"Consumers' Use of Debit Cards: Patterns, Preferences, & Price Response"

by

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*: The views expressed here are not necessarily those of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

Contributions

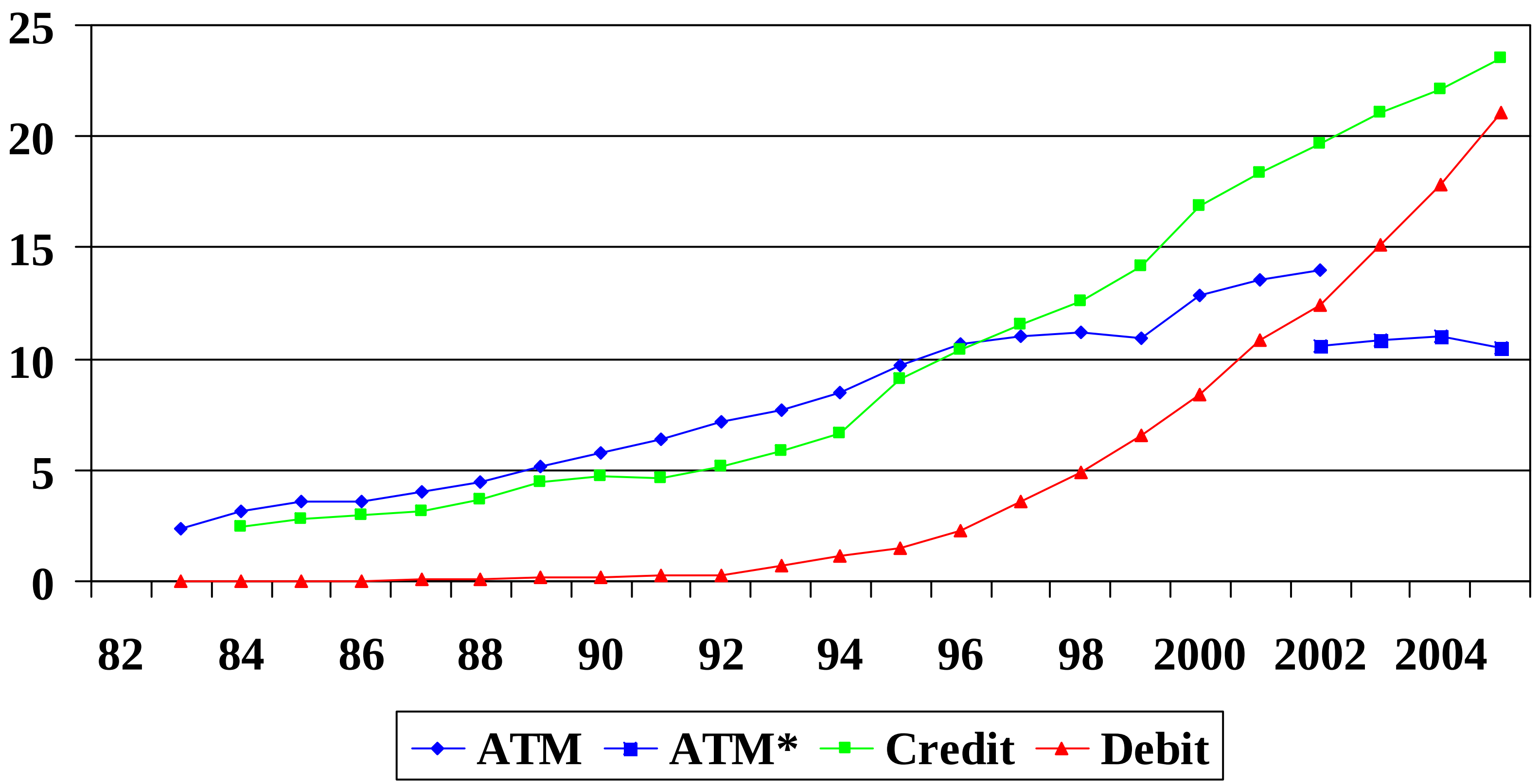
- This is a very good cross sectional data set
  - Michigan Survey of Consumers (including sentiment)
  - Clearly representative in general
  - Authors document validity in terms of payment questions
- Debit use is influenced by liquidity & expectations
  - Exploits the questions on consumer sentiments
  - Consumers use credit more if financial condition <u>has</u> worsened
  - Consumers use debit more if they <u>expect</u> conditions to worsen
- Consumers respond to explicit pricing of payments
  - The response appears quite large
  - Stimulates use of Signature debit over PIN debit
  - But I suggest a few caveats

