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IMPACT OF CASHLESS TRANSITION ON SHADOW ECONOMY AND TAX REVENUE IN SERBIA: UPDATE OF THE ESTIMATIONS

KEY FINDINGS

- Change in behaviour associated with COVID-19 pandemic accelerated cashless transition in Europe. In comparison to 2019, the total value of cashless payment transactions in the EU in 2021 was higher by 27% in nominal terms (22.5% in real terms). With the nominal rise by 59.3% in 2021 comparing to 2019, Serbia was among the top two countries in Europe (together with Lithuania) in terms of the speed of development of cashless payments in that period.
- The total value of cashless payments in Serbia in 2021 stood at 11.9% of GDP, which was higher by 3.9 percentage points of GDP in comparison to 2019, but still substantially below the EU-CEE average (17.3% of GDP) and the EU-27 average (19.9% of GDP).
- Considering the results of previous econometric studies on the cashless-to-shadow economy elasticities and the 2021 cashless payments gap, it is estimated that closing the gap in Serbia relative to the EU member countries from the Central and Eastern Europe (EU-CEE) in terms of the relative value of cashless payments, would be associated with a decrease in the share of shadow economy in Serbia by 1.9% of GDP, which may yield additional tax revenues of 0.7% of GDP, equivalent to EUR 380 million per year.

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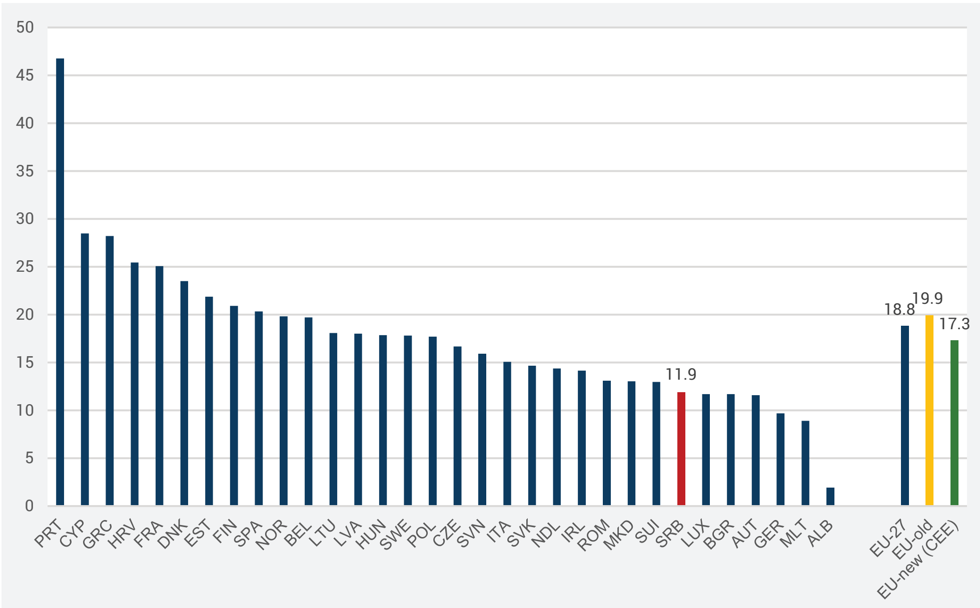
UPDATE OF THE ANALYSIS

This report provides an update to the estimation of the impact of cashless transition in Serbia on shadow economy and tax revenues, by taking into account the actual data on cashless payments and national accounts in 2020 and 2021.[4]

Digital transformation and gradual change in consumer habits led to substantial switch to cashless payments in C-to-B transactions in Europe over the past decade. In 2020 and 2021, cashless transition was additionally fostered by the change in life and doing business regime, associated with COVID-19 pandemic restrictions. The European Central Bank (ECB) data on cashless payments, show that in all but one[5] EU member state, the total value of cashless payments in 2021 increased relative to 2019, with the average growth rate in the value of cashless transactions being close to 27% in nominal terms, i.e. 22.5% in real (inflation-adjusted) terms.[6] On the other hand, the total value of cashless payments in Serbia (in EUR million) in 2021 rose by 59.3% in nominal terms (i.e. close to 50% in real terms), in comparison 2019, which means that Serbia (together with Lithuania) was one of the two top ranking countries in Europe in terms of the growth of cashless transactions in that period.

