



TOPICAL RESEARCH AND HIGHLIGHTS

DYNAMICS OF PRIVATE CONSUMPTION IN BULGARIA BETWEEN JANUARY AND SEPTEMBER 2020

(PUBLISHED AS PART OF 'MACROECONOMIC FORECAST',
DECEMBER 2020)



BULGARIAN NATIONAL BANK

Dynamics of Private Consumption in the Bulgaria between January and September 2020

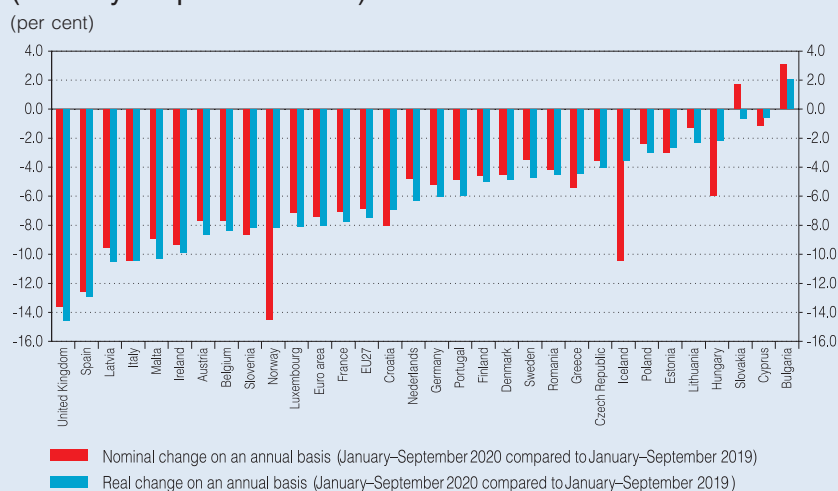
According to NSI data, private consumption in Bulgaria in the first nine months of 2020 increased by 2.0 per cent in real terms compared with the same period of 2019. The resilient dynamics of private consumption given the negative shock from the spread of the COVID-19 pandemic and containment measures related to it is the main factor for the upward revision (lower decline in real GDP) in the forecast for economic activity in Bulgaria in 2020 compared with the September 2020 and June 2020 projections.¹ The purpose of this short analysis is to present the extent to which the dynamics of private consumption could be explained by the effects of factors related to the stringency of anti-epidemic measures, consumer sentiment, the amount of fiscal support for the economy and the change in employment and household income. The analysis suggests that the positive dynamics of private consumption in Bulgaria in the first nine months of 2020 could not be fully explained by the above factors. In addition, the analysis of the dynamics of high frequency indicators implies a decline in household consumption over the period. It is likely that the resilience of private consumption in Bulgaria in the first nine months is due to the specificities of the methodology used for compilation of statistics, rather than to country's economic developments.

Dynamics of Private Consumption in the EU Member States in the First Nine Months of 2020

NSI data on private consumption in Bulgaria in the first three quarters of 2020 show a significant resilience to the negative shock from the spread of the COVID-19 pandemic and containment measures. However, such resilience is not observed in the other European countries. During the period January–September 2020, Bulgaria was the only country in the European Union (EU), where private consumption increased in real terms (by 2.0 per cent) compared to the same period of 2019, while in the EU and the euro area this component declined by 7.4 per cent and 8.0 per cent respectively. The growth of private consumption in Bulgaria in the first nine months was even higher in nominal terms (3.0 per cent), with only one more EU Member State (Slovakia) posting a positive annual change in household final consumption expenditure at current prices.

From January to September 2020 household final consumption expenditure in the EU was more negatively affected in countries where more stringent anti-epidemic measures against the spread of COVID-19 were

Chart 1. Annual Rate of Change in Private Consumption (January–September 2020)



Source: Eurostat, own calculations.

