

IMPACT OF THE COVID-19 PANDEMIC AND THE INFLATION CRISIS ON THE FINANCIAL CONDITION AND EXPENDITURE STRUCTURE OF POLES

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Purpose: The purpose of the article was to assess the impact of the COVID-19 pandemic and the inflationary crisis that followed on the financial condition and consumer and investment expenditures of Poles. This purpose was supplemented by detailed research hypotheses.

Design/methodology/approach: The study was conducted using the diagnostic survey method on a group of 1,000 randomly selected Polish residents. The research tool was an original survey questionnaire containing 50 substantive (problem) questions and 9 metric questions. Selected statistical tests were used in the analysis of the survey results.

Findings: The research results indicated that the pandemic and inflationary crises contributed to the deterioration of Poles' financial condition. A significant decline in real income was declared by about 23% of respondents in both crisis phases. About one-fifth of active respondents were affected by job loss, mainly temporarily. A quarter of respondents indicated a significant increase in the share of consumer expenditure in current income and the need to give up a number of goods and services beyond basic consumption. A persistently limited Poles' propensity to invest was found, as well as little dynamic change in outlays and investment forms.

Research limitations/implications: Limitations are the estimated nature of the information obtained in surveys. The reliability of some data can be improved by repeating the survey on the same sample at a time interval.

Practical implications: The crises have changed Poles' attitudes toward accumulating savings and spending money. Awareness of this fact should prompt potential business entities and financial institutions to remodel their offerings in accordance with market conditions. Government bodies can use the research results to manage the crisis more effectively on a national scale.

Social implications: The research revealed the Poles' limited knowledge of managing their own finances and could be a rationale for measures to disseminate such knowledge to society.

Originality/value: The value of the research is the original author's diagnostic approach based on a representative research sample, addressing current social and economic problems of Poles, not fully recognized and disseminated in publications.

Keywords: pandemic and inflation crisis, Poles' financial condition, consumer and investment expenditures.

Category of the paper: Research paper.

1. Introduction

Since the dawn of time, people and state institutions have had to deal with various local and global threats to life and social development of an epidemic nature. Examples include the plague epidemic, which in the 14th century killed about a third of Europe's population at the time, or "Spanish flu", the 1920s influenza pandemic with an estimated 50 million victims (Krajewska, 2020). The contemporary case to us was COVID-19, an infectious disease caused by the SARS-CoV-2 coronavirus, which was found in November 2019 in Wuhan, central China, and was declared a pandemic by the World Health Organization on March 11, 2020 (WHO, 2020). Although the COVID-19 pandemic's health effects were not as dramatic as those of the two previously mentioned (an estimated 6.3 million people worldwide had died from it by August 2022), it caused massive social and economic perturbations.

As the COVID-19 pandemic spread, social life changed by introducing various formal restrictions on mobility and human contact. Coronavirus testing, quarantine and, in some countries or occupational groups, COVID-19 vaccination have been made mandatory. Health systems' conversion to fighting the virus and restrictions on diagnosis and treatment of other diseases have contributed to a large number of excess deaths. In Poland, for example, the number of deaths in 2021 exceeds the annual average of the last 50 years by nearly 154,000 (519,500 vs. 366,000) (GUS, 2022).

The virus has also left its mark on the economies of many countries (Jackson et al., 2021; Bartosiewicz, Książopolski, Zybała, 2021). Many industries' operations have been suspended. Transportation of raw materials and finished products has been severely restricted, and exports to many countries have been suspended due to border closures. Breaking supply logistics chains resulted in reduced production in active industries. Jobs were threatened and the unemployment rate increased. Concerns about the impact of COVID-19 on the global economy were compounded by the conflict between OPEC and Russia resulting in large declines in oil prices in March 2020 which, in addition to reducing oil export revenues (Ozili, Arun, 2020), led to strong declines in global stock prices (Jaworski, 2021). In the first 9 days of March 2020, stocks traded on stock exchanges around the world lost USD 9 trillion in value (He, Duffy, Horovitz, 2020). Finally, there were significant declines in GDP and unfavorable developments in other macroeconomic indicators in the economies of many countries (Halmai, 2021; Zamfira, Lordache, 2022; Pavolová, Culková, Šimková, 2022) with a varying degree of intensity (Ghecham, 2022). The International Monetary Fund forecast that

in three pandemic years (2019-2021) the global public debt will increase by USD 24.6 trillion (34%), and the Polish public debt will increase even more, by PLN 451 billion (43.1%) (Frączyk, 2021).

The implementation of the aforementioned pandemic restrictions and an economic collapse danger necessitated the implementation of solutions to minimize the impending recession effects. The economy was to be helped by so-called anti-crisis (anti-covid) shields, i.e. comprehensive packages of laws and regulations to counteract the adverse effects of COVID-19 (Staniszewski, 2020; Kubiczek, Derej, 2021; Ahmed, Sarkodie, 2021). The Council of Ministers of the Republic of Poland adopted the first national package of laws implementing anti-crisis solutions on March 25, 2020. In Poland, they materialized in the form of successive anti-crisis shields (1.0-4.0) in the period until June 2020. In Poland, they materialized in the form of successive anti-crisis shields (1.0-4.0) in the period until June 2020. Among other things, they introduced flexible management of the central and local government budgets, tax relief and relief on social security contributions for entrepreneurs, subsidized employee salaries, support for entrepreneurs with loans from the Industrial Development Agency, and interest rate subsidies on bank loans for enterprises affected by COVID-19. Combined budget funds transfers, as well as funds from the Guaranteed Employee Benefits Fund and the Anti-Coronavirus Fund to the economy, financial institutions, health care and investment support under the anti-crisis shields are estimated at over PLN 312 billion. However, in addition to the presumed protective effects, they caused an imbalance between the money supply and the supply of consumer goods and services to appear in the market when several sectors of the economy were closed. This imbalance was exacerbated by the NBP's continued low interest rate policy in 2020 - 2021 and the associated increased money supply in the form of cheap bank loans. These factors, according to the authors of the publication, were the main indicators of the ongoing inflation crisis, with its negative consequences for the budgets and financial security of the Polish people (Redo, 2022). The inflationary spiral in 2022 was triggered by the war in Ukraine and the resulting perturbations in the energy markets (Desalegn, Tangl, Fekete-Farkas, 2022; Bednar, Cecdlova, Kaderabkova, Rezabek, 2022). There is a danger that we could remain with high inflation for longer (Bonam, Smadu, 2021).

The purpose of the article is to attempt, based on our own empirical research, to provide an answer to the question of the extent to which the pandemic and inflation crises (referred to in the text as the first and second crisis phases) have affected the financial condition and the structure of changes in consumer and investment expenditures of the statistical Pole. The research attempted to resolve a number of specific questions, such as temporary or permanent job loss due to COVID-19, the level of lost earnings or business profits, the need to change employment, the extent of using crisis shields, the impact of crises on respondents' savings levels, the level of credit burdens, the extent of changes in the structure of consumer

and investment expenditures, and the choice of methods of securing savings against inflation. These issues are detailed in the form of research hypotheses in the research methodology.

The literature study authorizes the conclusion that although the literature treating the impact of the COVID-19 pandemic on the Polish economy, finance or health care is abundant, the issues addressed in this article have few equivalents in it. Examples of items that can provide a comparative basis include studies on the impact of COVID-19 on: the financial situation of households (Paździor, Majek, 2021), consumer behavior (Samuk, Sidorovich, 2021), the vulnerability of public and private budgets to the crisis (Zbroińska, 2022), on working life and the labor market (Juza, Walawender, 2021; Radlińska, 2021) or the quality of young people's lives (Wicka, 2021).

