

Incentives at the counter: An empirical analysis of the impact of surcharging on payment behaviour in the Netherlands

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Research question

What is the influence of surcharging debit card payments on payment behaviour?

- How do consumers react?
- Does surcharging lead to an under- or overprovision of debit card payment services?
- What if retailers would stop surcharging debit card payments?



Motivation

Internationally:

- The 'No surcharge rule' of card payments is under pressure by antitrust and competition authorities
- Price sensitivity card holders wrt card usage key issue in MIF debate Europe

NL (but probably also elsewhere)

- Costs of debit card payments are declining→debit card also attractive from social cost perspective for low amounts



Overview literature

Theory: 2sms-approach

- Usage of interchange fees in order to influence transaction tariffs for consumers and merchants
- Getting both demand sides on board

Gans-King (2003)

- with surcharge, interchange fees have no real effect because they are neutralized

Rochet (RNE, 2003)

- but over- and underprovision can still occur, depending on market conditions



Overview literature

Empirics:

Borzekowski et al (JMCB, 2008):

- PIN debit charge reduces debit card use

Bolt, Humphrey & Uittenbogaard (IJCB, 2008):

- Consumers are sensitive to transaction pricing



Key figures NL POS payments 2007

| | <u>number (in billions)</u> | <u>value (EUR billion)</u> |
|-------------|-----------------------------|----------------------------|
| Debit card | 1.59 | 69.5 |
| E-purse | 0.18 | 0.5 |
| Creditcard | 0.03 | 3.4 |
| <u>Cash</u> | <u>5.4</u> + | <u>51</u> + |
| Total | 7.2 | 124.4 |

Brits & Winder (2005), McKinsey & Co. (2006) and EIM (2007)

- Cost studies Dutch POS payment system
- Debit card used to be efficient for amounts above EUR 11.63, but the break-even point is rapidly declining



Data

Two surveys held in autumn 2006

- Consumer survey (DNB Household survey) among 2000 households yielding 1873 respondents
- Interviews by telephone among 1000 retailers by TNS Nipo



Research results

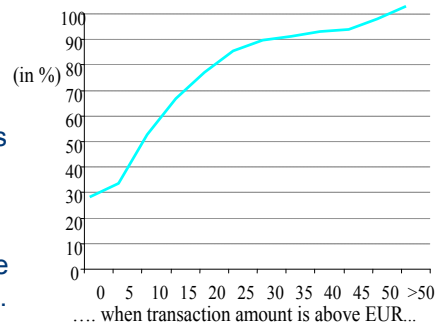
| | |
|--|-----------|
| Share of retailers accepting PIN: | 0.67 |
| Share of PIN accepting retailers that surcharges | 0.22 |
| • Average surcharge | EUR 0.23 |
| • Average treshold amount | EUR 10.50 |
| • Branch and firm size | |



Research results

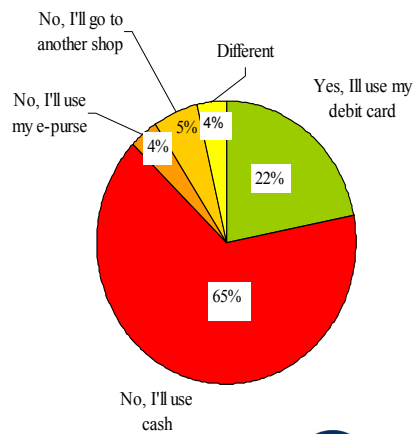
Graph 2 Share of debit card payers using the card....

About $\frac{3}{4}$ says his payment choice depend on transaction amount, they use the debit card

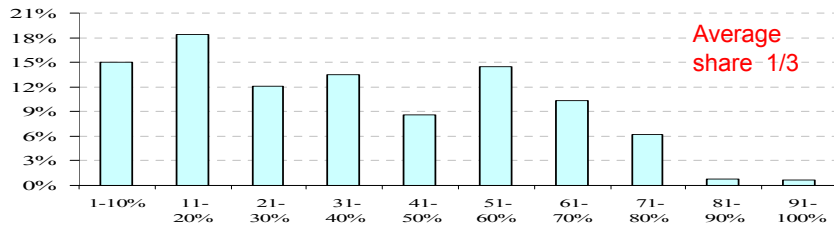


Research results

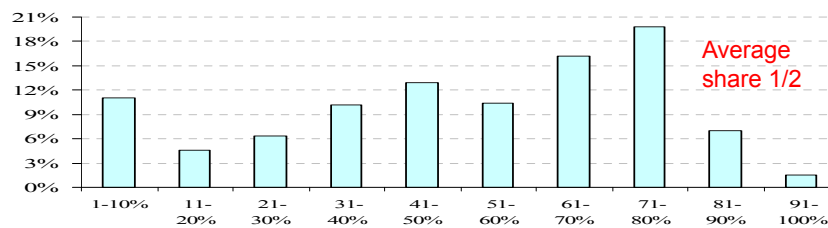
Are you willing to pay a surcharge for using a debit card to pay an amount below EUR 10?



Research results



Share debit card payments in shops **with a surcharge**



Share debit card payments in shops **without a surcharge**

Research results

Estimating the impact of surcharging on payment behaviour

- Ordered probit model
- Sample: Debit card accepting retailers (n=812) of which 174 surcharge
- Dep. Var.: share debit card payments on all payments (10 cat.)
- Explanatory variables: surcharge dummy, level of surcharge, cut off point, firm chars. like firm size, branch, sales, urbanisation degree, province, independent shop or part of larger chain

Research results

Influence surcharging on debit card share

- Incidence of surcharging - (5%-level)
- Level of the surcharge - (10% level)
- Threshold 0 (not significant)
- Other significant variables: branch, region, sales, independent shopkeeper



Research results

Focus on impact incidence on debit card share:

- using marginal effects surcharge dummy on chance to fall in a debit card share category
- 8 % -points less debit card payments at retailer level in case of surcharging
- suggests that half of the difference in debit card share between the two types of retailers stems from surcharging



Scenario analyses

Evaluating the impact of the abolishment of debit card surcharging on the costs of the POS payment system

1. Direct effect 8 % points more d.c.payments in surcharging stores

Second round effects change payment behaviour all stores and all transaction amounts

2. 10 % points increase d c share EUR 10-60
3. d c share EUR 10-60 rises to d c share EUR 60 and over (75%)



Scenario analyses

Savings on social costs POS payment system

| | Δ number of d c payments (mln) | Δ value of d c payments (EUR bln) | Cost savings (EUR mln) | % of var. costs cash and dc payments |
|----------------------|---------------------------------------|--|------------------------|--------------------------------------|
| Direct effect | 67 | 0.8 | 5 | <1% |
| 10 % points increase | 340 | 6.7 | 50 | 4% |
| Rise to EUR 60 level | 1180 | 16.0 | 110 | 8% |



Concluding

- Both consumers and retailers indicate that surcharging affects payment behaviour
- Surcharging seems to lead to an underprovision of debit card services
- The abolishment of surcharging would in the short run lead to small cost savings....
- ...in the long run substantial savings might be possible
- Increase in debit card acceptance might lead to even higher cost savings



Thank you for your attention!

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