STIMULATING CASHLESS ECONOMY: THE ROLE OF TARIFF REGULATIONS & NATIONAL PAYMENT SYSTEMS CREATION

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INTRODUCTION & MOTIVATION

Retail payments market has recently attracted government attention. Cashless economy development has become a priority for a number of countries, both developed and developing ones because it produces transparency, sustainability and economic growth benefits. There are a number of stimulating measures available to governments two of which have received particular attention during the recent years: the creation of national payment systems (NPS) and the regulation of interchange fees (Krivosheya et al., 2015). These interventions are expected to foster retail payments market growth.

Despite theoretical foundations of interchange fee regulation effects on the retail payments market activity, there are still doubts about the efficiency of such stimulating measures. Most of the tariff regulation implemented so far has been found to be ineffective. NPS creation is considered relatively recent measure and has not been analysed on the global scale yet. This study aims to cover this gap and presents the cross-national analysis of the effects of interchange fee regulation and national payment systems creation on the cashless transaction volume. The key research question is, therefore: “Does government intervention at the retail payments market via tariff regulation and national payment systems creation foster retail payments market development?”

This research contributes to the literature on the efficiency of government intervention at the retail payments market (Aurazo & Vasquez, 2019; Chaplin et al., 2014; Evans & Mateus, 2011; Kayalidereden & Cetiner, 2018; McGinnis, 2012; Weiner & Wright, 2005). This literature so far has focused on the individual cases analysis or non-quantitative assessment of government intervention efficiency. This study covers this gap by providing quantitative estimates of correlations between government intervention via interchange fee regulations and NPS creation and cashless transactions volume on a cross-national representative sample of

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international payments market. After analysing the literature, this is the first study to provide such analysis.

THEORETICAL FRAMEWORK

Interchange fee regulation and cashless transactions volume

Interchange fees have two key roles at the retail payments market. Firstly, they act as a balancing instrument, which redistributes costs between two sides of the market. Secondly, they may be used as a stimulating instrument in order to increase the demand at one sides of the market. Lower interchange fees may lead to reduced merchant discount fees, which stimulate higher cashless payments acceptance rates but, at the same time, increased fees or reduced payments in stimulating programs for cardholders, which decreases the activity of individuals.

However, empirical evidence on interchange fee regulation cases does not support theoretical results on the necessity of interchange fee levels decrease. In fact, regulatory intervention into tariff formation at the retail payments market is considered ineffective. Most of the reasons why this might happen are related to the incomplete pass-through of the tariff changes to the end-users, no changes in the retail prices as the result of interchange fee cuts and market imperfections existence.

National payment systems and cashless transactions volume

National payment systems (NPS) may increase cashless transactions volume due to increased competition, availability of additional stimulating mechanisms via government channels and increased number of offerings for the financially excluded end-user groups. NPS, either public or private, usually act as market participants, which compete with international payment systems. This may lead to innovation fostering, higher number of addressed specific market problems and larger share of financially included individuals and merchants all of which translate to higher transactions volume. Some government backed NPS also oblige some groups of end-users to use cashless payments. These groups are usually more vulnerable and may not have participated in the market voluntarily.

EMPIRICAL SET-UP

Data sample is collected from BIS and Global Payment Systems Survey (GPSS) conducted by World Bank without any restrictions to combine the largest available dataset on crosscountry payments study to date. Countries included in sample were selected based on the availability of data without any other restrictions. Despite the fact that the resulting number of countries is limited, the final sample is representative for the world in terms of payment system indicators (e.g., value and volumes of payments, number of accounts) as well as a number of macroeconomic indicators (e.g., GDP per capita level, population size, territory). Countries with no government interference in payment markets are added in order to track general trends of payments market development, which are inherent to all countries in the World. Countries without government interference are usually less economically developed.

Data on 2014-2017 period was acquired from reports of Bank for International Settlements (BIS). BIS covers most of the developed retail payments market that collectively cover more that 56% of recent global payments activity. Data on 2004-2014 period was collected from World Bank, Global Payment Systems Survey (GPSS). Some information is omitted for certain periods of time, which makes panel data imbalanced. Information about the year of regulation and national payment system launch was acquired via websites of NPSs, websites of Central Banks, legislative acts and mass media & academic articles. All of the variables enter the models in logarithmic form in order to normalize the data.

RESULTS & CONCLUSIONS

Using GMM to estimate empirical models, specifically, Arellano-Bond method this study shows that interchange fee regulation does not correlate with higher volume of payments, while the creation of National Payment Systems does. This result remains both statistically and economically significant when the models control for the number of macroeconomic, institutional and retail payments indicators. Arellano-Bond method helps mitigating possible endogeneity problems occurring due to the omitted controls. Further robustness checks related to the addition of further control variables, changes in sample (separation of developed and developing countries) and estimation methods confirm the results established in the main analysis.

The results imply that the financial regulators should consider non-tariff stimulating measures for boosting cashless payments. In particular, the efficiency of interchange fees regulation for the cashless transactions volume increase has not been supported that is why those markets, which have not yet seen the interchange fee regulation, may benefit from alternative stimulating policies and independent market clearing mechanisms as well as industrial self-regulation for the tariff changes.