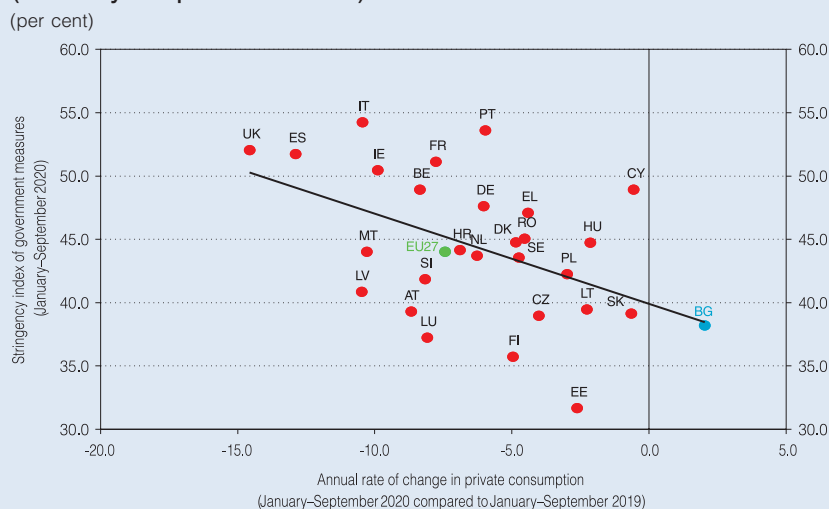
¹ Private consumption accounts for about 59 per cent of nominal GDP for 2019 by final consumption expenditure component and therefore any change in the expected dynamics of this component leads to a substantial revision of the economic activity forecast in Bulgaria.

introduced. In Bulgaria, the stringency of anti-epidemic measures in the period January–September 2020 was lower than the EU average but was comparable with that in other countries such as Austria, the Czech Republic, Lithuania and Slovakia. Unlike Bulgaria, these countries posted an annual decline in real private consumption ranging from -0.6 per cent to -8.7 per cent in the period under review.

The change in consumer confidence indicator also did not correspond to the more resilient dynamics of private consumption in Bulgaria compared to the other EU Member States in the first nine months of 2020 as the deviation of the consumer confidence indicator in Bulgaria from its long-term average was close to the average for the euro area and the EU.

In response to the pandemic all EU Member States introduced discretionary fiscal measures to support most vulnerable households and firms and preserve employment. In Bulgaria, fiscal stimuli announced as of October 2020 amounted slightly under 4 per cent of GDP², which is below the average level for EU Member States. At the same time, Bulgaria reported a lower decline on an annual basis in hours worked per person by 4.9 per cent compared to the EU average (decline by 6.9 per cent) in the first nine months of 2020, which, probably, could be explained by less restrictive anti-epidemic measures and firms' policy of employee recruitment and lay-offs.

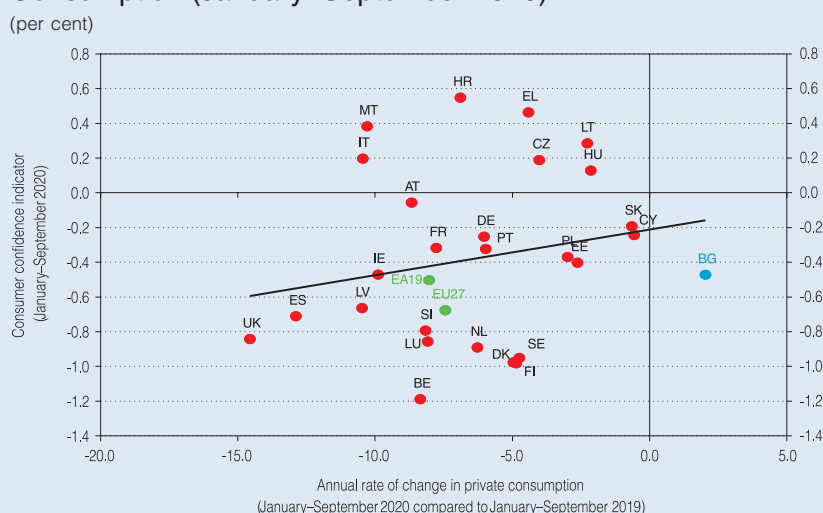
Chart 2. Stringency of COVID-19 Containment Measures and Dynamics of Real Private Consumption (January–September 2020)



Notes: Higher values of the stringency indicator of COVID-19 containment measures point to a more restrictive measures and *vice versa*; the linear regression relationship between the variables in both scales for the review period is presented by a line in the chart.