2. Research methodology

The main purpose of the article is to assess the pandemic crisis impact and the subsequent inflation crisis on the financial condition and the size and structure of the consumption and investment expenditures of Poles. This purpose was detailed by the following research hypotheses:

Hypothesis h1: The financial condition of Poles deteriorated significantly during both crisis phases, both in subjective assessment and as measured by the level of change in real monthly earnings/income.

Hypothesis h2: The pandemic and inflation crises caused permanent or temporary job losses and/or difficulties in changing jobs for a significant number of respondents, and shielding/stabilization measures in this area were insufficient.

Hypothesis h3: Both crisis phases significantly influenced the increase in the share of consumer expenditures in respondents' current income, the change in its structure and the subjective assessment of one's own purchasing power as a consumer.

Hypothesis h4: Crisis situations have significantly affected the dynamics and change in the forms of investment by Poles.

Hypothesis h5: Respondents' financial situation and the structure and size of their consumption and investment expenditures showed a significant relationship with their metric characteristics.

Hypothesis h6: Respondents' current financial situation and its future projection significantly affected the structure and size of consumer and investment expenditures in both crisis phases.

Hypothesis h7: Respondents' financial situation and the structure and trends in consumer and investment expenditures in the two crisis phases differed significantly.

The research was conducted by the BIOSSTAT Research Agency (contractor) in October 2022 using the diagnostic survey method on a group of 1,000 randomly selected Polish residents. The research tool was an original survey questionnaire containing 50 substantive questions and 9 metric questions (M1 to M9) characterizing the respondents. Substantive questions P1 to P25 were for the first crisis phase (pandemic) covering the period (Q1'2020 - Q3'2021) and were repeated as questions P26 to P50 for the second crisis phase (inflationary) covering the period (Q3'2021 - Q3'2022).

For each phase, the substantive questions are grouped into three thematic blocks regarding:

- the respondent's financial and work situation (P1 to P9 for the first phase and P26 to P35 for the second crisis phase),
- the structure and dynamics of consumer expenditures (P10 to P18 for the first and P36 to P44 for the second crisis phase),
- structure and changes in investment expenditures (P19 to P25 for the first and P45 to P50 for the second crisis phase).

The survey was conducted using the CAWI technique, using the Contractor's online research panel. It included a sample of 1,000 adult Poles, participants in the Opinion Research Internet panel. The sample selection considered a representative distribution of the population by age and gender according to CSO data¹, as well as the Internet usage percentage by age and gender². The sample distribution by age (M1) is shown in Table 1, and by gender (M2) in Table 2.

Table 1.

Representative distribution of the survey sample by age after adjustment (M1)

Age range	Conversion rate	Adjustment	[%]	[N]
18-24 years	1.00	2,614,962	11.0%	110
25-34 years	1.00	5,042,117	21.2%	212
35-44 years	0.96	6,030,080	25.4%	254
45-54 years	0.86	4,393,148	18.5%	185
55-64 years	0.65	3,150,491	13.2%	132
65 years and older	0.35	2,536,934	10.7%	107
TOTAL		23,767,732	100.0%	1000

Source: BIOTON data.

Table 2.

Representative distribution of the survey sample by gender after adjustment (M2)

Gender	Conversion rate	Adjustment	[%]	[N]
Woman	0.76	12,386,116	51.7%	517
Man	0.78	11,578,706	48.3%	483
TOTAL		23,964,822	100.0%	1000

Source: BIOTON data.

¹ Population as of December 31, 2021, updated on May 27, 2022.

² Based on the CBOS research release *Korzystanie z Internetu*, no. 77/2022.

Regarding the education level (M3), the largest respondent groups were those with secondary education (45.1%) and higher education (39.5%), while the smallest, less than 1%, were those with primary and post-graduate education.

The majority of respondents (31%) came from small cities (up to 100,000 residents) and medium-sized cities (27.9%), while residents of large cities and rural areas made up a similar 20% representation (M4).

Respondents from two- and three-person families (28% each) and four-person families (25%) participated in the survey in the largest numbers. The smallest percentages were single (6%) and respondents from families of five or more (13%) (M5).

According to the income criterion (M6), the largest group (24.7%) were those with monthly net family income in the range of PLN 5001 to 7000, while the smallest groups were those with high income, PLN 13001 to 20000 (2.3%) and very high income, more than 20000 (1.2%). The share of those with very low incomes, up to PLN 3000, was 12.9%.

Declaring their housing situation (M7), almost three-quarters of respondents indicated their own apartment or house. Renting and living with family accounted for comparable indications of several percent.

Respondents' professional status structure (M8) is shown in Table 3, and the working respondents' business structure (M9) is shown in Table 4.

Table 3.

Respondents' professional status (M8)

Economic area	[%]	[N]
Employment in the public sector	19.2%	192
Employment in the private sector	45.7%	457
Own business	4.7%	47
Retirement/pension	16.4%	164
During learning/study	5.4%	54
Without a job	8.6%	86

Source: BIOTON data.

Table 4.

Respondents' employment by business (M9)

Business	[%]	[N]
Industry	16.5%	115
Public administration	7.5%	52
Other, what kind of?	18.0%	125
Trade	18.4%	128
Construction	9.8%	68
Education	6.2%	43
Transportation	8.2%	57
Hotel industry, gastronomy, tourism	3.6%	25
Finances	5.3%	37
Consulting and legal services	3.2%	22
Healthcare	3.4%	24

Source: BIOTON data.

To verify research hypotheses h1 to h4, tables of the indicated numbers of specific answer variants from the cafeteria of survey substantive questions were used, as well as by confronting with each other the answers to analogous substantive questions on the first (P1 to P25) and second crisis phases (P26 to P50). A discussion of the research results and verification of the aforementioned hypotheses are presented in the paper's Section 3.

In order to verify hypotheses h5, h6 and h7, a correlation calculus was used between specific variable groups, both metric and substantive, characterizing the respondents' financial situation and consumption and investment expenditures in the first and second crisis phases. The analyses were conducted using Statistica software. A chi-square test was used to examine the relationship between variables. The strength of the relationship was assessed by the Cramer coefficient, taking values in the interval [0,1]. In interpreting the correlation strength, the Cohen scale was used, where the correlation coefficient's absolute value greater than 0.5 indicates a strong correlation, between 0.3 and 0.5 a moderate correlation, and between 0.1 and 0.3 a weak correlation. However, a correlation coefficient absolute value below 0.1 indicates no correlation (King, Minium, 2009). A significance level of $\alpha = 0,05$ was assumed. Correlation analysis results and hypothesis h5, h6 and h7 verification are presented in Section 4 of the article.

3. Survey results

Respondents' financial condition

In the subjective opinion of respondents in the first crisis phase, the financial condition of 17.6% of them deteriorated significantly, while for 36.8% of respondents, it deteriorated slightly. In the second phase, such changes were indicated by 14.0% and 29.4% of respondents, respectively. A stable financial situation was declared by 39.1% for the first phase and 46.4% of respondents for the second phase. A slight or significant improvement in financial condition was experienced by 6.5% of respondents in the first and 10.2% of respondents in the second crisis phase.

A significant decrease exceeding 20% in earnings was indicated by 7% in the first phase and 8.3% of respondents in the second phase. A decrease in the 10% - 20% range was indicated by 16.8% and 14.0% of respondents, respectively. A slight +/-10% change in salary was indicated for both phases by a similar group of respondents, about 40%, and an increase or significant increase by a group of 8.5% and 10.6% of respondents, respectively. The answer "not applicable - I did not work" was indicated by 27.6% for the first and 25.0% of respondents for the second crisis phase.

