CHANGES IN HOUSEHOLD AND GENERAL GOVERNMENT CONSUMPTION AND SAVINGS DURING THE COVID-19 PANDEMIC IN THE EUROPEAN UNION*

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Abstract

In March 2020, the COVID-19 pandemic caused a significant economic shock in countries worldwide, negatively affecting every aspect of the world economy. Due to the situation with the COVID-19 pandemic, governments imposed a lockdown on households to slow the spread of the pandemic. It was unknown how long the lockdown could last and how much impact it would have on households and the general government. Household consumption is a specific component of final GDP consumption and generally represents about 60% of GDP. Crises most often affect the individual and manifest in unplanned and unnecessary costs that affect household consumption and savings, and consequently growth and development. Eurostat states that the household savings rate of the European Union (EU) decreased in the third quarter of 2020 but was 4.5% higher than in 2019. This paper aims to analyze the differences in household consumption expenditure and net savings across the EU from 2018 until 2021 and general government consumption expenditure and net savings. In addition, it will compare the differences in household and general government consumption and savings in 2019 and 2020. This paper uses univariate statistical methods to define the differences between the EU member states and their private and public consumption expenditure and net savings. The authors will suggest further research on the topic mentioned above and provide evidence on how households should react to future pandemic situations.

Keywords: COVID-19, household consumption, household savings, general government, the European Union

JEL: A10, D10, D14

1. Introduction

In December 2019, a new form of a disease known as COVID-19 was discovered in the Chinese city of Wuhan. The condition began as a big unknown and quickly spread over the globe. Countries had to protect themselves and look after their populations. Therefore, they began to shut down and restrict population movements, resulting in a reduction in economic trends and activity. The World Health Organization (WHO) proclaimed a global pandemic on 11 March 2020, and an epidemic was declared throughout the European Union (EU) and Croatia. In the Republic of Croatia, the first case of infection was confirmed on 25 February 2020, and by the end of March 2020, all EU member states reported cases of COVD-19. With the increased number of infected people in the Republic of Croatia, measures to protect citizens were implemented. The so-called "lockdown" was established, which had economic consequences, like for the rest of the EU.

During the first few months of COVID-19 in Europe, many countries reported insufficient necessities such as toilet paper, food, and more. People feared a new situation that had never happened before and, due to uncertainty, they bought more supplies than needed. Moreover, they started to spend more until they realized that the employment rate could decrease and that they can lose jobs, which may be leading to poverty. The COVID-19 pandemic has negative consequences on people as countries registered increased panic, anxiety, and depression levels in both young and adult people and changed food consumption preferences. In addition, people's unemployment concerns are higher than those during the Great Recession (van der Wielen and Barrios, 2021).

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Since the COVID-19 pandemic is still present, many countries adapted to new living standards under which some countries have restrictions in everyday life, while others do not. The authors analyzed consumption expenditure and net savings of the households and general government in the twenty-seven member states of the EU, excluding the United Kingdom.

2. Theoretical background

Unlike previous economic crises, the COVID- 19 crisis has had four shocks: (1) supply shock; (2) demand shock; (3) falling expectations and rising uncertainty; and (4) the shock of rapid inadequate measures (Čavrak, 2020, p. 8). An initial blow is a health impact that leads to a supply shock because healthcare policies disrupt local and global production and supply chains. Inventory is depleted, but it is the end of the line, so there is a supply breakdown. Fear, panic, and uncertainty emerge as a result of a large number of deaths, leading to a drop in consumption and a halt in investment. A decrease in demand reduces company's cash flow, thus increasing the likelihood of bankruptcy. Companies are initially protected from potential bankruptcy by laying off employees, resulting in increased unemployment. This reduces the income of unemployed households while also expanding the scope of "bad loans" and the inability to repay loans. This puts the financial system in jeopardy, exposing it to higher risk, and reduces consumer purchasing power, leading to a further drop in demand. As a result, we enter a new, deeper negative cycle: further reduction in consumption, decrease in output and employment, drop in enterprise and household income, and the negative loop grows (Čavrak, 2020).

All of these shocks had the most significant impact on consumers, specifically households. The situation that households are in is challenging and uncertain. As a result of the loss of income, households found themselves in financial difficulties. This, in turn, reduced their consumption and, thus, had a significant impact on the inflow of money to the state and businesses. "Household spending is the amount of final consumption expenditure made by resident households to meet their daily needs, such as food, clothing, housing (rent), energy, transportation, durable goods (particularly automobiles), health costs, leisure, and miscellaneous services. It accounts for roughly 60% of gross domestic product (GDP) and is, thus, an important variable in economic demand analysis. Household spending, including government transfers (referred to in national accounts as "actual individual consumption"), is equal to household consumption expenditure plus general government and non-profit institutions serving households (NPISHs) expenditures that directly benefit households such as health care and education" (OECD, 2021).

