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EFFECTS OF BUSINESS CYCLE ON PRIVATE CONSUMPTION IN BULGARIA DURING THE GLOBAL FINANCIAL AND ECONOMIC CRISIS

The paper discusses the patterns of individual consumption in Bulgaria after 2008 and we focus our research on processes in the real sector the crisis amplified or made more resistant. We analyse the structure of household income and expenditures through tracing the dynamics of actual and potential GDP, inflation, actual and equilibrium unemployment, savings and credits of households. The basic conclusions revolve around the significant impact of the business cycle fluctuations on the structure of household income against relatively stable preferences for private consumption which is in line with the permanent income hypothesis and shows low sensitivity of households' expenditures to the business cycle phase. The considerable increase of household deposits and very low credit activity are also cyclically driven and show that although the real GDP structure in terms of the shares of domestic and external demand is more balanced after 2008 this does not transform into better conditions for doing business and increasing employment.
JEL: E20; E32; E66

Introduction

The paper discusses the changes in private consumption patterns in Bulgaria in 2008-2015. We study the ways in which households react in response to the global financial and economic crisis and changes it caused to the Bulgarian economy. When analyzing the structure of household income and expenditures we rely on an integrated approach, which allows for registering the mutual inter-relatedness of the processes in the real sector through tracing the dynamics of actual and potential GDP, inflation, actual and equilibrium unemployment, savings and credits of households. The paper consciously refrains from commenting on the effects from macroeconomic policies conducted in Bulgaria in this period, so as to focus primarily on the effects on households in times of crisis and in the period of economic recovery. The choice of the period, namely 2008-2015, is justified by the need for a period of a longer duration so as to be able to trace the different in their dynamics and depth processes in the national economy, while at the same time keeping in

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view their currency. Moreover, our analysis on the business cycle phases shows that this period marks the beginning and the end of the slowdown in the Bulgarian economy. Notwithstanding this, we are fully aware that it is difficult to isolate only the cyclical effects on household consumption in the period under review which is not a heterogeneous one as regards the business cycle phases. That is why the paper aims at outlining the real sector processes that the crisis amplified or made more resistant which is a good basis for policy decisions that the paper does not discuss.

The paper is structured as follows. In the next section we provide an overview of the studies on economic fluctuations and their impact on economic agents' aggregate activities as well as recently published papers on macroeconomic effects of the financial and economic crisis in 2008 in different countries, including Bulgaria. Following that, we present and test the Dungey and Pagan approach on recognizing the business cycle phase on the base of deviation of current GDP from its potential level and estimate the unemployment gap in Bulgaria. These calculations help us disaggregate the period under review to the respective business cycle phases and orientate the analysis of changes in the private consumption against the GDP dynamics and labour market conditions. On that ground, we analyse the structure of household monetary income and monetary expenditures as well as the dynamics of the household savings and credits focusing our research on changes in real economy that not only mark the crisis effects on households in Bulgaria but also show the current status of the real sector after the crisis. The concluding remarks revolve around the changes in income sources for households against relatively stable preferences for private consumption in a very low credit activity environment combined with a considerable increase of household deposits.

Studies on Macroeconomic Indicators Sensitivity to the Business Cycle

The first systematic study of macroeconomic variables performance during different phases of business cycle was that of Burns and Mitchell (1946). Their approach was to identify dates for cyclical turning points of expansions and contractions and the dynamics of economic variables relative to the business cycle phase. Applying statistical procedure of studying the business cycle chronology represented in well-known Burns-Mitchell diagrams it seems that some macroeconomic variables are leading and that they can help forecast future turning point of GDP (such as inflation, interest rates and exchange rates), some variables are pro-cyclical and coincident (industrial production and personal incomes), yet other variables have dynamics that lags 6 months or even more behind the peak or trough of GDP (unemployment is such a countercyclical variable). Abel, Bernanke, and Croushore (2016) provide a description of macroeconomic variables sensitivity to the business cycle phase and classify the macroeconomic indicators relative to their response to the cyclical fluctuations. According to their research monetary aggregates and inflation are highly sensitive to GDP dynamics while unemployment and unit labour costs lag the economic activity ups and downs.

The central point in characterizing output fluctuations has been that of the decomposition of trend and cycle. A commonly used way of approaching the issue is studying economy as being affected by permanent shocks (such as labour productivity improvements) and shocks

with transitory effects (short-run dynamics of government spending and changes in money). As Blanchard and Fischer (1989) suggest, three approaches to the cycle and trend decomposition can be applied when analyzing the economic behaviour of different variables. The first, so-called traditional, approach assumes that the economy grows along a smooth trend path and cyclical fluctuations come from transitory shocks. This idea corresponds with the Okun's computation of relation between output and unemployment which initially found that a 1 percent decrease in unemployment rate compared to its equilibrium rate in the USA was associated with a 3 percent rise in actual GDP over potential GDP (Okun, 1962). Similar approach in recognizing the business cycle phase on the base of deviation of current GDP from its potential output is used by Dungey and Pagan (2000), building on work by Bry and Boschan (1971). An alternative decomposition approach may be applied, making the assumption that the growth rate of output follows an ARMA (1,2) process (Campbell&Mankiw, 1987). Although the main result of this research is that the GDP follows a non-stationary process and there are numerous ways of decomposing a non-stationary process to trend and cycle, it also suggests that looking at the dynamics of other variables affected by GDP may be a useful approach to the study of the business cycle at all. A modeling of ARIMA process of GDP and the behaviour of its components and reviewing the correlation among different variables seems to be a good basis for reporting covariations in macroeconomic variables. Purely statistical approaches, as applied by Prescott (1986) and Harding and Pagan (2005), are also applicable. Such approaches help identify stylized facts about macroeconomic performance during the business cycle based on turning points in the series under review, serially correlated deviations of GDP over its trend and co-movements in output and nominal and real economic variables.

