

THE IMPACT OF ECONOMIC MACROENVIRONMENT ON SHAPING FOREIGN TRADE DURING THE COVID-19 PANDEMIC IN POLAND

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Purpose: The purpose of this article is to demonstrate how changes in economic indicators affect foreign trade in Poland during the COVID-19 pandemic.

Design/methodology/approach: The research problem is: what impact did economic indicators have on imports and exports in Poland during the COVID-19 pandemic? Main hypothesis: the COVID-19 pandemic had a negative impact on economic indicators, which directly had a negative impact on the export and import from Poland. The conducted research used an analysis of domestic and foreign literature and method of a document examination.

Findings: Research has shown that the emergence of the COVID-19 pandemic in 2020 had a significant impact on the development of several indicators of the economic macroenvironment, in particular GDP, inflation and the unemployment rate. Indicators identifying foreign trade did not show significant dependencies on the number of infections, but on phenomena shaping sensitive indicators.

Originality/value: The content of the study confirms the impact of the COVID-19 pandemic on changes in most indicators of the economic macroenvironment. Additionally, it shows the phenomenon and the scale of impact, which may be important in the event of new cases of epidemiological threats or crisis situations (e.g. geopolitical).

Keywords: pandemic COVID-19; index; trend.

Category of the paper: Case study.

1. Introduction

The proper functioning of entrepreneurship is determined, among others, by the economic situation of a given country, the potential of the organization, the socio-economic and geopolitical situation of neighboring countries or countries potential for cooperation. Analysis of opportunities and threats gives companies the opportunity to implement customer-oriented changes, meeting their changing expectations and requirements while increasing their

satisfaction. Continuous analysis of macroeconomic market variables through appropriate identification and evaluation of data allows you to minimize the risk of running a business in such volatile times through flexible and responsible management. The literature on the subject indicates that much attention is paid to the appropriate identification and assessment of various phenomena relating to investment, social, sociological aspects, etc. in terms of business cycles (Taylor, McNabb, 2007; Klein, Ozmucur, 2010). Such studies of the economic macro-environment are intended, firstly, to give a hint as to what factors are (can be) the main determinants of economic success, and, on the other hand, how to manage an organization or a country to achieve stability (functioning, development, macroeconomic) by undertaking various types of activities aimed at a specific goal (Kozioł, 2010).

A query of the most important databases revealed that there are few publications that focus on the analysis of the impact of the COVID-19 pandemic on foreign trade in Poland. It can therefore be assumed that this issue is relatively rarely researched in the literature and the literature on this subject is limited. Therefore, with this publication I would like to fill this research gap.

The aim of the publication is to demonstrate how changes in economic indicators affect foreign trade in Poland during the COVID-19 pandemic. The study poses a research question: what impact did economic indicators have on imports and exports in Poland during the COVID-19 pandemic? and a hypothesis was put forward: the COVID-19 pandemic had a negative impact on economic indicators, which directly had a negative impact on the export and import from Polish.

2. Literature review

The Social, economic, political and cultural changes force organizations to make changes and decisions quickly, which involves the need to verify the goals of action and sometimes the implemented strategies. The early years of the 21st century were perceived very positively, as they indicated a significant acceleration of the processes of internationalization of the economy and globalization processes, resulting from, among others, trade liberalization, technology development, global dissemination of logistics systems and global development (investment) activities undertaken by international corporations. The growing expectations of market stakeholders cause constant changes in the market(s), shaping trends and the economic situation (Kozioł, 2010; Wang, Zeng, 2020). Therefore, ensuring the stable operation and development of enterprises in the global economy is becoming more and more difficult. Organizations began adapting to new conditions resulting from, among others, digitalization, the development of automation and intelligent technologies, as well as changing laws (legislation) in the second half of the 20th century. This was particularly important for achieving

the set goals in specific socio-economic conditions (dimension of the economic macro-environment), where economic acceleration required reliability, standardization and appropriate information management (big data) from enterprises (Inekwe, 2020; Ghosh, 2021).