The structure of consumption expenditures is observed according to the international classification COICOP-HBS, by which expenditures are classified into 12 major groups: food and non-alcoholic drinks, alcoholic drinks and tobacco, clothing and footwear, housing, furniture, equipment for house and regular maintenance, health, transport, communications, recreation and culture, education, hotels and restaurants, other goods and services (DZS, 2006, p. 180).
The economic effects of the COVID-19 pandemic have prompted many global economists to estimate and forecast the economic effects of this unpredictable virus, with a particular emphasis on macroeconomic effects. Drivers of household behavior were investigated in Italy (Guglielminetti and Rondinelli, 2020) from a macro and microeconomic perspective. Several authors (Chronooupulous *et al*., 2020; Hacioglu *et al.* 2020) examined the impact of the COVID-19 on consumer spending in Great Britain. Consumer expenditure in the United Kingdom remained generally stable in the early stages of the COVID-19 crisis (Chronopoulos *et al*., 2020), but subsequently spending significantly declined. In addition, transaction data was used (Hacioglu *et al.,* 2020) to show that, during the COVID-19 crisis, British households spent 40-50%, especially on services such as retail, restaurants, and transportation. In the USA, a public database was built (Chetty *et al.* 2020) that measures spending, business revenues, employment rates, and other indicators used to obtain insights into the effect of the COVID-19 pandemic. They found that GDP fell in the second quarter of 2020 because of a reduction

in consumer spending. Authors (Baker *et al*., 2020) also studied how individual spending reacts in an epidemic, a scenario with anticipated income shocks, the threat of supply chain disruption, and significant uncertainty, and economic impact of the COVID-19 pandemic on income and poverty of US families (Han, Meyer, and Sullivan, 2020) .

In Denmark, bank account transactions were used (Andersen *et al*., 2020) to study the dynamics of consumer spending through the COVID-19 crisis. They concluded that total card spending fell by 25% during the early stages of the crisis. Another article also analyzed consumer behavior in Denmark and Sweden since both countries were similarly affected by the pandemic (Shediran *et al*., 2020). In China, the influence of COVID-19 on consumption was analyzed (Chen *et al.*, 2020) after the epidemic in China in late January 2020 using daily transaction data from 214 cities over a 12-week timeframe. In Spain, 2.1 billion transactions were considered in Spain's second-largest bank (Carvalho *et al.*, 2020), as an alternate source of information for calculating consumption, a crucial component of GDP. A strong effect of financial concerns due to COVID-19 on non-durables spending based on the Consumer Expectations Survey (CES) conducted in the six largest euro-area economies, that was consistent with an important role of precautionary motives during the first peak of the pandemic and its immediate aftermath (Christelis *et al*., 2020).
Several Croatian researchers also investigated the main macroeconomic consequences of the COVID-19 pandemic on Croatia and other EU member states (Rogić Dumančić *et al*., 2020), as well as the impact of the COVID-19 pandemic on the respondents and their personal consumption (Roška and Draganović, 2020). Researchers also examined changes in behavior and lifestyle (Đogaš *et al,* 2020) of more than 3,000 respondents during the "lockdown" period in 2020, while others (Topolko Herceg, 2021) demonstrated consumer behavior in online shopping in the Republic of Croatia.

Panic buying is a typical response to the COVID-19 pandemic, and it stems from people's fears of scarcity, loss of control, and anxiety exacerbation. Individuals deal with dangers in this situation by purchasing specific types of products, such as necessities (Arafat, 2020, in Jin *et al*., 2020). Individuals may also stockpile resources and enhance saving behavior to deal better with future uncertainties (Jin *et al*., 2020).

On the other hand, the COVID-19 pandemic forced all levels of government to act in a situation of great uncertainty and severe economic, fiscal, and social pressures. With the appearance of variants and the onset of new waves of infection in many countries since mid-2020, governments are faced with a limited ability to sequence policy action. To manage, escape, and recover from the crisis, national, regional, and municipal governments have discovered that they cannot rely on a straight or linear route of policy action (OECD, 2021, p. 2). Since 2020, governments have provided financial support to protect businesses, households, and vulnerable people. On a global scale, since March 2020, the total fiscal support amounts to USD 13.8 trillion. Many countries, including the EU, are allocating new funding and reallocating the existing public funds to crisis priorities, including health care, SMEs, vulnerable populations, and crisis-affected regions.

3. Research methodology

Due to the recency of the researched topic, the authors used different online sources to retrieve data needed to conduct the analysis. To analyze household and general government consumption expenditure, the authors used CEIC Data available online. CEIC Data was founded in 1992 by a team of expert economists and analysts. Since then, CEIC Data has been providing accurate data insights for more than 200 countries (CEIC, 2021a). The authors analyzed available quarterly data in millions of euros. The time series includes data from January 2019 until April 2021, ten observations in total.