Recent studies on macroeconomic effects of financial and economic crisis in 2008 have unsurprisingly shown that households' behaviour is largely affected by the crisis and point current dimensions of analyzing macroeconomic variables correlations. The starting issue under review is GDP dynamics and the crisis impact on potential output growth suggesting that wide differences in crisis effects exist among EU Member States (Gros&Alcidi,2009). The authors' computations based on European Commission data show that in 2009-2011 the "old" Member States suffered a net loss of 9.6% output gap while the potential GDP in "new" Member States decreased by 13%. The unemployment has been seen as an indicator of the social costs of crisis and labour market impact in terms of employment losses. The increase of structural unemployment clearly showed cross-country differences (Eichhorst, Escudero, Marx&Tobin, 2010). The greatest output and employment losses were registered in Latvia, Estonia, Ireland, and Lithuania, while the best-off countries were Austria and France. Brezinski and Stephan (2011) also discovered that the crisis has hit the countries in Central and Eastern Europe to very different extents. Although the economic development pattern of these countries before the crisis was common – export-driven economic growth with massive capital inflows and current account imbalances due to catching up effects, the different exchange rate regimes and different macroeconomic policies instruments available in Central and East Europe countries gave rise to varying crisis effects on economic agents. In the same vein, Marer (2010) pays attention to the different level of foreign currency indebtedness and accumulation of credits by households that negatively amplify the crisis effects. Yotzov (2014) outlines the main channels through which the global financial and

economic crisis has affected the Bulgarian economy, emphasizing foreign trade and foreign investments and in a lesser extent household losses induced by the crisis. Kasabov, Kotseva, Vassilev, and Yanchev (2017) analyze the factors that influence inflation dynamics for the Bulgarian economy and find that the trade-off between economic activity and inflation is not as clear-cut as theory suggests. They also estimate output gap in period 2009-2014 and their research shows that the potential output growth is steadily around 5%.

The economic literature review shows there are two important strands that claim a business cycle impact analysis should be taken into consideration. First, on a theoretical point of view purely statistical and descriptive approaches can be used for analyzing the business cycle effects on different economic variables. All of them are supposed to find common features of hardly identical cycle evidence across countries and across time. Second, recent studies on crisis impact across countries have clearly shown that the real sector is most affected by the crisis which initially began to manifest itself as a financial one but has increasingly transformed into an economic one. Moreover, significant cross-countries divergences of crisis development are identified and a research on the crisis effects can both demonstrate common manifestations of the crisis in small open economies and show the specificities of the crisis processes in the Bulgarian economy. That is why the paper is focused on outlining the changes in real economy that not only mark the crisis effects on households in Bulgaria but also show the current status of the real sector after the crisis.

Economic Fluctuations of the Bulgarian Economy in 2008-2015

The first step of our analysis is to define the business cycle phases and unemployment gap, i.e. the deviation of current unemployment from its equilibrium rate in the reference period. This allows us to better outline the specifics of the crisis in the Bulgarian economy and to identify different stages of its evolvement that have an impact on the real sector of the economy.

To define the business cycle phases we use the Bry and Boschan (1971) algorithm adapted by Dungey and Pagan (2000). According to their empirical method the business cycle phase (BCI_t) is determined by the difference between the current GDP growth (y_t) and the potential GDP growth (y^*_t):

$$BCI_t = y_t - y^*_t$$

applying the following rule:

- The economy expands in period t if $(BCI_{t-p}, \ldots, BCI_{t-1} < BCI_t > BCI_{t+1}, \ldots, BCI_{t+q})$, $BCI_t > 0$ for each $t \in [-p, \ldots, q]$ which let mark with 1;

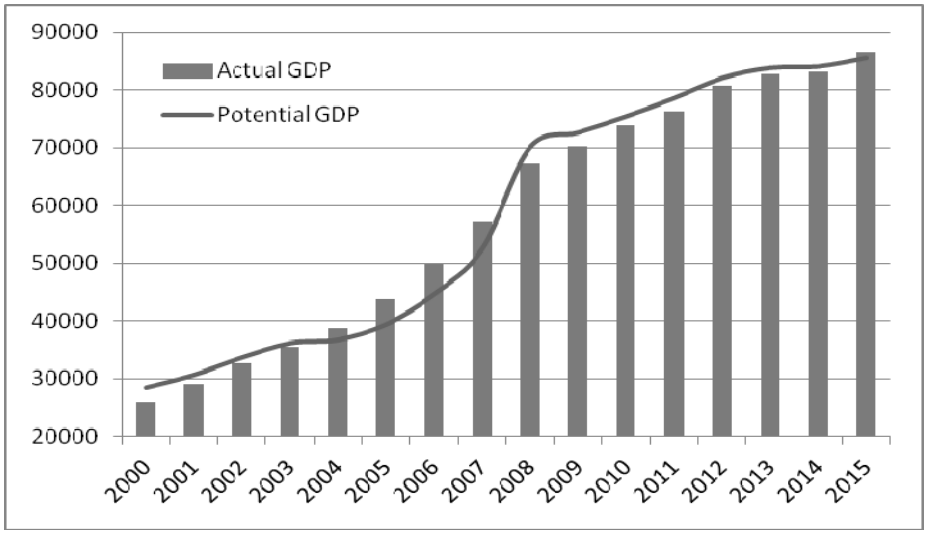
- The economy shrinks in period t if $(BCI_{t-p}, \dots, BCI_{t-1} > BCI_t < BCI_{t+1}, \dots, BCI_{t+q})$, $BCI_t < 0$ for each $t \in [-p, \dots, q]$ which let mark with 0.

