

Did the Durbin Amendment Reduce Merchant Costs? Evidence from Survey Results

By Renee Haltom and Zhu Wang

Debit cards facilitate nearly 50 billion transactions annually—so the fees that debit card networks and issuers assess on each transaction are of great interest to merchants, consumers, and, more recently, regulators. In 2010, the so-called Durbin Amendment of the Dodd-Frank Act aimed to lower merchants' costs of accepting debit cards by capping debit interchange fees. New survey results suggest that the regulation has had limited and unequal effects on merchants. This *Economic Brief* discusses the causes of these findings as well as the implications of the regulation for end users.

The interchange fees associated with debit and credit cards have long been a controversial issue in the retail payments system. These fees are paid by a merchant to the cardholder's bank (the "issuer") through the merchant-acquiring bank (the "acquirer") when credit or debit card payments are processed. Merchants have complained that card networks (such as Visa and MasterCard) and their issuing banks have wielded market power to set excessively high interchange fees that drive up merchants' costs of accepting the cards. The controversy also has attracted great attention from policymakers, who are concerned that high interchange fees may inflate retail prices and cause welfare losses to merchants and consumers.

In an attempt to resolve this issue, a provision of the 2010 Dodd-Frank Act, known as the Durbin Amendment, mandates a regulation aimed at reducing debit card interchange fees and in-

creasing competition in the payment-processing industry. The Durbin Amendment directs the Federal Reserve Board of Governors to regulate debit card interchange fees so that they are "reasonable and proportional to the cost incurred by the issuer with respect to the transaction." The objective of this legislation was to lower merchants' costs of accepting debit cards and to pass along the savings to consumers via lower retail prices. The Board subsequently issued Regulation II (Debit Card Interchange Fees and Routing), which took effect on October 1, 2011.¹

The regulation establishes a cap on the debit interchange fees that financial institutions with more than \$10 billion in assets can charge to merchants through merchant acquirers. The permissible fees were set based on an evaluation of issuers' costs associated with debit card processing, clearance, and settlement. The resulting interchange cap is composed of the

following: a base fee of 21 cents per transaction to cover the issuer's processing costs, a charge of 0.05 percent of the transaction value to cover potential fraud losses, and an additional 1 cent per transaction to cover fraud prevention costs if the issuer is eligible. This cap applies to both signature and PIN debit cards.² On the average debit card payment of \$40, for example, the interchange fee was capped at 24 cents, about half the average interchange fee prior to the regulation.³

Since its implementation, the regulation has substantially reduced—by billions of dollars annually—the interchange revenues of covered issuers, while exempt small issuers did not experience these losses. Due to lack of data, however, the regulation's impact on merchants, as well as consumers, has not been examined as fully.

This *Economic Brief* reviews the results of a merchant survey conducted by the Federal Reserve Bank of Richmond and Javelin Strategy and Research. The results were analyzed in a recent article by one of the authors of this brief (Wang) and his co-authors, Scarlett Schwartz and Neil Mitchell.⁴ The results suggest that the regulation has had limited and unequal effects on merchants. While issuers have lost billions in revenue, the costs of accepting debit cards have not gone down for many merchants in the survey; and for some merchants, the costs have even increased. Interpreting the reasons behind these unequal effects is not straightforward—nor is the regulation's overall impact on end users (merchants and consumers).

Complicating Factors of Assessing Regulatory Effects

The study by Wang and his co-authors sought to investigate: (1) how the regulation affected merchants' costs of accepting debit cards, as well as how its impact varied across merchant sectors and transactions; and (2) merchants' reactions to their debit cost changes in terms of changing prices and encouraging or restricting debit use.

Several factors complicate the intended effects of the regulation on merchants. First, the regulation sets a cap on the interchange fee but not on the ultimate

fee that a merchant has to pay to the acquirer for accepting a card payment, typically including the interchange fee plus the markup charged by the acquirer. This ultimate fee is known as the "merchant discount rate." Therefore, the amount of the regulation's interchange fee reduction that can be passed along to merchants may depend on the pass-through rate of the acquirers.

Second, small issuers with less than \$10 billion in assets—in 2013, more than one-third of the total in both transaction value and volume—are exempt from the regulation. Therefore, merchants whose customers primarily use exempt debit cards may not see a fall in debit-acceptance costs.

Third, the impact can vary substantially by merchant sector. Before the regulation, card networks charged different interchange fees to different merchant sectors, and the fees varied in both level and structure. Therefore, how much a merchant can benefit from the regulatory cap depends in part on the sector-specific interchange fees that the merchant paid prior to the regulation.

