

# The COVID-19 pandemic and Poland's macroeconomic situation

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**Abstract:** The research objective is to evaluate the impact of the COVID-19 pandemic on the macroeconomic situation in Poland. The research employed critical analysis of scientific literature and an analysis of statistical data. The first part of the article describes the channels through which the COVID-19 pandemic affects economy. The second part contains an analysis of changes in the mood of entrepreneurs, using monthly fluctuations of the indices measuring economic situation and consumer confidence, followed by an evaluation of Poland's macroeconomic situation in the context of the developing COVID-19 pandemic. This evaluation was based on an analysis of quarterly data concerning changes in the GDP and its component parts, the labour market situation and changes in price indices from the first quarter of 2018 to the second quarter of 2021. The research results showed that the COVID-19 pandemic and the restrictions imposed by the Polish government caused negative consequences in Polish economy. This is evidenced by the worse mood prevalent among entrepreneurs and consumers. Over the time period analyzed, the macroeconomic situation of Poland was observed to have deteriorated as well, with the decreased rate of economic growth, higher unemployment rate and accelerated inflation processes..

**Keywords:** COVID-19 pandemic, macroeconomic situation, Polish economy

## 1. Introduction

The first cases of COVID-19 infections were confirmed in the Chinese city Wuhan in December 2019 (Huang et al., 2020, p. 497), and the World Health Organization announced the state of a pandemic on 11 March 2020 (WHO, 2020). A pandemic is a situation where a rapidly accelerating number of infections with a specific disease agent is observed in a short time. The epidemiological situation developed over the larger part of the year 2020, causing many socio-economic changes (Mueyeed and Islam, 2020, p. 8), which continue to generate significant consequences to this day. Although this is not the first pandemic outbreak in the twenty-first century, its consequences can be much greater than those of previous

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ones. The reason is that the current pandemic, via globalization processes, has spread very rapidly (in about two months) to all continents and infections are recorded in almost all countries across the world, with few exceptions (Welz and Breś-Targowska, 2020, p. 260).

The outbreak of this pandemic cannot have been predicted, which makes it “a black swan” event. The term *black swan* was coined by N. Taleb. A rise in the cases of COVID-19, followed by the government restrictions, such as social distancing, limited travel or even total lockdown, has triggered significant changes in the way companies as well as households function, which has eventually affected state economies (Fitriyasari, 2020, p. 53). The COVID-19 epidemic has also been spreading in Poland, as confirmed by the number of infections and deaths. The total morbidity rate places Poland on the 14th position globally (2.88 million cases, including 75.19 thousand fatal ones, as of 16 July 2021). The sharp increase in infection cases has resulted in a worse financial situation of many companies and households, which undoubtedly has influenced the macroeconomic situation in Poland. The above presumption has encouraged us to undertake the study reported below.

The objective was to evaluate the impact of the COVID-19 pandemic on Poland’s macroeconomic situation. The first part of the article focuses on characterizing the channels through which the pandemic affects economy. The second part contains an analysis of changes in the economic situation and consumer confidence indices, a step followed by an assessment of Poland’s macroeconomic situation in the context of the developing COVID-19 pandemic. This assessment was based on an analysis of quarterly data concerning changes in the GDP and its components, the labour market situation and in price indices from the first quarter of 2018 to the third quarter of 2020. The data originated from the database of Statistics Poland (formerly the Central Statistical Office, GUS).

## 2. Channels through which the COVID-19 pandemic affects economy

The COVID-19 pandemic is not the only pandemic that has struck the human population in recent years. The disease called COVID-19 is caused by the virus SARS-CoV-2, whose name refers to another virus, such as SARS-CoV, to which it bears strong resemblance. The earlier virus caused an epidemic that spread in 2002–2003 (Pawlik et al., 2020, p. 2). In the face of its unpredictability and the severity of consequences that outbreak was nicknamed “a black swan”. N. Taleb distinguished “black swan” events in his book issued in 2007 as events characterized by three features (Szczepański, 2020, p. 9), which are: (1) unexpected, atypical and highly unlikely to happen; (2) the impact of these events on the socio-economic situation is very strong; and (3) once they have happened, some of the general public claim may have been predicted.