When applying the adapted Bry and Boschan algorithm we assume that $p = q = 3$ following the Reijer (2002) results for three-period reversibility of the business cycle phase.

The estimations of the potential GDP are based on statistical approach using the Hodrick-Prescott filter with the height of the value λ for smoothing the trend component $\lambda = 1600$ (Marcet&Ravn, 2003) which is adopted as a reference for studying the economic development for the most countries of the Organisation for Economic Cooperation and Development (OECD). For a better representation of the dynamics of current and potential GDP we calculate the potential output using annual data for GDP at constant prices of the previous year by the National Statistical Institute for the period 2000-2015. The data clearly shows that 4 years before 2008 Bulgaria has experienced a positive output gap (near 5% in 2006 and 3.7% in 2007) which was rebuilt in 2015.

Graph 1

Actual and potential GDP

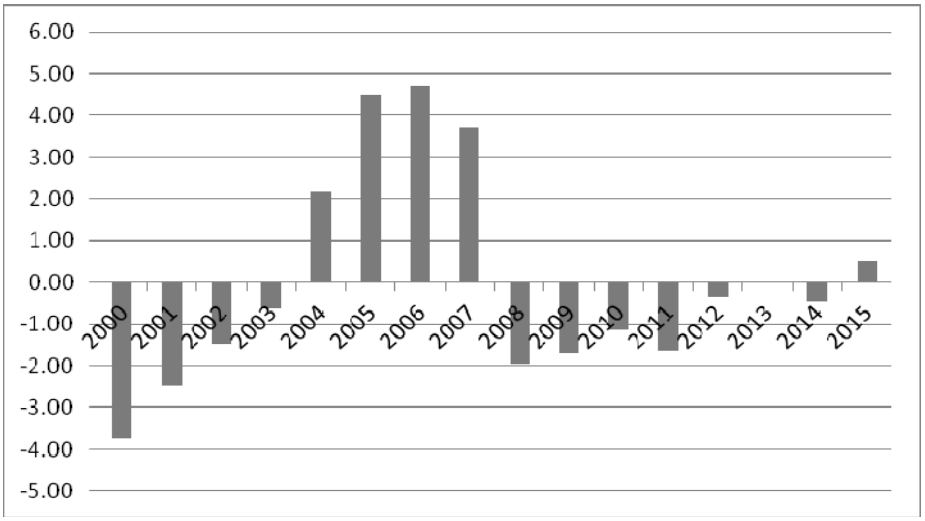


Source: Own estimations based on data from the Bulgarian National Statistical Institute

Such dynamics of actual and potential GDP shows that the period 2008-2015 was a period away from the potential level of production and can be marked as the beginning and the end of the slowdown in the Bulgarian economy. Although the output gap remained negative in 2008-2014 the first clear signals of economic recovery were visible in 2012 and finally manifested in 2015 with positive output gap amounted to 0.5%. Such findings show that the total potential GDP loss in 2008-2014 is near 6%.

Graph 2

Output gap (%)



Source: Own estimations

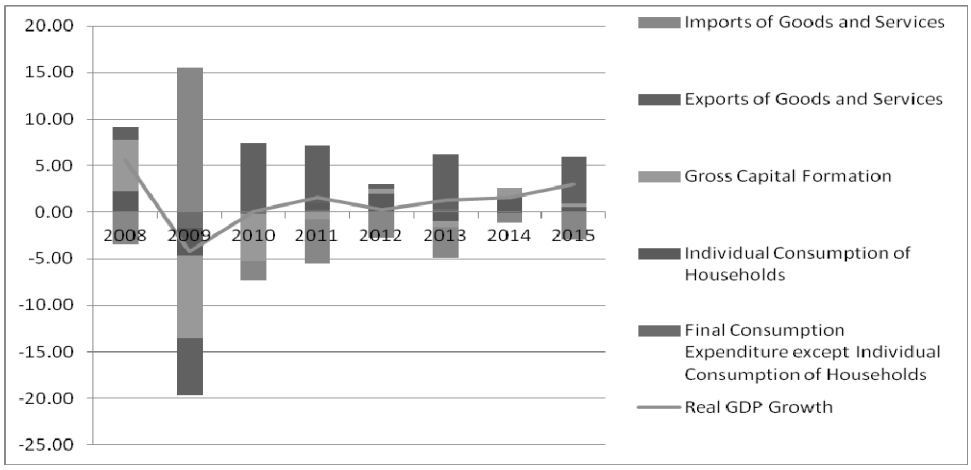
The data also shows that during 2008-2015 there is a balancing of the sources of economic growth as evidenced by the share of domestic and external demand in real GDP. In 2008 the share of domestic demand in the structure of real GDP was 138% with a 38% share of external demand which was a result of the significant import of goods and services in national economy in a period of ascending development. In 2015 the structure of economic growth is different: 31%:69% share of domestic and external demand and is already a consequence of the prevalence of the export of goods and services over their import. Although the private consumption share within the structure of domestic demand has gone up and its cumulative real growth is 5.4% for the period under review, its contribution to the growth of GDP in 2015 is as low as 0.5 percentage points, while in 2008 it was 2.3 p.p. This process reflects the significant lag of domestic demand as a factor of economic growth which is due to the serious decrease of investment activity in the country (the only GDP component with negative contribution to the real GDP growth since 2009 till 2013 and cumulative growth of -1.03% in the period under review) and increase of the export of goods and services.