Responsible management, based, among others, on corporate social responsibility, is important from the point of view of the economic functioning and development of the organization. There is always a possibility of a recession or other threats, e.g. pandemic, war, which may limit the proper functioning of the organization and force business entities to analyze the causes and mechanisms causing them. This will allow you to focus on anticipating market opportunities and threats resulting from, for example, government actions, e.g. lowering taxes, lowering interest rates, supporting strategic investments for the country, etc., which may have a positive or negative effect on the economic activity of enterprises (Bodo et al., 2000; Narayanan, Unni, 2017; Oi, Cheun, 2020; Konstantinou, Tagkalakis, 2011).

It becomes particularly important during the emergence and development of the COVID-19 pandemic. There was a significant threat to the implementation of current activities of business entities (various industries), investment and development activities (Ainsworth, McKenzie, 2020; Yu, 2020; Wang, Zeng, 2020).

This was confirmed by the effects of the spread of various pathogens and viruses in the past. Various threats caused by viruses have always appeared in the world on a mass scale. Examples include SARS in 2002-2003, bird flu in 2003-2006, swine flu in 2009-2010, Ebola in 2013-2016, and measles in 2019 and now. However, the range and power of destruction were much less noticeable (Długosz, 2021) than in the case of SARS-CoV-2, also known as the COVID-19 pandemic.

The economic development of the country has an important impact on the activities of economic entities and households, and the emergence and development of the COVID-19 pandemic around the world, including in Poland, has influenced changes in the conditions of the country's economic macroenvironment. In such urgent crisis situations, epidemiological restrictions are introduced, e.g. maintaining social distance, the obligation to wear masks or partial closure of activities in some sectors (Anderson et al., 2020; Lewnard, Lo, 2020; Musselwhite et al., 2020; Moreno et al., 2021), determined running a business, forcing actions to guarantee social security. (Camargo, 2021; Anderson, 2020; Khan, Upadhayaya, 2020; Olkiewicz, Wolniak 2018; Wolniak et al., 2021; Wyszomirski, Olkiewicz, 2020).

3. Materials and methods

The aim of the publication is to demonstrate how changes in indicators affect foreign trade in Poland during the COVID-19 pandemic. This is especially important in terms of running a business and, above all, shaping its development. The study attempts to show how the

COVID-19 pandemic affected basic economic indicators that could influence decision-making regarding international trade. In the study, the most important parameters (indicators) influencing international aspects were adopted in the identification of the economic macroenvironment according to Pizło and Mazurkiewicz-Pizło: GDP, inflation, unemployment level, income level.

The study asked research questions: what impact did economic indicators have on imports and exports in Poland during the COVID-19 pandemic? The analysis of the literature and observations of the effects caused by the COVID-19 pandemic led to the development of a "negative" hypothesis: the COVID-19 pandemic had a negative impact on economic indicators, which had a direct negative impact on the export and import from Polish.

The research was carried out as follows:

1. The changes in individual indicators in the years 2016-2020 were analyzed in the analysis of quarterly series.
2. The data were subjected to regression analysis and correlation between variables.
3. The data were subjected to comparative analysis to demonstrate relationships.
4. The final result of the study was to demonstrate the development of foreign trade in the analyzed period.

The study analyzes domestic and foreign literature on the subject. Quantitative research was based on secondary data from the following databases: EUROSTAT, NBP, TRADING ECONOMICS Central Statistical Office covering the period 2016-2020. The values of the analyzed indicators were calculated in Microsoft Excel, and the research results were presented in the form of Microsoft Excel charts.

4. Results

The effects of the COVID-19 pandemic were visible throughout the global economy. Literature analysis shows that the first series of infections quickly caused a global pandemic, which continues to this day, as well as its effects. The WHO announced the COVID-19 pandemic on March 11, 2020, because the phenomena occurring in various parts of the globe indicated a mortality rate of 3.4% globally, and for Poland 2.29% (Olkiewicz, 2022). Figure 1 shows the increase in infections during the analyzed period.

