Effects of COVID-19 Pandemic on Household Savings: Evidence from the CESEE Region

Gianluca Mattarocci[1*], Olta Manjani[2]

[1]University of Rome "Tor Vergata", Italy

[2]Bank of Albania, Albania

Abstract

The current study joins a rapidly growing body of research that investigates how the pandemic-induced state of vulnerability impacts consumers' household savings. Today, COVID-19 has changed the lifestyle of individuals and their propensity to save money for the future. Money saving strategy is highly required in order to manage the unexpected expenses and the higher uncertainty that characterizes the after pandemic scenario. Savings dynamics are expected to be different country-by-country due to the unique features that may characterize citizens on the basis of the relevant historical trends and their financial habits.

The current research paper analyses the CESEE countries and evaluates the change in the saving rate in order to find out the differences among them. The current research investigates CESEE countries saving rates with respect to the long-term average and the expectations for the after crisis period. Results show some interesting factual differences among the CESEE countries saving rates that may matter for the policymakers in order to determine the best solution to reduce the negative effects/after effects of the COVID-19 pandemic.

Keywords: COVID19, CESEE countries, savings dynamics, saving rate

JEL Classification: G51, E21

1. Introduction

According to the current study, rapid spread of COVID-19 pandemic has cost/swallowed many precious lives. In order to control this life taking

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[*] Coresponding Author: gianluca.mattarocci@uniroma2.it

virus, social distancing measures haven been undertaken. COVID-19 has become the biggest source of uncertainty for future in terms of health, economic, financial, and social developments regardless of both in short term or long run. The impact of the pandemic on the economic activity and its chain effects have been at the core of literature in last months. Data on the economic activity for first quarter of the year and also forecasts for the rest of the year, indicate a recession in many countries. The decline remains in aggregate demand, especially during the period of social isolation.

However, some of the factors have negatively affected the economic activity in its aftermath which is coupled with the shrinking production, job losses and increased uncertainty of savings. . The overall impact on savings is driven by both forced and precautionary increase in risks/negative effects, out of which the former (forced) is related to lower expenses, which is further related to services and it is no longer requested including hospitality, restaurants, and others. On the other hand, the latter (precautionary) attains to the risk appetite of individuals and their income uncertainty (Dossche & Zlatanos, 2020). The entity of the saving rate change will not be homogeneous among different countries and it will be affected by the local habits and propensity to save money for precautionary purposes.

The current research aims to analyze the household's savings behavior in times of pandemics by looking at the CESEE countries. The results highlight interesting differences among these countries in terms of the savings behavior over the time. These differences can be explained on the basis of historical trends of savings rate and different propensity for managing risk. Monitoring this indicator can serve policymakers to better complement their framework of household's financial situation, and consequently address the challenges they may face. The current research follows with a literature review of the economic and financial consequences of the COVID-19 pandemic and/or similar pandemics. Also, it proceeds with a sporadic examples of savings performance in the banking system during these times. Thus, it goes on to analyze the potential effects of the COVID-19 pandemic on savings in the CESEE region and closes with some concluding remarks at the end.

2. Literature Review

The question regarding how long COVID-19 pandemic would stay, remains unanswered. However, several studies are conducted on economic literature which further analyzes the economic costs along with the consequences of infectious diseases and epidemics. In modern history, they start with the Spanish Flu (1918-1920) in the early 20th century, and continue with smaller epidemics in the 21st century such as the SARS epidemic in 2002, the Swine Flu epidemic in 2009, and the Ebola epidemic in 2014 (Stephany et al., 2020). The studies on the SARS epidemic consequences on the economy indicate a significant reduction in the consumption of goods and services, an increase in the business operational costs as well as an increase in the risk premia in several countries (McKibbin & Fernando, 2020). Further, Goodell (2020) summarizes several articles that focus on the economic and social consequences of COVID-19, as well as other large scale epidemics/pandemics. They are grouped according to their impact on several sectors including the banking sector, insurance sector, and the public sector.

Moreover, Baldwin and Mauro (2020) also provide a summary of articles on the potential economic implications of COVID-19, including mostly descriptive data, opinions, and simulations. They vary from the impact of COVID-19 pandemic on trade, labor, and financial markets, to the macroeconomic and monetary policies, undertaken to smooth and contain its negative effects. Overall, the economists along with the available data on the first and second quarters of this year, indicate that the economic and financial costs of the COVID-19 pandemics are unprecedented in the modern history of epidemics.