In the first, pandemic crisis phase, permanent job loss was declared by 6.4% among working people, and temporary loss by 14.2%. For the second phase, such indications came from 4.4% and 13.5% of respondents.

Using government anti-covid shields either by the employer or directly by the respondent was indicated by 29.5% of the respondents, while non-users but active respondents accounted for 42.9% of the group.

The effectiveness of the anti-covid shields in maintaining jobs and earnings levels was rated positively by 33.2% of respondents under such support, 59.0% indicated half-success (earnings levels were not maintained), and 7.8% of respondents rating was negative (job/business was eliminated).

The possibility of changing jobs/availability of new offers within the industry was virtually impossible or difficult in the first crisis phase according to 41.4% of respondents, did not change compared to the pre-pandemic period according to 26.4% of respondents, and was easier or definitely easier for only 4.6% of respondents. For the second crisis phase, analogous indications were declared by 31.5%, 33.9% and 9.6% of active respondents.

The assessment of the Polish government's economic aspects of its response to the COVID-19 crisis was, according to 26.5% of respondents, definitely or rather positive, 23.1% of respondents had no opinion on this issue, and according to 50.4% of respondents, it was rather or definitely negative. For the second, inflationary crisis phase, analogous indications were declared by 23.3%, 25.5% and 51.2% of respondents, respectively. Among the negative opinions indicated were the misallocation of funds from the anti-covid shields and the excessive increase in public expenditure in the second phase.

The evaluation of the NBP's actions in combating the rising inflation in the second crisis phase was, in the opinion of only 15% of respondents, definitely or rather positive, 24.4% declared no opinion, and 60.6% of respondents gave these actions a negative or definitely negative rating, arguing that they were too late in raising interest rates and that there were no alternative instruments for financial impact on inflation.

Regarding employers' compensation for the effects of inflation with wage increases, only 6% of active respondents said they were satisfactory, 28.3% considered them too small, and 40.7% indicated that they were not.

However, the economic situation did not force most respondents to take out loans/consumer loans in both the first and second crisis phases. In both phases, consumer loans benefited a similar percentage of respondents, approximately 16%.

Respondents' predictions of changes in their own financial situation over the next 12 months were as follows: at the end of the pandemic crisis, improvement was predicted by 28.5% of respondents, stabilization by 40.4%, and fear of further adverse changes was declared by 31.1% of respondents. At the end of the second phase, the aforementioned options for the development of the situation were indicated by 29.5%, 30.5% and 40.0% of

respondents, respectively, which means that the percentage of respondents fearing further unfavorable changes increased significantly.

Choices and consumer expenditure

The survey indicates that both crisis phases significantly increased the consumer expenditure share of respondents' current earnings. An increase and a significant increase were indicated for the first phase by 24.7% of respondents, and for the second phase by 26.7%, while the opposite options, a decrease or a significant decrease, were indicated by 15.6% and 12.4% of respondents, respectively. For about 32% of respondents, the share did not change for both the first and second crisis phases.

Respondents most frequently spent 20-40% of their current income on basic consumption (34.5% of indications in phase one and 32.4% in phase two), and least frequently more than 60% of income (4.7% of indications each in both phases). Shares not exceeding 20% of income were declared by 18% and 21% of respondents, respectively.

Current earnings (79% of indications each in both phases) and savings (34.0% in the first phase and 31.9% in the second phase) were indicated as the main source of financing for basic and current consumption in a two-way choice. Credit/loans were indicated by only 4.1% and 6.3% of respondents, respectively, and leasing was a marginal source (less than 1% of indications).

Credit charges most often consumed up to 20% of respondents' current income (49.0% and 47.4% of indications) or 20-40% of income (17.3% and 19.1% of indications). The share of burdens higher than 40% concerned 6.1% in the first crisis phase and 8.5% of respondents in the second.

The most frequently reported subjective assessment of one's own purchasing power as a consumer in the survey was moderate (73.5% of indications for the first and 69.1% for the second crisis phase). A high rating was indicated by 8.8% and 7.3% of respondents, respectively, and a low rating by 17.7% and 23.6% of respondents.

Among the factors that most strongly influenced changes in the structure and level of consumer expenditure, respondents indicated in phase one: the current income level (39.8% of indications), official pandemic restrictions (27.0%) and the savings level held (20.9%). In the second crisis phase, these were the inflation level and price changes (46.2%) and the current income level (29.1% of indications). Other factors, such as measures from anti-covid shields and the interest rate level had shares of a few percent.

The low interest rate policy in the first crisis phase did not have a strong impact on the respondents' increase in consumer expenditure. Indeed, a significant impact was indicated by 17.7% of respondents, a slight impact by 33.9%, and no impact by almost half of respondents (48.4%). In contrast, dynamically rising interest rates in the second crisis phase significantly reduced consumer expenditure for 36.7% of respondents, or reduced it slightly (44.6% of respondents), and had no major impact for 18.7% of respondents.

In the expenditure breakdown for specific goods and services, spending on basic consumption (food, fees, basic clothing) showed the highest growth rate (40.5% each in both phases). The category in which spending stabilization dominated was spending on home/apartment furnishings (53.2% and 45.6% of indications). The largest declines in spending were in the categories of travel/holidays abroad (55.4% first and 51.1% second phase), travel/holidays at home (52.8% and 44.4%), luxury goods (52.2% and 52.3%) and current consumption - restaurant/cinema/theatre (50.6% and 43.7%). For categories evaluated dichotomously (yes, no), the highest indications for yes were home/apartment renovation (32.2% of indications in the first phase and 24.2% in the second phase). Far lower: buying or changing a car (17.5% and 15.7%) and buying a house/apartment for personal use (13.0% and 13.8%).

Crisis situations have forced large numbers of those surveyed to abandon certain categories of consumer expenditure altogether. Even in the field of basic consumption excluding food, abandonment of expenditure was indicated by 8.5% of respondents in the first and 7.7% of respondents in the second crisis phase. Current consumption, domestic and international travel, luxury goods, and car purchases received indications of more than 40% and more than 50% of respondents, respectively. On the other hand, forgoing housing expenses (purchase, renovation, furnishing) were indicated by more than 30% of respondents. The option "I have not given up any of the indicated categories" received in multiple choice 12.3% of indications in the first and 13.7% of indications in the second crisis phase.

Choices and investment expenditure

The survey revealed respondents' limited willingness/ability to invest. In both crisis phases, the percentage of non-investors was high, amounting to 42% among those working in the first phase and 36% in the second phase. The group of non-investors was supplemented by non-working respondents, accounting for 27.5% of the total respondents in the first and 25% in the second crisis phase.

Individuals who invested were most likely to allocate up to 20% of their current income for investment purposes (15.1% in the first phase and 20.9% of indications in the second phase) or 20-40% (10.4% and 10.7% in indications).

The dynamics of changes in the investment expenditures' share of respondents' income was also small. The most frequent statement was that the share had not changed from the previous period (14.7% and 19.7% of indications). An increase and a significant increase were indicated by the same percentage of respondents in both phases (7.2%), while a decrease and a significant decrease were indicated by 8.9% in the first phase and 11.6% of respondents in the second crisis phase.

The tendencies of saving and using savings under crisis conditions found in the survey were as follows: a significant group of respondents continued to save (43.5% of indications in the first phase and 39.0% in the second phase), quite numerous were those allocating previous savings for consumption purposes (27.0% and 24.0% of indications, respectively), while only a few invested previous savings in investment instruments (4.3% and 5.1% of indications). Those stating that they were not saving were 25.2% and 31.9%, respectively, which seems to confirm that escalating inflation was not conducive to savings accumulation.