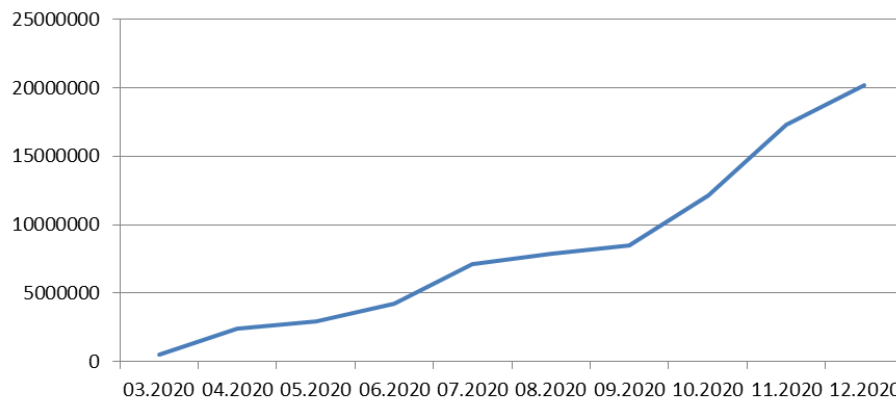


Figure 1. The scale of COVID-19 infections in the world.

It is worth recalling that all sectors of the economy had to undergo rapid, radical changes. Not all enterprises have passed the test of their ability to adapt to sudden, unforeseen crisis situations. It should be noted that the rapidly progressing COVID-19 pandemic changes resulted in socio-economic changes, which resulted in the introduction of epidemiological restrictions. On the one hand, the restrictions influenced the conduct of business activities, increasing and guaranteeing the safety or sense of security of employees, and on the other hand, they changed the habits, habits and expectations of customers and also caused the emergence of new needs. Such changes were reflected in the development of Gross Domestic Product. The data presented in Figure 2 indicate that despite the emergence of the pandemic, the analysis of the GDP indicator at current prices does not show any downward trends. There is minimal increase from year to year.

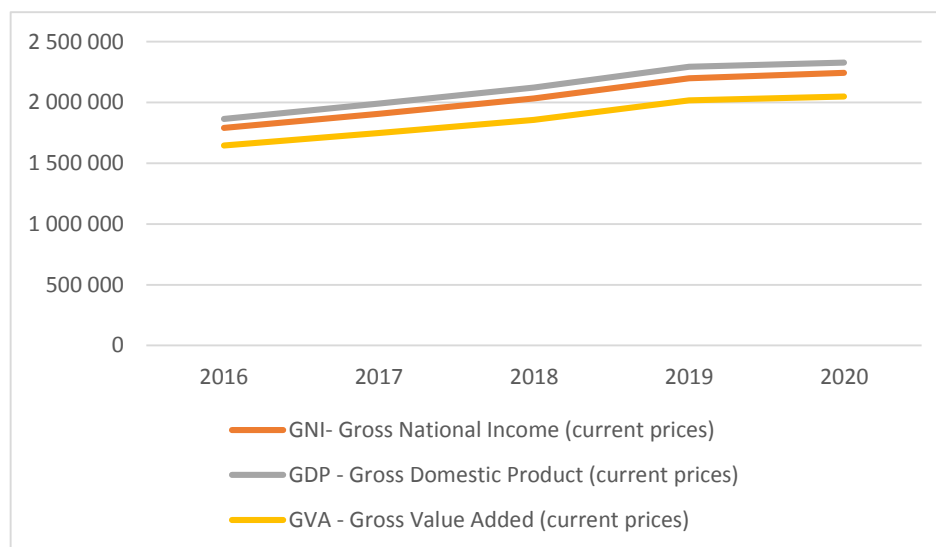


Figure 2. Changes in the GDP index.

The data in Fig. 3. looks different. Changes in the method of data identification, i.e. comparative analysis year to date (at constant prices) and the value of the previous year = 100, allow us to conclude that the GDP indicator shows negative variability during the emergence of the COVID-19 pandemic.

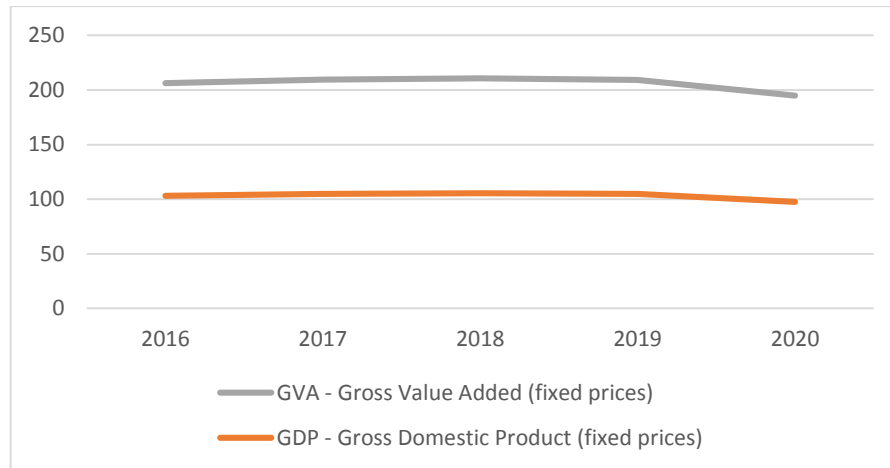


Figure 3. Changes in the GDP index.