For instance, referring to Huang et al. (2020), in China, the origin of the pandemic, the service and manufacturing sectors are most severely affected by COVID-19 crisis. Ramelli and Wagner (2020) use a combination of techniques such as Google search intensity of COVID-19 and stock market data to measure the economic impact by sector. Results show that the energy, retail, and transportation sectors have suffered the largest losses, while the health sector has incurred substantial gains in both of them. Another strand of literature focuses on the COVID-19 consequences in financial markets. McKibbin and Fernando (2020) build seven different

scenarios based on the hybrid DSGE/CGE model along with six sectors for twenty four countries.

These different scenarios factor the evolution probability of COVID-19 in order to measure its impact on financial markets as well as on macroeconomic indicators at global level. Their simulations indicate that even in the most contained scenarios, the economic and financial costs are quite significant in terms of GDP losses and reductions in investment. Also in terms of private consumption, trade balance, severe consequences in the capital markets, and so on. Stephany et al. (2020) build some co-risk indices to measure in real time the COVID-19 risks, by using the database of company risk reports of the US Securities and Exchange Commission (SEC).

Their results suggest that through the use of these risk sentiment indices businesses risk awareness is ahead of the stock market developments. Further, Lagoarde-Segot and Leoni (2013) construct a theoretical model for developing countries which indicates the risk of a banking system failure. Due to the deposit withdrawals in times of pandemics is proportional to the severity of the spread of the epidemics. Banks increase of reserves is also proportional to the latter. Nevertheless, the authors reinstate the fact that this is a theoretical model and despite of the deposit withdrawal episodes during pandemics, there have been no bank runs in these countries.

Skoufias (2003), in a summary of twelve papers based on the household coping strategies with the impact of crisis, epidemics, and other similar aggregate shocks, concludes that the group-funding of low-income households by micro-finance institutions or banking institutions is reduced as all the group members are similarly affected by the same shock. A very few studies are focused on the behavior of household savings during the COVID-19 pandemic, or even during other similar pandemics for that matter. Along these lines, Leoni (2013) analyzes the behavior of deposits in the banking system in the developing countries. The results indicate that the reduction of household savings in the banking system is affected by the spread of the epidemics, which is explained by the need of households to use their savings for medical treatment expenditures. In the meantime, most recent data have showed that many households have increased their savings

with the global spread of COVID-19, in the forms of deposits in the banking system, cash holdings, and other investment instruments.

On the other hand, households are reducing their consumption expenditures[†] which is highly related to the increased uncertainties of future. Likewise, according to McKibbin and Fernando (2020) DSGE/CGE model simulations, the shock assumptions of the pandemic generate a shift of funds from equity markets due to the increased risk premia and expectations of reduced profits in the wake of economic crisis partly into bonds, cash holdings or overseas, reflecting the particular markets which are mostly affected.

3. Empirical Analysis

3.1 Data Collection

Data sample of the current research includes quarterly data based on some countries in the region of Central and Southeast Europe. Data based on household consumption expenditures and savings expectations are provided by the Eurostat database. However, the household consumption expenditures consist of seasonally unadjusted data reported in million euros and current prices. Data on savings expectations include the results of Eurostat consumer confidence surveys on household expectations regarding their savings in the following twelve months. Moreover, savings expectations represent net balances of their percentage of positive and negative answers to the question, represented as the difference from their historical average. Data on household savings are authors' calculations. Data on savings for Albania, Croatia, Romania, and Hungary include deposits in the banking system, cash holdings, and investments in the government securities. Furthermore, savings data for the rest of the countries are approximated by deposits and cash holdings. The table 1, summarizes the average growth rates of household consumption expenditures and savings, along with their correlation coefficient.

[†]Applicable to the countries that have provided data in 2020Q1, depending on their availability at the time of the publishing:https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200806-2?inheritRedirect=true&redirect=/eurostat/web/main/home

Table 1

Summary statistics of household consumption expenditures and savings by the relevant Country

Country	Average growth rate of households consumption	Average growth rate of households savings	Correlation coefficient
Albania	7.2%	3.10%	-0.40
Bulgaria	4.0%	7.9%	0.02
Croatia	8.9%	-1.1%	-0.38
Czech Republic	5.7%	7.5%	0.26
Hungary	7.1%	12.3%	-0.17
North Macedonia	4.1%	6.4%	0.20
Poland	4.6%	9.6%	-0.79
Romania	4.7%	11.8%	0.50
Serbia	6.2%	7.30%	-0.33
Overall	*5.8%*	*7.2%*	*-0.12*

Source: Eurostat data processed by the authors

Croatia, Albania, Hungary, and Serbia have above the average growth in the household consumption rate while Serbia, Bulgaria, Romania, Poland, and Hungary are those countries which have been characterized by the higher average growth rate of household savings. As expected, the correlation coefficient is negative for most of the Countries. Also it indicates the increase in the savings rate as consumption expenditures reduce. Besides, Albania, Serbia, Croatia, Poland, and Hungary are those countries which have the strongest negative correlation with respect to the average value.