Respondents' preferences for specific investment forms as the most favorable income and inflation protection did not change significantly during both crisis phases. In a double choice, the following were indicated in order: investments in apartments/houses (41.5% and 38.2% of indications), land plots/agricultural land (28.1% and 27.7%) and gold/raw materials (26.6% and 24.5%). Also ranked high were government bonds (16.9% and 18.6% of indications), bank deposits (16.7% and 17.8%), and currencies (12.8% and 12.7%). Respondents had less confidence in stocks/stock funds (9.3% and 7.8%), and indications for corporate bonds/bond funds, antiques and artwork were below five percent in both phases.

However, the above declarations are hardly reflected in the respondents' actual investment choices. Those who declared investing (30.5% of the total in the first phase and 39% in the second crisis phase) placed funds mainly (a threefold choice) in: bank deposits (14.5% and 20.6% of indications), currencies (8.9% and 9.4%), stocks/stock funds (8.2% and 8.9%), government bonds (7.3% and 8.8%). Real estate, although indicated as the most profitable, was ranked further down the list, which is probably due to the need for much larger funds.

The above statements seem to confirm the answers to the question about factors determining investment choice. The funds level was ranked highest here (16.9% of indications), followed by: the investment risk level (15.9%), the knowledge necessary to invest (8.4%), the expected rate of return (5.7%) and the investment procedure difficulty (3.8%).

The most common rate of return expected by investing respondents was 6-10% (15.1% of indications in the first phase and 17.0% in the second phase), followed by up to 0-5% (8.4% and 12.3% of indications) and 11-20% (7.6% and 9.3% of indications). Higher rates of return were expected in both crisis phases by less than 6% of respondents each.

Hypothesis verification h1 to h4

According to the survey results cited above, it can be concluded that research hypothesis h1, stating that the Poles' financial condition deteriorated significantly in both crisis phases, was verified partially positively. Although a significant subjective deterioration in condition was declared by several percent of respondents each (more in phase I), the dominant indications were financial situation stabilization. The trends were even less unfavorable in the sphere of changes in real monthly earnings/income, where a significant drop of more than

20% in income was declared by 7% and 8.3% of respondents, respectively, with equally high indications for income stabilization of around 40%, as in the subjective assessment.

Hypothesis h2 can also be considered partially true. In both crisis phases, there were quite numerous cases of permanent or temporary (more numerous) job loss among professionally active respondents, but the cases in question were found not to be massive in nature. A more significant problem, especially in the first crisis phase, was the low availability of new job offers or the possibility of changing jobs, as indicated by more than 40% of respondents. In assessing the Polish government's stabilization efforts, respondents' opinions were divided almost equally, while more than 60% of respondents gave a poor assessment of the NBP's actions in countering inflation.

Hypothesis h3 about the impact of both crisis phases on the significant increase in consumer expenditures in respondents' current income and the change in its structure can be considered true. Increases and significant increases in such expenditures were indicated in both crisis phases by about 25% of respondents each, and the highest growth rate (40% of indications each in both phases) was shown by expenditures on basic consumption (food, fees, basic clothing). Large declines in the share of expenditures or their complete abandonment were noted in several categories, such as travel/holidays at home and abroad, luxury goods, current consumption, buying or changing a car, or buying a house/apartment for personal use. During the second crisis phase, there was an increase (from 17.7% to 23.6%) in the percentage of respondents rating their own consumer purchasing power as low, compared to the first.

Hypothesis h4 stating that the crisis situations significantly affected the dynamics and change in the forms of investment by Poles was not confirmed in the survey. The percentage of respondents who invested in the total number of them was relatively small and similar in both crisis phases (33% and 37%). Those who invested most often allocated up to 20% of their current income for this purpose and mostly declared that this share did not change significantly compared to previous periods. Preferences for forms/instruments of investment did not change significantly, except for the increase in the share of deposits in the second phase.

4. Statistical analysis

Hypothesis h5 verification

To verify hypothesis h5, which considers the respondents' financial situation and expenditures structure to be significantly related to their metric characteristics, a correlation calculation was used between the metric variables (M1 to M9) and the following substantive variables (symbols for the second phase in parentheses):

- P1 (P26) Respondents' subjective assessment of their financial condition;
- P2 (P27) Change in monthly real earnings/income;
- P3 (P28) Temporary or permanent employment loss;
- P8 (P33) The need for taking credit for consumption purposes;
- P9 (P36) Expected change in own financial situation in the next 12 months;
- P10 (P36) Change in current consumption expenditure earnings;
- P11 (P37) Share of consumption expenditure in current income;
- P12 (P38) Main sources of financing consumption;
- P17 (P43) Changes in consumer expenditure by specific goods/services;
- P18 (P44) Resignation from consumption of certain goods;
- P19 (P45) Change in current investment expenditure earnings;
- P20 (P46) Share of investment expenditures in current income;
- P23 (P48) Dominating investment forms/instruments;
- P25 (P49) The expected rate of return on the investment.

For the relationships indicated in grey in Table 5, the null hypothesis H0 regarding the absence of a dependence between the characteristics can be rejected for the alternative hypothesis H1 that the indicated substantive variables depend on the metric variables. Relationships for which the values of the Cramer coefficient are greater than 0.1, correspond to the lower limit of weak correlation according to the Cohen scale. As the majority of the indicated relationships show very weak correlations, the Cramer coefficient values for those for which it is greater than 0.2 are plotted in Table 5. Such correlations appear to be relatively few and are attributed to two metric variables: age (M1) and respondents' occupational status (M8). Cramer coefficients for the M8 variable in both the first and second crisis phases indicate a stronger correlation than for M1. Comparing their values from the corresponding relationships from the first and second crisis phases, it can be concluded that the correlation strength of the M1 and M8 variables with the substantive variables is similar in both phases.

Table 5.

Significant Chi-square test results between metric and substantive variables in the first and second crisis phases

Phase 1	M1	M2	M3	M4	M5	M6	M7	M8	M9	Phase II	M1	M2	M3	M4	M5	M6	M7	M8	M9
P1										P26									
P2	.23							.41		P27	.21								.38
P3	.30							.53		P28	.27								.49
P8										P33									
P9										P35									
P10	.23							.41		P36	.22								.40
P11	.26							.45		P37	.24								.42
P17.1										P43.1									
P17.2										P43.2									
P17.3										P43.3									
P17.4										P43.4									
P17.5										P43.5									
P17.6										P43.6									
P17.7										P43.7									
P17.8						.21				P43.8									
P17.9										P43.9									
P19	.20							.34		P45	.22								.38
P20	.23							.41		P46	.22								.42
P25										P49									

Source: Own elaboration.

For all variables shown in Table 5, variables P3 and P28 are most strongly correlated with both variable M1 and variable M8. Variables P3 and P28 are related to questions about temporary or permanent job loss in both crisis phases. The detailed results of the Chi-square test, p-value and Cramer coefficients for the relationships of the P3 and P28 variables with the M1 and M8 metric variables are shown in Table 6.

Analyzing in detail the relationships between variables M1 and P3 (P28) shown in Figure 1, it is possible to conclude that the respondents' age only slightly differentiated their job loss in both phases of the crisis. This is because the largest number of people in all age groups stated that they did not lose their jobs or did not work during this period, while the apparent larger share of people declaring mainly temporary job loss from the 25-34, 35-44 as well as 45-54 age groups may be due to the fact that representatives of these groups were more numerous in the research sample (see Table 1).