The analysis of figure 3 indicates a significant impact of the COVID-19 pandemic on the development of the GDP indicator (changes in the GDP indicator compared to the same period of the previous year), as there is a breakdown in the tendency of the indicator's distribution. For a better presentation of the interaction of both phenomena, Figure 4 is presented. The data in Figure 4 show how the number of infections directly affects changes in GDP, i.e. the number of infections increases and the GDP indicator decreases.

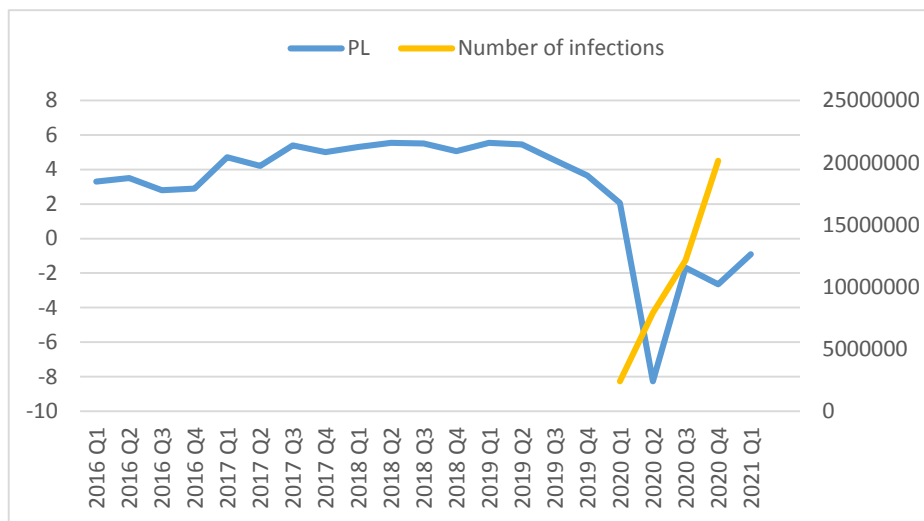


Figure 4. Changes in the GDP index in quarters and the number of infections.

Changes resulting from the introduction of restrictions and restrictions, e.g. related to maintaining distance, have largely influenced the demand and supply of products and services. Fears of infection and disease have resulted in restrictions on movement and direct consumption. This, in turn, (sales restrictions) resulted in the increase in inflation presented in Figure 5.

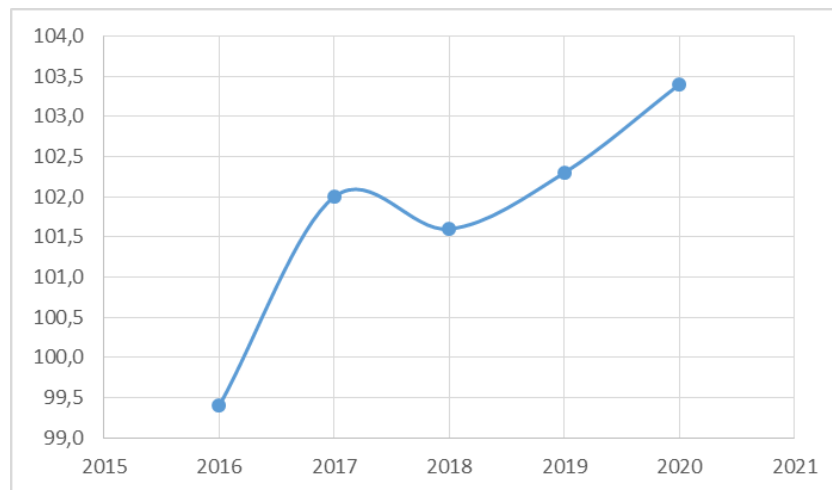


Figure 5. Changes in the inflation rate.