It is worth noting that the negative output gap in 2008 coincides and potentially may be viewed as a result of the global financial and economic crisis also outburst in 2008. However, such a hypothesis should be based on an analysis of national economy specificities which together with the impact of the crisis may lead to a deeper crisis manifestation and may be the leading factor against the economic recovery. Applying the Bry and Boschan adapted algorithm we find that the Bulgarian economy began to shrink in 2007 and the lower positive output gap than in 2006 also demonstrated it. This finding shows that the preconditions for economic slowdown are still before the outbreak of the

global financial and economic crisis and they amplify the negative crisis effects on the economy which are clearly visible since 2008. The timid economic recovery began in 2012 and 2015 was the turning point of business cycle as the positive output gap then shows.

Graph 3

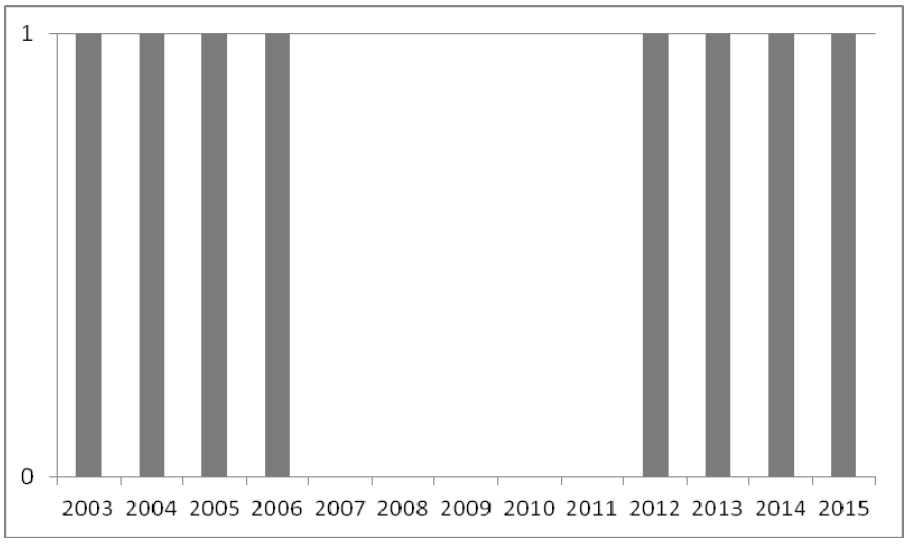
Real GDP growth structure by components



Source: Bulgarian National Statistical Institute

Graph 4

Business cycle phases in Bulgaria*



Note: 1 means expansion and 0 means contraction based on the Bry and Boschan algorithm.
Source: Own estimations

Another important characteristic of the business cycle is the deviation of actual unemployment rate from its equilibrium rate, i.e. the unemployment gap. Its estimation allows us to determine how sustainable positive output gap in 2015 is when taking into account the labour market conditions. It also allows us to assess whether the overcome of the economic downturn at the end of 2015 reflects the achievement of equilibrium employment. Following the so-called traditional approach for studying the business cycle phases based on the Okun's law we know that the cyclical fluctuations affect the unemployment rate and a negative output gap is combined with positive unemployment gap. So we may expect that unemployment will accelerate when economy experiences recessions and actual unemployment rate will be below its equilibrium rate when the economy grows. When we refer to the concept of the equilibrium unemployment rate we mean the non-accelerating inflation rate of unemployment (NAIRU) as proposed by Modigliani and Papademos (1975). Its estimation is based on the ordinary least squares regression which helps us find the slope of the Phillips curve using unemployment rate and inflation lagged one year in the period 1998-2015 from the Bulgarian National Statistical Institute. Actually we calculate the NAIRU by subtracting the slope of the Phillips curve from the unemployment rate of the respective year. The results are summarized in the following graph where we present the aggregate estimations based on the following regression:

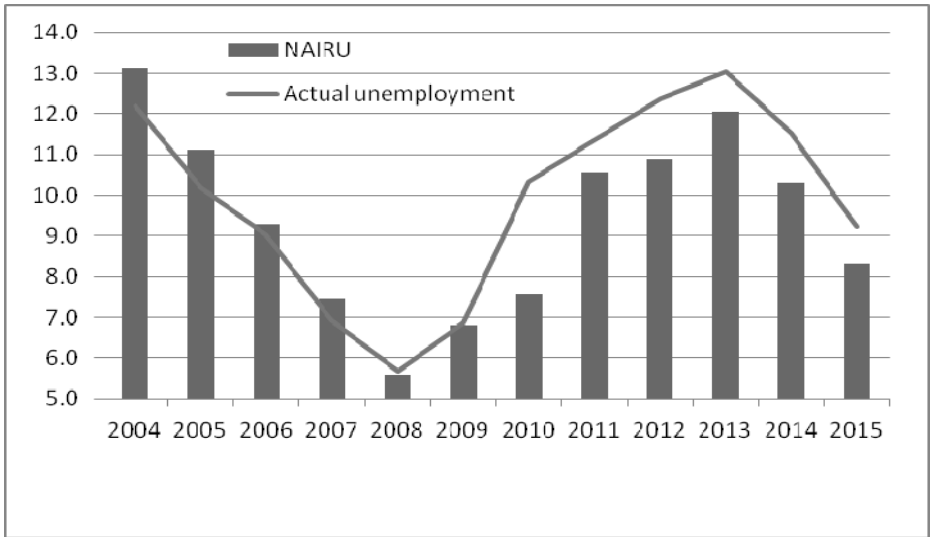
$$inflation_{t-1} = 14.76892 - 1.10907 unemployment_t + e_t$$