Sources: Eurostat, own calculations, Hale, Thomas, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira (2020). Oxford COVID-19 Government Response Tracker.

Chart 3. Consumer Confidence and Dynamics of Real Private Consumption (January–September 2020)



Note: Consumer confidence indicator is standardised; the linear regression relationship between the variables in both scales for the review period is presented by a line in the chart.

Sources: Eurostat, own calculations

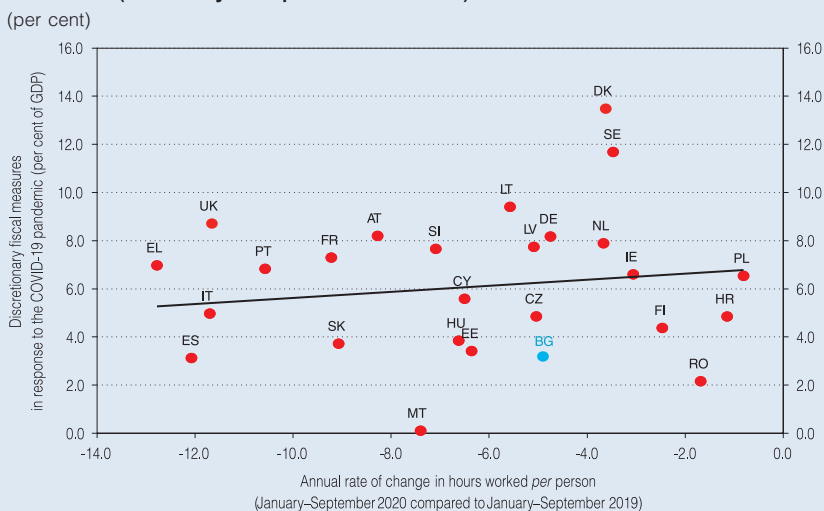
² Discretionary measures are calculated as a share of GDP for 2019.

Despite the relatively low decline in worked hours, Bulgaria is the only country in the EU, where an opposite change in this indicator and real private consumption is observed. Given that hours worked declined at a rate similar to that in Bulgaria, the annual decline in private consumption in real terms registered in other EU Member States in this period ranges from -2.3 per cent (Lithuania) to -10.5 per cent (Latvia).

A factor, which may have contributed to the more favourable dynamics of household disposable income in Bulgaria and respectively private consumption compared to most EU Member States, is the increase in the compensation per employee over the January–September 2020 period by 5.4 per cent on an annual basis (compared to a decline of -1.2 per cent in the euro area and 0.9 per cent in the EU). Bulgaria's reported growth is the second highest in the EU, behind Lithuania. Concurrently, in Latvia and Lithuania while hours worked declined and compensation per employee increased at a rate similar to that in Bulgaria, private consumption fell by -2.3 and -10.5 per cent respectively compared to January–September 2019.

Based on BNB calculations the reported increase in the compensation *per* employee of 5.4 per cent on an annual basis in Bulgaria between January and September 2020 was not sufficient to offset the pandemic's negative effects on consumers' financial position, with household

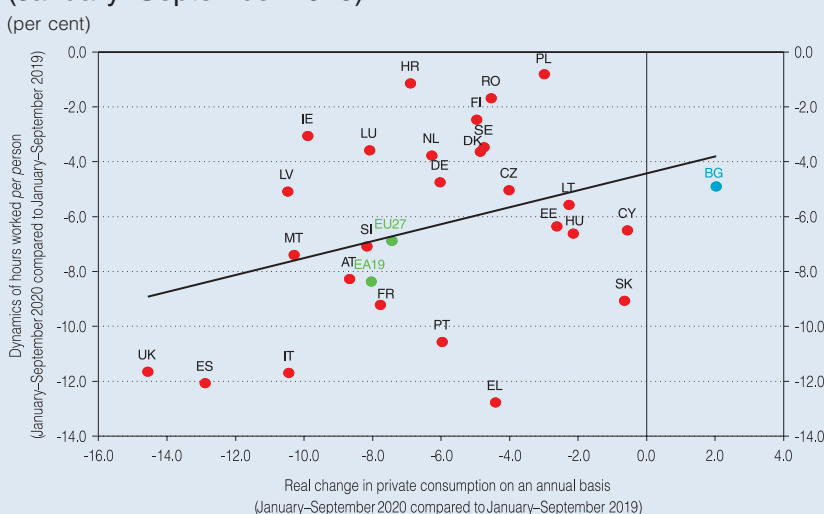
Chart 4. Discretionary Fiscal Expenditure in Response to the COVID-19 Pandemic and Annual Rate of Change in Hours Worked (January–September 2020)