3.2 Methodology

According to the current study, the household savings include all monetary assets in the form of deposits, cash holdings or investments in the government securities, pension funds, private equity or other financial instruments. However, financial markets in some of the CESEE countries are yet in the early stages of development and household investments in such instruments are still negligible. Even, in the developed countries such

as Eurozone, the largest chunk of household investment portfolio in financial instruments consists of deposits in the banking system and cash holdings[‡]. In this context, household savings in some of these countries are approximated by the amount of household deposits in the banking system and cash holdings. In other cases, they also include investments in the government securities. The following equations represent the main assumptions in the approximation of household savings:

$$S_t^i = D_t^i + COB_t^i + GS_t^i \qquad (1)$$

where S_t^i is the overall household total savings, COB_t^i is the stock of currency outside banks, and GS_t^i the household investments in the government securities at time t. Data for deposits and Investments on the government securities is collected directly from the Eurostat database .While, the currency outside banks represent households share in the total stock held in local currency which has to be estimated from the available data[§]. In formula:

$$COB_t^i = \alpha_i * COB_t \qquad (2)$$

Where α_i represents the share of cash holdings of households as opposed to other economic agents. We assume keeping the same ratio as that of household deposits to the total stock of deposits for the approximation of the stock of cash outside banks held by households (D_t^i) as opposed to the other economic agents. In formula:

$$\alpha_{it} = D_t^i / D_t \qquad (3)$$

The analysis computes the savings rate of change for each quarter during the considered time horizon (ΔS_t^i), the gap between the current rate of change and the moving average of the last 4 quarters ($GapS_t^i$) and the gap between the current saving consensus forecast and the moving average of the last 4 quarters ($GapES_t^i$). In formulas:

[‡] https://sdw.ecb.europa.eu/reports.do?node=1000004900

[§] The stock of currency outside banks in foreign currency is not included. The latter cannot be directly measured, while estimation techniques or indirect measures would require very strong assumptions.

$$\Delta S_t^i = S_t^i - S_{t-1}^i \tag{4}$$

$$GapS_t^i = \Delta S_t^i - \frac{1}{4}\sum_{j=1}^{4} \Delta S_{t-j}^i \tag{5}$$

$$GapES_t^i = ES_t^i - \frac{1}{4}\sum_{j=1}^{4} ES_{t-j}^i \tag{6}$$

The analysis of the quarterly growth and consensus on the amount of savings before the pandemic and during the current sanitary crisis in order to underline the changes in the household behavior that could be ascribed do the disease. The data about the disclosure of COVID-19 events are summarized in the following table (Table 2).

Table 2

Disclosure of COVID-19 cases in the CESEE countries and in Europe

Country	First cases of COVID-19	Cumulative number of cases at the end of the month				
		February	March	April	May	June
Albania	March 9th	0	223	766	1,122	2,466
Bulgaria	March 8th	0	359	1,447	2,513	4,831
Czech Republic	March 2nd	0	3,002	7,579	9,230	11,805
Croatia	February 26th	5	790	2,062	2,246	2,725
Hungary	March 5th	0	492	2,775	3,867	4,145
North Macedonia	February 27th	1	285	1,442	2,164	6,224
Poland	March 4th	0	2,055	12,640	23,571	34,154
Romania	February 27th	3	1,952	11,978	19,133	26,582
Serbia	March 7th	0	785	8,724	11,381	14,288

Country	First cases of COVID-19	Cumulative number of cases at the end of the month				
		February	March	April	May	June
Europe	*February 22nd*	1,146	448,445	1,411,154	2,079,910	2,595,839

*Source: European Centre for Disease Prevention and Control data*

The CEESE countries were not affected at the beginning by the pandemic, but in few weeks it was spread over the whole Europe. So, all the countries then started to register new cases of COVID-19 and in few months several thousands of citizens were infected by the disease.

3.3 Results

Data on household savings show that all the CEESE countries were already experiencing a growth in the saving rate quarter by quarter before the pandemic. Moreover, the saving rate changed significantly during the lockdown period (Chart 1).

