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Regulate one service, tame the entire market: Credit cards in Turkey

Guzin Gulsun Akin, Ahmet Faruk Aysan, Denada Borici, Levent Yildiran *

Bogazici University, Department of Economics, Bebek, Istanbul 34342, Turkey

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ABSTRACT

In credit card markets banks provide both payment and credit services. Two regulations were recently enacted in the Turkish credit card market: one on payment services in 2005 and the other on credit services in 2006. By employing the well-known Panzar and Rosse (1982, 1987) method and a unique quarterly data set for 21 Turkish banks between 2002 and 2008, we investigate the extent of banks' market power in the Turkish credit card market before and after the regulations. Unlike most of the existing literature, which considers competition and regulation for either credit or payment services and ignores the externalities between them, we consider the entire market by taking both services into account. Fixed effects estimations reveal that banks enjoyed collusive oligopoly power before the regulations. Although the first regulation did not have much impact, the second led to rises in both banks' total revenues and competition in the entire market.

1. Introduction

Credit card markets, whereby both payment and credit services are provided, entail intricate business arrangements and engender serious regulatory challenges. The high levels of credit card interest rates, merchant discounts and interchange fees; the surge in credit card transactions and credit card debt; and the lucrativeness of the credit card business have rendered competition and regulation in credit card markets very important issues all over the world. Turkey, the second largest credit card market in Europe, is not an exception in this respect. Two important regulations took effect in this market recently: the interchange fee (IF) regulation for payment services in 2005, and the interest rate (IR) regulation for credit services in 2006. This paper attempts to identify the type of competition in the Turkish credit card market, and gauge the effects of these regulations on the level of overall competition.

Credit cards are a means of payment. Banks earn non-interest revenues for providing this service: they collect annual fees from cardholders, merchant discounts from merchants and interchange fees from acquirers. Consumers can also use the credit option of their credit cards and borrow by paying interest. Thus, in return for credit services, issuing banks earn interest revenues from revolving cardholders. The existing literature addresses the regulations for either of these services. It concentrates either on credit services and investigates whether credit card rates should be regulated,[1] or on payment services and examines whether merchant discounts or interchange fees should be regulated.[2] This approach, however, is inadequate as the externalities between the two services render them interdependent. A bank's market power for one of these services may affect its market power for the other. In the Turkish credit card market, for instance, to acquire market power banks differentiate their cards by providing an array of payment service benefits, such as travel miles, bonus points, rewards, shopping discounts, the possibility of paying in installments, et cetera, which can only be offered if transactions are made through the point of sale (POS) terminal of the issuer. Consequently, consumers prefer issuing banks that offer these benefits and have large POS terminal networks in the payment services market. The market power that a bank acquires for payment services through such benefits and a large POS terminal network enables it to charge very high interest rates to the revolving balances of its captive cardholders (Akin et al., 2011). This being the

* Corresponding author. Tel.: +90 212 359 7637; fax: +90 212 287 2453.
E-mail addresses: gulsun.akin@boun.edu.tr (G.G. Akin), ahmet.aysan@boun.edu.tr (A.F. Aysan), denada.borici@boun.edu.tr (D. Borici), levent.yildiran@boun.edu.tr (L. Yildiran).

[1] See e.g. Ausubel (1991), Calem and Mester (1995), and Akin et al. (2011).
[2] See e.g. Evans and Schmalensee (2005a,b), and Rochet and Tirole (2002, 2003).

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case, a regulation designed for one of these services is likely to impact the other. After the IR regulation, for instance, which was particularly designed to reduce banks' market power in the credit services market in Turkey, banks began to charge cardholders annual fees for payment services,[3] and although data is unavailable there is anecdotal evidence that they also increased merchant discounts (Akin et al., 2012a,b).

Our objective is twofold. First, we want to identify the type of competition in the Turkish credit card market, and second we aim to ascertain the effects of the abovementioned regulations on the level of competition. Since banks acquire their overall market power from both services, and since regulations designed for one service are likely to affect the other, we consider payment and credit services together.

We employ the well-known Panzar and Rosse (1982, 1987) (PR hereafter) method on a recently collected data set covering all of the 21 non-participation banks operating in the Turkish credit card market from the last quarter of 2002 to the last quarter of 2008. The PR method has been widely used for the banking sector in many countries.[4] Shaffer and Thomas (2007) present the first study that applies it to credit card markets.[5] It is one of the rare studies, to our knowledge, which examines competition in credit card markets by considering credit and payment services together.[6] They find that the American credit card market epitomizes neither collusive oligopoly nor perfect competition, but is actually monopolistically competitive. In this study we follow Shaffer and Thomas' (2007) method. However, using the same framework we also probe the effects of the IF and IR regulations on banks' overall market power. Fixed effect panel data estimations show that banks in Turkey enjoyed monopoly (collusive oligopoly) power prior to these regulations. The IF regulation produced changes in neither the revenues nor market power of banks; however, the IR regulation caused the credit card market to become competitive and simultaneously led to a rise in banks' total revenues.