The analysis of the phenomenon of change in the inflation rate (year to year) from Figure 5 indicates a significant increase, which resulted in an increase in the prices of raw materials, which in turn, together with the limited access of employees to work (epidemiological restrictions), resulted in higher production costs, forcing entrepreneurs to raise prices products. It should be noted that actions limiting the possibility of stable operation of enterprises, due to restrictions and bans implemented by the government, forced employers to change the organization of work, including sending employees on forced leaves. Ultimately, employees made decisions to lay off employees or even suspend or close their operations. Such radical changes had their consequences in terms of changes in the unemployment rate. Figures 6 and 7 indicate that in the case of Poland, the COVID-19 pandemic also had a negative impact on the development of this parameter.

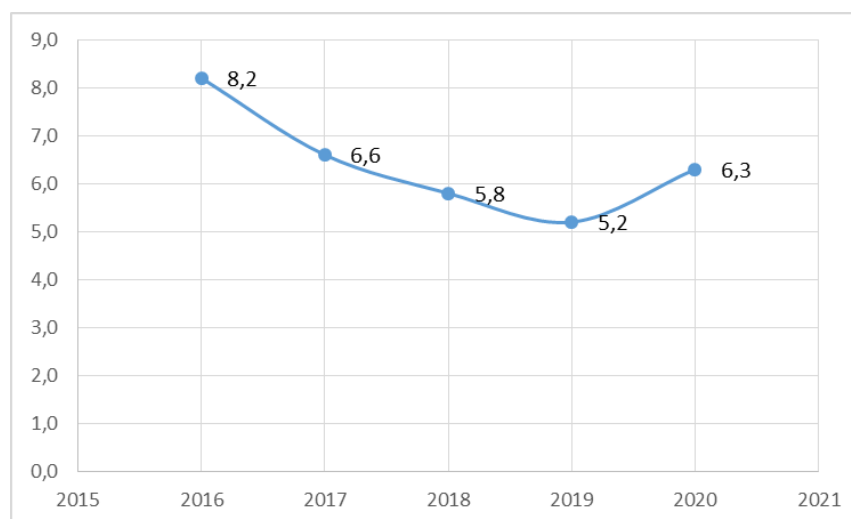


Figure 6. Changes in the unemployment rate (in %).

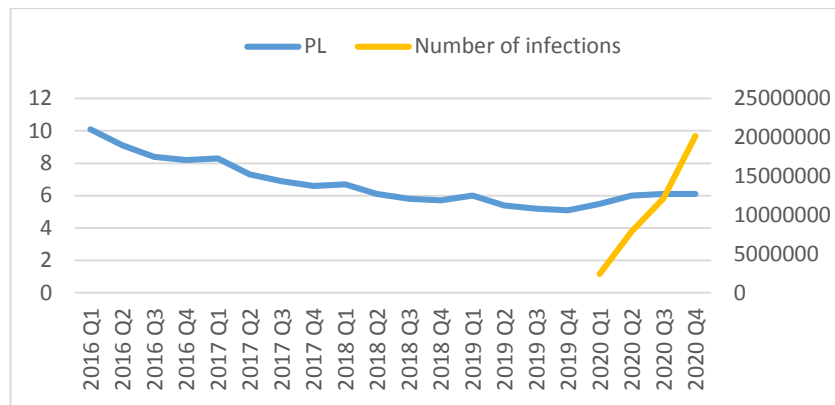


Figure 7. Changes in the unemployment rate in quarters and the number of infections.

The change in the unemployment rate (Fig. 6, 7) in the analyzed period indicates that there was a reduction in jobs due to the liquidation of entities and the difficult socio-economic situation. Particularly visible is the relationship between the distributions of the unemployment rate, which begins to increase when COVID-19 cases increase.

It is worth noting that the growing unemployment rate as well as reduced demand should be reflected in the development of the international trade index, in particular foreign imports and exports. The analysis of the export and import index (on a year-to-year basis) in the analyzed period had a very similar distribution to changes in GDP (Fig. 8), but in terms of value it was slightly different (Fig. 9).