Research on the impact of the COVID-19 on Poland’s macroeconomic situation is also conducted in many scientific centres. Economists from the Warsaw University of Life Sciences have prepared a monograph on the Polish economy in the initial period of the COVID-19 pandemic. According to the research results, the COVID-19 pandemic caused a huge increase in the level of uncertainty, comparable to that observed during the global financial crisis of 2008–2009 (Czech et al., 2020, p. 123). The literature on the subject also includes studies on the impact of COVID-19 on individual sectors of the economy. Researchers from the

National Research Institute have prepared a study on food processing and agri-food exports in Poland. According to these research results, the impact of COVID-19 on various sectors of the economy was diversified (Szczepaniak, Ambroziak and Drożdż, 2020, p. 141). A researcher from the University of Economics in Wrocław conducted an analysis of the impact of COVID-19 on the tourism sector, according to which the SARS-CoV-2 coronavirus pandemic has a negative impact on the tourism industry, burdening it with COVID-19 restrictions (Stojczew, 2021, p. 157).

The rising rate of COVID-19 infections triggered an immediate response on behalf of the authorities in many countries consisting of such measures as social distancing, ban on travel and even a complete lockdown. These restrictions have both short- and long-term consequences for global economy and for the socio-economic development of every state (Akbulbaev et al., 2020, p. 114). The OECD experts emphasize that COVID-19 has caused adverse effects in many branches of economy. The following are mentioned: interferences with global supply chains, limited demand for imported goods and services, decreased international and national tourism flow as well as fewer business trips (OECD, 2020).

This epidemic also affects the private sector—both households and companies. COVID-19 has given rise to negative consequences, for instance in the sector of small and medium-sized enterprises (SMEs). Businesses have experienced dramatic revenue losses, which may contribute to higher unemployment as well as higher prices for everyday goods, in both short- and long-run. Some SMEs have taken steps to remain operational, for instance shorter working time of employees, redundancies, suspending some business operations, or temporary closure of business. Some entrepreneurs, however, have been forced to go out of business (Warsame 2020, p. 96). Enterprises face such challenges as disruptions in logistic activities, lesser mobility of the staff, growing uncertainty about restrictions and a general decline in the economic potential of national economies. The severity of these consequences depends on business branches. For example, export companies have suffered more than others due to the decreasing demand for foreign goods and shortage of key imported parts needed to manufacture own products; agricultural companies have experienced more problems in the area of logistics, and service companies have been forced to close down their outlets due to the government restrictions (Dai et al., 2020, p. 1).

The limited production has affected the macroeconomic situation adversely. Most European countries have experienced a decline in the GDP and in the employment rate while the public finances have deteriorated (European Commission, 2020, p. xiii). This explains why many countries across the world have decided to implement measures aiming to protect their national economy (Polski Instytut Ekonomiczny, 2020, p. 4), (Decerf et al., 2020, p. 2). The pandemic has also affected national economies, leading to poorer economic effects and worse macroeconomic forecasts for the future presented by various institutions.

According to a PwC report, over 90% of Polish companies have experienced some sort of disturbances in their operation after the epidemic broke out in Poland, while 63% of medium-sized enterprises engaged in production reduced the scale of operation in 2020; furthermore, over 20% of companies from the industrial branches of economy reduced the workforce, while about one-third of the Polish companies recorded cash flow problems and lower revenues (PwC, 2020, p. 2).