Dynamics of ATM & Debit Usage

Percent of Households that use a…	1998	1998	2001	2004	1998	1998	2001	2004
	ATM Card				Debit Card			
All Households	61	67	70	74	18	34	47	59
By age								
under 30	71	76	78	83	25	45	61	74
30 - 60 years	67	76	77	82	20	39	53	68
Over 60	43	42	49	53	10	16	25	33
By Income								
low income	36	46	47	53	7	20	29	41
moderate income	60	64	67	73	16	32	46	57
middle income	69	72	75	78	20	37	50	64
upper income	77	82	84	87	25	44	58	69
Education								
no college	53	60	64	67	14	29	42	55
college degree	80	82	82	86	25	43	56	67

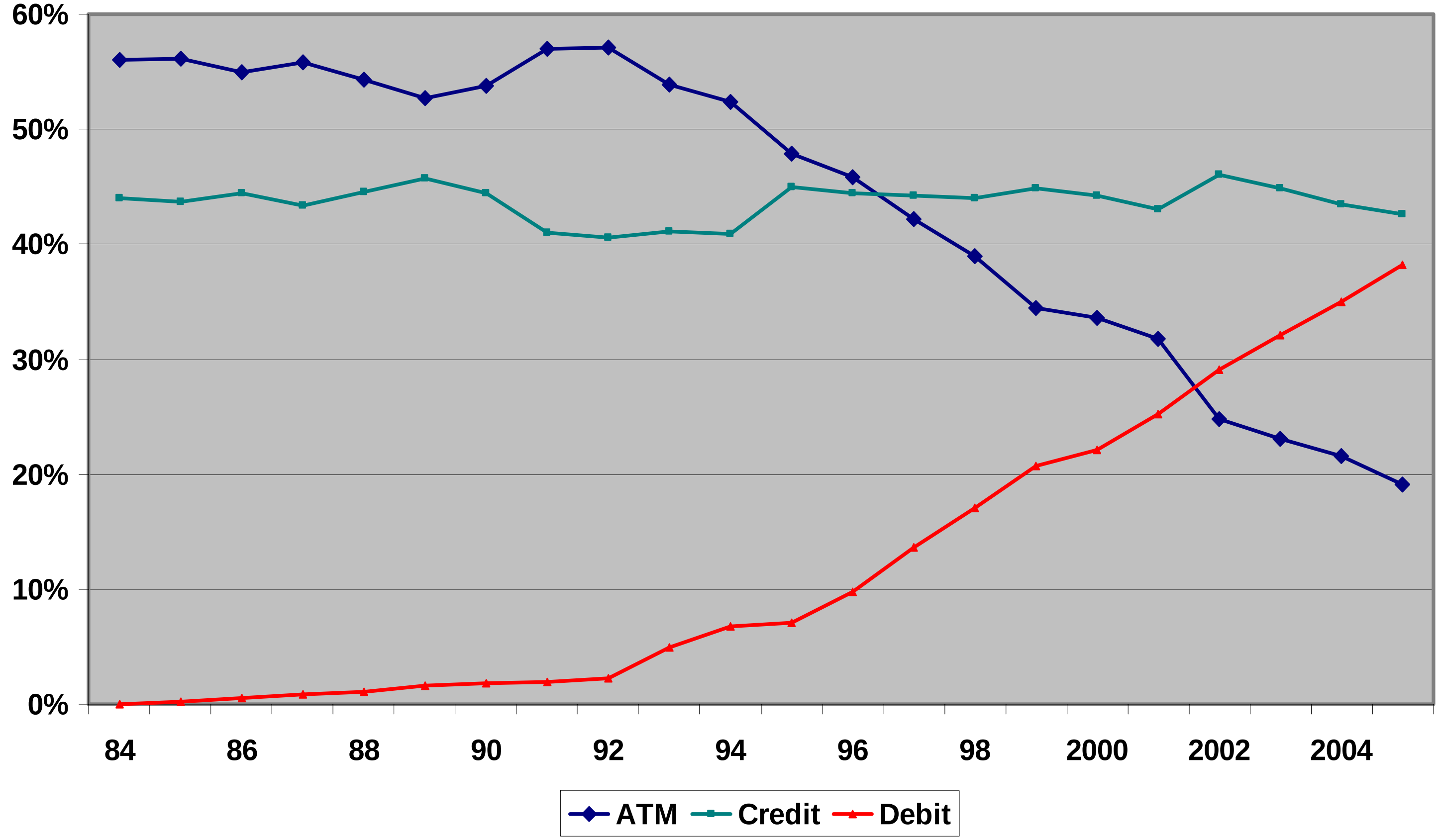
Source: Mester (2006), using the Survey of Consumer Finances