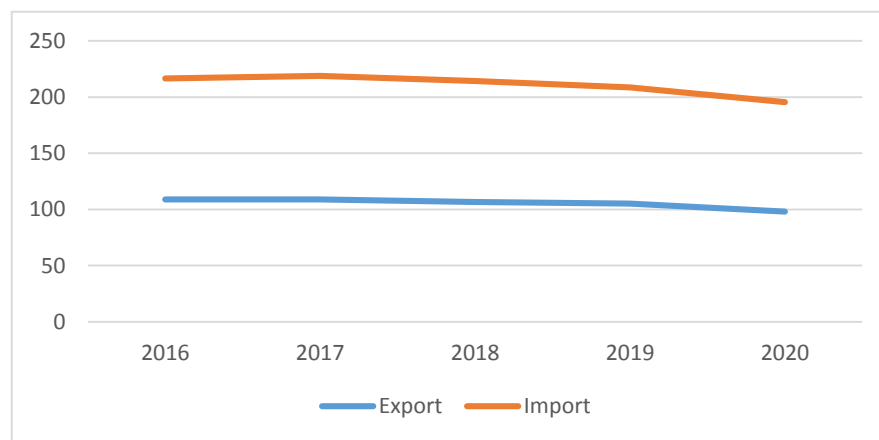


Figure 8. Changes in the export and import index.

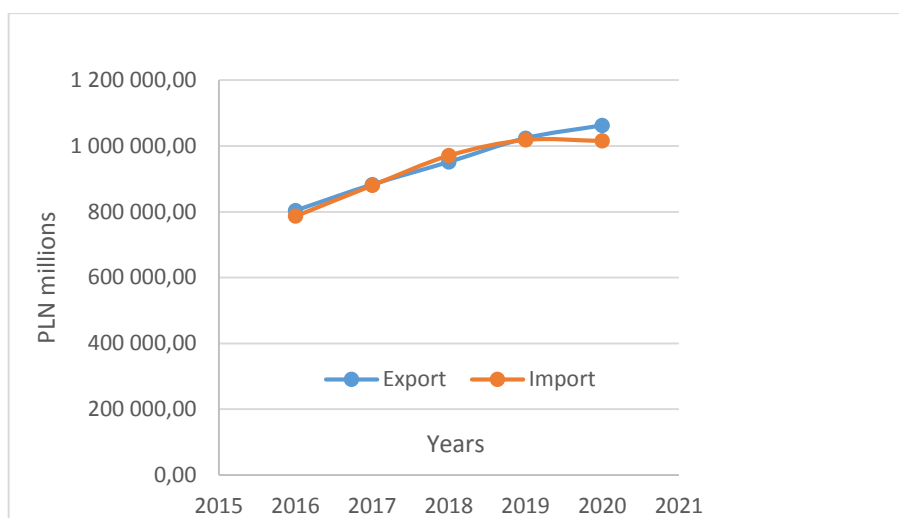


Figure 9. Changes in the international trade.

The analysis of Figures 8 and 9, despite a different approach to assessing the distribution, indicates downward trends (imports) and slowing growth (exports) during the COVID-19 pandemic. For a better presentation of the studied phenomenon, the export index and the number of cases were identified on a quarterly basis (Figure 10).

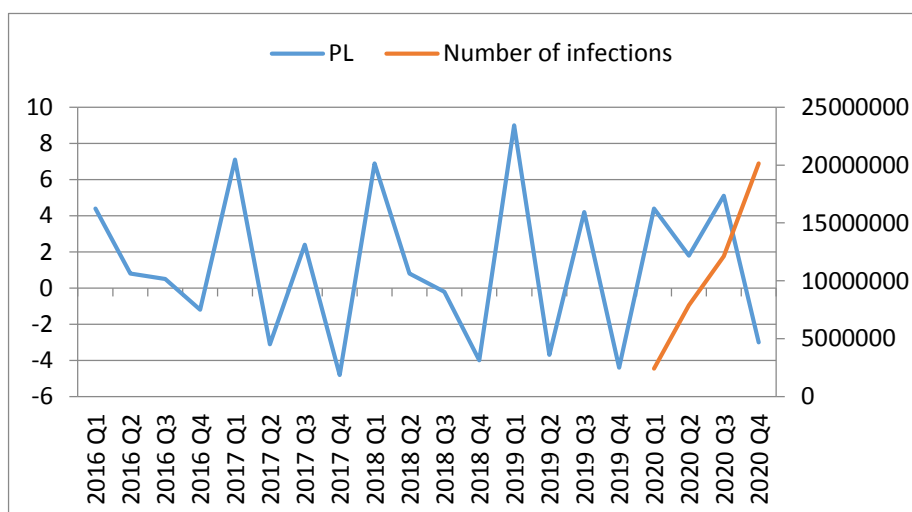


Figure 10. Changes in the export index in quarters and the number of infections.