Chart 1

*Quarterly rate of change of household savings rate in the CESEE region*
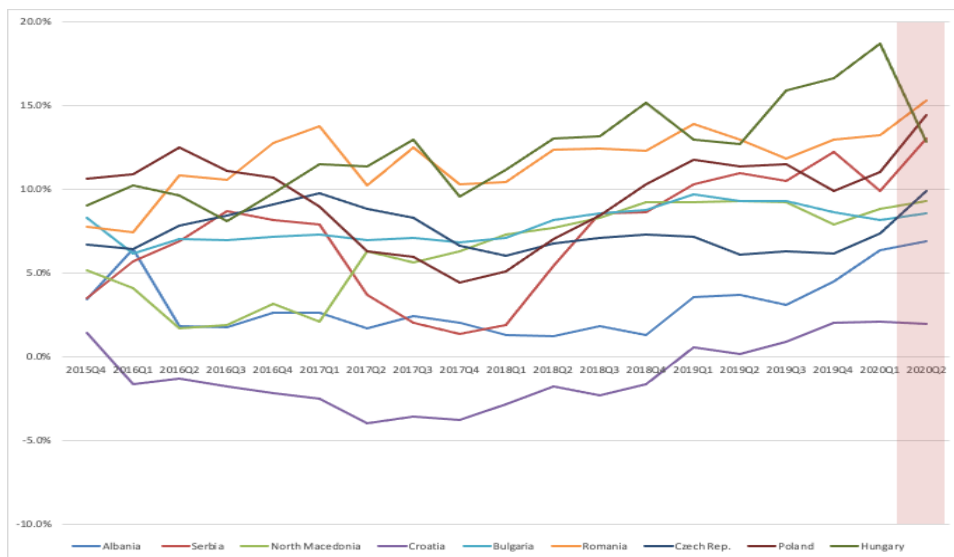
Notes: *Data on household savings for Albania, Croatia, Romania, and Hungary include deposits in the banking system, cash holdings, and investments in the government securities; savings data for the rest of the countries include deposits and cash holdings.

The savings data on CEESE countries excluding Hungary for the first quarter of 2020 indicate the largest growth in the last 20 years, by 3.5 pp on average in annual terms. The evidence is coherent with the results obtained on average in the EU countries due to the higher uncertainty in the real economy after the COVID-19 disease (Eurostat, 2020).

To further understand whether the savings growth is a short-term trend or expected to continue in the future, the chart below shows data from the consumer confidence survey on household expectations regarding their savings in the following 12 months (Chart 2).

Chart *2*

*Current household savings rate of change with respect to long term average (1 year)*
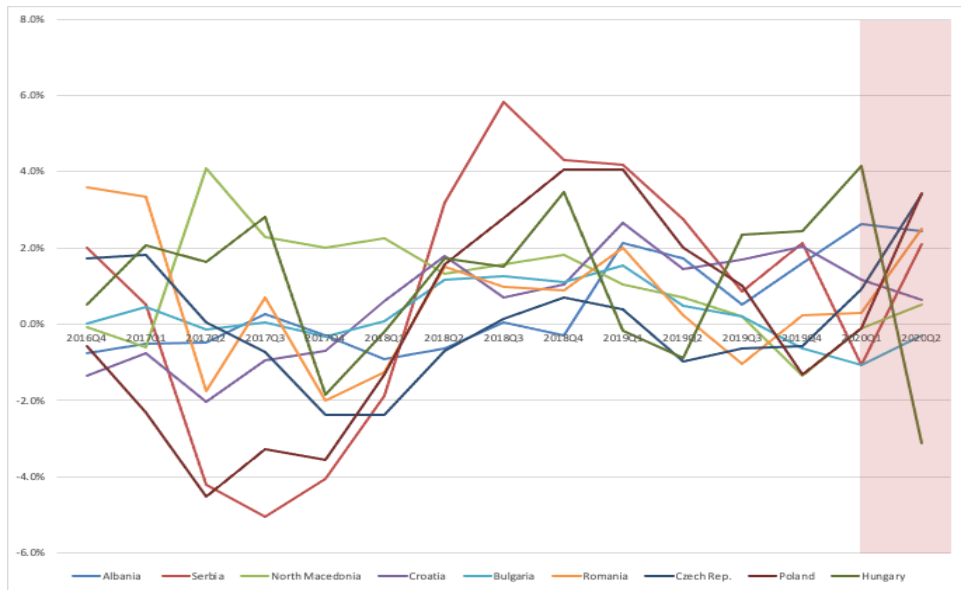
Source: Eurostat data processed by the authors

Countries like Albania, Czech Republic, Poland, Romania, and Serbia experience an abnormal growth rate of the savings in the quarter of the pandemic of more than 2%. While some countries like Hungary and Bulgaria experienced even a decrease of the current savings rate during the pandemic with respect to the historical average.

