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## Impact of COVID-19 on Household's Financial Situation in Poland

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**Abstract:**

**Purpose:** The main purpose of the article was to assess the impact of the COVID-19 pandemic on the financial situation of households in Poland. This goal was supplemented with the main hypothesis, auxiliary hypotheses and research questions.

**Design/Methodology/Approach:** The research was conducted in February 2021 by means of an questionnaire survey on a group of 1000 randomly selected Polish residents. The questionnaire was developed in the form of 19 record and substantive single or multiple choice questions. Another method that was used for the research was the review and analysis of bibliographic resources.

**Findings:** The empirical results show that due to the COVID-19 pandemic, the financial situation of households in Poland has slightly deteriorated. Nearly 2/3 of the respondents were negatively affected by the financial effects of the pandemic to a small or medium degree. In 1/4 of the respondents, there was a marked reduction in income related to the pandemic crisis. It is worth noting the change in Poles' attitude to saving. The unpredictability of the pandemic crisis resulted in a significant reduction in purchasing expenses in more than half of the respondents, and nearly three quarters of them began to carefully plan their expenses. Two-thirds of respondents believe that one of the ways to protect themselves against another crisis caused by a pandemic, or another genesis of a phenomenon, is to save money.

**Practical Implications:** With the pandemic, the approach of Polish households to collecting savings and spending money has changed. This informs potential entities and institutions offering their goods that they should remodel their offers and adapt them to the prevailing conditions on the Polish market.

**Originality/Value:** Unique, authorial survey conducted on a representative research sample, dealing with current issues, concerning not only Poland, but also the entire world. The effects of the COVID-19 pandemic are described and the impact of respondent characteristics on the financial extent impact of the economic downturn is analyzed.

**Keywords:** COVID-19 pandemic, financial situation, households, surveys.

**JEL codes:** G51, C10, I31.

**Paper Type:** Research article

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## **1. Introduction**

Throughout history, the world and people had to confront various local and global life and development threats, such as the plague epidemic covering the mid-14th century, or the so-called "Spanish flu" occurring in the 1920s (Kowalczyk, 2020). Currently, this role is played by COVID-19, which was most likely created in December 2019, and in March 2020 it was officially announced by the World Health Organization as a factor causing the coronavirus pandemic (WHO, 2020).

Along with its spread, social life changed and restrictions were applied on a global scale. Among other things, the pandemic has led to mandatory mask-wearing, stationary work shifting to remote work, street mobility restrictions, local and international lock-downs (Bohdan, Maziarz, and Dornfeld-Kmak, 2021), flight cancellations, and the closure of recreational and educational venues to the public (Bryk and Wilczewski, 2020).

The virus has also left its mark on economies in many countries and economic regions. Millions of jobs are at risk in many countries, especially underdeveloped ones, and many immigrant workers have returned to their homelands or have remained in camps located within specific cities due to border closures. Transportation of raw materials and finished products between cities was severely restricted, and in turn exports to other countries due to border closures came to a complete stop (Mahendra Dev and Sengupta, 2020). In Turkey, on the other hand, taking the situation from March 2019 to March 2020, exports of goods decreased by almost 18% and imports increased by more than 3%. Additionally, the country experienced the highest unemployment rate since 2018, reaching 13.7% (Açıkgöz and Günay, 2020). Globally, the epidemic in turn has also led to a decline in revenue from crude oil sales to crude oil-dependent countries (Ozili and Arun, 2020).

From a social aspect, the impact of the pandemic on the Polish economy can be considered from two perspectives. On the one hand, for business entities, considering the PMI index, the coronavirus caused the index to fall from 48.2 points in February to 31.9 points in April 2020. This was followed by an increase and since June the index value has exceeded 50 points (Trading Economics, 2021). In February 2021, the index reached 53.4 points, indicating a positive market situation (Bankier.pl, 2021). Additionally, entrepreneurs are also provided with assistance under the Anti-Crisis Shield, which is to reduce the negative effects of the pandemic (Błaszczuk, 2020). Conversely, when considering the citizens' perspective, a survey conducted in April 2020 found that a quarter of families were negatively affected by the loss of income-generating opportunities (Staniszewski, 2020).

## **2. Essence of Households**

The pandemic has changed the lives of many families who create their own households and also manage their finances. Although individually they do not

usually constitute large communities, in the structure of the whole economy they are the most numerous group (Kubiak, 2011).