Experts also underline the adverse effect of the anti-crisis shield on the state debt (Szczeptański, 2020, p. 8). The NBP reports (NBP, 2019; NBP, 2020) show that the Polish GDP decreased by  $-4$  to  $-2.1\%$  in 2020, and it is claimed that the GDP will be much lower in the years to come than predicted previously. Forecasts regarding other macroeconomic parameters, e.g. inflations, are similar. In 2019, it was estimated that inflation in 2020 would equal 3.0, whereas according to the median derived from central forecasts it reached 3.4. It was also expected that the reference rate by the Polish National Bank (NBP) would remain unchanged (1.5), but it actually fell to below 0.5 and will most probably continue to decline in the following years (NBP, 2020, p. 3).

Table 1. Economic forecasts from 2019 and 2020—a comparison

The macroeconomic forecast of September 2019			
Indicators	2019	2020	2021
Growth of GDP	4.3	3.5	3.1
Inflation	2.3	3.0	2.5
The NBP reference rate	1.5	1.5	1.5
The macroeconomic forecast of September 2020			
Indicators	2020	2021	2022
GDP	$-3.1$	4.2	3.6
Inflation	3.4	2.2	2.5
The NBP reference rate	0.44	0.1	0.2

S o u r c e: Authors' own elaboration based on NBP reports (<https://www.nbp.pl/statystyka/amakro/am2020q4.pdf> and <https://www.nbp.pl/statystyka/amakro/am2019q4.pdf>).

It is difficult to predict with any measurable degree of confidence the ultimate impact of the current pandemic and the decisions made by the government on the Polish economy. The high likelihood that the virus will mutate adds to the sense of uncertainty among the general public, entrepreneurs and investors (Dobska, 2020, p. 13). Moreover, we still lack statistical data that could enable one to make a more precise analysis of the effect of the virus on economy, especially in the long-term perspective. It is also hard to estimate how long it will take economies to regain the economic balance (Maliszewska et al., 2020, p. 2).

### 3. The macroeconomic situation in Poland in the face of the COVID-19 pandemic

The pandemic crisis and the restrictions imposed in economy have had a direct impact on how the real sphere entities (companies and households) operate (Aragie et al., 2020, p. 5). The restrictions on companies have resulted in certain limitations in branches like trade and commerce or catering and hospitality (Bank Pekao, 2020, p. 6). Consequently, some or all revenues have been lost while the operational costs have increased to the detriment of the financial standing of companies. This has frequently led to cuts in the workforce and investments or, in extreme cases, to bankruptcies. The consequences were then felt by the households where members of families have lost some or all of their incomes earned so far, which may have forced them to limit consumption expenses.

Table 2. Current consumer confidence index and general economic situation index in Poland, from October 2018 to July 2021

		Current consumer confidence index	Overall synthetic economic situation index	Industrial processing	Building	Retail trade	Services
2019	10	9.3	3.9	8.9	11.5	0.9	-0.6
	11	6.7	2.9	6.9	12.0	1.1	-0.7
	12	4.3	2.6	6.7	12.1	1.7	-4.3
2020	1	3.7	0.4	2.1	12.9	0.5	-4.0
	2	1.3	0.9	3.6	12.6	2.2	-4.7
	3	1.3	3.5	-1.5	10.8	1.1	-8.2
	4	-36.4	-47.6	-36.9	-24.7	-54.1	-64.6
	5	-30.1	-47.9	-36.1	-18.7	-56.1	-69.6
	6	-19.4	-37.1	-26.6	-11.9	-37.2	-55.4
	7	-13.4	-25.4	-16.2	-5.9	-20.5	-41.6
	8	-15.2	-16.1	-8.4	-3.0	-9.5	-29.6
	9	-15.0	-11.2	-6.3	-0.9	-0.6	-21.2
	10	-20.0	-8.8	-2.2	1.2	-5.0	-19.8
	11	-29.2	-18.2	-1.2	-2.5	-27.0	-32.7
	12	-24.9	-12.1	-2.2	1.0	-13.4	-26.4
2021	1	-25.1	-12.0	1.1	1.6	-17.6	-30.7
	2	-25.2	-7.4	4.3	0.8	-10.5	-23.7
	3	-23.0	-5.9	3.2	0.9	-4.9	-19.4
	4	-22.5	-4.5	7.5	0.1	-9.9	-20.4
	5	-14.6	-0.5	8.8	0.5	-2.7	-12.8
	6	-14.8	.	.	.	.	.
	7	-13.5	.	.	.	.	.