Notes: Discretionary measures of each country are calculated as a share of GDP for 2019 due to the high uncertainty surrounding the economic activity in 2020; the linear regression relationship between the variables in both scales for the review period is presented by a line in the chart.

Sources: Eurostat; IMF database of Country Fiscal Measures in Response to the COVID-19 Pandemic (October 2020), own calculations.

Chart 5. Dynamics of Private Consumption and Hours Worked (January–September 2020)

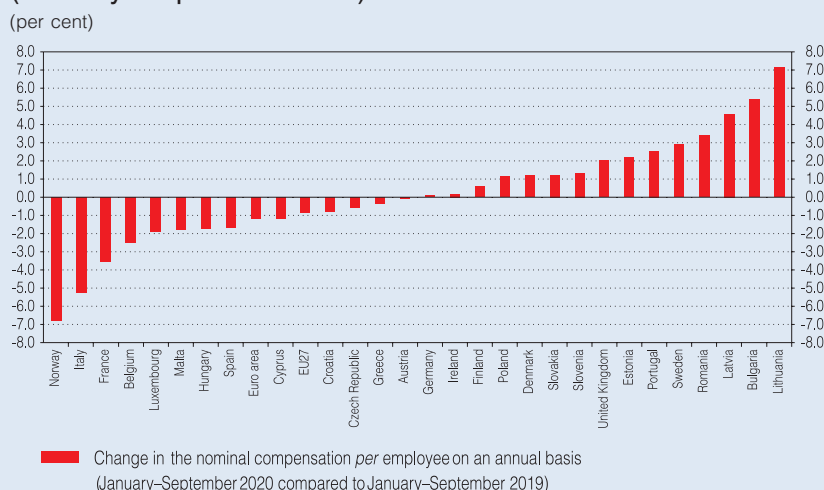


Note: The linear regression relationship between the variables in both scales for the review period is presented by a line in the chart.

Sources: Eurostat, own calculations.

real disposable incomes³ falling by 1.8 per cent from January to September 2019. The private moratorium on loan repayments allows households to maintain higher consumption rate than that assumed on the basis of macroeconomic factors, as it temporarily defers loan repayments and leaves the households with more free resources for consumption. However, this factor is not specific for Bulgaria, as private and/or public moratoria have also been imposed in the other EU Member States⁴. At the same time, an increase in household savings rate was observed in Bulgaria⁵ in the review period, which is also a prerequisite for a decline in consumption on an annual basis.

Chart 6. Change in Compensation per Employee (January–September 2020)

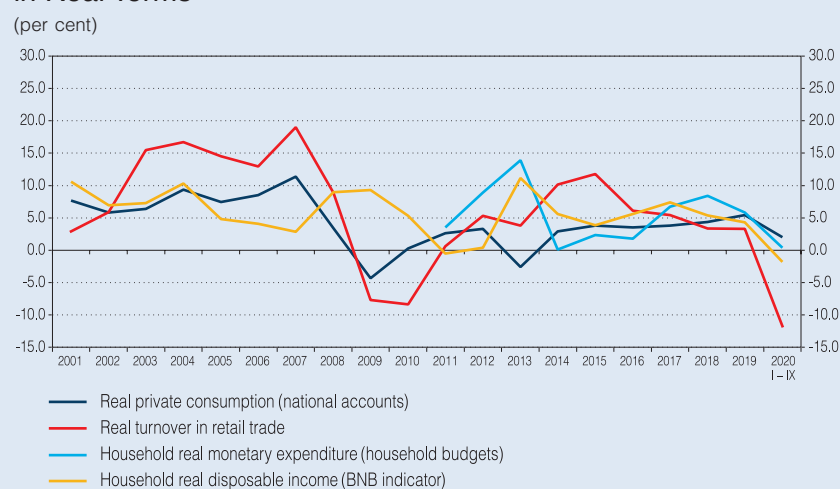


Sources: the NSI, own calculations.