In the scientific literature, personal finance can also be found, which is often associated as a synonym for household finance (Xiao, 2020). In the economic context, interest includes, among other things, building models based on household consumption and saving behavior (Beshears, Choi, Laibson, and Madrian, 2018), and examining not only the cumulative values of consumption and savings, which undoubtedly shape the country's or region's economy (Kawiński, 2015), but also investment issues and house prices (Agarwal, Qian, and Tan, 2020).

Income research is an important matter in determining the wealth level and the extent to which the given households meet their needs (Krasucka, 2013). These can be shaped by, among other things, access to credit (Levine, Lin, and Xie, 2019), family benefits and various allowances (Koniuszewska and Święch-Kujawska, 2021), or by household members working outside their country (Clemens and Tiongson, 2017). Due to obtained income, the distribution of obtained money and its destination is planned at a certain level of possessed financial knowledge (Musiał, 2016) or accompanying financial risk (Potocki, 2018). These decisions are somewhat determined by, among other things, prices (Foà, Gambacorta, Guiso and Mistrulli, 2019), random events caused by the action of nature (Gallagher and Hartley, 2017). The purpose of allocating earned income is to maximize the needs met by household members or to create savings, which is the excess of earned income over the sum of their expenses (Wisniewska, 2017). Additionally, households also provide production factors, which are land, capital, and labor (Stalończyk, 2015).

All these processes are reflected in economic indicators presenting the macroeconomic situation in the country or region. They are manifested, for example, in accumulated savings that allow them to finance commercial transactions. These in turn translate into shaping economic growth (Badarinza, Balasubramaniam, and Ramadorai, 2019). On the other hand, however, the deteriorating economic situation makes society less inclined to shape trade and more focused on accumulating savings and leveling its own debt level (Musiał and Świecka, 2014). It leads, on the other hand, to the formation of a higher level of wealth in the society, which in Polish realities is more often observed in rural than in urban population (Grejcz and Żółkiewski, 2017).

### **3. Purpose, Hypotheses and Research Questions**

The main objective of the considerations conducted in this publication is to assess the impact of the COVID-19 pandemic on the financial situation of households in Poland. This was accomplished through the analysis of questionnaire surveys administered to a randomly selected representative group of respondents. The main hypothesis and two auxiliary hypotheses were also set for the analyses conducted in

the aforementioned research. According to the main hypothesis, the COVID-19 pandemic significantly affected the financial situation of households in Poland. For low- and moderate-income households, these changes were seen mainly in the area of increased concern about financial stability. For affluent households, the pandemic influenced a remodeling of their investment strategies.

The first auxiliary hypothesis is that COVID-19 had the greatest impact on the finances of households that were considered poor or average before the pandemic. The effects of the pandemic were less visible in the case of affluent households.

The second auxiliary hypothesis is based on the assumption that the greatest impact associated with reduced income and wages during the pandemic was suffered by residents of larger cities, while in smaller cities the impact of the pandemic was relatively small.

Complementing the purpose and research hypotheses are the conclusive and complementary research questions posed in this study with the following content:

- Was the impact of the pandemic symmetrically distributed across age categories?
- Do respondents with better education feel the effects of the pandemic less than those with less education?
- Is the impact of the pandemic more pronounced for people living in larger cities?
- Were the more numerous households more affected by the pandemic than the relatively small households?

#### **4. Description of the Research Tool**

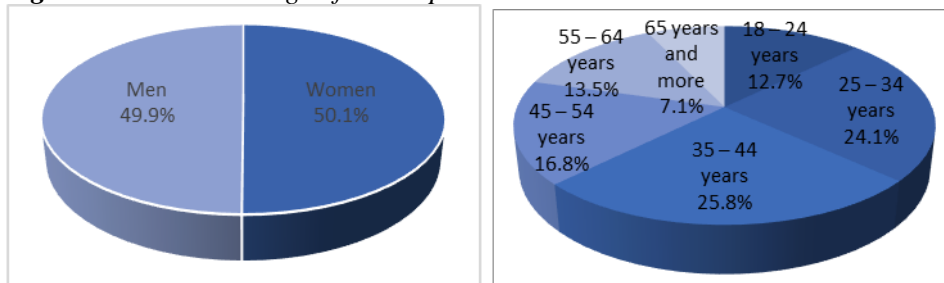
The research method that was used for the purpose of this paper is the questionnaire method. The primary function of this method is to gather collected information that relates to the issues raised by the researcher (Łobocki, 2006). The survey technique used to conduct the research is a self-developed survey questionnaire. The questionnaire contained 19 single-choice or multiple-choice metric and content questions. The Chi-square test with Yates' correction was used to assess the relationship of the answers given to the questions in the metric, allowing the hypothesis of no relationship between the answers to be verified in favor of the alternative hypothesis that a relationship exists. The strength of the relationship were assessed using Cramer's coefficient and the strength and direction of the relationship was assessed using gamma coefficient (Sobczyk, 2007).