In order to understand the change with respect to the long term trend, the analysis compares the last quarter consensus expectation in the savings rate with respect to the last year average in order to identify the changes in the expectations related to the pandemic (Chart 3).

Chart 3

Rate of change of the consensus on household savings rate with respect to long term average (1 year)
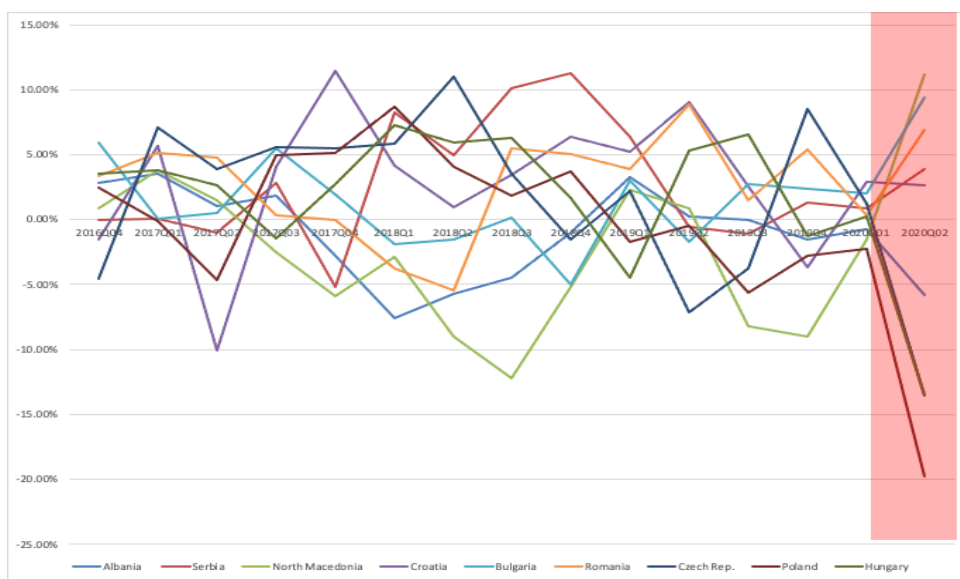
Source: European commission data processed by the authors

Furthermore, households in the Balkan countries look relatively more pessimistic about their savings in the future as compared to the current period. The savings expectations especially in the countries including Northern Macedonia, Albania, and Serbia, have continued to fall below their historical average. Meanwhile, households in all EU countries expect

to increase savings in the future, and in Central European countries this trend is expected to intensify in the next 12 months. Thus, these results can be explained by the household expectations and perceptions regarding the duration of the crisis. In non-EU Balkan countries, where income level is lower, expectations on income and economic developments may have affected the downward trends of household expectations regarding the savings over the next 12 months.

4. Conclusion

The current study analyzes the savings behavior of households in the CESEE countries particularly in the times of epidemics / COVID-19 pandemics. In this study, indicators of savings in the CESEE region indicate an increase in the household savings in the first and second quarters of this year. Households have displayed similar behavior in all EU countries. This behavior reflects a decline in consumption, as indicated by consumption expenditure data for the first quarter of the year. Moreover, it also indicates an increase in future uncertainty. In terms of future developments, survey data on household expectations indicate a slowdown of savings in the next 12 months, in some of the Balkan countries. With the decline in income for extended periods of time, households tend to smooth their consumption over the time by preserving a consistent level of the consumption of basic goods and services. Thus, using their savings to meet such needs over time. This is in line with the findings of Leoni (2011), who shows that the fast spread of epidemics in developing countries has a causal correlation with the reduction of deposits in the banking system. However, the literature of current study also suggests that the structural changes in the behavior of households can be expected in times of economic crises, natural disasters, or epidemics/pandemics. The effect of increased uncertainty about the future may outweigh that of declining income, as households attempt to save more and consume less during the periods of crisis and in normal times as well. For this reason, it is rather important for the policymakers to monitor the balance of these factors and their long-term trends in order to complement the general framework of developments with the additional information.

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