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Benefits of the retail payments card market: Evidence from Russian merchants☆

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ABSTRACT

This article evaluates the benefits to merchants resulting from participation in the retail payments market. Using surveys to obtain a representative sample of 800 traditional (offline) Russian merchants, the article finds significant, robust evidence in favor of positive merchant's benefits. This study further separates the benefits into direct and opportunity: finding that the non-welfare improving regulatory initiatives might result from the failure to account for the opportunity benefits to merchants. This article also examines the factors affecting the level of merchants' benefits. Results show that factors affecting the value of benefits and the probability of accepting payment cards differ. Findings imply that unbalanced intervention may be detrimental to the agents' welfare, leading to a suggested mechanism for ex-ante evaluation of the effect of shocks and interventions.

1. Introduction

Payment cards are integral to the modern and innovative retail and finance ecosystems. Practitioners and ecosystem stakeholders confirm the increasing benefits associated with the participation in the retail payments market. The main criticism of the existing market conditions, however, revolves around the argument that some groups of agents exploit the benefits from participation in the market at the expense of other agents. Main advocates of these arguments have been the merchants, which incur direct costs in terms of the merchant fee associated with the acceptance of payment cards. This results in proposals to conduct regulatory and balancing interventions on the market. None of such proposals has proved to be Pareto efficient yet (Weiner & Wright, 2005), which may link to the inability of both market participants and regulators to empirically evaluate current levels of benefits from participation in the market, and the consequences of shocks and interventions.

This article aims to contribute to two rising strands of literature The first one concerns the formation of retail payments market equilibrium (Bedre-Defolie & Calvano, 2013; Bolt & Chakravorti, 2008; Rochet & Tirole, 2002, 2003; Weiner & Wright, 2005). Thus far, existing research has not provided any quantitative estimates of the benefits to stakeholders, claiming this value to be theoretical rather than empirical. This article aims to fill this gap by estimating the benefits to merchants of the Russian retail payments market. The key research question in this article is therefore: how much do merchants gain, in terms of net benefits, from their participation in the retail payments market? This article also reveals the reasons for accepting non-welfare improving regulatory interventions aimed at increasing benefits to merchants and reducing costs by separating the direct and opportunity benefits to merchants. This study also contributes to the field of marketing. By understanding the estimates of merchants' benefits banks and commercial agents in the retail payments market are able to improve segmentation of merchants, and to target these merchants more precisely. Additionally, banks and other commercial players that offer products to merchants can refine their pricing strategies and gain implicit information about the merchants' willingness to pay for banks' offerings.

After analyzing the existing research, only Krivosheya and Korolev (2016) provide quantitative estimates for the cardholders' benefits resulting from the payment and cardholding decisions. This study, however, investigates the benefits to merchants that, unlike cardholders, make only one decision concerning their participation in the retail payments market, namely, the decision to accept cards. In this respect, this research is complementary to the article by Krivosheya and Korolev (2016) and extends the results found by authors to the new market segment, which deepens the understanding of the general retail payments market equilibrium and provides the results for the other part of the two-sided market.

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Additionally, this research contributes to the growing empirical literature on the emerging retail payments markets (e.g., Reinartz, Dellaert, Krafft, Kumar, & Varadarajan, 2011) by analyzing the current market situation and identifying the merchant-related stylized facts of the retail payments market in Russia. In addition, this study provides the comparison between the determinants of merchants' benefits and determinants of the probability of them accepting payment cards.

The empirical analysis of the benefits uses a representative sample of 800 traditional (offline) merchants from all Russian regions. The study finds significant robust evidence in favor of the presence of positive merchants' benefits in the Russian retail payments market. The article further separates benefits into direct and indirect showing that the intervention proposals might take into account the direct benefits. Failure to recognize the opportunity benefits in the regulatory initiatives might result in welfare loss because of these interventions. The analysis continues with the investigation of factors affecting the size of merchants' benefits. Factors affecting the probability of merchants' payment cards acceptance differ from the determinants of merchants' benefits size. The results in this article highlight the importance of empirical evaluation of the benefits in order to explain the market equilibrium formation and the merchants' behavior.

Following this introduction, Section 2 provides the theoretical framework. Section 3 explains the empirical set-up of the research and method of merchants' benefits evaluation. Section 4 presents major findings. Finally, Section 5 discusses the major results, outlines limitations and suggestions for future research, and concludes.

2. Merchants' benefits

Although the topic of merchants' benefits is novel in the literature, they have been integral to the market equilibrium formation in a number of baseline models of the payments industry organization (Baxter, 1983; Bedre-Defolie & Calvano, 2013; Bolt & Chakravorti, 2008; Rochet & Tirole, 2002, 2003, 2006). Combining merchants' benefits with the benefits of the cardholders and other participants allows determining the level of equilibrium interchange fees, in order to balance the costs and benefits between the two sides of the retail payments market (Baxter, 1983). Importantly merchants unlike consumers make only one decision, namely, whether to accept cards. Once merchants choose to accept cards, cardholders determine the volume and frequency of transactions (Bedre-Defolie & Calvano, 2013).