#### **5. Research Material and its General Characteristics**

The research material in this study consisted of answers given by people randomly selected from throughout Poland. The research was conducted between 01.02.2021 and 22.02.2021 on a sample of 1000 respondents aged between 18 and 70 years.

The questionnaire survey was completed by 501 women and 499 men. The questionnaire was administered to individuals aged 18-70 years. The largest portion of respondents who completed the survey are between the ages of 35-44 (25.8% of the respondents). Those aged 25-34 were second (24.1%) and those aged 45-54 were third (16.8%). Those over 55 years of age accounted for a total of 20.6%, while those under 25 years of age accounted for 12.7% of respondents (Figure 1).

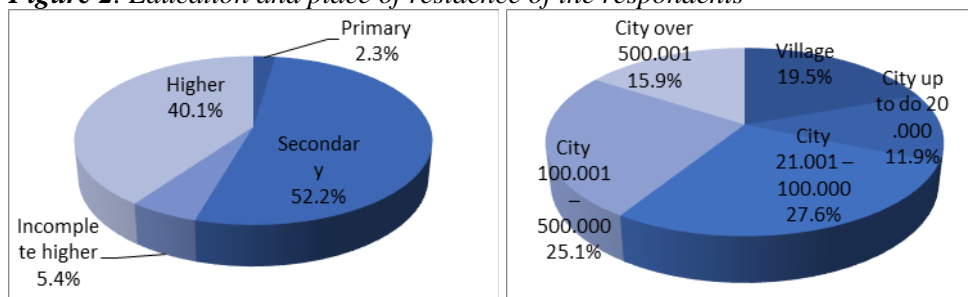
**Figure 1.** Gender and age of the respondents



**Source:** Own creation based on the survey results.

The largest proportion of respondents were those with a high school education (52.2%) and higher education (40.1%). A total of 7.8% of respondents had incomplete higher or primary education. The largest percentage of people (27.6%) were residents of medium-sized cities, i.e., from 21,001 to 100,000 residents. A slightly smaller percentage of respondents lived in cities with populations between 100,001 and 500,000. About 1/5 were inhabitants of the village. The smallest percentage of respondents came from cities with population over 500,001 (15.9%) and small towns - up to 20,000 (11.9%) (Figure 2).

**Figure 2.** Education and place of residence of the respondents



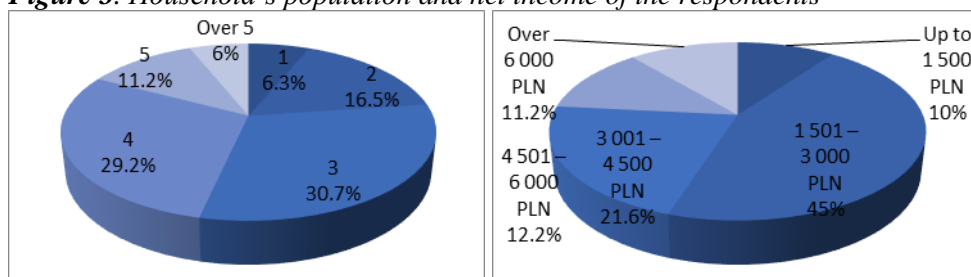
**Source:** Own creation based on the survey results.

The largest proportion of respondents (30.7%) were representatives of households with 3 persons. A slightly smaller group (29.2%) were those representing 4-person households. There was a noticeably smaller share of 2-person households (16.5%) and 5-person households (11.2%). Single-person households (6.3%) and households with more than 5 persons (6.0%) had the lowest percentage. Among the respondents, the majority (45%) were representatives of households with an

average net income per person in the range of PLN 1501 to PLN 3000. Approximately 1/5 were people with incomes between PLN 3001-4500. Other income groups were much less numerous (Figure 3).