Figure 1: Value of cashless payments in 2021 (% GDP)



Source: Authors' calculations based on ECB and NBS data

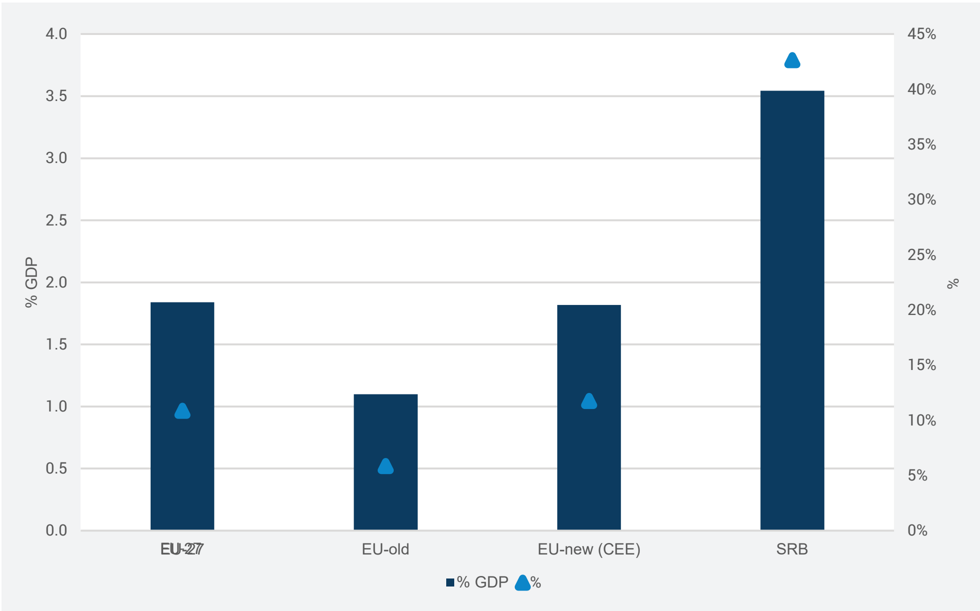
4 The year 2021 was the last year for which the comparable data on cashless payments in the EU member states were available at the ECB database, at the time of preparation of the update report (February 2024).

5 The Netherlands.

6 The term "Cashless payments" here refers to the card payment transactions at POS terminals and card payment transactions via Internet for purchase of goods and services within a country.

Due to very strong rise in the nominal value of cashless payments, which significantly outweighed the GDP dynamic, the relative value of cashless payments in Serbia soared by 3.9 percentage points of GDP, from 8% of GDP in 2019 to 11.9% of GDP in 2021, which is equivalent to an increase by 40% (Figure 2). Consequently, the relative value of cashless transactions in Serbia (as % of GDP) in 2021 stood at 63% of the EU-27 average, which was significantly higher than in 2019 (49% of the EU-27 average). However, in spite of the significant progress in cashless transition, the gap in the relative value of cashless payments (as % of GDP) in Serbia in 2021, in comparison to the EU-27 and EU-CEE average remained pronounced, albeit smaller (Figure 1).

Figure 2: Change in the value of cashless payments relative to GDP (2019-2021)