In a complementary study (Akin et al., 2012a), to unveil the interdependence between payment and credit services, we particularly investigate the effects of the abovementioned regulations on the payment services market. In line with our previous results, we find that the IF regulation did not effect much change. After the IR regulation—which was specifically designed for the credit services market—however, we observe a rise in prices, non-interest revenues and the level of competition in the payment services market. In Akin et al. (2012b), we examine the interactions between credit and payment services in a three-stage least squares (3SLS) framework, where banks' interest and non-interest revenues are assumed to be determined simultaneously. The findings corroborate our other results. While the IF regulation did not have much impact, the IR regulation led to a fall in interest revenues and a rise in non-interest revenues, suggesting that to compensate for the fall in their interest revenues, banks increased the unregulated prices of their payment services (i.e. annual fees and merchant discounts). Moreover, from the price and revenue changes in the two markets, we infer that the demand for both payment and credit services was inelastic in the Turkish credit card market (Akin et al. (2012b)).

The paper is organized as follows: The next section gives a brief account of the Turkish credit card market. Section 3 lays the background and presents the relevant literature. In Section 4, the data and model are explained. Section 5 presents the results, and Section 6 concludes.

2. The Turkish credit card market

Credit cards have been used in Turkey since 1968. However, the market thrived in the last decade, mostly due to unusually auspicious domestic and international macroeconomic conditions. The number of credit cards increased more than threefold from 13.4 million in 2000 to 43 million in 2008, making Turkey the second country in Europe after the UK in this respect. Similarly, total outstanding balances and total transaction volume increased more than fivefold in the 2002–2008 period.[7]

Competition has intensified on non-price features in the Turkish credit card market. To acquire market power, banks differentiate their cards by providing card level benefits such as travel miles, bonus points, rewards, discounts, travel insurance and the possibility of paying in installments. Moreover, Akin et al. (2011) show that consumers view credit cards and other banking services as a bundle, thus enabling banks to further differentiate themselves and enhance their market power through some bank level benefits like larger branch/ATM networks, more and higher quality banking services, et cetera.

Although there are 25 card-issuing banks,[8] the market is quite concentrated. The six largest issuers control 87% of total outstanding balances and 80% of all customers.[9] 15–25% of the total profits of these banks are due to their credit card operations. All issuers in the market provide general banking services. The six largest issuers are also major players in the deposit and credit markets. They have numerous branches, broad ATM and POS terminal networks, and compete on these attributes to increase their market share.

The Turkish credit card market has recently undergone two important regulations. On the payment services side, the Turkish Fuel Stations Employers Union filed a lawsuit against the Interbank Card Center (ICC)[10] on grounds of illegally fixing IFs and thus leading to high merchant discounts. After examining the case, the Turkish Competition Authority decreed in July 2005 that the ICC could continue fixing IFs. However, in November 2005, it modified the formula the ICC used to determine IFs, relating them to banks' funding costs and to the operational costs of the ICC. IFs fell from 2.75% in 2004 to 1.75% in November 2005, and gradually declined to 0.91% by the end of 2008.[11] On the credit services side, credit card rates were extremely high before 2006, reaching 130% annual effective rates while inflation and short-term interest rates were 10% and 19%, respectively. Rising concerns over these untenable credit card rates culminated in the Credit Cards Law that was enacted in March 2006. The Law mandated the Central Bank to regulate the credit card market. The regulations prepared by the Central Bank did not only target interest rates, but also comprised provisions for many issues like the minimum amount payable, interest fee calculation method, format of the contract, credit card limits, and solicitation methods in order to protect cardholders and reduce banks' market power. The monthly credit card rates of major banks were about 7% by the end of 2005. In June 2006 the Central Bank

[3] Credit card ownership came at no cost until 2006.

[4] See Degryse and Ongena (2008) for the literature on PR.

[5] The reason why the PR method has not been extensively applied to credit card markets so far is that data on interest and non-interest revenues for credit card operations are not readily available.

[6] Shaffer's (1999) article is the only other study we could find which examines the impact of a regulation on the entire industry.

[7] http://www.bkm.com.tr/bkm%2Den/yearly-statistical-data.aspx.

[8] Four of them are participation banks. They are not included in our sample as they have different modes of operation.

[9] The Central Bank of the Republic of Turkey. The six largest issuers are Yapi Kredi, Garanti, Akbank, Isbank, Finansbank and HSBC.

[10] ICC is the local network provider in the Turkish credit card market. It was established in 1990 as a partnership of 13 public and private banks to settle the local credit and debit card transactions and to develop rules and standards for the Turkish card payment system.

[11] For more on the IF regulation, see Karayol (2007).