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**Figure 3.** Household's population and net income of the respondents



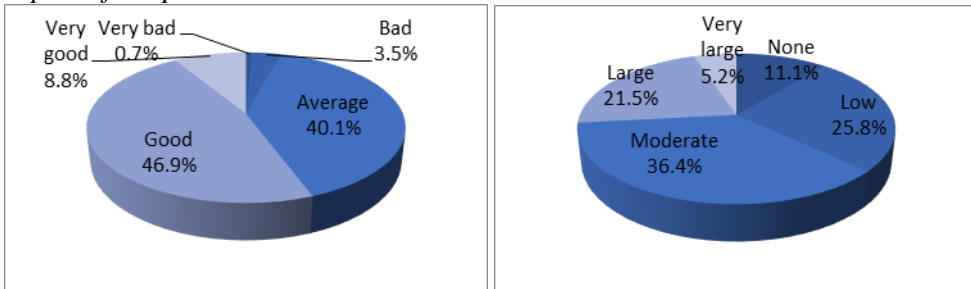
*Source:* Own creation based on the survey results.

## 6. Research Results

The research material in this study consisted of answers given by people randomly selected from throughout Poland. The research was conducted between 01.02.2021 and 22.02.2021 on a sample of 1000 respondents aged between 18 and 70 years.

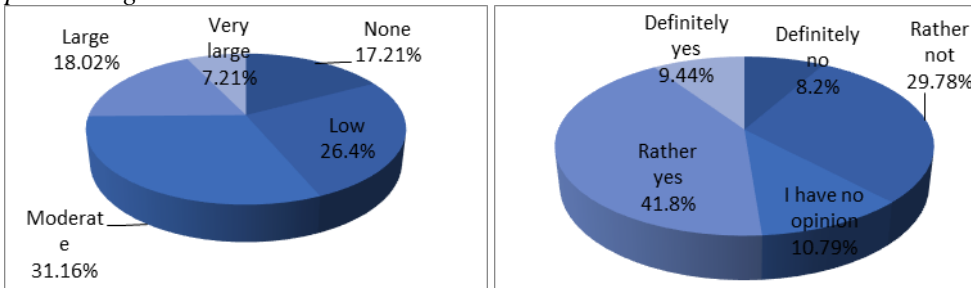
The financial situation in 469 respondents before the pandemic outbreak was described as good, and among about 400 respondents it was average. For 88 people the situation was very good, while the rest perceived their financial situation as bad or very bad. The largest number of respondents (364) were moderately affected by the pandemic, and for 369 people this impact was less or nonexistent. In contrast, slightly over a quarter of the respondents considered that the COVID-19 virus had a large or very large impact on their financial situation (Figure 4). Nearly 1/3 of respondents felt that the pandemic had a medium impact on income reduction, and more than 43% said it had less or no impact on income reduction. For about 25% of the respondents, this impact on income was large or very large. More than 50% of the people surveyed said that SARS-CoV-2 caused them to reduce their purchase spending, and about 38% felt that the reduction in spending was not due to the pandemic outbreak. More than 10% of respondents had no opinion (Figure 5).

**Figure 4.** The financial situation of respondents before the pandemic and the impact of the pandemic on this situation



Source: Own creation based on the survey results.

**Figure 5.** Impact of the pandemic on the reduction on respondent's income and purchasing decisions



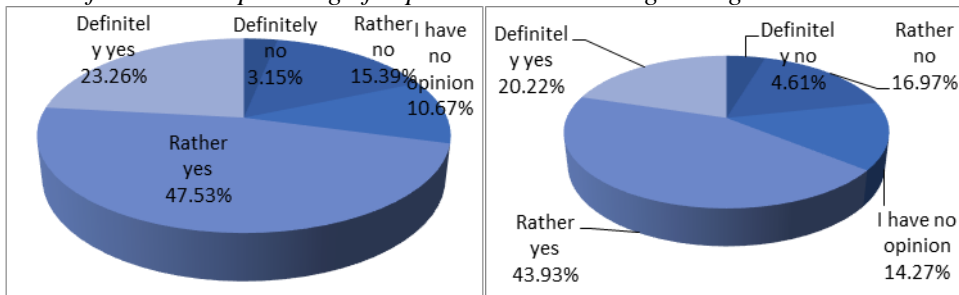
Source: Own creation based on the survey results.