(0.067) (0.0478)

R-squared 0.782735

Graph 5

Actual and equilibrium rate of unemployment



Source: Own estimations

We find that the unemployment gap is positive before 2008 (it varies between 1 p.p. in 2005 and 0.52 p.p. in 2007) which fully corresponds to the ascending economic development in pre-crisis times. The largest unemployment gap of -2.78 p.p. is estimated in 2010 suggesting that the crisis impact on the unemployment lagged two years after 2008. After 2013 the unemployment gap has been shrinking but in 2015 it is still negative and amounts to -0.9 p.p. although the output gap has been already positive. Therefore, we may conclude that in 2015 the labour market has not regained pre-crisis levels of equilibrium employment and its recovery is still ahead. In this view, the achieved positive output gap in 2015 may be viewed as a partial recovery of the economy after the recession of 2008, which is to be transferred to the labour market.

Based on the estimations presented we may conclude that unlike the popular view that the economic crisis in Bulgaria is a result of the global crisis preconditions for its development are noticed one year before 2008 which makes it difficult uniquely highlight its effects on the households in the country. Taking into account the GDP dynamics we may conclude that 2015 is the first year of positive output gap since 2007 but the unemployment gap is still negative which does not make reasonable considering 2015 as an end point of economic crisis in Bulgaria. That is why our analysis is mainly focused on investigating the changes in households' consumption in 2008-2015 without explicitly stress cyclical effects which may be viewed as a result of national business cycle or due to the openness of the Bulgarian economy or simply as a reflection of still unrecovered labour market in the country in 2015. In this vein, our methodological approach is purely based on descriptive statistical methods that help us mark the real sector processes that the crisis amplified or made more resistant which is a good basis for further policy decisions.

Household Income and Employment

The real increase of overall income of households for the period 2008-2015 is 37%, whereby the importance of direct sources of income within the overall household income is increasing, while the opportunities for additional income from independent activities are decreasing.

Within the structure of gross income, the share of wages/salaries and pensions exceeds 82% at a considerable nominal growth, which clearly indicates that household income depends mostly on labour remuneration and the stability of pension funds, whereby the situation on the labour market and the fiscal stability are the leading factors determining household income dynamics. In this sense, still unachieved full employment in 2015 is a factor that has a deterrent effect on household income and it should be taken into consideration. Meanwhile, the share of pensions in the income of households has increased minimally for the period under discussion, the significant increase of the average pension for the period notwithstanding (according to the National Statistical Institute data, the average pension in 2008 was €119, while at the end of 2015 it was €169). The low effect on the structure of household income that the increase of pension payments has is due mainly to the constant increase of retirement age in Bulgaria, which has been viewed as an anti-crisis measure for dealing with the problems of retirement security financing. In other words, there is an effect of substituting pension income with employment income which are interconnected

precisely by virtue of social security funds. The share of unemployment benefits, family allowances for children and other social benefits is also increasing as a result of 53% growth of the unemployed persons in the period under discussion. At the same time, the discrepancy between their nominal increase and their share in the structure of income is a sign of income stratification in society with a compensatory effect in which the income of certain social groups compensates the increasing dependency on social benefits with other groups.

Table 1

Structure of household monetary income by source

Monetary income by source	Average per household, yearly					Average per capita, monthly (EUR)		
Year	2008		2015		%-change 2008/2015	2008	2015	%-change 2008/2015
	EUR	Structure	EUR	Structure				
Monetary income	4271		5994		40.3	144	208	45.1
Monetary gross income	4038	94.5	5815	97.0	44.0	136	202	48.9
Wages and salaries	2303	53.9	3344	55.8	45.2	77	116	50.1
Other earnings	216	5.0	194	3.2	-10.2	7	7	-7.1
Self-employment income	225	5.3	385	6.4	70.7	8	13	76.4
Property income	39	0.9	33	0.6	-15.6	1	1	-12.9
Pensions	1028	24.1	1577	26.3	53.5	35	55	58.8
Unemployment benefits	9	0.2	25	0.4	182.4	0	1	185.7
Family allowances	29	0.7	57	0.9	94.7	1	2	100.0
Other social benefits	136	3.2	126	2.1	-7.5	5	4	-3.7
Regular transfers from other households	53	1.2	74	1.2	39.4	2	3	42.9
Receipt sale	98	2.3	37	0.6	-62.0	3	1	-61.0
Miscellaneous	135	3.2	142	2.4	4.9	5	5	9.4