ATM, Credit and Debit Transaction Volume
(billions per year)



Sources: EFT Network Data Book, Debit Card and POS Market Data Book, and Card Industry Directory, various years.

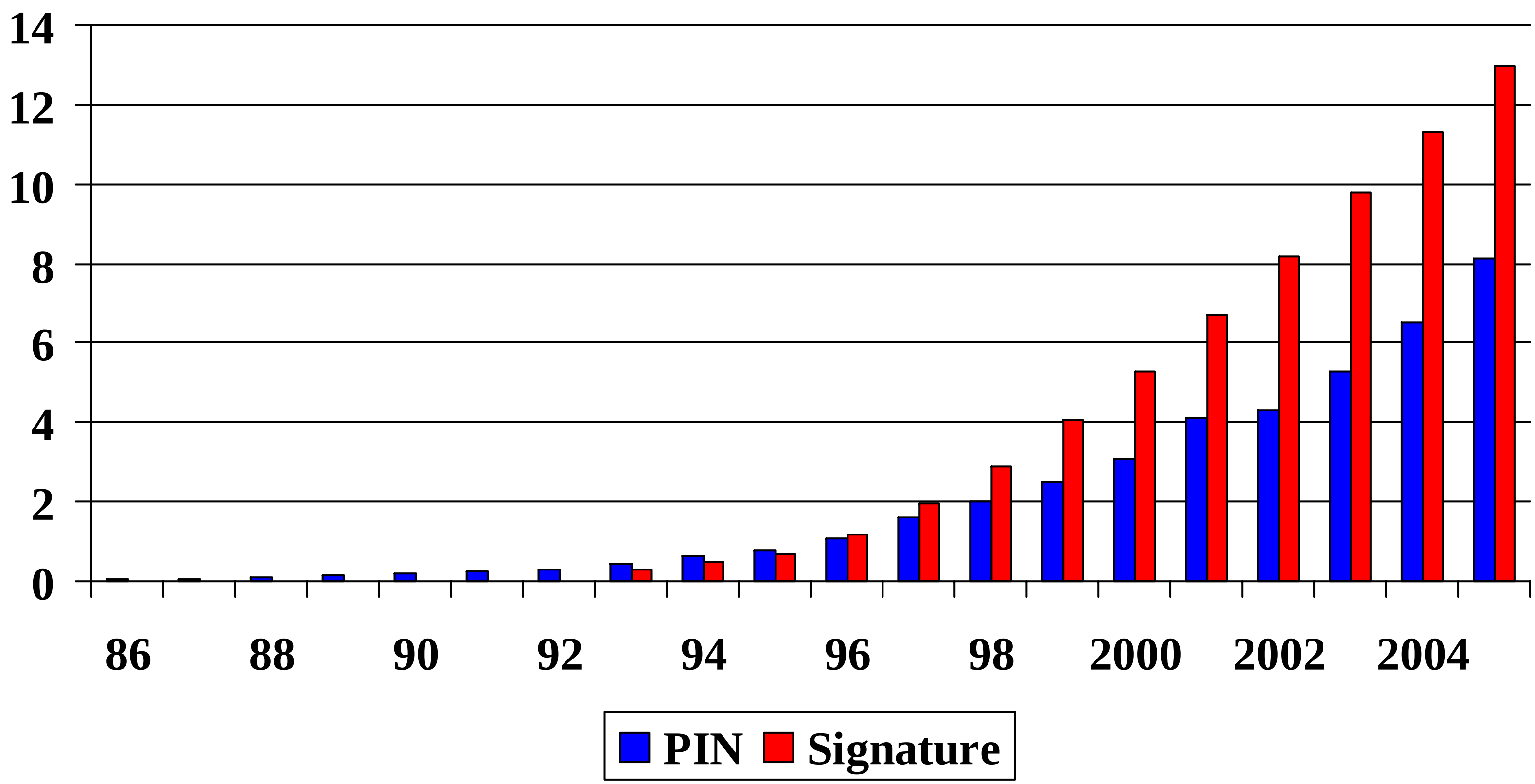
Shares of Electronic Transactions*



Source: 2005 EFT Data Book

*: Excludes ACH & Paypal

PIN Debit vs. Signature Debit Transaction Volume
(billions per year)



Sources: EFT Network Data Book, Debit Card and POS Market Data Book, and Card Industry Directory, various years.

Price Responses

- Author’s argue a 2% change in total cost of purchase reduces debit use by 12%
  - May underestimate effects given that fees are not observed at POS
  - Consumers don’t switch banks much, so they are stuck with fees
- Killing the goose?
  - Authors suggest Pin debit fees are an attempt to promote Signature
  - And they find PIN fees increase Signature use
  - But PIN debit falls by more than Signature debit rises
- For banks, the question is whether profits rise or fall
  - Even with lower volume, margins may be higher
  - Banks suffer little if net decline in Debit goes to Credit cards

Interpretation

- Only 14% of consumers report paying PIN fees
  - This fee doesn't seem a particularly popular strategy for banks
  - Especially relative to ATM surcharges & foreign fees
  - This would be consistent with a high price elasticity…
- Similarly, when allowed to, merchants rarely surcharge
- Relatively few consumers switch banks
  - And yet only 14% observe PIN fees
  - Does this suggest a credible threat to switch?
- There are other (implicit) prices to consider
  - Interest & other benefits associated with DDA & savings accounts
  - Cardholder incentives (air miles, cash back)
  - Implies the price difference is larger than 2%
  - So the "implicit" elasticity is smaller

Some Caveats

- Should we worry about selection?
  - Are customers who face Pin fees for their accounts different?
  - Suppose they care less for debit, so the fees are less relevant?
  - Suppose that banks are engaged in price discrimination?
- This is easy to test