Source: Authors' own elaboration based on the Statistics Poland GUS data (<https://stat.gov.pl/obszary-tematyczne/koniunktura/koniunktura/koniunktura-w-przetworstwie-przemyslowym-budownictwie-handlu-i-uslugach-2000-2021-styczen-2021,4,45.html> and <https://stat.gov.pl/obszary-tematyczne/koniunktura/koniunktura/koniunktura-konsumencka-lipiec-2021-roku,1,101.html>).

The actual situation of economic entities is deteriorating and poor forecasts regarding their future situation emerge from an analysis of the economic situation and consumer confidence indices recorded from October 2019 to July 2021. Both indices were observed to have steadily been declining since the beginning of the studied period. The economic situation index was 9.1 initially but dropped to -13.5 at the end of the analyzed period. The negative value of this index was first noted in March 2020, when it decreased to -3.1, after which it fell rapidly

to  $-47.2$  in April and  $-48.4$  in May 2020. Starting from June 2020, the value of this index increased but did not reach a positive figure until the end of the analyzed period. The worse economic situation was observed in all of the sectors presented in Table 2. The most favourable situation appeared in the building sector, where this index had a negative value in April 2020, i.e.  $-24.3$ , but it still was the highest in the analyzed period among all the sectors investigated. In December 2020, it was the only sector whose economic situation index was above zero, at  $1.0$ , same as in October that year. The economic situation was evaluated most poorly by companies in the services sector, where this index achieved negative scores all through the analyzed period of time, falling the lowest in April and in May 2020,  $-65.7$  and  $-70.5$ , respectively. In retail trade, the negative consequences of the crisis emerged in April 2020, when the economic situation index fell down to  $-53.0$ , and then even lower, to  $-54.7$ . At the end of the analyzed period, the economic situation index equalled  $-18.3$ . The economic situation looked slightly better in the industrial processing sector, but the said index fell to a value below zero in March 2020, at  $-0.1$ , dropping down to  $-35.5$  in April that year and climbing up to just  $0.5$  in July 2021.

Households, same as companies, assessed poorly their financial standing as well as Poland's macroeconomic situation, which is demonstrated by the calculated values of the consumer confidence index. From October 2019 to March 2020, its value decreased from  $9.3$  to  $1.3$ , and starting from April 2020 the said index scored negative values. The lowest value was recorded in April 2020, i.e.  $-36.4$ ; later on the index began to increase gradually. However, in July 2021 it was still negative, at  $-13.5$ .

The microeconomic consequences felt by particular entities in the real sphere produce an impact on the country's macroeconomic situation. The principal indicator applied to diagnose the situation of a given state's economy is the Gross Domestic Product and its fluctuations. It is worth recalling that the GDP, according to one of the methods used for its calculation, is also influenced by expenses on behalf of households and the public sector, by investments made by companies and by expenses to purchase exported domestic goods (Lis, 2011, p. 35). Thus, a worse financial condition of individual objects is invariably reflected in the macroeconomic situation.

Table 3. Dynamics of the GDP and its components (analogous period of time of the preceding year = 100) in Poland from the first quarter of 2018 to the first quarter of 2021

Year	Quarter	Gross Domestic Product (fixed prices)	Domestic demand (fixed prices)	Consumption (fixed prices)	Consumption (fixed prices) in households	Gross accumulation (fixed prices)	Export of goods and services (fixed prices)	Import of goods and services (fixed prices)
2018	I	105.3	106.5	104.3	104.4	119.7	104.3	106.5
	II	105.5	104.8	104.4	104.5	106.4	109.0	107.8
	III	105.5	106.0	104.3	104.1	113.4	106.6	107.7
	IV	105.1	105.0	104.2	104.1	107.1	107.8	107.8