Dynamics of Private Consumption in Bulgaria and Estimated Historical Correlations to Selected Indicators

Private consumption resilience (according to NSI national accounts data) to the negative shock from the spread of the COVID-19 pandemic and containment measures in the first nine months of 2020 may be studied in the light of high frequency monthly and weekly indicators that are used for short-term forecasting of consumer expenditure. Such indicators are, for example, the turnover indices of sector retail trade, excluding the trade of motor vehicles and motorcycles and the nominal

Chart 7. Annual Rate of Change in High Frequency Indicators Related to Final Household Consumption Expenditure in Real Terms



Sources: the NSI, the BNB, own calculations.

³ Household real disposable income is calculated by deflating household nominal disposable income with the private consumption deflator. Household nominal disposable income is constructed by the BNB in two steps. The first step includes the calculation of gross disposable income as a sum of the following components 1) wage bill adjusted for the employed to employees ratio; 2) income from employment of Bulgarian residents working temporarily abroad (net); 3) remittances to households in Bulgaria (mainly Bulgarian emigrants); 4) social payments from government to households. The second step includes the decrease in gross disposable income by the amount of 1) social contributions due by employees, and 2) personal income tax.

⁴ See the European Banking Authority Report of December 2020 on the use of moratoria across the EU banking sector: <https://www.eba.europa.eu/banks-report-significant-use-covid-19-moratoria-and-public-guarantees>.

⁵ According to the NSI household budget survey average savings rate per household member came to 16.1 per cent in the first nine months of 2020 compared to 8.7 per cent in 2019. Household savings are measured by the difference between total nominal income and total nominal expenditure average per household member under the same survey. Household income, to which savings have been compared, is calculated by deducting from total household nominal income (according to the NSI household budget survey), the expenditure for taxes, social contributions and regular transfers to other households. The obtained household savings to income ratio is seasonally adjusted by the BNB.

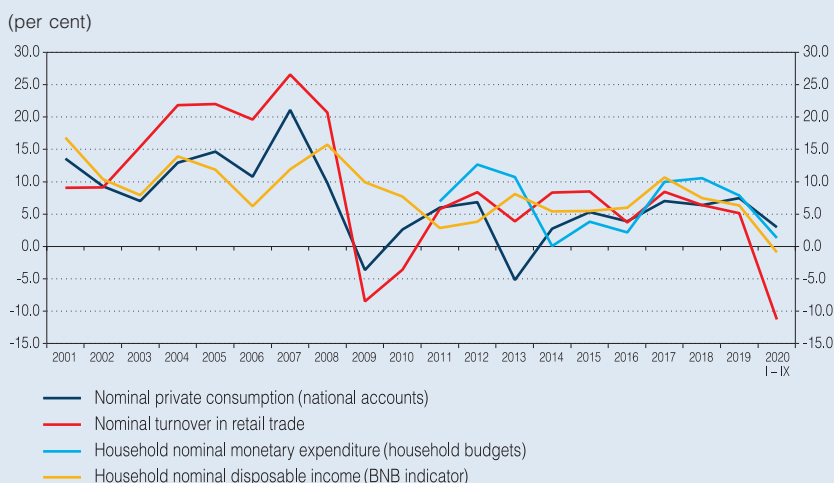
amount of card transactions via POS and ATM terminals.⁶ In the second and third quarters of 2020, these high frequency indicators indicate a significantly more subdued dynamics of private consumption compared to that registered according to NSI national accounts.