To analyze household and general government net savings, the authors used the AMECO database available online. The AMECO database is the annual macro-economic database of the European Commission's Directorate-General for Economic and Financial Affairs (European Commission,

2021a). The database includes data for the EU membertates and countries in the eurozone, EU candidate countries, and other OECD countries. The authors analyzed the available annual data in millions of euros. The time series includes data from 2018 until 2021, four observations in total.

The authors used Excel to analyze the data. The authors calculated changes in consumption expenditure based on the retrieved data. In the original database, consumption expenditure was in million USD, and the authors calculated percentage changes. Net savings are savings after deducting the consumption of fixed capital, and they are measured in a million euros.

4. Results

The following figures illustrate the changes in consumption expenditure and net savings in households and general government before and during the COVID-19 pandemic.
Figure 1 shows the changes in private consumption expenditure during the observed time in the EU (excluding the United Kingdom) and Croatia.

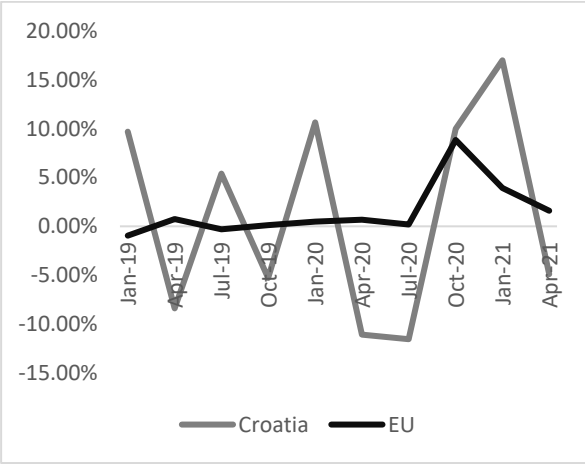

Figure 1 *Changes in private consumption expenditure in the EU and Croatia*
Source: Authors' research based on data available at CEIC (2021b)

As Figure 1 shows, the changes in private consumption expenditure in the EU were stable before the COVID-19 pandemic, in other words, during 2019 and at the beginning of COVID-19, from January 2020 until July 2020. After July 2020, private consumption expenditure started to increase until October 2020. From October 2020 until April 2021, private consumption expenditure started to decrease. In the case of Croatia, private consumption expenditure was more volatile. It was at the highest levels in January 2021 and at the lowest in July 2020. As Figure 1 shows, from one quarter to the next, Croatian changes in private consumption expenditure shift in the opposite direction – in one quarter it is at highest levels, and in the next quarter it is at the lowest level. Even though Croatia is an EU member state, it deals with more uncertainty than the EU does. Those changes in Croatian private consumption expenditure are shifting from one observation to another. Also, they change more than 5% in comparison. When the changes in general government consumption are analyzed, a similar situation is observed, as Figure 2 shows.

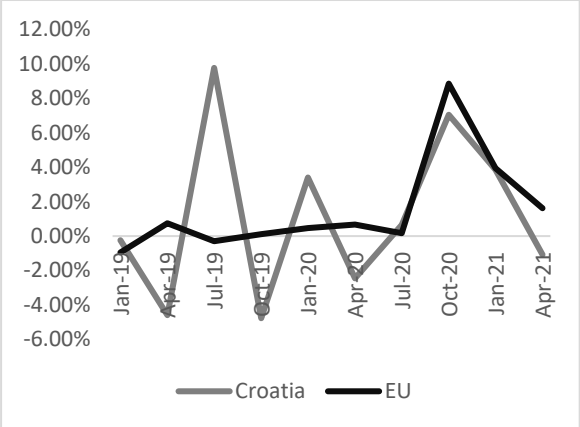

Figure 2 *Changes in general government expenditure in the EU and Croatia*
Source: Authors' research based on data available at CEIC (2021c)

Following the data showed in Figure 2, the changes in general government expenditure in the EU were stable before the COVID-19 pandemic, during 2019 as well as at the beginning of COVID-19, from January 2020 until July 2020. After July 2020, the changes in general government expenditure started to rise until October 2020. From October 2020 until April 2021, they started to decline. In the case of Croatia, the changes in general government expenditure were unstable. Theywere at the highest levels in July 2019 and at the lowest in October 2019. The changes in Croatia were more volatile before COVID-19, even though they remained unstable during 2020 and 2021, although less dramatic.

Figure 3 shows the changes in the net savings of the households during the observed time in the EU (excluding the United Kingdom).