2019	I	105.3	103.8	104.8	103.9	98.6	108.6	106.1
	II	105.1	105.0	104.5	104.4	106.9	103.7	103.4
	III	104.4	103.7	104.7	104.1	99.8	105.5	104.3
	IV	103.6	101.9	103.8	103.6	97.1	103.0	99.7
2020	I	101.9	101.0	101.5	101.2	98.4	102.0	100.4
	II	91.6	90.1	92.5	89.2	80.3	85.5	82.0
	III	98.5	96.8	101.0	100.4	79.8	102.0	99.0
2021	I	99.1	101.0	100.6	100.2	103.4	105.7	110.0

S o u r c e: Authors' own elaboration based on data from the Macroeconomic Database (<https://bdm.stat.gov.pl/>).

Since the onset of 2018, the Polish GDP rate was approximately 5.3%, with slightly decreasing or increasing trends. The deceleration of the GDP rate suggesting an economic slowdown was observed in the second quarter of 2020, when the GDP dynamics fell below zero, down to  $-8.4\%$ , after which it was increasing up to  $1.5\%$ . Thus, some improvement took place but the GDP dynamics is far from desirable. The main factor influencing thereof is the dynamics of domestic demand, which includes consumption, especially in the sector of households, and accumulation by companies. The domestic demand dynamics in the first quarter of 2018 was approximately  $6.5\%$ , but it largely fluctuated in the consecutive quarters of the year, which was reflected in frequent fluctuations of the GDP dynamics. An observable decline in the domestic demand dynamics occurred in the third quarter of 2019, down to  $3.7\%$ , with further decreases in the subsequent quarters of the year. The biggest fall was in the third quarter of 2019, down to  $-9.9\%$ , after which it increased to  $-3.2\%$ . The dynamics of consumption remained at around  $4\%$ , decreasing afterwards to  $1.5\%$  in the first quarter of 2020, falling down to  $-7.5\%$  in the second quarter and then rising to  $1\%$  in the third quarter of 2020. In the first quarters submitted to our analysis, i.e. from the first quarter of 2018 to the fourth quarter of 2018, the dynamics of accumulation by companies was higher than that of consumption by households. In the first quarter of 2019 it decreased to  $-1.4\%$ , after which it rose in the following quarter to  $6.9\%$  and declined again below zero, down to  $-20.2\%$  in the third quarter of 2020. With respect to consumption in the sector of households, a negative dynamics occurred only in the second quarter of 2020, when it decreased to  $-10.8\%$ . The decrease in the dynamics of domestic demand, and consequently of the GDP, was affected more strongly by the decline in the dynamics of accumulation by companies than by the limitation of the consumption by households.

An analysis was also carried out to explore the dynamics of exports and imports of goods and services. In most of the analyzed quarters of a year, the dynamics of exports surpassed that of imports, which is beneficial from the point of view of a state's economy. It is a manifestation of the development of an export-driven economy, meaning that more goods are exported abroad than imported to Poland. The trade balance in this case is positive. However, the analyzed indices underwent frequent fluctuations. A negative dynamics of imports was observed the first time in the fourth quarter of 2019 ( $0.3\%$ ), after which it went up to a positive value of  $0.45\%$ , only to decline again to  $-18\%$  in the second quarter of 2020 and  $-1\%$  in



the subsequent quarter. In turn, the dynamics of exports was positive until the second quarter of 2020, when it fell down to  $-14.5\%$ , but this dynamics was more rapidly changing than the dynamics of imports, and in the third quarter of 2020 it was again positive, at  $2\%$ .