Fourth, interchange fees rose for small-ticket transactions, an unintended consequence of the Durbin Amendment. Prior to the regulation, most networks offered discounted debit interchange fees for small-ticket transactions as a way to encourage card acceptance by merchants for those transactions. For example, for transactions of \$15 or less prior to the regulation, Visa and MasterCard set an interchange fee of 1.55 percent of the transaction value plus 4 cents for signature debit card purchases—or an 11 cent interchange fee on a \$5 purchase. However, in response to the regulation, card networks eliminated the small-ticket discounts and assessed the maximum amount set by the regulation on all transactions. Since merchants have different compositions of transaction sizes, they would be affected differently by the changes of interchange fees. Merchants who specialize in small-ticket transactions would be most adversely affected.

Finally, it is not obvious how merchants will change prices and debit card restrictions in response to

changes in debit costs. Would merchants who experience lower debit costs reduce prices and encourage the use of debit cards? Alternatively, would merchants who experience a rise of debit costs do the opposite?

To explore these issues, Wang and his co-authors examined the results of a merchant survey conducted in late 2013 through January 2014, roughly two years after the regulation. The sample comprised 420 merchants with various attributes spanning 26 sectors in all U.S. states. Among them, apparel, restaurants, and fast food each account for 11 percent to 17 percent of the sample, and the other sectors each account for a share below 10 percent. The survey collected information on the costs of accepting debit cards and the retail prices of goods or services before and after the regulation. In addition, the survey looked at restrictions on debit card use, including minimum amounts, surcharges, and discounts for nondebit payment options (such as cash, checks, and credit cards).⁵

Survey Results

Wang and his co-authors investigate how the regulation's impact varies across different merchant sectors. Regression results suggest limited and unequal impact on debit costs for the merchants in the survey: averaging across 26 sectors, 11.1 percent of merchants are estimated to have experienced reduced debit costs for all transactions; 31.3 percent had increased costs, and 57.6 percent had no change. For small-ticket transactions (\$10 or less), only 2.8 percent of merchants are estimated to have lower debit costs, 31.8 percent had increased costs, and 65.4 percent had costs that were unchanged.

The mixed cost impact on merchants may result from the complicating factors discussed in the previous section, which could vary substantially by sector. For example, merchants who reported reduced debit costs could be those who gained more from large-ticket transactions than they lost on small-ticket ones. (Matching this intuition, merchants in home furnishings and sporting goods ranked high in total debit-cost reduction.⁶) Merchants reporting no change could be those whose customers were

primarily using debit cards from exempt issuers or whose losses from small-ticket transactions balanced out gains from large-ticket ones. Merchants reporting increased debit costs could be those who specialized in small-ticket transactions (for example, merchants in fast food and delivery services ranked high in both total debit cost increase and small-ticket debit cost increase).

The results further suggest that the regulation had a limited effect on retail prices. Averaging across all sectors, it is estimated that the vast majority of merchants in the survey (77.2 percent) did not change prices post-regulation, very few merchants (1.2 percent) reduced prices, while a sizable fraction of merchants (21.6 percent) increased prices. Finally, the results also suggest a limited and unequal impact on changing debit card restrictions (in terms of minimum amounts, surcharges, and discounts for nondebit payment options), with an estimated 76.6 percent of merchants not changing them post-regulation, 12.4 percent increasing them, and 10.9 percent decreasing them. Each of the above results varied significantly by sector.

Wang and his co-authors also take a further step to investigate impact channels. In particular, they ask whether lower debit costs led to lower retail prices and debit restrictions (an intended effect of the regulation) and whether higher debit costs led to higher retail prices and debit restrictions (an unintended effect). They explore these questions by connecting survey respondents' answers of their post-regulation debit cost changes with their reported changes of prices and debit restrictions.

The results of this exercise suggest an asymmetric response. For merchants in the sample who reported that their costs decreased after the Durbin regulation, few of them reduced prices or debit restrictions. This behavior remains a puzzle that deserves further research. On the other hand, if a merchant reported increased costs after the Durbin regulation—as a sizeable fraction of them did—it tended to raise prices and increase debit restrictions, especially in terms of setting a minimum transaction amount requirement.

Evaluating the Durbin Regulation: Further Considerations

The survey results suggest that the regulation has had limited effect on reducing debit acceptance costs for many merchants and that it even generated unintended effects on some merchants. However, caution needs to be taken when considering an overall evaluation of the regulation.

First, a study based on survey results relies on respondents' reports rather than actual observations (in this case, about costs and pricing behavior). Moreover, the survey is based on a relatively small sample, and one cannot be certain that there were no systematic differences in response rates across categories of merchants. For example, small merchants may have been more likely than large merchants to respond, or merchants displeased with increased costs may have been more likely to respond. Such differences could bias results, but it is difficult to say how skewed the sample might be as a result. Nevertheless, the survey results are persuasive in suggesting that the regulation had unintended consequences in terms of higher fees on small-ticket transactions.