Table 6.

Correlation analysis example of variables M1 and M8 with variables P3 and P28

	Statistics: M1. Age of respondent (6) x P3. As a result of the COVID-19 pandemic, did you experience a temporary or permanent loss of your job? (4)			Statistics: M1. Respondent's age (6) x P28. In the second crisis phase, did you experience a temporary or permanent loss of your job? (4)		
	chi-square	df	p	chi-square	df	p
Pearson's chi-square	261.4650	15	0.0000	214.1270	15	0.0000
NW chi-square	252.5875	15	0.0000	195.3652	15	0.0000
Cramér V	.2952203			.2671622		
	Statistics: M8. Occupational status (6) x P3. As a result of the COVID-19 pandemic, did you experience a temporary or permanent loss of your job? (4)			Statistics: M8. Occupational status (6) x P28. In the second crisis phase, did you experience a temporary or permanent loss of your job? (4)		
	chi-square	df	p	chi-square	df	p
Pearson's chi-square	835.8332	15	0.0000	711.4958	15	0.0000
NW chi-square	915.5057	15	0.0000	744.6430	15	0.0000
Cramér V	.5278362			.4869962		

Source: Own elaboration.

Similar conclusions are reached by analyzing the distributions of variables M8 and P3 (P28) illustrating the impact of occupational status on job loss (Figure 2). However, individuals declaring that they have not lost their jobs also dominate in numbers at this point, and the increased number of cases of mainly temporary job loss of those employed in the private and public sectors is probably due to the fact that the representations of representatives of these sectors among respondents were the most numerous (see Table 3). Moreover, the similarity of the distributions presented in Figures 1(a) and 1(b), as well as 2(a) and 2(b), allows us to conclude that there is no significant impact of the crisis phase on job loss among respondents.

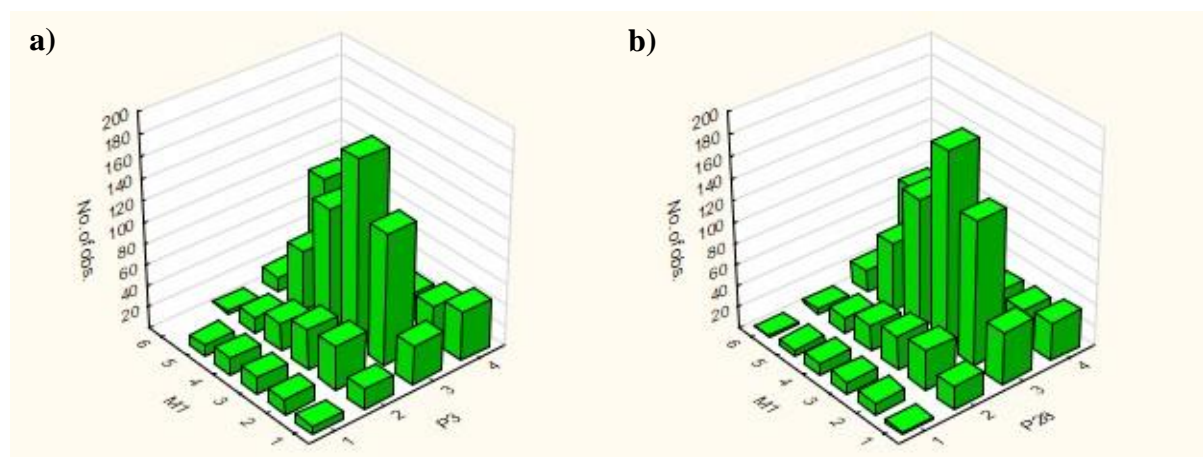


Figure 1. Two-dimensional distributions for the variables (a) M1 and P3, as well as (b) M1 and P28.

- Responses for variable M1: 1. 18-24, 2. 25-34, 3. 35-44, 4. 45-54, 5. 55-64, 6. 65 and more;
- Responses for variables P3 and P28: 1. Yes, permanent loss, 2. Yes, temporary loss, 3. No, 4. Not applicable - I did not work/did not run a business.

Source: Own elaboration.

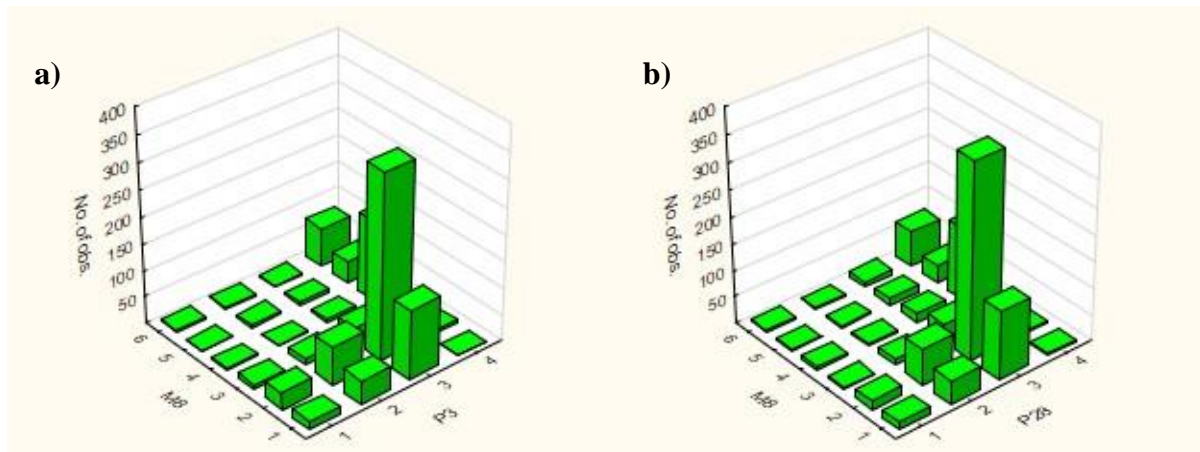


Figure 2. Two-dimensional distributions for the variables (a) M8 and P3, as well as (b) M8 and P28.

- Responses for variable M8: 1. Employed in the public sector, 2. Employed in the private sector, 3. Self-employed, 4. Retired/pension, 5. During education/studying, 6. Unemployed;
- Responses for variables P3 and P28: 1. Yes, permanent loss, 2. Yes, temporary loss, 3. No, 4. Not applicable - I did not work/did not run a business.

Source: Own elaboration.

Table 5 shows that only the correlations of some substantive variables with the metric variable M8 (respondent's occupational status) are moderately strong. Figure 3 shows sample distributions of such relationships for the first and second crisis phases presented in the following order:

- the impact of M8 on the change in monthly real earnings/income of respondents P2 (P27),
- the impact of M8 on changes in consumer expenditures P10 (P36),
- the impact of M8 on the share of investment expenditure in the current income of respondents P20 (P46).