However, so far, academic literature on the retail payments market has not provided any quantitative estimates of merchants' benefits (Krivosheya & Korolev, 2016). Besides, there is no one single approach to the valuation of the types of merchant benefits. Theoretical studies on the payments market assume that the benefits of the market agents implicitly capture their willingness and ability to utilize payment products (Baxter, 1983; Bedre-Defolie & Calvano, 2013). In practice, however, the benefits are often ignored and market players focus purely on accounting concepts of cost balance rather than rely on economic models that incorporate the agents' willingness to use payment cards (Weiner & Wright, 2005). As a result, the rates and tariffs in the payments market differ from those that are efficient in theory (e.g., Bedre-Defolie & Calvano, 2013). In addition, empirical literature has, so far, focused solely on the cost side of the analysis, ignoring the benefits and, hence, has not provided any estimates of the net benefits (Krivosheya & Korolev, 2016).

These gaps between theory and practice lead to two types of inefficiencies. Firstly, regulators cannot approach potential tariff changes in a proper way to promote welfare improvement. Secondly, commercial agents in the market, such as banks, focus on cost-based pricing strategies. Understanding the net benefits to the merchants can reveal the possibility of enhancing the pricing strategies of banks and produce welfare improving regulation. The key aim of the following theoretical framework is to provide an analysis of the main components and sources of the benefits to merchants. Thus far, there is little theory about merchants' benefits. This article analyzes various sources and uses of the theoretical benefits, which are necessary in order to develop a method for their estimation, in an empirical set-up, and suggests a set of hypotheses to match the findings regarding the merchants' behavior.

2.1. Sources and determinants of benefits

Some sources of benefits include increased security, faster payments processing, higher average check as well as network externalities (Baxter, 1983; Bedre-Defolie & Calvano, 2013). Merchants may observe these benefits directly as they decide to start accepting payment cards. Benefits relate to the acceptance decision and determine whether a merchant chooses to participate in the retail payments market (Bounie & Francois, 2006). Higher subjective assessment of the advantages of card payments over cash payments yields to higher willingness to consume payment products.

Considering the nature of benefits there are two potential approaches to their valuation. One is to evaluate each source and component of the aggregate benefits to the merchants. The other method involves the implicit calculation of benefits using the methods often employed in the assessment of the willingness to pay, in marketing and economics studies, such as surveys and indirect valuation (Li, Li, & Kambele, 2012; Wertenbroch & Skiera, 2002). This study focuses on the latter method of benefits evaluation since the limitations of the former method, such as the inability to create an exhaustive list of benefits sources and high heterogeneity of benefits value (both among the products and merchant types) limits the potential use of these values for regulatory, segmenting and targeting purposes.

Another stream of literature focuses on the efficiency of merchant choice between alternative payments method (Gresvik, 2008; Gresvik et al., 2009; Weiner & Wright, 2005). The method in this strand of literature derives from a comparison of the costs involved in different payment methods (Arango & Taylor, 2008; Gresvik et al., 2009). Overall, there is significant evidence that merchants do make a rational informed choice between alternative options and that the payment cards bring merchants additional benefits (Arango & Taylor, 2008; Bounie, François, & Hove, 2016; Hayashi, 2006; Jonkers, 2011; Loke, 2007). Hence, benefits are important for the merchants and impact their behavior in the payments market. None of the existing studies, however, provides quantitative estimates of the benefits of payment cards. Expert interviews and surveys (e.g., Bolt, Jonker, & Van Renselaar, 2010) indicate that merchants associate payment cards with additional benefits, leading to the following hypothesis.

Hypothesis 1. The total merchants' benefits from participation in the cashless retail payments market are positive and significant.

Since the higher net benefits value implies less costs (for example, the costs in case of robbery) or a smaller merchant fee that merchants pay to the bank for every transaction, merchants often act as the main advocates for the interventions claiming that the card acceptance costs are higher than socially optimal (Börestam & Schmiedel, 2012; Rochet & Tirole, 2006; Weiner & Wright, 2005). In fact, none of the regulatory interventions proposes an increase in the interchange fees, which would result in a redistribution of costs from the acquiring side of the payments market to the issuing side and subsequent merchant fee rise (Weiner & Wright, 2005). Instead, all of the regulatory interventions aim at providing cost cuts to both the acquirers and the merchants that accept payment cards (Krivosheya, Korolev, & Plaksenkov, 2015). Optimality conditions usually involve consideration of the direct benefits of merchants and conclude that the fees are usually too high for merchants (Bedre-Defolie & Calvano, 2013; Rochet & Tirole, 2002, 2006). This study makes the following hypothesis.

Hypothesis 2. The direct benefits to the merchants are statistically and economically insignificant.

The available literature also suggests the strategic nature of