

Impact of cashless payments growth on the shadow economy

Methodology

The estimation of the impact of the development of the cashless economy on the level of the shadow economy and tax revenues was carried out based on the econometrically assessed elasticity between the shadow economy and the cashless economy for a set of 26 European countries, as well as on the available data on the size of the shadow economy and the development of cashless payment methods in Serbia.

The analyses in the study are based on official, internationally comparable data on the size of the shadow economy and the development of cashless payments, up to and including 2021, which was the last year for which internationally comparable data were available for European countries at the time of the study. Given that after 2021 there has been a further strong development of cashless payments in both Serbia and Europe, data for the subsequent years may differ from those from 2021.

The study used standard indicators of the development of cashless payment methods, which have been applied in other similar studies published by central banks of European countries and in papers published in reputable international academic journals. The presented indicators do not include some of the newer payment methods (e.g., QR code payments, etc.), since some of these methods have only been introduced relatively recently, and comparable databases on their use do not yet exist for a broader set of countries and the full observation period.

The Study on the Impact of Cashless Payments on the Shadow Economy was prepared by professors of the Faculty of Economics, University of Belgrade – Saša Ranđelović, Miloško Arsić, and Svetozar Tanasković.

Chart 1. Estimated Value of Cashless Payments as a Share of GDP (2019–2021)

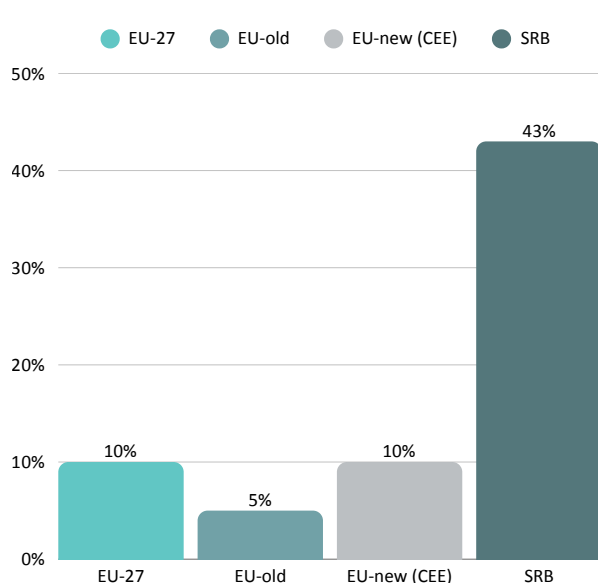
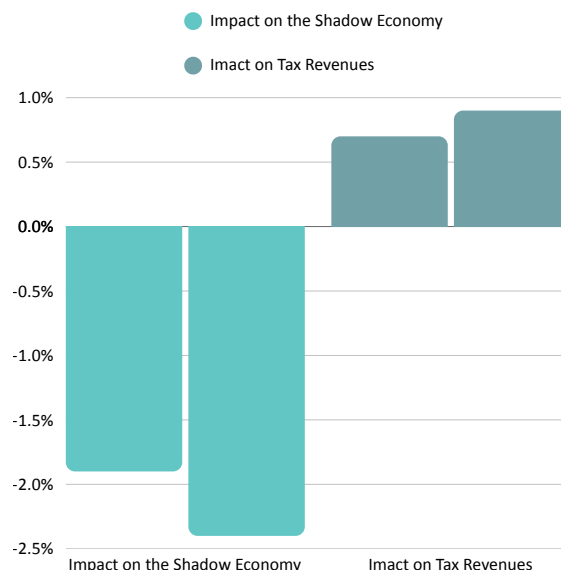


Chart 2. Impact of Increasing Cashless Payments in Serbia to the CEE Average Level



Results

While cash-based transactions can more easily be concealed, cashless transactions are easier to track, which is why both theoretical and empirical studies suggest that a shift toward cashless payment methods helps to discourage participation in the shadow economy, and may have a positive effect on state budget tax revenues.

Over the past decade, Serbia has experienced strong growth in cashless payments, in some segments even outpacing comparable European countries. However, according to data as of 2021, Serbia still lagged behind the average of comparable European countries in terms of financial inclusion, development of retail infrastructure for cashless payments, and the relative size of cashless transactions in the economy.

In 2021, the total value of cashless transactions in Serbia amounted to around 11.9% of GDP, while, for comparison, in the Central and Eastern European (CEE) countries it amounted to an average of 17.3% of GDP.



380.000.000€

Expected increases in tax revenues if the level of the cashless economy in Serbia equates with the CEE countries

The results of the study “The Impact of Cashless Payments Development on the Shadow Economy and Public Finances in Serbia” show that a 1% increase in the value of POS transactions is associated with a 0.041% reduction in the shadow economy, while a 1% increase in the ratio of the value of POS transactions to ATM transactions is associated with a 0.037% decrease in the shadow economy.

Based on the gap in the development of cashless payments between Serbia and the countries of Central and Eastern Europe that existed in 2021, it is estimated that reaching the CEE average in terms of cashless payment development could reduce the shadow economy by around 1.9% of GDP, which would lead to an increase in tax revenues of up to 0.7% of GDP—or approximately €380 million annually.

Assuming that the development of cashless payments in Serbia continues at a pace similar to that of the fastest-progressing CEE countries in this area, it is estimated that these results could be achieved within 6 to 7 years.

Achieving such outcomes requires the implementation of a wide range of public policy measures from regulatory and financial, to educational initiatives.



6 to 7 years

Growth of cashless payments could reduce the shadow economy of Serbia by about 3.4% of GDP in the next six to seven years