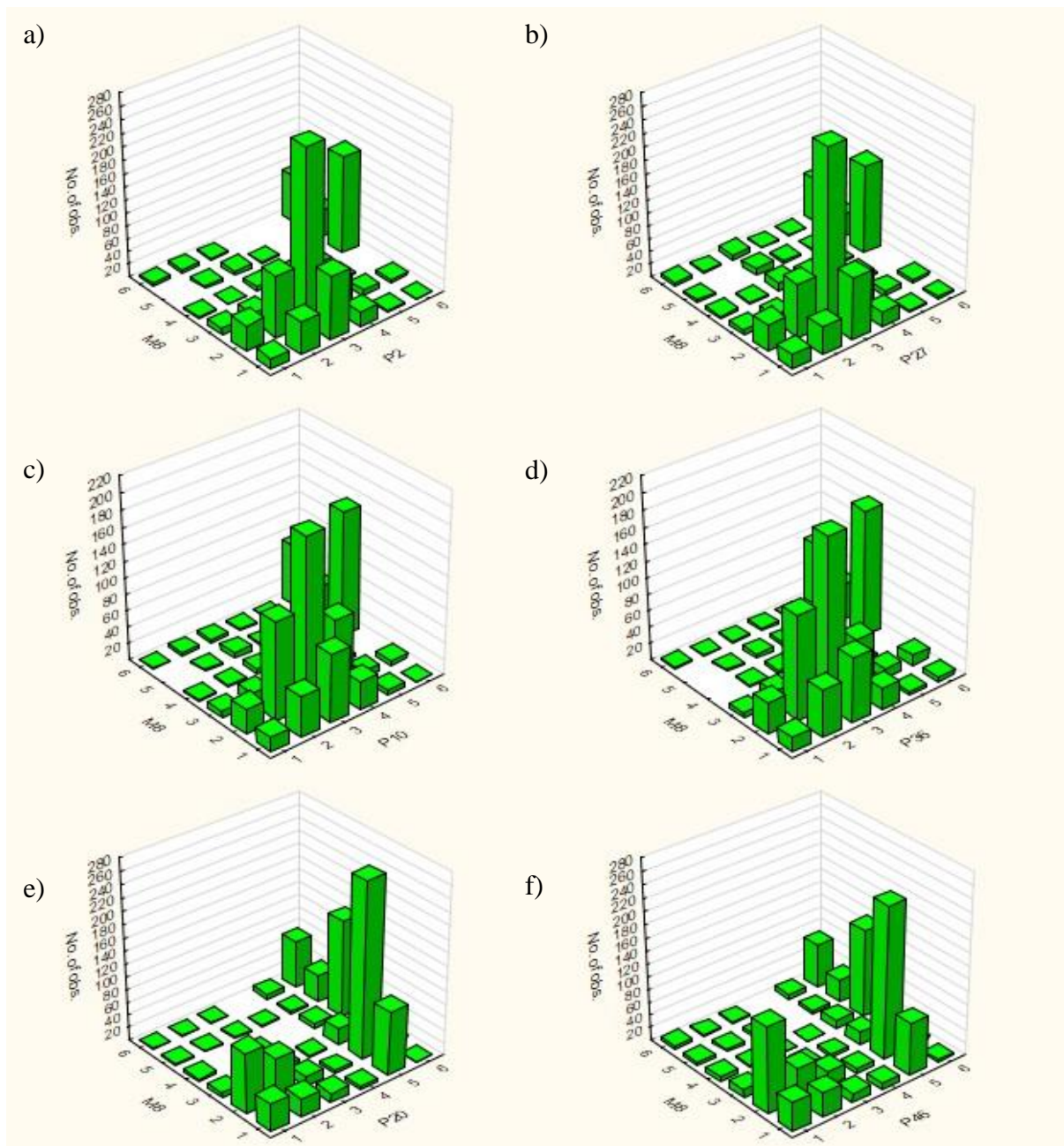


Figure 3. Two-dimensional distributions for the variables a) M8 and P2, b) M8 and P27, c) M8 and P10, d) M8 and P36, e) M8 and P20, f) M8 and P46.

- Responses for variable M8: 1. Employment in the public sector, 2. Employment in the private sector, 3. Self-employment, 4. Retirement/pension, 5. During education/studies, 6. Unemployed;
- Responses for variables P2 and P27: 1. Decrease by more than 20%, 2. Decrease by 11% - 20%, 3. Small change +/-10%, 4. Increase by 11% - 20%, 5. Increase by over 20%, 6. Not applicable - I did not work/did not run a business;
- Responses for variables P10 and P36: 1. Significantly increased; 2. Increased; 3. Has not changed; 4. Decreased; 5. Significantly decreased; 6. Not applicable - I did not work /did not run a business;
- Responses for variables P20 and P46: 1. 0 - 20%, 2. 21 - 40%, 3. 41 - 60%, 4. Over 60%, 5. Not applicable - I did not invest, 6. Not applicable - I did not work/operate/ did not run a business.

Source: Own elaboration.

Figures 3(a) and 3(b) indicate that the typical trends in the change in real respondents' earnings/income in both crisis phases were a small change ($\pm 10\%$) or a decrease in the range of 11-20%. This became apparent mainly in the private and public sectors, as the representation of these sectors among respondents was much more numerous than the others (see Table 3).

The distribution of responses shown in Figures 3(c) and 3(d) authorizes the conclusion that the consumer expenditure share for most respondents increased or remained unchanged during both crisis phases. However, for the second crisis phase, there are more numerous cases of a significant increase in this spending and fewer indications that this spending has relatively declined. These trends became apparent mainly in the private and public sectors for the reasons indicated above.

The two-dimensional distribution of the variables M8 and P20 as well as M8 and P46, presented in Figures 3(e) and 3(f), indicates that in the second crisis phase, the percentage of people investing increased slightly compared to the first. This occurred mainly among respondents employed in the private sector, investing small amounts (up to 20% of current income).

The analyses posted above authorize the conclusion that hypothesis h5, regarding the significant relationship between the financial situation and structure of respondents' consumption and investment expenditures and their metric characteristics, was not confirmed in the research. For only two of the metric characteristics showed a significant correlation with the substantive variables analyzed. Furthermore, the correlation strength of these variables appeared moderate at best (only strong for M8 and P3), and the two-dimensional distributions of the variables from both crisis phases were similar to each other.

Hypothesis h6 verification

Hypothesis h6 assumed that respondents' current financial situation and its future projection significantly influenced the structure and size of consumer and investment expenditures in both crisis phases. Its verification was based on correlation analysis between selected substantive variables reflecting the financial condition of the respondents (variables: P1 (P26), P2 (P27), P3 (P28), P8 (P33), P9 (P35)) and variables reflecting the structure and trends of their consumption and investment expenses (variables: P10 (P36), P11 (P37), P17 (P43), P19 (P45), P20 (P46), P25 (P49)). The symbols of the second phase variables are given in brackets. Similarly, as before, correlation calculus was used, using the Chi-square test. In Table 7, the shaded boxes indicate the relationships between the aforementioned variables, for which the Cramer coefficient values are greater than 0.1, and the numerical values denote those where the coefficient value is close to or greater than 0.5. The table layout indicates the existence of correlations between almost all the substantive variables analyzed, although their correlation is weak in most cases. However, the relatively strong for both crisis phases

correlation between variables characterizing the financial situation of respondents: P2 (P27) and P3 (P28), as well as those depicting the trends and volume of consumer and investment expenditure: P10 (P36); P11 (P37); P19 (P45) and P20 (P46) authorize the conclusion that hypothesis h6 can be positively verified.

Table 7.

Significant Chi-square test results between selected substantive variables

Phase I	P10	P11	P17.1	P17.2	P17.3	P17.4	P17.5	P17.6	P17.7	P17.8	P17.9	P19	P20	P25
P1														
P2	.4865	.5132											.4640	
P3	.5877	.5789										.4957	.5897	
P8														
P9														

Phase II	P36	P37	P43.1	P43.2	P43.3	P43.4	P43.5	P43.6	P43.7	P43.8	P43.9	P45	P46	P49
P26														
P27	.4242	.5056										.4750	.4619	
P28	.5272	.5792										.5988	.6060	
P33														
P35														

Source: Own elaboration.