Table 4. Situation on the Polish labour market from the first quarter of 2018 to the first quarter of 2021

Year	Quarter	Employed persons in national economy	Registered unemployed persons (at the end of a given period)	Registered unemployed persons (Men)	Registered unemployed persons (Women)	Registered unemployment rate	Job offers
		in thousands	in thousands	in thousands	in thousands	in %	in thousands
2018	I	9 400.10	1092.2	501	591.1	6.6	66.9
	II	9 431.10	967.9	424.2	543.7	5.8	99.7
	III	9452.9	947.4	406.9	540.5	5.7	110.6
	IV	9 481.20	968.9	426.3	542.6	5.8	98
2019	I	9 635.60	984.7	443.3	541.5	5.9	62.7
	II	9 647.70	877.1	382.9	494.2	5.3	84.6
	III	9 650.60	851.2	367.8	483.3	5.1	83.9
	IV	9 689.10	866.4	387	479.4	5.2	85.1
2020	I	9 691.80	909.4	417.8	491.7	5.4	47.8
	II	9 578.60	1 026.50	475.5	551.0	6.1	47.2
	III	9 580.70	1023.7	470.8	552.9	6.1	66.3
2021	I	9 579.3	1 078.4	504.8	573.6	6.4	68.8

S o u r c e: Authors' own elaboration based on data from the Macroeconomics Data Bank (<https://bdm.stat.gov.pl/>).

The pandemic crisis has affected the labour market in Poland, where the situation had been positive until 2020. At the beginning of the analyzed period, i.e. from the first quarter of 2018 to the first quarter of 2020, the number of people working in the national economy grew steadily. It increased from 9 400 100 to 9 691 800 in that time. Meanwhile, the number of unemployed people decreased from 1 092 200 to 851 200 in the third quarter of 2019. Over the analyzed period of time, there were more unemployed women than men. The number of unemployed men decreased from 501 000 in the first quarter of 2018 to 367 800 in the third quarter of 2019, whereas the number of women lacking employment declined from 591 100 to 479 400 in the fourth quarter of 2019. These data influenced the unemployment rate, which decreased from  $6.6\%$  to  $5.1\%$  in the third quarter of 2019. Negative changes on the labour market were observed with respect to the number of employed persons as late as in the second quarter of 2020, when the said number fell down to 9 578 600 persons, only to increase again to 9 580 700 persons in the third quarter of 2020. Alternatively, the growing number of registered unemployed people became apparent already in the fourth quarter of 2019, when



it reached 866 400, and continued to rise in the subsequent two quarters, to 909 400 and 1 026 500 respectively, after which it decreased to 1 023 700. A rise in the number of unemployed men was observed in the second quarter of 2020, while the number of unemployed women rose in the first quarter of 2020. The number of men out of employment increased to 475 500 in the second quarter of 2020, and decreased to 470 800 in the third quarter of that year, whereas the number of unemployed women was 491 700 in the first quarter of 2020, rose to 551 000 in the second quarter and to 552 900 in the third quarter of that year. In the same time, the unemployment rate increased in the second quarter of 2020, when it equalled 6.4%, same as in the first quarter of 2021. Over the entire period submitted to analysis, the number of job offers fluctuated. In the first quarter of 2018, there were 66 900 job offers made available, and in the two subsequent quarters this number rose to 110 600, however then it declined to 85 100 in the fourth quarter of 2019. The most severe drop, however, occurred in early 2020, down to 47 800, remaining approximately the same in the second quarter of that year, but rising to 66 300 job offers in the third quarter of 2020.

Table 5. Price indices for consumer goods and services in Poland from the first quarter of 2018 to the first quarter of 2021