Second, while the survey results suggest a limited reduction of debit costs for many merchants, the regulation still could have yielded benefits to merchants by preventing further increases in debit costs through its cap on interchange fees. This effect is not addressed in the survey analysis.

Finally, the impact of the Durbin Amendment on end users (merchants and consumers) should be evaluated carefully. A theoretical study by Wang in 2015 indeed predicts that regulation that reduces interchange fees is likely to benefit merchants and consumers.⁷ Specifically, a model used by Wang suggests that the interchange fees that card networks charge to merchants in the absence of regulation are likely to be too high from the end users' perspective. This finding stems from the fact that merchants typically do not vary retail prices based on consumer payment type even though merchants' costs vary by payment type, which means cards could be overused. In that sense, the Durbin

regulation may have benefited merchants and consumers. However, on the other hand, the regulation may leave additional benefits on the table. Debit cards are what economists refer to as a two-sided market—that is, a market in which the product (payment cards in this case) has value only if two end users—again, merchants and consumers—use them. In such a market, regulation that balances the costs and benefits of both end users may help achieve the optimal level of card usage. This suggests that the fees should be set based on merchants' and consumers' joint costs and benefits, not just issuers' costs. Regulation based only on the latter may overshoot or undershoot the cap, leaving potential benefits to merchants and consumers unexploited.

Another insight of Wang's theoretical study is that the regulation overlooks "spillovers" across different transactions. According to the theory, prior to the regulation, issuers might be willing to accept a loss on small-ticket transactions (via low interchange fees) in order to increase overall card acceptance and usage, recouping these losses via fees on high-dollar transactions. Once an interchange cap prevented the latter, this loss-leading strategy was no longer profitable. Wang's theoretical study, however, shows that end users could benefit from different fees for large and small transactions, a practice that ceased following the Durbin regulation.⁸

Conclusion

New survey results found that the Durbin regulation has had limited and unequal impact on reducing merchants' costs of accepting debit cards, and it has produced unintended consequences for some merchants in terms of raising costs. This *Economic Brief* discusses ways in which the survey results should be interpreted with caution. Theory suggests that the Durbin regulation is likely to benefit end users by reducing interchange fees. However, its ultimate effect is complicated by the fact that the regulation is based solely on issuers' costs and overlooks spillovers between small- and large-ticket transactions. ■

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Endnotes

- ¹ For simplicity, “Durbin Amendment” and “Durbin regulation” are used interchangeably to refer to both the original legislation and the resulting regulation.
- ² Debit card payments are authorized either by the cardholder’s signature or by a personal identification number (PIN). The former is called signature debit, and the transactions are processed through either the Visa or MasterCard network. The latter is called PIN debit, and the transactions are processed through a dozen PIN debit networks.
- ³ See Zhu Wang, “Debit Card Interchange Fee Regulation: Some Assessments and Considerations,” Federal Reserve Bank of Richmond *Economic Quarterly*, Third Quarter 2012, vol. 98, no. 3, pp. 159–182; and Benjamin S. Kay, Mark D. Manuszak, and Cindy M. Vojtech, “Bank Profitability and Debit Card Interchange Regulation: Bank Responses to the Durbin Amendment,” Federal Reserve Board of Governors Finance and Economics Discussion Series No. 2014-77, August 2014.
- ⁴ See Zhu Wang, Scarlett Schwartz, and Neil Mitchell, “The Impact of the Durbin Amendment on Merchants: A Survey Study,” Federal Reserve Bank of Richmond *Economic Quarterly*, Third Quarter 2014, vol. 100, no. 3, pp. 183–208.
- ⁵ Since the survey did not include merchants who did not accept debit cards at the time of the survey, studying debit restrictions—even though these are not covered by Regulation II—is an alternative way to gauge merchants’ reactions to the regulation.
- ⁶ See the full study for additional results by merchant sector.
- ⁷ The study employs a 2011 model by Jean-Charles Rochet and Jean Tirole provided in “Must-Take Cards: Merchant Discounts and Avoided Costs,” *Journal of the European Economic Association*, June 2011, vol. 9, no. 3, pp. 462–495. See Zhu Wang, “Price Cap Regulation in a Two-sided Market: Intended and Unintended Consequences,” Federal Reserve Bank of Richmond Working Paper No. 13-06R, Revised October 2015.
- ⁸ There might be other hypotheses that are also relevant for explaining the regulation’s side effect on small-ticket transactions. For more discussions, see Wang, Revised October 2015.

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