Source: Bulgarian National Statistical Institute

As regards the labour market conditions we should note that the growth of household income is under conditions of decreasing employment and increasing unemployment. This brings into perspective the cyclical effect of the crisis on employment, which in turn directly reflects on the dynamics of income. Youth unemployment in the age range between 15 and 29 increased significantly in the period after 2008 – 14.4% in 2015, while in the most efficient labour group between the ages of 34 and 54 the unemployment remains stable – below 8% according to the Bulgarian National Statistical Institute. At the same time unemployment with higher education graduates in 2015 is already 4%, with 22% unemployment of persons with lower secondary education and 44% for persons with primary or lower education in 2015. Such data indicate that one of the effects of the crisis is the priority retaining of employees within the most efficient labour age, with most

experience and qualification, and at the same time most educated. It is only among holders of higher education degrees that employment grows, by 14% at that in 2015 in relation to 2008. In parallel to this, the economic activities registering the most significant increase of employed higher education graduates are hotel and restaurant services, administrative and support activities and utility services, in which the average wage significantly deviates from the average wage for the country. This explains the increasing share the income from employment on the gross levels has in the overall monetary income of households, but it also explains their still low absolute level which is dependent on the social stratification of income against the background of high unemployment among household members within the younger age group and with lower educational background. Moreover, this income stratification in society means that the income of certain social groups (the group of employed dominating on the labour market – between 34 and 54 with higher education and high income) compensates and supplements the increasing dependency on social benefits with other groups (pensioners, young people, persons with low education). This also suggests that the increase of the overall household income and achievement of full employment is dependent upon the fairer social distribution of the income and the participation of social benefits dependent group of society.

Household Spending and Inflation

The real increase of overall expenditures for the period 2008-2015 is 3 percentage points lower than the real growth of consumer income, which also gives an idea of the levels of average household savings in the country.

What is worth noting in the structure of monetary expenditures of households is the significant increase of tax and social security payments. With a view to the unchanged tax rate on the income of individuals since 2008, the explanation for the higher tax payments may be sought along the lines of the structure of employment. With the increase of highly qualified employment alongside the laying off of persons of lower educational background, the higher income of the former leads to higher tax revenues fixed tax rate notwithstanding, at the expense, however, of social stratification of income and purchasing power in society, if we keep in mind the high levels of youth unemployment and the unemployment rates among persons with lower educational background. The increase of social insurance contributions is due also to their almost annually increasing rate, the latter motivated again by the adverse effects of the economic slowdown both on the labour market and on the financial condition of insurance funds.

The evaluation of the structure of consumer spending follows two aspects: from the perspective of the changes in the prices of respective expenditure components (price analysis) and according to the specifics of separate types of expenditures (quantity consumption and consumer habits).

Table 2

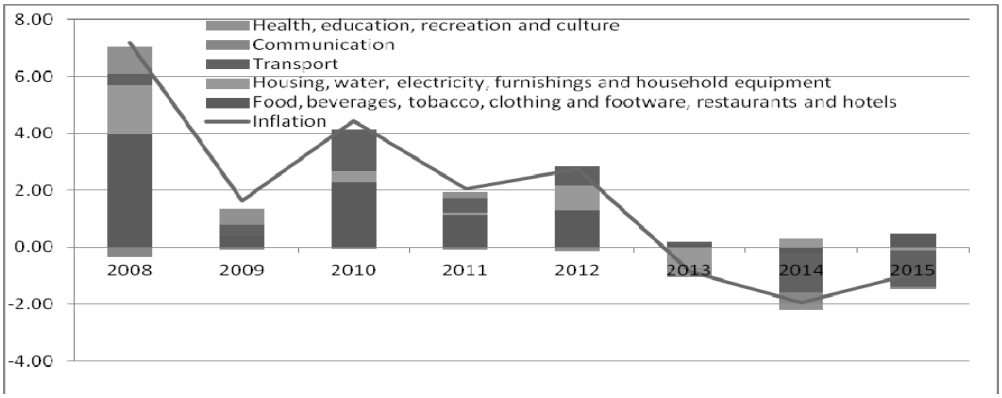
Structure of monetary expenditures

Monetary expenditures by group	Average per household, yearly					Average per capita, monthly (EUR)		
Year	2008		2015		%-change 2008/2015	2008	2015	%-change 2008/2015
	EUR	Structure	EUR	Structure				
Monetary expenditures	4026		5648		40.3	135	196	45.2
Consumer monetary expenditure	3417	84.9	4695	83.1	37.4	115	163	41.7
Foods and non-alcoholic beverages	1406	34.9	1723	30.5	22.5	47	60	27.7
Alcoholic beverages and tobacco	178	4.4	247	4.4	38.8	6	9	50.0
Clothing and footwear	144	3.6	202	3.6	40.3	5	7	40.0
Housing, water, electricity, gas and other fuels	560	13.9	816	14.4	45.7	19	28	47.4
Furnishing and maintenance of the house	154	3.8	212	3.8	37.7	5	7	40.0
Health	197	4.9	304	5.4	54.3	7	11	57.1
Transport	290	7.2	406	7.2	40.0	10	14	40.0
Communication	184	4.6	248	4.4	34.8	6	9	50.0
Recreation, culture and education	152	3.8	279	4.9	83.6	5	10	100.0
Recreation and culture								
Education								
Miscellaneous goods and services	152	3.8	257	4.5	69.1	5	9	80.0
Taxes	129	3.2	284	5.0	120.2	4	10	150.0
Social insurance contributions	153	3.8	364	6.4	137.9	5	13	160.0

Source: Bulgarian National Statistical Institute

Graph 6

Overall inflation and contributions to the overall inflation



Source: Bulgarian National Statistical Institute.

