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COVID-19 AND THE RISK OF DEFLATION FOR THE BULGARIAN ECONOMY

Assoc. Prof. Emil Trifonov, PhD
Department of Economics
Faculty "Business and Management"
University of Ruse, Bulgaria
Phone: 082-888 703
E-mail: etrifonov@uni-ruse.bg

Georgi M. Georgiev, PhD Student
Department of Economics
Faculty "Business and Management"
University of Ruse, Bulgaria
E-mail: gmgeorgiev@uni-ruse.bg

Abstract: *The specter of deflation is rising in recent years and nowadays the topic is again a central subject for most researchers in the field of economics, because of the world-wide spread of the new virus COVID-19. The aim of this study is to answer the question which phenomenon – inflation or deflation is more likely to appear in the Bulgarian economy during the period of massive lockdowns and after that. A detailed analysis of both demand- and supply-side shocks is performed. Also, for the empirical research special attention is paid to the analysis of the values for the period from March to September of the main commodity groups of the Consumer Price Index, Harmonized Indices of Consumer Prices and Price Indices of a Small Basket. Furthermore, an integral part of the current paper is the data from several conducted surveys by the National Statistical Institute about the impact of the COVID-19 crises on the Bulgarian economy. Conclusions from both theoretical and empirical research are presented.*

Keywords: *COVID-19, Deflation, Bulgarian Economy.*

JEL Codes: *A10, E31, E60*

INTRODUCTION

The rapid spread of the new coronavirus disease (COVID-19) affects globally almost every sphere of life. It has brought serious medical problems and considerable human suffering. Unfortunately, the main measures that have been undertaken in most countries worldwide and probably up-to-the moment only efficient are the so called public-health measures such as economic shutdowns and stay-at-home orders. The problem is that this kind of measures can lead to an economic disruption in the near term. The question is whether this can lead to a substitutional downward pressure on prices and thus to deflation. Despite the fact that there are strands in modern economic thought for which deflation can be considered as a good phenomenon, it is absolutely clear that such deflation, which can be a consequence from restrictive measures for prevention of COVID-19 spreading, will not be caused by an increased productivity. This means that such a process can threat the proper economic development and can even lead the economy into a deflationary spiral and a liquidity trap. Probably, the last one is the worst scenario and it will not happen. However, we should be prepared for different scenarios one of which is weak to moderate deflation. Whether this will appear or not depends on a lot of factors – foremost how adequate are the economic and social government interventions.

The lack of analysis of deflation in current years makes studying the phenomenon extremely important nowadays especially during the period of COVID-19 crises and after that. It is fundamental for the better understanding of the process and taking the proper decisions in every field of life – one of which is economy. The purpose of the current paper is to answer the question does the Bulgarian economy is threatened from a prolonged period of strong deflation. The goal of the study is achieved

by implementing the following research tasks – introducing a short overview of the process of deflation as well as both theoretical and empirical analysis of the available information.

EXPOSITION

Definition of deflation

Most often deflation is considered to be the opposite process of inflation which means that deflation will occur when the CPI or the GDP deflator is negative for a longer period of time. Exactly deflation could be characterized as a general fall in some aggregate price level (Burdekin & Siklos, 2004). Other authors stress on the fact that deflation is not a short-term phenomenon (Groth & Westway, 2009). We speak about falling prices but Salerno (2003) points out that both inflation and deflation in older economic literature were related to up and downward changes in the amount of money in the economy, not increase or decrease in the price level. It is really important to be mentioned that changes in price level can also be understood as a changes in the money supply. For the purpose of the study the definition of deflation refers only to prices.

Also, it should be mentioned that in modern economic thought there are two strands of economists, who try to make a distinguish between the so called "good" and "bad" deflation. Another theoretical approach is related with making a difference whether deflation is a cause or symptom. Those who believe that deflation is a cause are sure that it should be prevented through all possible ways. Others for whom deflation is just a symptom are on the opinion that it should not be avoided but the focus of researches should be on the sources of the process. However, this is out of the scope of the current study. Nevertheless, we speak about "good" or "bad" deflation or deflation as a cause or symptom, the fear of deflation is prompted by the possibility of a large postponement of consumption and investment because of the persistent price fall. In other words, it could be said that deflation leads to running the mechanics of loss redistribution (Avramov, 2007). The basic problem of deflation is that it ruins debtors. No one can deny that everybody prefers lower prices but when prices fall for a long period they lead to a postponed consumption and thus to low investments, higher rates of unemployment and even to a deflationary spiral (Conway, 2010). That is why deflation is most often considered as a one of the most harmful economic events. One of the most proper ways to understand deflation and inflation is to analyse the processes by the help of the standard AS – AD framework. According to it, there are two main mechanisms which could push the economy into deflation. On the one hand deflation can occur as a result of the short-run AS curve expanding and its shifting to the right without being accompanied by an expansion of AD. On the other hand, there is another possibility – contracting and shifting of AD curve to the left but not with coincidental move of the AS. This means that there are two possible origins of deflation – supply- or demand-side shock. In the next few paragraphs there is a try to be given a brief overview of the eventual relationship between COVID-19 and deflation.