Charts 7 and 8 compare the dynamics of private consumption in the period after 2001 with that of retail trade turnover indices, the disposable income indicator constructed by the BNB, and the average expenditure per household member according to the NSI household

budget survey. Data give indications of significantly higher resilience of private consumption according to national accounts compared to the alternative indicators both in real and nominal terms. Almost all indicators of household expenditure show a strong decline on an annual basis in the first nine months of 2020. Between January and September 2020 only the average expenditure per household member increased in real and nominal terms on an annual basis according to the quarterly NSI household budget survey, but the growth is lower than that of private consumption according to NSI national accounts. According to BORICA AD data the nominal value of card payments decreased by 7.1 per cent in the first nine months of 2020.⁷

Correlations estimated based on historical series also imply that during the same period there is a mismatch in the dynamics of private consumption according to NSI national accounts and alternative high frequency indicators of household consumption, reflecting higher than expected household consumption according to NSI national accounts compared to the high frequency indicators.

Chart 8. Annual Rate of Change in High Frequency Indicators Related to Final Household Consumption Expenditure in Nominal Terms



Sources: the NSI, the BNB, own calculations.

Table 1. Historical Correlations between Private Consumption and Selected Indicators

	Annual Change (January–September 2020 compared to January–September 2019)	Correlation of Real Private Consumption with Specific Series
Household real disposable income	-1.8	0.03
Real retail trade volume	-11.7	0.59
Hours worked per person	-4.9	0.59
Employment	-2.4	0.50
Real volume of card payments	-8.1	0.11
Household real monetary expenditure	0.4	-0.18
Real private consumption	2.0	1.00

⁶ BORICA AD non-public data are used.

⁷ Including all POS and ATM transactions, for which a payment card managed by BORICA AD has been used. Transactions refer both to the territory of Bulgaria and abroad. The indicator is calculated in million levs at current prices.

	Annual Change (January–September 2020 compared to January–September 2019)	Correlation of Real Private Consumption with Specific Series
Household nominal disposable income	-0.8	0.39
Nominal retail trade volume	-11.2	0.71
Hours worked <i>per person</i>	-4.9	0.57
Employment	-2.4	0.50
Nominal volume of card payments	-7.1	0.10
Household nominal monetary expenditure	1.4	0.19
Nominal private consumption	3.0	1.00

Notes: The private consumption deflator from NSI national account data is used to convert household monetary expenditure, card payments volume and household disposable income from nominal into real terms.

The correlation is calculated on the basis of annual growth by quarter of non-seasonally adjusted series for the period between the first quarter of 2001 and the third quarter of 2020, excluding household monetary expenditure series (calculated for the period between the first quarter of 2011 and the third quarter of 2020) and the series for nominal volume of card payments (calculated for the period between the first quarter of 2012 and the third quarter of 2020).

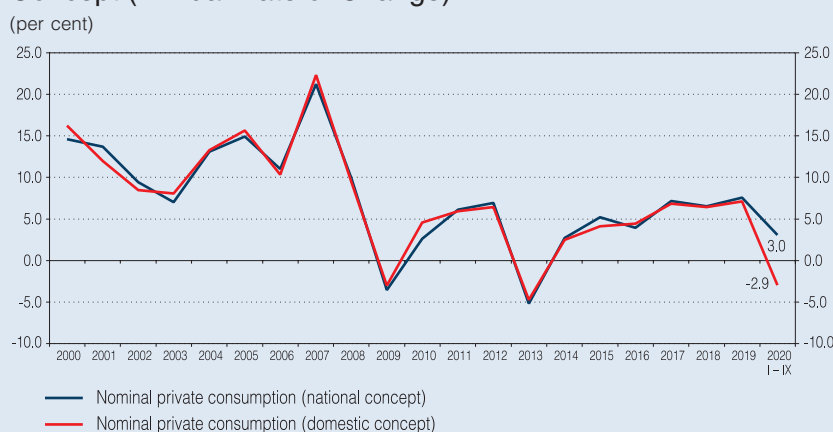
Sources: Eurostat, the BNB, the NSI, own calculations.

It is likely that methodological specificities also contributed to the resilience of private consumption in Bulgaria in the first nine months of 2020. Private consumption statistics are compiled using two alternative concepts: domestic and national. The domestic concept of private consumption includes the expenditure of resident or non-resident households in Bulgaria, while private consumption national concept includes the consumption of residents abroad, but excludes the consumption of non-residents in Bulgaria.⁸ Private consumption according to the national concept is used as a GDP sub-component.⁹

Historically, the two concepts lead to a very similar annual growth of private consumption, but the data for the first nine months of 2020 show a significant difference in consumption dynamics according to the two concepts.