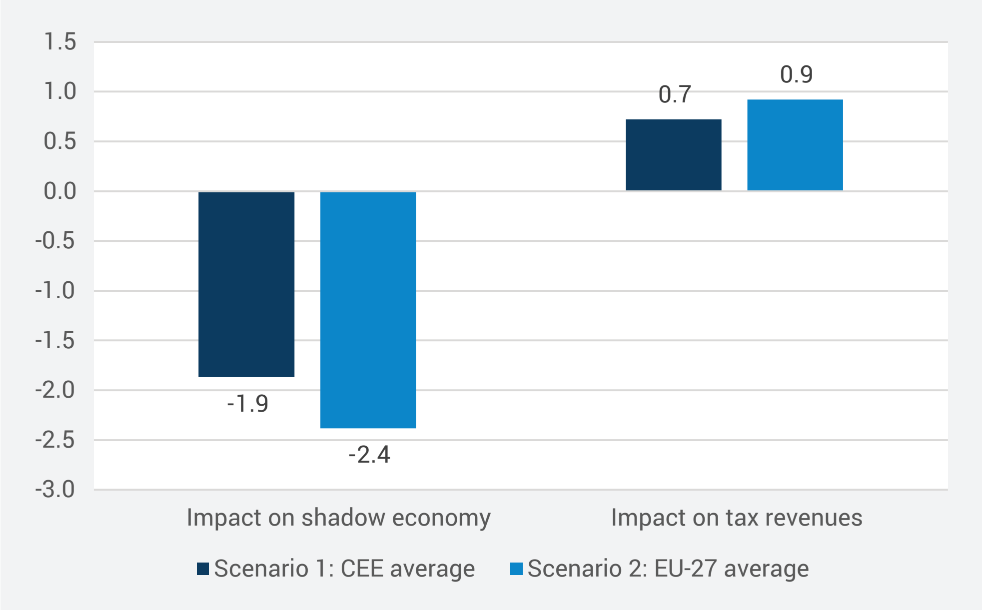


Source: Authors' calculations based on ECB and NBS data

According to the econometric study (Ranđelović, et al. 2021) on the shadow economy and fiscal effects of cashless transition in Europe, the elasticity of shadow economy to cashless economy was close to -0.041. Considering the 2021 gap in the relative share of cashless payments in Serbia and EU member states, it is estimated that closing that gap in Serbia relative the EU-CEE would be associated with a decrease in the relative share of shadow economy by 1.9% of GDP. In case of full convergence with the EU-27 average, the impact of reduction in shadow economy in Serbia would be even more pronounced, amounting to 2.4% of GDP (Figure 3).

As in 2021, tax revenues accounted for 38.6% of GDP, the above mentioned decline in shadow economy linked to the cashless transition would result in an increase in tax revenues by 0.7% of GDP (in case of convergence in cashless payments to the EU-CEE average), i.e. by 0.9% of GDP (in case of convergence with the EU-27 average).

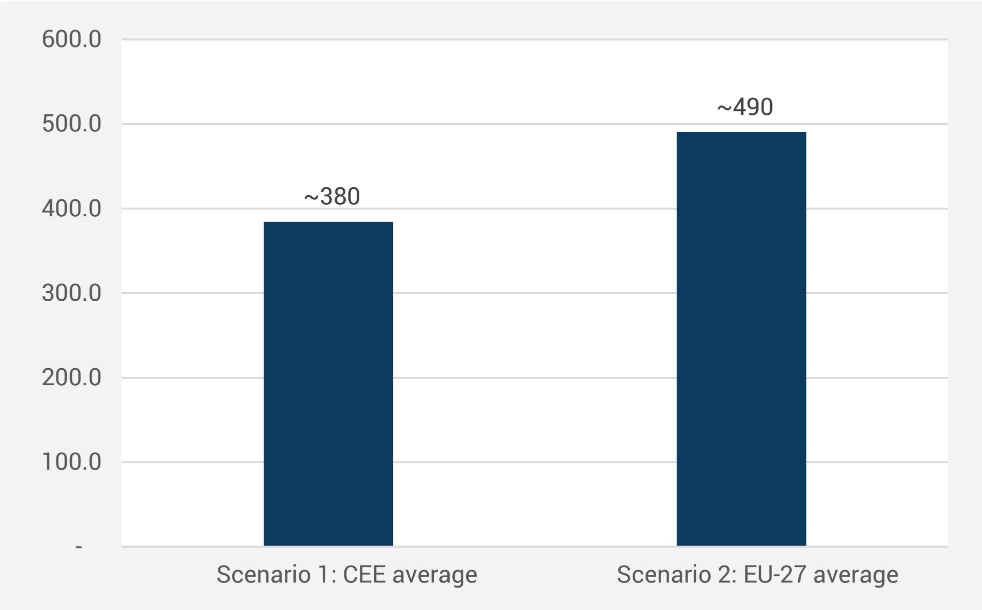
Figure 3: Impact of increase in cashless payments on shadow economy and tax revenue in Serbia (% GDP)



Source: Authors' calculations based on ECB and NBS data

When translated into nominal terms, these results suggest that if Serbia was to reach the EU-CEE average in terms of the relative share of cashless payments (% of GDP) in 2021, *ceteris* paribus, it would result in raising additional tax revenues of up to EUR 380 million, while in case of convergence with the EU-27 average the additional tax revenues would be close to EUR 490 million (Figure 4).

Figure 4: Impact of increase in cashless payments on tax revenue in Serbia (EUR million)



Source: Authors' calculations based on ECB and NBS data

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The authors are solely responsible for the content presented in this study.