## Summary

## The impact of the COVID-19 pandemic on cash demand and changes in payment behavior: A collection of empirical studies

The COVID-19 pandemic outbreak led to drastic changes in many areas of social and economic life worldwide. This doctoral dissertation's research aims to enhance our understanding of how the pandemic affected the demand for cash and consumers' payment behaviors. The COVID-19 pandemic observed a significant increase in cash demand and a decrease in its use for transactional purposes, thereby deepening an already established phenomenon known as the "cash paradox."

The study findings suggest that concerns about contracting the SARS-CoV-2 virus through handling cash and alterations in their daily routines primarily influenced customers' payment behaviors. Prior to the pandemic, individuals who favored non-cash transactions were more inclined to persist in this behavior and potentially even increase the frequency of using such methods. Conversely, individuals who had a higher frequency of cash usage in the past showed a lower inclination to transition to cashless payment methods. This situation leads to an increasing social divide in the use of payment instruments. National considerations substantially influence the ability of inhabitants in different countries to adapt to external influences, such as a pandemic.

In Poland, the surge in money demand during the COVID-19 pandemic was not driven by transactional motives but rather by hoarding. This is demonstrated by the fact that Poland had a two-fold decrease in the use of physical money for transactions, surpassing the rate of decline observed in the period before the epidemic in 2020. Simultaneously, Poland experienced the biggest surge in cash demand compared to other European countries. International research has demonstrated that a characteristic of national culture known as uncertainty avoidance played a substantial role in driving the heightened need for cash during the initial year of the COVID-19 epidemic. This implies that during periods of uncertainty, customers have a tendency to amass cash as a secure asset, even if they have no intention of using it for transactions.

Another notable finding was the impact of merchants' rejection of cash, which greatly diminished its usage among consumers in subsequent transactions. In Poland, the response to this challenge was the implementation of legal regulations initiated by the Narodowy Bank Polski (Polish central bank), which mandated merchants to accept cash payments. This measure was intended to guarantee the continued social acceptance of cash as a form of payment and to prevent financial exclusion.

The findings in the studies not only documented significant social and economic occurrences but also provided guidance for future research and practical interventions on both an international and domestic scale. Several potential studies include: (i) investigating the long-term effects of the COVID-19 pandemic on payment behavior once the epidemic subsides; (ii) assessing the safety of various payment methods in terms of disease transmission; (iii) examining how national factors, such as the prevalence of cash in the informal economy, varying levels of payment method adoption, or the scale of payment infrastructure, influence changes in payment behavior across different countries; and (iv) exploring the impact of national culture on the demand for cash during periods of heightened uncertainty and on the rate of payment behavior change.

Practical measures that can be implemented include: (a) central banks increasing their cash reserves and enhancing the efficiency of cash supply chains to meet growing demand and prevent bank panic; (b) raising public awareness about the health risks associated with handling cash; and (c) governments and public institutions in each country considering legislative actions to ensure the continuity of cash access and acceptance.