COVID-19 and the risk of deflation – theoretical aspects

The world passed through many pandemics but now the situation is different. Previous post war pandemics hit nations that at that time were far less economically dominant. Very important is that now the hardest hit nations include all the countries from G7 plus China. It is a well-known fact that these economies account for more than 60% of the world GDP and world manufacturing. However, the pandemic of COVID-19 lead to massive lockdowns because this was the only possible way to slower the spread of the disease and this way to save more human lives. The problem is that these kind of measures were absolutely untypical and unfamiliar for everyone participating in the decision-making process. They were also vey scaring for the people. Unfortunately, the public-health measures were necessary to be taken but they can derail the economic system.

The massive lockdowns lead to negative shocks to global demand and supply. On the demand side social activities like dining out, tourism, going to theatre and cinema have been almost forbidden, that is why there is a constant drop of consumer spending. On the other hand, is the supply side where the global supply chains were partially disrupted because of the production shutdowns all over the

world. Traditionally, inflation tends to fall during recessions. Nowadays, inflation is relatively low and also below the minimum target ray of 2% almost in every country. So, the main question which we face is there a probability of negative inflation and a net decline in price levels? To sum it up, it could be said that we have two very powerful shocks which act in opposite way each of them. The negative supply shock can lead to raise of prices, because of the sharp cutbacks in many services. However, the demand-side shock is also significant. It tends to lower prices, so it could be said that this shock combined with eventual collapse in oil prices may result into a disinflationary shock for a few months or either into low level of deflation. As we can see now in many countries the CPI inflation has already been running low. From the data analysis of the economic indicators in the leading countries it could be concluded that the most probable global scenario is for a low deflation or disinflation in the near future. Authors such as Bofinger (2020) think that more reasonable is to distinguish between three phases of coronavirus crises. The first one was the period of the massive lockdowns, which for Europe was mainly between March and May. During the period economic activities in many of the countries were almost suspended. The impact of that was significant and CPI dropped. For example, in Bulgaria CPI, previous month=100, was 0.9 in January 2020 and 0.1 in February – still positive. After that in March it felt with 0.7 and became -0.6. Almost for the whole period from March to September is negative and around -0.6. Just for July and August it was positive, or 0. The second phase is related with very strict measures from time to time. The key problem is that this period will be marked by a high degree of uncertainty and thus corporate investments and buying of long-term consumer goods by households will be postponed. From a medical point of view, the last period will be when there is a vaccine against the disease and there will not be any kind of restrictions. The only problem will be that the economy will continue to suffer from both less investments and enough consumption. This would be because not of hard restrictive measures, but because of the higher level of unemployment which occurred during mainly the first as well as the second period. It should not be forgotten that the intensive use of home as office will lead a reduction in some specific sectors – travel to work, using office space, organizing of conferences and so on. That can also lead to a lower oil prices. Speaking about period of crises there is also a worry that not deflation will be the problem, but inflation. This is another hypothesis that does not seem so realistic at least in the near future. Yes, it is possible to speak about deflation if we face a period of high inflation which up to the moment does not happen. Exactly, after very high deflation – there are two options – hyperinflation or strong deflation – both of which are absolutely harmful for the economy. Behind this view point is the fear from the sharp rise in the monetary base. This is not so dangerous because there is a necessity of stimulation the demand. From all of the above mentioned it can be concluded that the net effects of the combined shocks – both demand- and supply-side are deflationary (Boone, 2020). The effects of the demand-side shock are probably larger but also here it should be mentioned that prices will not go up, because people will spend less due to higher rate of unemployment and/or reduced wages, and also firms would like to sell everything which will lead to further price cutting. That is a typical case of deflationary spiral. It was made a short overview whether it is possible to occur deflation during the COVID-19 crises and after that in near term. In the next point there is a try of empirical research on the topic for Bulgaria.

