgetary authorities managed to stop the further increase in the unemployment rate. Meanwhile, in the euro area, since the outbreak of the economic crisis, there is a continuing increase in the unemployment rate.

Fifth, easing monetary policy in the era of coronavirus is aimed at preventing excessive strengthening of the national currency against foreign currencies. The point is that the exchange rate should be favourable for domestic exports, which mitigates the effects of the economic slowdown.

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