The most dramatic drop in the structure of expenditures can be observed with the share of food and non-alcoholic beverages expenditures, which corresponds to the consumption model of developed economies. With the widening of employment among higher education degree holders food products are most likely viewed as inferior goods, the consumption of which decreases as a relative share with the increase of overall income even when their prices increase with approximately 9% between 2008 and 2015. At the same time, however, the share of expenditures for alcoholic beverages and tobacco remains constant at the beginning and at the end of the period in reference, irrespective of the fact that their prices cumulatively increase with almost 53%. Such zero elasticity towards the price changes of these goods creates conditions for their additional acceleration, leading to profits for their producers and additional revenues from excise to the budget, while also creating a premise for increased revenues from smuggling and deepening grey economy.

The registered considerable increase in the prices of utility services and house maintenance is reflected also in the increase of their share within overall consumer spending. The greatest increase in the prices of water, electricity and fuels was registered in 2012 – 9.4%, and that led to the social protests and the political crisis in 2013. Such social processes show high sensitivity towards the price dynamics of this type of goods, which is also illustrated by the fact that they are the second largest in volume expenditures on average per person after food and non-alcoholic beverages expenditures and comprise approximately 47% of them (40% in 2008), whereby one of the reasons for the decrease in food expenditures in the structure of consumer expenditures may be attributed to the significant increase in utility prices.

Service spending is marked by diverse and divergent dynamics: the significant increase in the prices of health and education services, which is also reflected in their larger share in overall consumer expenditures; the decrease in transportation prices and most markedly of communication prices, which corresponds, however, to the preservation of their share within overall expenditures. The increase in the prices of health and education services that are on the most part offered by the state is 11.4% and 30.3% respectively and is due to the decrease of government spending in conditions of crisis, evoking market mechanisms for securing their funding. These processes are also influenced by demographic factors related to the aging of the population and the more intensive use of health services, as well as the dropping numbers of pupils and students in parallel to attempts at retaining the teaching staff.

Inflation in the group of transport has been influenced to a great extent by oil prices, which have been dropping since 2010. At the same time, however, a significant decrease in car purchases and in overall spending on private means of transportation is observed, i.e. postponing long-term consumption on the back of the uncertainty in the economy and the lack of clear signals for economic recovery till 2015. Vis-à-vis this tendency, the share of transport expenditures in the structure of household expenses remains constant due to the preserved levels of prices in transportation services and the low competition in the sector. The bad state of railroad transport, the need to allocate public funds for its survival, as well as the significant monopolization of bus services lead to the maintenance of the price levels of transportation services on the whole relatively unchanged. This is one of the reasons why society fails to register a real sense of the observed since 2013 deflation and it shows the

deficiencies of the market mechanism for the reduction of which the crisis does not contribute greatly. A similar effect may be traced with regard to communication services and the services related to recreation and culture.

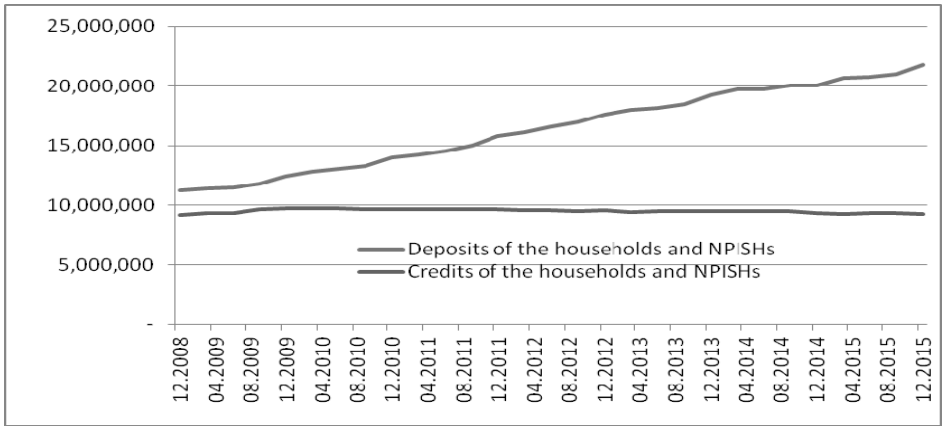
The structure of household consumption suggests that the slowdown of the economy changes households' income sources but not their consumption patterns which remain on the whole dominated by personal preferences and even collective psychology, if we keep in mind the low elasticity to the changes in the prices of services in the country. This creates a long-term pressure for using savings and/or credits so as to maintain the dominant stereotype of consumption and shows that households' expenditures are less dependent by the business cycle phase. Theoretically, such a conclusion tends to describe Bulgarian society as one that is following neoclassical views of orienting current consumption according to the permanent income hypothesis rather than more in line with Keynesian theorists as showing its high sensitivity towards current changes in income (as an argument in latter direction may serve the tendency of abstaining from purchasing long-term goods, such as cars for instance).

Household Savings and Credits

The household savings increase by 41% in the period 2008-2015 and amount to 21.8 bn. euro at the end of 2015 (49% of the nominal GDP). The most significant share among them hold deposits between 500 and 1250 euro, saved under conditions of consistent decrease in interest rates on household deposits in the country.

Graph 7

Deposits and credits of the households and NPISHs (mln. EURO)



Source: Bulgarian National Bank.