Hypothesis h7 verification

Hypothesis h7 assumes that the respondents' financial situation and the structure and trends in consumer and investment expenditures in the two crisis phases were significantly different. Correlation analysis between the corresponding substantive variables from the first and second crisis phases indicated in Table 7, i.e. (P1 P25) and (P26 P49), revealed that all results are statistically significant. Furthermore, the Cramer's coefficient and Pearson's contingency coefficient values, calculated additionally for cases of variables with dichotomous cafeterias (yes/no), indicate a stronger correlation of corresponding variable pairs than in the case of h5 and h6 hypothesis verification. The most strongly correlated pair is P3 and P28, for which the detailed results of the Chi2 test and the contingency coefficient and Cramer's value are provided in Table 8. The weakest correlated pair of variables in this analysis were P17.01 and P43.01 (changes in basic consumption), for which the Cramer coefficient was 0.31. Therefore, in the area of these analyses, we have a moderate to strong correlation. The strong relationship between the P3 and P28 variables is confirmed by the two-dimensional distribution presented in Figure 4. The figure shows that in response to questions P3 and P28, respondents most frequently indicated the same response options, stating that they did not lose their jobs in either the first or second crisis phases, or that they did not work/do not run a business. Accordingly, hypothesis h7 should be rejected as false.

Table 8.

Detailed example of correlation analysis between substantive variables P3 from the first and P28 from the second crisis phase

Statistics	Statistic: Q3. As a result of the COVID-19 pandemic, has there been a temporary or permanent loss of your job in your case?(4) x P28. In the second crisis phase, has there been a temporary or permanent loss of your job in your case?(4)		
	chi-square	df	p
Pearson's chi-square	993.5007	df=9	p=0.0000
NW chi-square	917.7556	df=9	p=0.0000
Contingency coefficient	.7059532		
Cramér V	.5754710		

Source: Own elaboration.

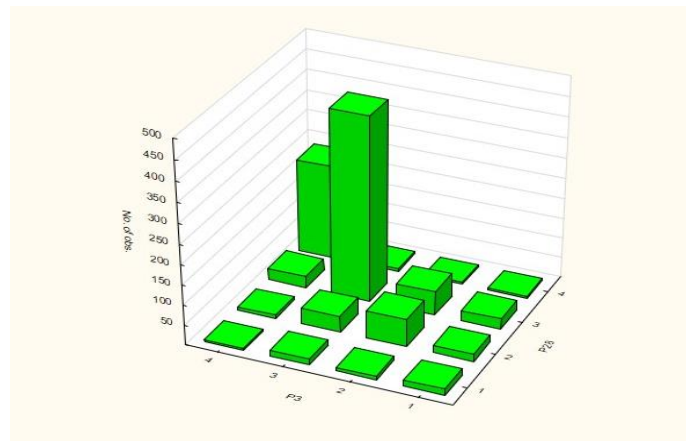


Figure 4. Two-dimensional distribution for the variables P3 and P28.

- Responses for variables P3 and P28: 1. Yes, permanent loss, 2. Yes, temporary loss, 3. No, 4. Not applicable - I did not work/did not run a business.

Source: Own elaboration.

5. Conclusion

The research results and statistical analyses presented in this paper authorize the following conclusions:

- Both the pandemic and inflation crises caused a deterioration in the financial condition of Poles, both as perceived subjectively and as measured by the decline in real income. Such a decline was declared in both crisis phases by approximately 23% of respondents each. However, the dominant phenomenon was the stabilization of the financial situation, as declared by 39% of respondents for the first phase and 46% for the second phase.

- The crises have exacerbated labor market perturbations. About one-fifth of active respondents have been affected by job loss, most of them, however, temporarily. In particular, the pandemic crisis has drastically reduced the possibility of changing jobs and/or the availability of new offers, as stated by more than 40% of respondents.
- The anti-covid shields proved to be an important factor in maintaining jobs and earnings levels for a third of the respondents covered by such support, while about 60% of respondents indicated their half-success (earnings levels were not maintained), and 8% of respondents' assessment was negative (despite the shield, the position/business was eliminated).
- However, in the opinion of the majority of the total respondents, the assessment of the Polish government's and the NBP's performance (in particular) in dealing with the pandemic and inflation crises was not positive. Among the negative opinions were the misallocation of funds from the anti-covid shields and excessive increases in public spending, late interest rate increases in phase two, and the lack of alternative financial instruments to affect inflation.
- However, the respondents' economic situation during the period under study was not quite bad enough to cause them to live on credit. During both crisis phases, the use of consumer credit was declared by a relatively small percentage of respondents, about 16% each. Credit charges generally consumed no more than 20% of current income, and the subjective assessment of one's purchasing power as a consumer was rated as moderate by about 70% of respondents in both phases. Meanwhile, the inflation crisis has exacerbated respondents' unfavorable projection of their own financial situation for the next 12 months. While at the end of the first crisis phase, 31% of respondents feared its deterioration, by the end of the research period this share had risen to 40%.
- Both crisis phases have significantly increased the share of consumer expenditure in current earnings/respondents, as indicated by about a quarter of respondents. Respondents most often spent up to 40% of their current income on basic and current consumption, and these were the main source of consumption financing (about 80% of indications when choosing twice). This was followed by savings (about 30% of indications).
- The factors that most strongly influenced changes in the structure and level of consumer expenditure were the current income level, inflation and price changes levels, savings holdings levels and the official pandemic restrictions of the first crisis phase. Low interest rate policy in the first crisis phase did not have a significant impact on the consumer expenditure growth.

- Dividing expenditure by specific goods and services, spending on basic consumption (food, fees, basic clothing) showed the highest growth rate (40% of indications each in both phases). The category in which spending stabilization dominated was home/apartment furnishings, and the largest spending reductions were in the categories of travel/holidays abroad, travel/holidays at home, luxury goods and current consumption (restaurant, cinema, theater), for which the percentage of indications in multiple choice was close to or above 50%. Expenditures for the car purchase or modification and the home/apartment purchase for personal use have also significantly decreased.
- The research showed that crisis situations have forced certain respondents groups to completely abandon certain consumer expenditure categories. However, even in the areas of basic consumption excluding food, the abandonment of this expenditure category, or a significant reduction in it, was indicated by 8% each of those surveyed in both crisis phases.
- Surveys have indicated a limited Poles' willingness/ability to invest. In both crisis phases, the percentage of non-investors was high, at around 70% of the total respondents. There was also a small share of investment expenditures, not exceeding 20% of the respondents' current income in most cases, and the dynamics of their changes over time.
- The respondents' stated preference for certain forms of investment as the most favorable income form and protection against inflation did not change significantly during both crisis phases. In a two-choice selection, the following were indicated in order of preference as the most advantageous investments: apartments/houses, land/agricultural land, gold/raw materials, treasury bonds and bank deposits. However, the declarations hardly translated into the respondents' actual investment choices, which were, according to frequency: bank deposits, currencies, stocks/stock funds, and treasury bonds. The following factors were identified as the main factors determining the choice of the investment form and limiting the investment process: the level of funds held, the level of investment risk, the knowledge necessary for investment, the expected rate of return and the difficulty of the investment procedure.

The statistical verification of the research hypotheses included in the study allows us to conclude that:

- Hypotheses h1 and h2 were verified partially positively, because although financial deterioration and job loss were found in a significant percentage of respondents, these phenomena were not of a massive, dominant nature.
- The following hypotheses should be considered confirmed: h3 on the impact of both crisis phases on the growth and change in the structure of respondents' consumer expenditures, and h6 assuming that the respondents' current financial situation and its

future projection significantly affected the assortment structure and size of such expenditures.

