

A Puzzle of Card Payment Pricing: Why Are Merchants Still Accepting Card Payments?

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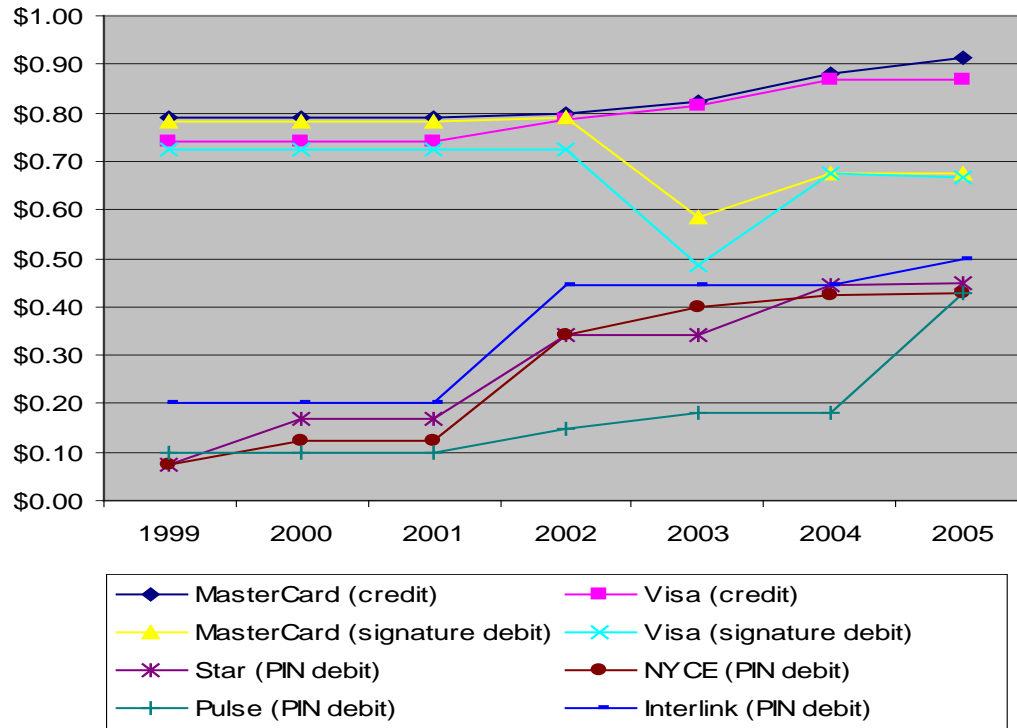
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Background

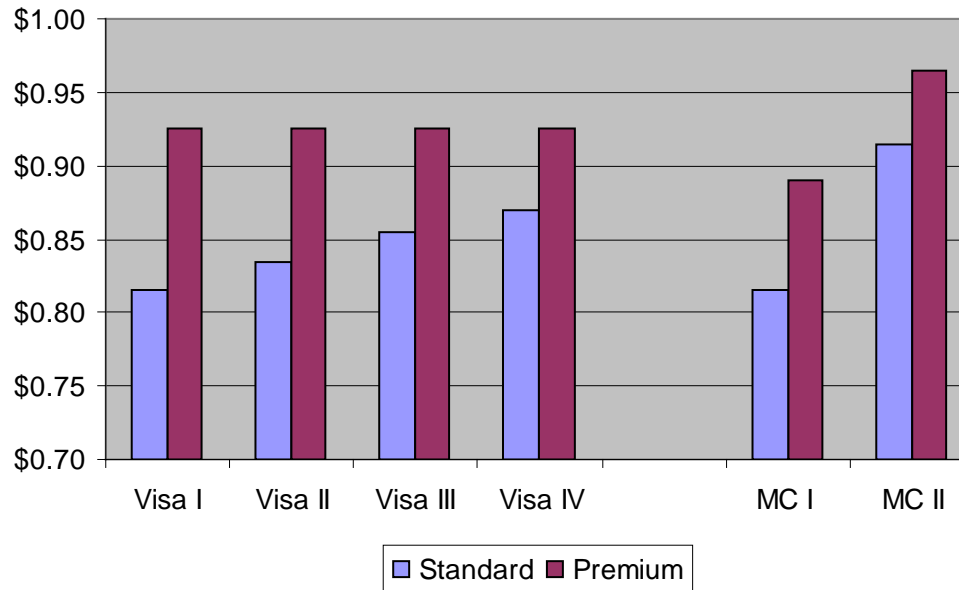
U.S. Interchange Fees for a \$50 Transaction at Non-supermarkets