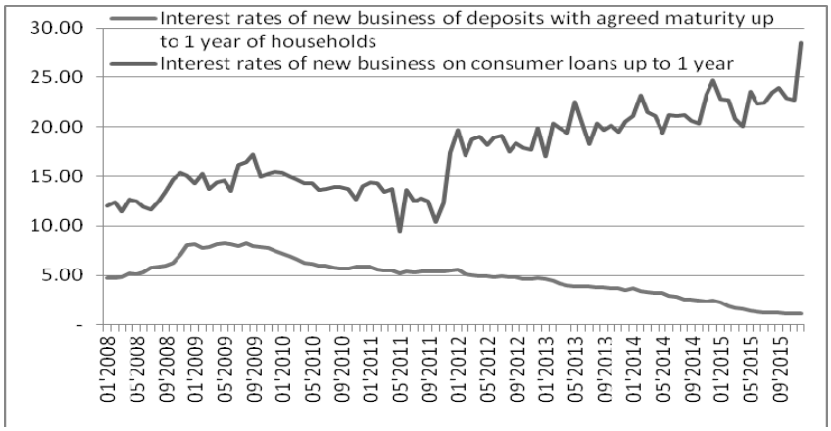
The considerable increase in deposits is due mostly to the uncertainty in the economic environment following the fluctuations in the recent economic development in Bulgaria whereby mass savings are on the whole a result of money saved with difficulty, so as to

cover the most urgent needs if a necessity arises, while the savings exceeding €50,000 are only 0.4% of all households' deposits. This clarification is very important, since it indicates that the use of the large volume of savings in Bulgarian economy so as to accelerate economic activity does not depend on the consumption of the average household but on the investment intentions of the banks, i.e. the risk levels assessment in Bulgarian economy is the leading factor in utilizing the large resource of households in the banking system in the country.

The effect of the overall uncertainty in the economy may also be observed with regard to the credits given to households. Their growth for the period 2008-2015 is only 0.3% and the number of credits given has dropped by 9.5%. Unlike interest rates on deposits, the interest rates on credits register a significant increase and they remain by far higher than those observed in the euro area (by the end of 2015 the interest rates on consumer loans up to 1 year amount at 4.84 % in the euro area based on European Central Bank data while the BNB statistics reports 28.51 % interest rate on the same type of households loans).

Graph 8

Interest rates on deposits and credits of the households



Source: Bulgarian National Bank.

The higher interest rates on loans to households after 2008 also shape as a factor which hinders the active loan-taking on behalf of households. The weaker reliance on consumer credits can also be seen in the structure of monetary income whereby it is again the risk profile of Bulgarian economy which appears to be the leading stimulus for refraining from active borrowing, and from their more accessible provision. However, it may also be explained with the intention of financial institutions to preserve profit levels and in a lesser extent with increasing non-performing loans to households. By the end of 2015 non-performing loans to households are approximately 1.62 bn. euro which is 28.5 % of total non-performing loans in Bulgarian banking system. However, the highest increase in profit realization among the industries in the country is registered with financial and insurance activities – 69%. This fact creates the impression that the levels of interest rates on credits are kept high speculatively and, taking into account the large share of foreign ownership in

the Bulgarian banking system, this is also suggestive of using the crisis so as to compensate for losses in other countries, while not offering sufficient support for the development of the local economy. On the other hand, this fact may be read as reassuring in terms of the stability of the Bulgarian banking system which faced challenges in 2014.

Conclusions

The analysis of the effects of recent economic fluctuations in Bulgarian economy on household income and expenditures shows that fluctuations in the business cycle have a significant effect on the structure of household income whereas the households' expenditures remains relatively unaffected by the ups and downs in the economy. The household income begins to depend more on labour remuneration in a clear trend of substituting pension income with employment income whereby the situation on the labour market and the fiscal stability are the leading factors determining household income dynamics in a descending economic development. Income stratification in society becomes more visible with a compensatory effect in which the income of certain social groups compensates the increasing dependency on social benefits with other groups against the background of growing unemployment among household members within the younger age group and with lower educational background as a result of the economic downturn. Household income levels continue to lag behind the average European level and depend on the most part on the income from wages and pension payments whereby the retaining of employees is predominantly in the most labour-active age bracket, with most experience and high qualification, on whose capacity for compensating and supplementing the share of the income of the other groups (pensioners, young people, persons with low educational background) depend both the increase of the overall income of households and its fairer social distribution.

Irrespective of this, the patterns of private consumption 8 years after the initial manifestations of the crisis in Bulgarian economy has not changed dramatically since the higher prices of services have been compensated by the decreased share of household expenditure for food, non-alcoholic beverages and clothing. We observe significant increase in the prices of health and education services while the share of transport expenditure in the structure of household expenses remains constant due to the preserved levels of prices in transportation services and the deficiencies of the market mechanism for the reduction of which the crisis does not contribute greatly. Not surprisingly, we also see a postponing of long-term consumption due to the uncertainty in the economy and the lack of clear signals for economic recovery till 2015. As a whole, we can conclude that Bulgarian society orientates its current consumption according to the permanent income hypothesis rather than more in line with high sensitivity towards current changes in income. Having in mind the unchangeable consumption patterns and their low sensitivity to the business cycle fluctuations, we may expect a long-term pressure for using savings and/or credits so as to maintain the dominant stereotype of consumption. Although the household savings have significantly increased, the mass savings come mostly as a result of money saved with difficulty which is fully in line with the relatively constant consumption pattern of Bulgarian households in an income inequality environment in post-crisis period. This also shows that the utilization of the large volume of savings in Bulgarian economy so as to

accelerate economic activity does not depend on the consumption of the average household, but on the investment intentions of the corporations and especially the banks which continue to maintain high interest rate levels on household credits in a very low credit activity environment and increasing bank profits. Such processes are also driven by still low economic growth and negative unemployment gap showing that the economic recovery after the crisis of 2008 is not yet sustainable and although the real GDP structure in terms of the shares of domestic and external demand is more balanced this does not transform into better conditions for doing business and increasing employment.

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