COVID-19 and the risk of deflation (the case of Bulgaria) – empirical research

The pandemic of COVID-19 hit almost every nation. Bulgaria was also hit and for the period from March to May there were very serious restrictions, resulting in massive lockdowns. This lead to both demand- and supply-side shocks. However, there were undertaken some measures by the Bulgarian government to prevent deep recession. In the next few lines we present the tendency of the CPI (Consumer Price Index), HICP (Harmonized Index of Consumer Prices) and PISB (Price Index of a Small Basket) as well as a summary of conducted surveys by the NSI (National Statistical Institute) about the impact of COVID-19 on business. All of the following data is taken from the website of NSI.

Table 1. Total CPI, HICP, PISB for the period from March to September 2020 in Bulgaria

№	Type of index	March	April	May	June	July	August	September
1.	Total CPI	-0,6	-0,6	-0,3	-0,4	0,5	0,0	-0,6
2.	Total HICP	-0,5	-0,4	-0,2	-0,1	0,8	0,4	-1,2
3.	Total PISB	0	0,6	-0,2	-0,5	-0,3	-0,4	0,1

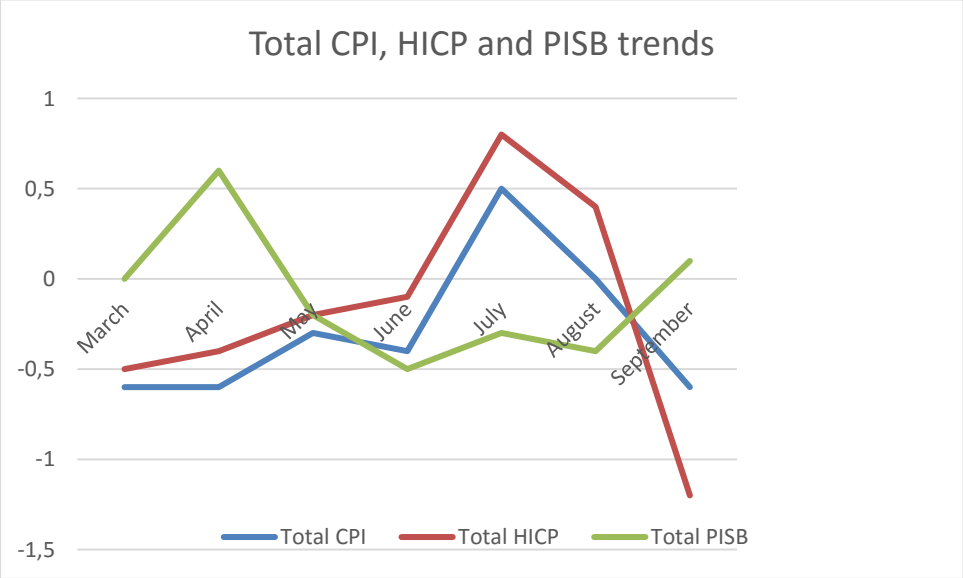

Fig. 1. Diagram of total CPI, HICP, PISB for the period from March to September 2020 in Bulgaria

It is absolutely clear from table 1 and fig. 1 that the risk of deflation for Bulgaria is much higher than this of inflation. The same can be concluded from the analysis of the data of the major commodity groups of each of the above mentioned indices, such as food and non-alcoholic beverages, non-foods, clothing and footwear, health, transport, communication and services. That can also be seen from the following tables and figures (from 2 to 4, including).

Table 2 – CPI by major commodity groups for the period from March to September 2020 in Bulgaria

№	Type of index	March	April	May	June	July	August	September
1.	Total CPI	-0,6	-0,6	-0,3	-0,4	0,5	0,0	-0,6
2.	Food and non-alcoholic beverages	0,1	0,9	0,1	-0,9	-1,4	-0,6	0,4
3.	Non-foods	-1,1	-1,2	-0,6	-0,2	0,2	-0,1	-0,1
4.	Clothing and footwear	-1,5	6,3	0	-0,9	-2,2	-4	-0,9
5.	Health	0,1	0,3	0,4	0	0,2	0,2	0
6.	Transport	-2,7	-6,8	-2,3	-0,5	1,4	2,2	-1,1
7.	Communication	-1,3	-0,2	0,2	0,3	0,5	0,2	0,2
8.	Service	-1,1	-1,8	-0,6	-0,2	2,9	0,9	-2,5