Year	Quarter	CPI	1	2	3	4	5	6	7	8	9	10
2018	I	101.5	103.9	101.1	95.9	102.1	100.3	101.7	98.3	101.1	101.7	102.1
	II	101.7	103.2	101.7	96.0	102.0	100.4	102.0	104.4	98.9	100.9	102.2
	III	102.0	102.2	101.8	96.4	102.3	100.9	101.9	108.5	97.9	101.5	102.3
	IV	101.4	101.1	101.6	97.3	102.0	101.1	102.6	105.9	94.8	101.2	102.9
2019	I	101.2	101.8	101.4	97.1	100.6	100.9	102.7	102.6	96.8	101.5	103.1
	II	102.4	104.7	101.3	98.1	101.6	100.9	103.1	102.7	98.0	102.9	103.0
	III	102.8	106.7	101.2	98.6	101.9	100.6	103.7	99.5	99.7	102.8	103.5
	IV	102.8	106.5	101.4	98.4	102.0	100.5	103.4	98.0	103.0	103.2	104.7
2020	I	104.5	107.7	103.6	98.5	107.0	100.4	103.9	100.7	102.1	103.1	104.9
	II	103.2	106.4	104.6	96.4	107.5	100.7	105.2	89.0	103.2	102.4	105.1
	III	103.0	103.2	104.7	98.1	107.2	101.2	105.2	93.2	104.3	102.7	105.8
2021	I	102.7	100.6	102.5	97.3	106.6	101.9	104.2	99.9	106.1	104.2	105.5

Key: CPI-inflation in total; 1—food and non-alcoholic beverages; 2—alcoholic beverages, tobacco products and drugs; 3—clothes and shoes; 4—housing maintenance and energy carriers; 5—housing equipment, furniture and running a household; 6—health; 7—transport; 8—communication; 9—recreation and culture; 10—education.

Source: Authors' own elaboration based on the Macroeconomic Data Bank (<https://bdm.stat.gov.pl/>).

The last research area investigated within this assessment of Poland's macroeconomic situation comprised inflation processes measured with the consumer price index CPI for all product groups and, for gaining better insight, divided into product groups. From the first quarter of 2018 to the second quarter of 2019 the inflation rate did not exceed 2.5%, which

corresponded well to the inflation target set by the Polish National Bank. Inflation processes accelerated in the third quarter of 2019, when the inflation rate reached 2.8%, and in the subsequent quarter. In the first quarter of 2020, the inflation rate peaked at 4.5%, after which it declined to 3.2% and 3.0% in the two subsequent quarters, respectively.

Different trends affecting the inflation rate can be observed within groups of products. The highest rise in prices was noted for food and non-alcoholic beverages, which most certainly had an effect on inflation processes. In the third quarter of 2019, food prices increased by over 6%, and this increase went up to 7% in 2020. Prices for house maintenance and energy carriers increased considerably in 2020, by 7%, too. Through the entire studied period, with few exceptions, prices in the health care category continued to increase systematically, reaching an increase of 5.2% in 2020. Similarly, prices for education were rising over the analyzed period of time, up to 6% in 2020 (5.5% in 2021). These are the categories of products which triggered a rise in the inflation rate in Poland to the highest degree. Noteworthy is the fact that they are categories of products associated with the necessity to satisfy basic life needs, and therefore an increase in prices for these products may be connected with their higher demand, for example the health-care products. As regards clothes and shoes, a decrease in their prices was noted, despite a slight increase in the third quarter of 2020. Finally, prices in the transport category began to decline in the third quarter of 2019, and this trend lasted to the end of the analyzed period. As for the other categories of consumer goods and services, changes in prices were not so significant.

The growing number of COVID-19 cases in Poland and the government restrictions have had an adverse impact on the mood among consumers and entrepreneurs, resulting in the deterioration of Poland's macroeconomic situation. Sustaining the macroeconomic stability and economic growth are the chief objectives of economic policy (Włodarczyk, Heller and Ostrowska, 2018, p. 130; Włodarczyk and Ostrowska, 2020), hence it has become a priority for the authorities to implement measures intended to restore the stability of the economy, using both monetary policy and fiscal policy instruments. In line with its monetary policy agenda, the Monetary Polish Council decreased the interest rates three times, but it is the banking sector that might experience most acutely the negative consequence of this step, such as undermining its profitability, which has already suffered in recent years due to increasing capital requirements and fiscal burdens. In turn, under the framework of fiscal policy, the government has launched so-called anti-crisis shields, to which it has already allocated over 312 billion PLN. This aid package has been dedicated primarily to health care (7.5 billion PLN), improved security of workforce (30 billion PLN), public investments (30 billion PLN), co-financing of companies (74.2 billion PLN) and financial shield (100 billion PLN). In addition, steps have been taken to improve the functioning of the financial sector (70.3 billion PLN) (Gov.pl, 2020).