Background

MC and Visa introduced premium card interchange rates

**Interchange Fees for a \$50 Transaction at Non-supermarkets
2005**



Objectives

- 1) Present models that can explain why merchants accept payment cards even when the fees they face exceed the transactional benefits they receive from a card transaction**
- 2) Explore possible explanations for the recent gradual increase in interchange fees/merchant fees in the U.S.**
- 3) Provide welfare analysis**

Previous Literature

- **Merchant card acceptance behavior**
Rochet & Tirole (2002), Chakravorti & To (2003), Guthrie & Wright (2003), Wright (2003a, 2003b, 2004)
- **Merchants accept cards only when benefits exceed fees**
Baxter (1983), Schmalensee (2002), Bolt & Tieman (2003), Wright (2004)
- **Merchants accept cards regardless of the fees (w/ upper limit)**
Frankel (1998), Katz (2001), Gans & King (2002), Schwartz & Vincent (2004)

Model

- **Two payments: Cash and card payment**
- **Three groups of players: Card network, merchants, and consumers (cardholders and non-cardholders)**
- **Transactional benefits of cards for merchants (t_m) and for card users (t_c) vary by industry but do not vary by individual merchant or by individual consumer**

Card network

- **Monopoly**
- **Sets industry-specific merchant fee (m) and universal cardholder fee (f)**
- **Wants all of the merchants in a given industry to accept cards**
- **Has an incentive to set merchant fees as high as possible**

Model

Merchants

- Either monopoly or competition (Hotelling)
- Consumer demand for products—either elastic or inelastic
- Decide card acceptance and determine product price (should be the same for cash users and card users)
- Product price setting is flexible

Consumers

- Decide from which merchant s/he makes purchases, which payment method s/he uses, and how much s/he purchases

Results

The highest possible merchant fee (assuming $tc-f > 0$)

	inelastic	elastic
Monopoly	t_m (if α or $(tc-f)$ is small) t_m+A (if α and $(tc-f)$ are large)	t_m+B
Hotelling	$t_m+(tc-f)$ (long-run) t_m+C (short-run)	t_m+D (long-run) t_m+E (short-run)

$A > 0$, $B > 0$, $0 < C < tc-f$, $D > tc-f$, $C < E < D$

Except for monopoly merchants with inelastic demand, merchants accept cards even when $m > t_m$.

Reason 1) shift consumer demand upward (if elastic)

Reason 2) strategic motives

Results

Three possible explanations for the U.S. interchange fee increases

- 1) Merchants' price setting may not be completely flexible**
- 2) Lower cardholder fees / generous rewards**
- 3) More cardholders and/or higher transactional benefits from cards**

Results

Welfare analysis

Compared to the equilibrium without the card:

- Cardholders are better off**
- Non-cardholders are worse off**
- Merchants are indifferent, if pricing is flexible; monopoly merchants are likely better off and competing merchants with inelastic demand are likely worse off, if pricing is inflexible**

Conclusion

- 1) A large group of merchants accept cards even when the merchant fee exceeds the merchant transactional benefit.**
- 2) Three potential explanations for the recent U.S. IF increases exist.**
- 3) Higher merchant fees potentially create inequality among consumers; merchants are likely indifferent.**
- 4) Does competition among card networks, among issuers, and/or among acquirers, lower merchant fees?**

Preview of my next paper

Two identical network competition