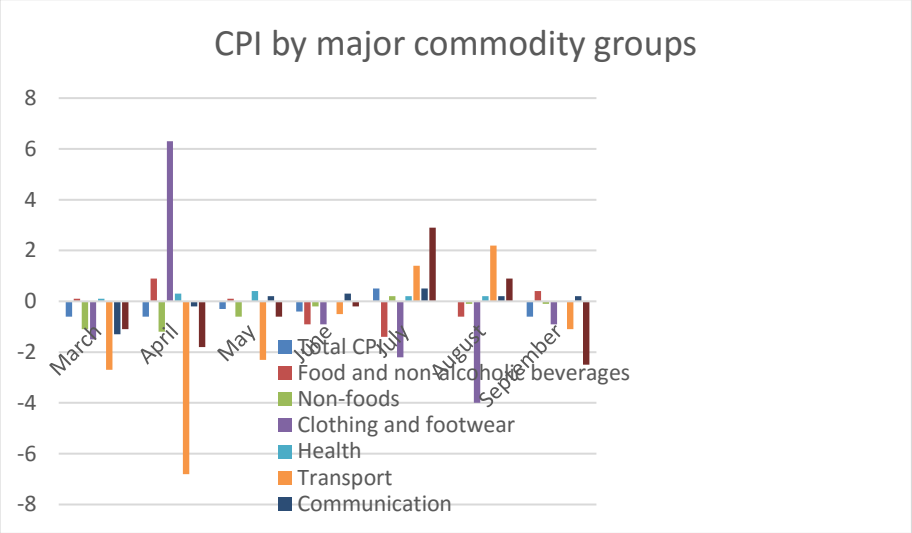

Fig. 2. Diagram of CPI by major commodity groups for the period from March to September 2020 in Bulgaria

Table 3 – HICP by major commodity groups for the period from March to September 2020 in Bulgaria

№	Type of index	March	April	May	June	July	August	September
1.	Total HICP	-0,5	-0,4	-0,2	-0,1	0,8	0,4	-1,2
2.	Food and non-alcoholic beverages	0,3	0,6	0,2	-0,7	-1,1	-0,4	0,4
3.	Non-foods	-1,3	5,6	0,1	-0,8	-2	-3,5	-0,6
4.	Clothing and footwear	0,1	0,3	0,4	0	0,2	0,2	0
5.	Health	0,1	0,3	0,4	0	0,2	0,2	0
6.	Transport	-1,3	-0,2	0,2	0,3	0,5	0,2	0,2
7.	Communication	-1,6	-3,3	-2	-0,1	0,8	3,4	-2,4
8.	Miscellaneous goods and service	0,2	0,6	0,6	-0,3	1	0,6	-0,1

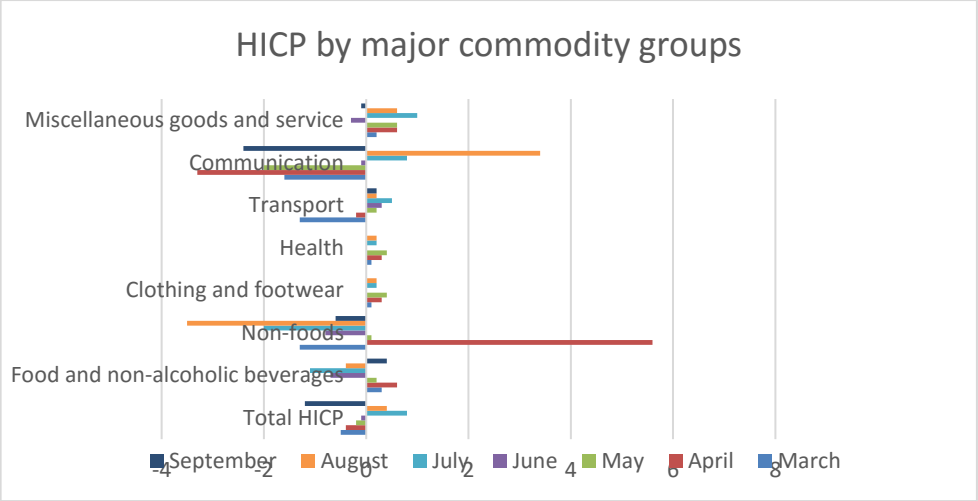

Fig. 3. Diagram of HICP by major commodity groups for the period from March to September 2020 in Bulgaria