Analysis of Fig.10. indicates that the initial wave of illnesses had a positive impact on export volumes. This may be the result of the disease being detected later than in other countries, thanks to which the organization's current production and resources could be sold abroad. However, as infections increased, the trend of foreign trade (export) began to decline. This may mean, on the one hand, limited sales opportunities and, on the other hand, interrupted supply chains of raw materials necessary for the production of goods. This distribution may mean that there is a small correlation in the short term but a significant one in the long term. However, the lack of correlation both in the long and short term is visible in the identification of the import index and the number of cases (Fig. 11).

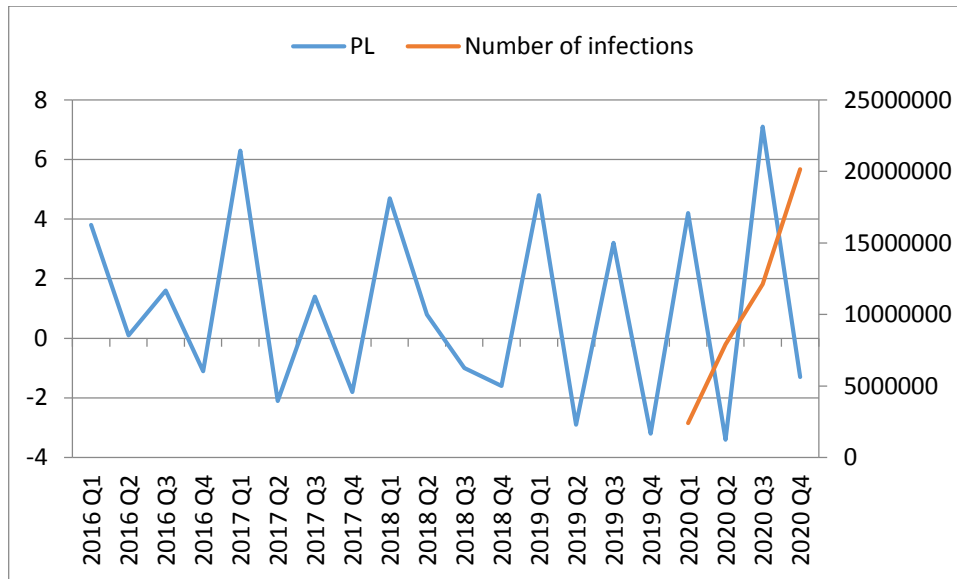


Figure 11. Changes in the import index in quarters and the number of infections.

This means that the COVID-19 pandemic is the main determinant of the import rate from abroad. In other words, the import rate is influenced by the demand situation in the country for given goods or services, as well as their availability, consumption possibilities (wealth of the inhabitants), etc. The analysis of Figure 11 only confirms these statements, as a very low relationship between these features is visible. To confirm the previous conclusions, Figure 12 presents the level of foreign trade between Poland and Ukraine.