More than 70% of respondents said that COVID-19 influenced them to plan their spending more meticulously. For almost 19%, this situation had no impact on that behavior, and over 10% had no opinion on the topic. Among the respondents, the largest percentage of people (about 64%) stated that they started accumulating savings due to the coronavirus. More than 20% claimed that it was not important to them, and more than 14% of the respondents had no opinion on this issue. This phenomenon is illustrated in Figure 6.

## 7. Statistical Analysis

Statistical analysis, described in section 4, was performed to assess the correlation of the responses to the questions in the metric. The results of the applied analysis are presented in Tables 1 and 2. The obtained results show that there are small or even negligible relationships between the selected parameters and the financial situation before the outbreak of the pandemic, as determined by the respondents. Of all the relationships presented, the largest ones occur in relation to the average net income and education. Along with the positive growth in income and the level of education, the financial situation before the pandemic also increased positively (Table 1).

**Figure 6.** Impact of the pandemic on the purchasing decisions of respondents in terms of meticulous planning of expenses and collecting savings



Source: Own creation based on the survey results.

**Table 1.** Significant Chi-square test results for question No. 7 along with an assessment of the strength and direction of the relationship

Question	Metrics	Chi-square	p-value	Gamma index	Cramer coefficient
How would you assess your household's financial situation before the pandemic?	Age	13.34	0.009728	-0.130	0.115
	Education	19.87	0,000529	0.204	0.141
	Place of residence	16.55	0,035123	0.052	0.091
	Number of persons in household	15.09	0.004520	0.131	0.123
	Average net income	73.72	0.000000	0.278	0.136

Source: Own creation based on the survey results.

A strong bond is observed between obtaining financial assistance in the form of credits and loans and the number of household members. It can be seen that the larger the household, the more willingly they use credits and loans from various sources (Table 2).

**Table 2.** Significant Chi-square test results for questions No. 9.01, No. 11.01, No. 11.02, No. 12.01, No. 12.02, No. 17 along with an assessment of the strength and direction of the relationship

Question	Metrics	Chi-square	p-value	Gamma index	Cramer coefficient
11.01. Job losses	Age	11.17.	0.024698	-0.005	0.112
12.02. Salary reduction	Number persons in household	10.72	0.029865	0.032	0.115
17.FLT. Financial assistance	Number persons in household	68.74	0.000000	-0.523	0.264

Source: Own creation based on the survey results.



## **8. Conclusions**

Statistical analysis showed that the effect of the basic categories describing the respondents on the subjective assessment of the respondents' financial situation before the pandemic was small (absolute coefficient values below 0.3). The highest correlations in this area were observed for average net income (coefficient 0.278). Similarly, small correlations were evident with respect to the phenomenon of the effect of metric elements on pandemic-induced economic risks and real concerns about further consequences of the pandemic crisis.

Therefore, the following conclusions emerge from the assessment of the impact of the COVID-19 pandemic on the financial situation of households in Poland:

- the financial situation of households in Poland has slightly deteriorated;
- nearly 2/3 of respondents were negatively affected financially to a small or medium degree by the pandemic;
- 1/4 of respondents showed a marked reduction in income pandemic crisis;
- change in Poles' attitude towards saving was observed (a large proportion of respondents began to meticulously estimate expenses and look for sources of savings during the pandemic);
- the unpredictability of the pandemic crisis phenomenon resulted in a significant reduction in purchase expenditures for more than half of the respondents, and nearly 3/4 began to plan their spending more carefully;
- 2/3 of respondents believe that one way to protect against another crisis caused by a pandemic or other such phenomenon is to accumulate savings.

The analysis conducted allowed answering the research questions posed. This shows that no significant correlation was observed between age, education level, place of residence, and the number of people in the household and the perceived effects of the pandemic.

The observed results prove that the COVID-19 pandemic has a global character in the socio-economic sense, i.e. it affects almost all social groups in Poland with similar intensity and raises concerns about economic and financial stability in representatives of each group regardless of age, place of residence, education, etc. This proves the thesis that its long-term effects are difficult to predict, and that economic protection against it eludes traditional model crisis management schemes.

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