#### **4. Summary**

The COVID-19 pandemic and the restrictions imposed by the government have caused significant effects on the Polish economy. The macroeconomic indices were observed to have declined in the second quarter of 2019, which coincided with the first lockdown. Above all,

the mood among economic entities, that is companies and households, has worsened as their current situation and prospects for the future were evaluated negatively. The area of economy where the entrepreneurs were most pessimistic was the sector of services, whereas the building sector seemed to have been the least stricken by the pandemic. The economic downturn is evidenced by the analysis of the GDP dynamics, which in the second quarter of 2020 and in the subsequent quarters assumed negative values. This effect arose both from the declining dynamics of consumption by households and of accumulation by companies, although the businesses had a stronger impact due to much deeper falls in the dynamics. Despite the deterioration of the macroeconomic situation, the dynamics of exports surpassed the dynamics of imports, which should be viewed as a positive finding. Changes were also detected in the situation on the Polish labour market, where the number of employed persons decreased while the number of registered unemployed persons increased. A more rapid increase in the number of people lacking employment was observed for women, which may be attributed to the fact that the pandemic struck feminized branches of economy more instantly. Following the above changes, the unemployment rate changed, although a rise in the number of job offers occurred in the third quarter of 2020, indicative of some improvement on the labour market and creating a chance for depressing the unemployment rate. Inflation processes in the Polish economy accelerated in 2020, mostly in response to the decreased interest rates, increased prices of staple consumer products and services, such as food, home maintenance and energy carriers, but also higher prices in the categories of consumer goods and services connected with health and education. With respect to clothes and shoes, their prices are observed to have been declining for several quarters of a year now, while prices in the transport sector started to decrease in third quarter of 2019. The future development of the macroeconomic situation in Poland will largely depend on the number of COVID-19 infections in the subsequent quarters and on the measures implemented by the government and central bank aiming to stabilize the economy. In the absence of viable predictions as to when the pandemic will come to an end, a considerable challenge for researchers is to observe the macroeconomic situation in Poland in the nearest quarters, and to make recommendations for measures which could improve it.

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## Pandemia COVID-19 a sytuacja makroekonomiczna Polski

**Abstrakt:** Celem badawczym była ocena wpływu pandemii COVID-19 na sytuację makroekonomiczną w Polsce. W badaniach wykorzystano krytyczną analizę literatury naukowej oraz analizę danych statystycznych. W pierwszej części artykułu opisano kanały, którymi pandemia COVID-19 wpływa na gospodarkę. Druga część zawiera analizę zmian nastrojów przedsiębiorców i konsumentów z wykorzystaniem miesięcznych wahań wskaźników mierzących sytuację gospodarczą i zaufanie konsumentów, a następnie ocenę sytuacji makroekonomicznej Polski w kontekście rozwijającej się pandemii COVID-19. Ocena ta została oparta na

analizie danych kwartalnych dotyczących zmian PKB i jego składowych, sytuacji na rynku pracy oraz zmian wskaźników cen od pierwszego kwartału 2018 roku do drugiego kwartału 2021 roku. Wyniki badań pokazały, że pandemia COVID-19 oraz ograniczenia nałożone przez rząd spowodowały negatywne konsekwencje w polskiej gospodarce. Świadczą o tym gorsze nastroje wśród przedsiębiorców i konsumentów. W analizowanym okresie zaobserwowano również pogorszenie sytuacji makroekonomicznej Polski poprzez obniżenie tempa wzrostu gospodarczego, wyższą stopę bezrobocia i przyspieszenie procesów inflacyjnych.

**Słowa kluczowe:** pandemia COVID-19, sytuacja makroekonomiczna, gospodarka Polski