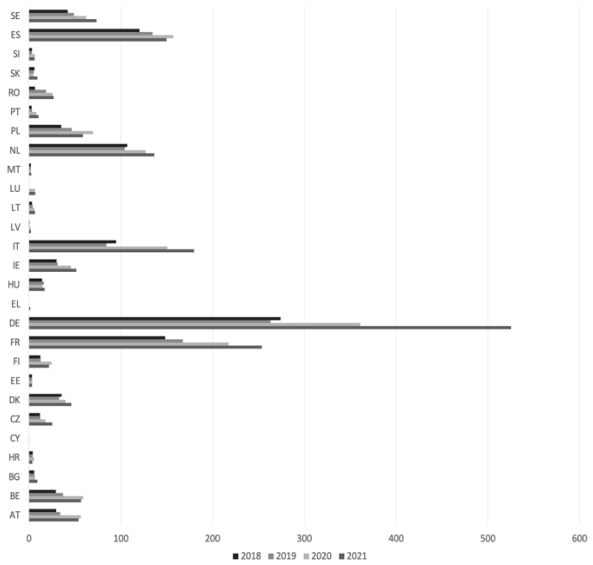

Figure 3 *Net savings of the households in the EU*
Source: Authors' research based on data available at European Commission (2021b)

As Figure 3 shows, net savings of the households before and during the COVID-19 pandemic differ from one-member state to another. There were only five countries with net savings of the households greater than 50 million euros per year during the observed time. The countries with net savings of the households greater than 50 million euros per year were France, Germany, Italy, Netherlands, Poland, and Spain. The remaining twenty-two countries had net savings of the households less than 50 million euros for at least one year. Greece had negative net savings of the households three years in a row, from 2018 until 2020. Since the COVID-19 pandemic started at the beginning of 2020, all countries except Greece recorded positive net savings of the households. There were as many as eleven countries that register net savings of the households less than 10 million euros: Bulgaria, Croatia, Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Portugal, Slovakia, and Slovenia. When the general government net savings were analyzed, a different situation was observed, as Figure 4 shows.

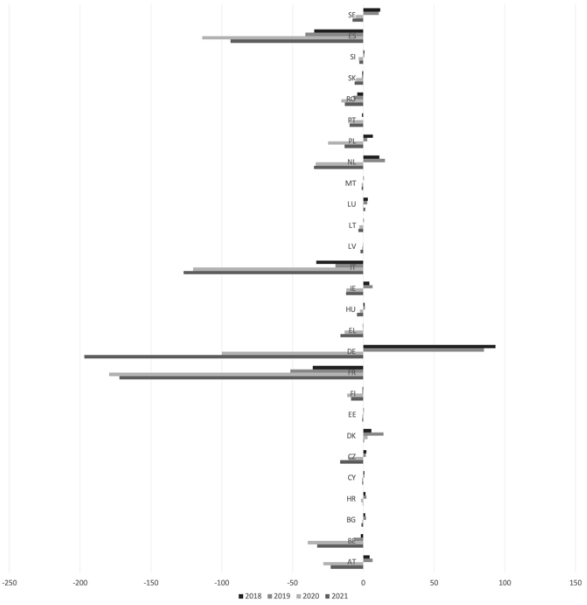

Figure 4 *Net savings of the general government in the EU*
Source: Authors' research based on data available at the European Commission (2021b)

Following the data showed in Figure 4, general government net savings in the EU had negative values in most countries. In addition, only one country recorded positive general government net savings values during the observed time, and it was Denmark. Sixteen countries had positive values in two following years, in all cases during 2018 and 2019. Eight countries registered negative general government net savings in 2019, while twenty-six countries registered negative general government net savings in 2020. The negative trend in general government net savings during 2020 can be described as a consequence of COVID-19 because governments had greater expenditures to help their citizens remain employed during the "lockdown". Germany and France decreased their general government net savings in 2020 and 2021 more than other countries.

5. Conclusion

The outbreak of COVID-19 has inflicted economic hardship upon the world. It has changed the world, and new approaches to save jobs as well as to adapt to new lifestyles emerged. There are negative consequences such as lost jobs, worse health conditions, more dissatisfied people, and more. On the other hand, COVID-19 positively influenced online market development, flexible job hours, online

education, *etc*. Even though many jobs were lost, people who kept their jobs started to adapt to work from home, and many firms are thinking of offering their employees to choose between working from the office or from home. The EU registered a significant decrease in general government net savings, while general government consumption expenditure remains stable. Regarding household consumer expenditure and net savings, consumer expenditure was steady during the COVID-19 outbreak, while net savings of the households remained positive. Based on the results, households performed better during the COVID-19 pandemic than the general government because they managed to spend and save at the same time.

The authors recommend further research into the decisions which led to the fact that households increase their net savings during the pandemic situation. The decision to increase net savings can mean that households are trying to save money for the future, which is unstable. On the other hand, it can mean that they are skeptical about today and that they do not want to spend money now if they can save it for the future.

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