- Hypotheses h4 on the impact of crisis situations on the change in the forms and dynamics of respondents' investments, h5 on the existence of relationships between respondents' metric characteristics and their financial situation and expenditures structure, and h7 on significant differences in respondents' financial situation and the size and structure of their expenditure from the first and second crisis phases should be rejected as unproven.

Concluding statements that the pandemic and inflation crisis have caused, although not on a massive scale, a deterioration in the financial situation of Poles and a change in the structure and growth of consumer expenditures in their current income are legitimate. However, such changes did not take place in the capital expenditure area. No significant differences in the severity of these phenomena were observed between the pandemic crisis phase and the inflationary crisis phase. Similarly, no clear correlations were identified between the metric characteristics of the subjects and the perceived crisis impacts. In the statistical analyses conducted, the correlation of the various categories of explanatory variables with the explained variables was quite common, but in the vast majority of cases weak.

The research presented here was conducted at a time when the inflation crisis was still growing. Better identification of its effects, including deferred effects, could be achieved by repeating the study on the same research.

References

1. Ahmed, M.Y., Sarkodie, S.A. (2021). How COVID-19 pandemic may hamper sustainable economic development. *Journal of Public Affairs*, 21(4), e2675. doi: 10.1002/pa.2675.
2. Bartosiewicz, A., Księżopolski, K., Zybala, A. (2021). *Polska ... Unia Europejska ... Swiat ... w pandemii COVID-19*. Warszawa: Elipsa.
3. Bednar, O., Cecrdlova, A., Kaderabkova, B., Rezabek, P. (2022). Energy Prices Impact on Inflationary Spiral. *Energies*, 15(9), 3443. doi: 10.3390/en15093443.
4. Bonam, D., Smādu, A. (2021). The long-run effects of pandemics on inflation: Will this time be different? *Economics Letters*, 208, 110065. doi: 10.1016/j.econlet.2021.110065.
5. Desalegn, G., Tangl, A., Fekete-Farkas, M. (2022). From Short-Term Risk to Long-Term Strategic Challenges: Reviewing the Consequences of Geopolitics and COVID-19 on Economic Performance. *Sustainability*, 14(21), 14455. doi: 10.3390/su142114455.
6. Frączyk, J. *Nasz covidowy dług ma przekroczyć 450 mld zł. Większość krajów poradzi sobie lepiej z pandemią*. Retrieved from: <https://businessinsider.com.pl>, 22.04.2021.

7. Ghecham, M.A. (2022). The Impact of COVID-19 on Economic Growth of Countries: What Role Has Income Inequality in It? *Economies*, 10(7), 158. doi: 10.3390/economies10070158.
8. GUS (2022). *Umieralność w 2021 roku. Zgony według przyczyn – dane wstępne*. Retrieved from: <https://stat.gov.pl/obszary-tematyczne/ludnosc/statystyka-przyczyn-zgonow/umieralnosc-w-2021-roku-zgony-wedlug-przyczyn-dane-wstepne,10,3.html>, 16.05.2022.
9. Halmai, P. (2021). COVID-crisis and economic growth: Tendencies on potential growth in the European Union. *Acta Oeconomica*, 71(S1), pp. 165-186. doi: 10.1556/032.2021.00034.
10. He, L., Duffy, C., Horowitz, J. (2020). *US stocks halted after falling 7%. Global stocks plunge as oil crashes and coronavirus fear spreads*. Retrieved from: <https://edition.cnn.com>, 9.03.2020.
11. Jackson, J.K. et al. (2021). *Global Economic Effects of COVID-19*. Congressional Research Service. Retrieved from: <https://sgp.fas.org/crs/row/R46270.pdf>.
12. Jaworski, P. (2021). Wpływ pandemii COVID-19 na główne indeksy giełdowe na świecie. *Zarządzanie Mediami*, Vol. 9, No. 1, pp. 157-172. Retrieved from: <https://www.ejournals.eu/ZM/2021/1-2021/art/18432/>.
13. Juza, M., Walawender, P. (2021). Praca i życie zawodowe w Polsce podczas pandemii COVID-19. In: A. Barwińska-Małajowicz, M. Grzebyk (Eds.), *Przedsiębiorczość w dobie kryzysu COVID-19. Lekcja na przyszłość* (pp. 49-58). Łódź: SIZ.
14. King, B.M., Minium, E.W. (2009). *Statystyka dla psychologów i pedagogów*. Warszawa: PWN.
15. Krajewska, H. (2020). Pandemie w historii świata. *Wiś i rolnictwo*, Vol. 188, No. 3, pp. 17-33, doi: 10.53098/wir032020/01.
16. Kubiczek, J., Derej, W. (2021). *Tarcze antykryzysowe jako źródło wsparcia działalności MŚP w dobie pandemii COVID-19*. Warszawa: Polski Instytut Ekonomiczny.
17. Ozili, P., Arun, T.G. (2020). Spillover of COVID-19: Impact on the Global Economy. *MPRA Paper*, No. 99850, doi: 10.2139/ssrn.3562570.
18. Pavolová, H., Culková, K., Šimková, Z. (2022). Influence of COVID-19 Pandemic on the Economy of Chosen EU Countries. *World*, 3, pp. 672-680. doi: 10.3390/world3030037.
19. Paździor, A., Majek, A. (2021). Impact of COVID-19 on Household's Financial Situation in Poland. *European Research Studies Journal*, Vol. XXIV, Special Iss. 2, pp. 492-502, doi: 10.35808/ersj/2279.
20. Redo, M. (2022). Zbyt długo utrzymywane zbyt niskie stopy procentowe NBP zagrożeniem dla bezpieczeństwa finansowego Polaków i rozwoju gospodarczego Polski. *Historia i Polityka*, No. 39, Iss. 46, pp. 137-156, doi: 10.12775/HiP.2022.008.

21. Rozporządzenie RM z dnia 19 kwietnia 2020 r. w sprawie ustanowienia określonych ograniczeń, nakazów i zakazów w związku z wystąpieniem stanu epidemii, Dz.U. No. 697 (2020).
22. Samuk, G., Sidorowicz, I. (2021). Wpływ pandemii COVID-19 na zachowania konsumentów. *Akademia Zarządzania*, No. 5, Iss. 3, pp. 75-93.
23. Staniszewski, R. (2020). *Polska gospodarka na kwarantannie – analiza wskaźników ekonomicznych, społecznych oraz rozwiązań formalno-prawnych związanych z przeciwdziałaniem koronawirusowi COVID-19*. Retrieved from: <https://www.researchgate.net/publication/345505106>, doi: 10.13140/RG.2.2.12309.55524.
24. WHO (2020). *WHO announces COVID-19 outbreak a pandemic*. Retrieved from: <https://www.euro.who.int/>.
25. Wicka, A. (2021). Ocena wybranych aspektów jakości życia ludzi młodych po roku trwania pandemii COVID-19. *Ekonomia*, Vol. 27, No. 3, pp. 47-59, doi: 10.19195/2658-1310.27.3.4.
26. Zamfira, C., Lordache, A.M.M. (2022). The influences of covid-19 pandemic on macroeconomic indexes for European countries. *Applied Economics*, 54, 39, pp. 4519-4531 doi: 10.1080/00036846.2022.2031858.
27. Zbroińska, B.A. (2022). Wrażliwość budżetów publicznych i prywatnych na kryzys spowodowany pandemią COVID-19 na przykładzie polskiej gospodarki. *Optimum. Economics Study*, No. 3, Iss. 109, doi: 10.15290/oes.2022.03.109.03.