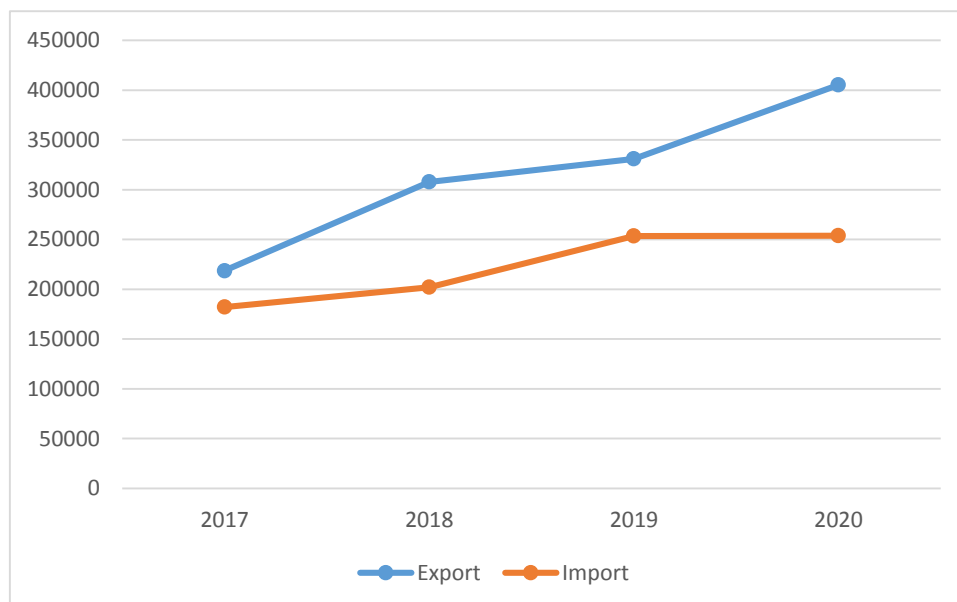


Figure 12. Polish imports from Ukraine and Polish exports to Ukraine in thousands of dollars.

The presented data confirm that in the initial phase of the COVID-19 pandemic, the growing trend in exports was maintained, while imports were already disrupted. The presentation of economic macro-environment indicators identifying the impact on foreign trade during the pandemic is presented in Fig. 13.

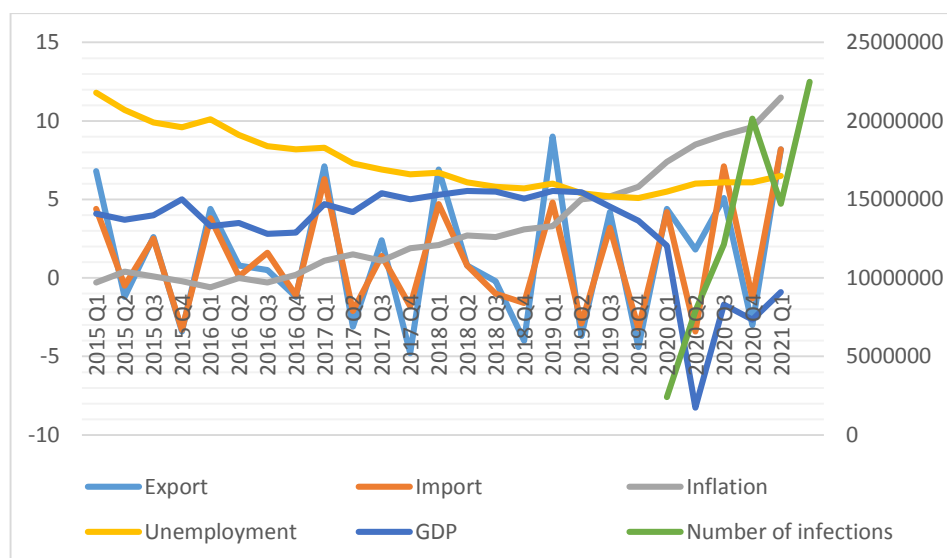


Figure 13. Indicators of the economic macro environment in quarters in 2016-2020.

5. Conclusions

The analysis of socio-economic phenomena indicates that the emergence of the COVID-19 pandemic in 2020 had a significant impact on the development of few indicators of the economic macro-environment. The presented statistical data show that most economic entities in Poland and the government took quick actions to minimize radical changes in the development of basic economic (macroeconomic) indicators. Significant changes were visible in GDP, inflation and unemployment rates. Such rapid changes had direct economic significance. It is worth noting that indicators identifying foreign trade did not show significant dependencies on the number of infections. It seems that the most sensitive indicators could have an impact on foreign imports, as many entities struggled with difficulties in organizing work and with the labor force. A similar situation was with exports, which could be limited by the same phenomena (as in Poland) in other countries, as well as logistic difficulties. The conducted research proves that the research hypothesis was correct, as the COVID-19 pandemic had a negative impact on economic indicators, which directly had a significant negative impact on the export and import of Polish products.

The research results indicate that the research area should be deepened and the research period should be extended. It is worth noting that during the research, limitations or difficulties were encountered resulting, for example, from the availability of data in the Central Statistical Office and EUROSTAT databases and various types of measurement methodologies used.

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