  - Look for differences between those who observe fees or not
  - Compare observables like age, education, income, etc.
  - Compare the payment attributes they mention
  - Also, look for differences between Signature & Pin users
- Explore interactions
  - Does elasticity depend on gender, age, education, or income?
  - Does it depend on the payment attributes consumers mention?
  - Does it depend on perceived financial conditions or credit costs?
  - Does it depend on the type of transaction? (outside the data set)

Use of Debit by Retail Segment (1999)

	Percent of Stores with PIN Pads	Percentage of Store Sales Paid via			
		Cash	Check	Credit Card	Debit Card
All Stores	50	35	21	25	8
Discount	43	47	17	27	3
Drug	73	41	17	26	14
Supermarket	100	44	32	11	12
Department Store	20	29	15	26	2
Home Center	7	21	27	26	6
Apparel	38	28	19	32	10

Source: "Survey of Retail Payment Systems," *Chain Store Age* (December 1999)

Effect of PIN Fees on Use vs. Frequency of Use

- Why isn't the coefficient on fees significant for frequency?
  - Perhaps the fee is not a marginal cost?
- Incidence of monthly/annual fees for debit cards is 17%
  - Federal Reserve Board (2004)
- If a consumer pays such a fee they might use debit more
  - If transaction fees are lower than otherwise (my bank)
  - Fixed fees can induce single-homing (using fewer pmt options)
- Regressions should control for fee structure
  - Perhaps by exploiting geographic variation in bank pricing

Final Thoughts

- Authors can exploit the Michigan Survey even further
  - Other questions might identify the desire to use/conserve liquidity
  - Cost & availability of credit, both today and in the future
  - Conditions for purchasing durables or homes, including prices
- Be explicit about statistically significant differences
  - For example, within columns of Table 2
  - Or across rows in Table 5
- Present measures of goodness of fit for the regressions
  - How much of the cross-sectional variation is explained?
  - It appears to vary quite a bit depending on the LHS variable