Table 4 – PISB by major commodity groups for the period from March to September 2020 in Bulgaria

№	Type of index	March	April	May	June	July	August	September
1.	Total PISB	0	0,6	-0,2	-0,5	-0,3	-0,4	0,1
2.	Food and non-alcoholic beverages	-0,1	1	-0,4	-1	-1,7	-0,8	0,3
3.	Non-foods	-0,1	0,9	0,1	-0,1	0,4	-0,1	-0,1
4.	Clothing and footwear	-1,3	4,8	-0,2	-1	-1,7	-2,9	-0,2
5.	Health	0,1	0,7	0,6	0,2	0,4	0,2	0,1
6.	Transport	0,1	0,1	-0,1	0	0,5	-0,2	0,2
7.	Communication	0	0	0	0	0	0	0
8.	Services	0,1	-0,6	0	0	2	0,1	0

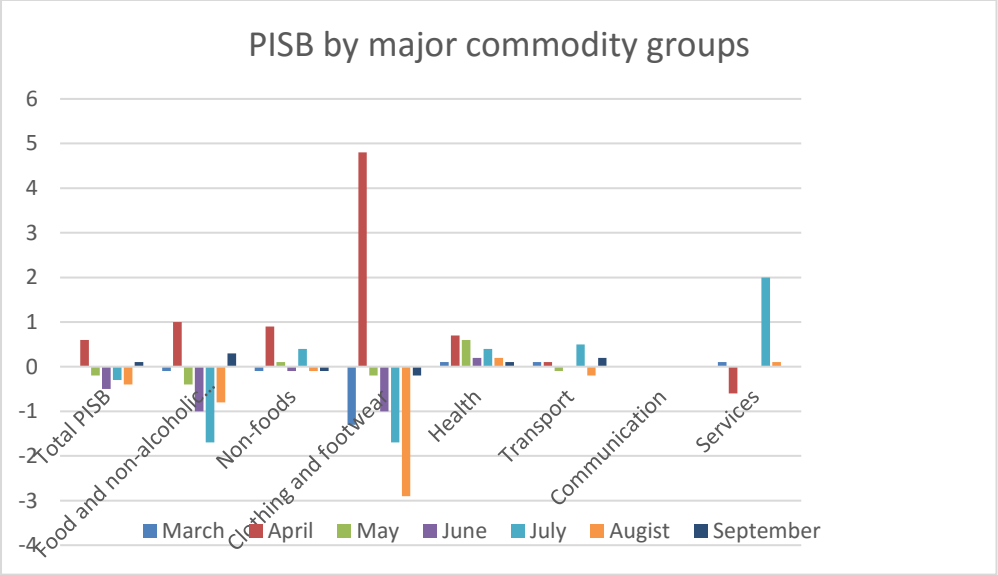

Fig. 4. Diagram of PISB by major commodity groups for the period from March to September 2020 in Bulgaria

There is also a serious decrease in the level of GDP. For the first quarter of 2020 the rate of change of GDP compared for the previous quarter is 0,4, but for the second quarter of 2020 to the first one the rate of change is -10,1. This together with the data from the conducted surveys of NSI about the situation of the non-financial enterprises in the state of emergency from March to May and the ensuing epidemic situation from June to September makes clear that there is a risk for the Bulgarian economy of a low level of deflation. Amongst the responded enterprises by the National Statistical Institute in March 53,5% of the companies declared that they experience a decrease in revenues from sales of goods and services, another 36,3% declared no change and only 9,5% increase compared to the previous month. However, these numbers fluctuated during the period from the beginning of pandemic up to now. Respectively, in September 32,2% of the companies declared that they experience a decrease in revenues from sales of goods and services, another 49,5% declared no change and 17,5% increase to the previous month. The positive change shows that the risk of high price fluctuations is not typical, but there is a risk a deflation. If proper measures are undertaken deflation will not be very hard and not long-lasting.

CONCLUSION

The current research shows that there is a higher probability of deflation during the period of COVID-19 crises and after that in the near term. However, the main factor of deflation for the Bulgarian economy is the demand-side shock. Despite that deflation can be much riskier and harmful event for the economy than inflation, it should be mentioned that deflation in the terms of Currency board is not so terrible because it shows that prices are non-rigid downward.

Other aspect of further studying of the topic may include also analyze of interaction between monetary and fiscal policy during such periods.

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