While according to the national concept private consumption used for calculating GDP remained resilient to the pandemic shock growing on an annual basis both in nominal and real terms, private consumption, according to the domestic concept, reported a decline on annual basis both in nominal terms (-2.9 per cent) and in real terms (-4.1 per cent) in line with the dynamics of most alternative indicators for measuring consumer expenditure in the review period.

Chart 9. Nominal Private Consumption: National to Domestic Concept (Annual Rate of Change)



Notes: The domestic concept of private consumption includes the expenditure of resident or non-resident households in Bulgaria, while private consumption national concept includes the consumption of residents abroad and excludes the consumption of non-residents in Bulgaria. Private consumption according to the national concept is used as a GDP sub-component.

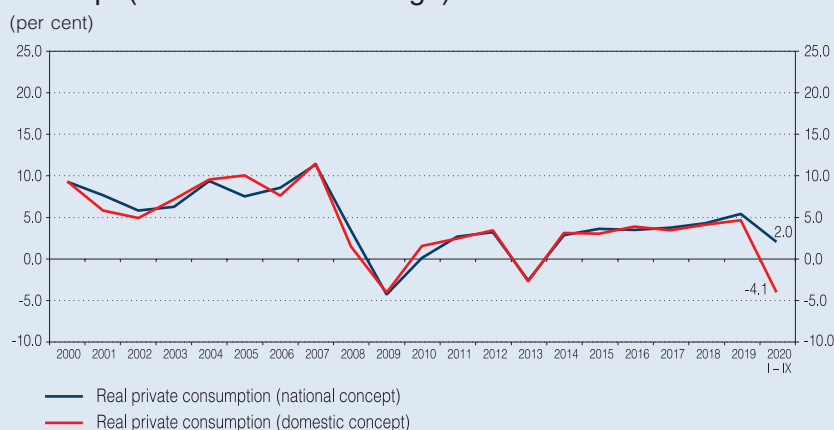
Sources: the NSI, own calculations.

⁸ For details, see the methodology for compiling data: https://www.nsi.bg/sites/default/files/files/metadata/GDP_1.2.3_Methodology.pdf

⁹ The implementation of the national concept does not change GDP level, as it has an impact both on estimates for final consumption and on goods and services foreign trade balance. However, the breakdown of expenditure by resident and non-resident household in Bulgaria is important for the forecasting process, as it sets the baseline of private consumption and net exports of services related to travel.

The analysis of household dynamics in Bulgaria between January and September 2020 shows that the growth of private consumption reported by the NSI according to the national accounts does not correspond to the developments of most EU Member States¹⁰ over the review period and differs from historical correlation to alternative indicators for households' income and expenditure. Therefore, it may be assumed that private consumption resilience observed in Bulgaria in the first nine months of 2020 to the negative shock from the spread of the COVID-19 pandemic and containment measures may reflect methodological specificities in preparing national account data. This in turn introduces a high degree of uncertainty to the forecast of this GDP component, as its dynamics could not be fully explained by economic indicator developments and the macroeconomic environment in Bulgaria.

Chart 10. Real Private Consumption: National to Domestic Concept (Annual Rate of Change)



Notes: The domestic concept of private consumption consists of the expenses of resident or non-resident households in Bulgaria, while private consumption national concept includes the consumption of residents abroad and excludes the consumption of non-residents in Bulgaria. Private consumption according to the national concept is used as a GDP sub-component.

Sources: the NSI, own calculations.

¹⁰ Even after taking into account the effect of factors, such as the stringency of anti-epidemic containment measures, consumer sentiment, the amount of fiscal support for the economy and the change in employment and household income.

THE SCULPTURAL COMPOSITION BY KIRIL SHIVAROV DEPICTING HERMES AND DEMETER ON THE SOUTHERN FAÇADE OF THE BULGARIAN NATIONAL BANK BUILDING IS USED IN COVER DESIGN.