

Card acceptance and surcharging: the role of costs and competition

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Research questions

- 1) What is the influence of costs on the acceptance and surcharging decisions of retailers?**
Cost perception fixed and variable costs (all retailers)
- Costs (accepting retailers)
- 2) What is the influence of competition on the acceptance and surcharging decisions of retailers?**
- Self reported experienced competition
- 3) What is the impact of cost reduction for debit card payments on acceptance and surcharging?**



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Motivation

Netherlands

- Costs of debit card payments are declining → debit card also attractive from social cost perspective for low amounts
- Consumers face limitations card usage because of non-acceptance and surcharging

International

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

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Overview theoretical literature

Baxter 83, Bolt and Chakravorti 08, overview of papers:

Impact differences in cost sensitivity card services between retailers and consumers on optimal pricing (rationale interchange fee)

Rochet & Tirole RAND 02, Hayashi 06, Guhtrie and Wright JIE, 07

R & D introduce strategic behaviour merchants to accept cards
Only (local) monopolists may decide to turn down card payments

Bolt and Chakravorti 08b

Card acceptance decreases with merchant service charge and increases with the extent in which retailers are able to pass through costs to customers

McAndrews and Wang 08

High fixed costs, low variable costs: large retailers or retailers who sell high value products will adopt payment cards first. As costs fall other merchants will follow.

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Key figures NL POS payments 2008

	<u>number (in billions)</u>	<u>value (EUR billion)</u>
Debit card	1.8	74.7
E-purse	0.2	0.5
Credit card	0.04	3.5
<u>Cash</u>	<u>5</u> +	<u>50</u> +
Total	7	128.7

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

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Data

One survey held in autumn 2007

- Interviews by telephone among 1008 retailers by TNS Nipo
- Questions on acceptance, surcharging, payment behaviour customers, reasons underlying acceptance and surcharging decisions, costs, cost perception, sales and standard firm characteristics

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Research results

Share of retailers accepting debit card:	0.70
Share of debit card surcharging	0.20
Average surcharge (fixed amount)	EUR 0.24
Average treshold amount	EUR 10.50
Share of retailers accepting credit card:	0.28
Share of credit card surcharging	0.13
Average surcharge	mixed results



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Table 1 Acceptance and surcharging debit and credit cards in 2007 (reweighed data)

In percentages

Branch	Acceptance debit card	Surcharging debit card	Acceptance credit card	Surcharging credit card
Food	76	44	14	40
Garden centre, florist, etc	73	36	22	15
Clothing, shoes	89	10	54	6
Builder's merchant	80	19	15	5
Hotels/restaurants/pubs etc	56	19	26	21
Department stores, furniture,	73	11	29	10
Media (books, DVDs, Cds)	84	32	33	4
Drugstores, perfumeries	85	29	25	17
Other retail stores	75	19	37	3
Gas stations/travel agencies	81	34	72	21
Other services	44	6	16	10
Firm size (no. of employees)				
1	50	23	13	19
2-4	75	22	29	15
5-9	89	19	46	7
10-19	93	9	59	9
20-49	92	4	54	24
50 and more	97	2	74	10
Competitiveness market				
Fierce	67	26	29	14
Strong	74	15	32	10
Mild	72	15	24	16
Weak	69	28	33	11
No	44	52	16	30
Total	70	20	28	13



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Research results

Table 2 Firm size and cost perception, 2007

(reweighed data, 1=very cheap, 6=sufficient/just right and 10= too expensive)

Firm size (no. of employees)	Fixed costs			Variable costs		
	cash	debit card	credit card	cash	debit card	credit card
1	5.2	6.3	8.2	4.9	6.0	8.2
2-4	6.1	6.7	7.3	6.2	6.7	7.2
5-9	5.9	6.5	7.2	6.3	6.6	7.7
10-19	6.2	6.6	7.2	6.0	6.6	7.7
20-49	5.5	6.5	6.2	5.6	6.2	7.1
>=50	6.6	6.3	6.7	6.2	6.5	7.6
Total	5.8	6.5	7.3	5.7	6.5	7.5
Don't know (in %)	14	27	67	18	33	68
Number of respondents	1008	1008	1008	1008	1008	1008

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Research results

Table 3 Firm size, costs and relative costs, 2007

(reweighed data)

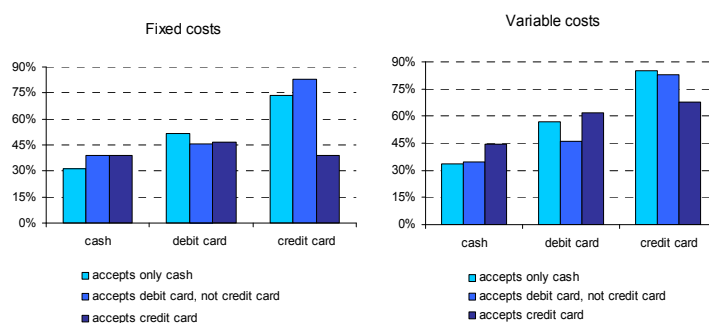
Firm size (no. employees)	Annual costs in euro			Annual cost-sales ratio (*100)		
	Cash	debit card	credit card	cash	debit card	credit card
1	187	372	269	0.40	0.32	0.19
2-4	350	662	833	0.18	0.24	0.20
5-9	559	915	1467	0.13	0.18	0.18
10-19	640	939	1795	0.12	0.13	0.13
20-49	1774	1917	4471	0.09	0.06	0.17
>=50	<u>1995</u>	<u>2792</u>	<u>4383</u>	<u>0.03</u>	<u>0.05</u>	<u>0.08</u>
Total	372	701	1249	0.25	0.24	0.18

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Research results

Graph 1 Cost perceived as too high by retailers accepting different means of payment
In percentages of retailers with an opinion about the fairness of costs



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Research results

Table 4 Reasons to accept cash only
(Reweighed data, multiple answers possible,
in percentages)

Investment costs too high	53
Merchant service fees too high	39
Card payments cause too much stuff	26
Transaction speed too low	19
Safety concerns	10
Low transaction amounts	5
Number of respondents	94

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Research results

Table 5 Reasons to surcharge debit card payments or not
(Reweighted data, multiple answers possible, in percentages)

Reasons for surcharging		Reasons for not surcharging	
Cost coverage debit card payments	61	Additional service to my customers	75
To stimulate cash usage for low amounts	37	To encourage debit card usage	16
Debit cards payments are relatively costly	24	Costs of debit card payment are low	9
Common in my business	11	To attract customers	7
Advised by bank/retail association	4	Costs passed through in retail prices	6
		Too much stuff	6
Number of respondents	118	Number of respondents	425

Research results

Estimating the impact of costs and competition on debit card acceptance and surcharging

- Heckman probit selection model/ separate probit models
 - Acceptance
 - Surcharging
- Sample: All retailers (n=1,008), 837 accept the debit card and 156 surcharge debit card payments
- Explanatory variables:
 - Acceptance eq. only: fixed costs debit card too high, regional income
 - Surcharging eq. only: fixed/variable costs too high, cost-sales ratio
 - Both eqs.: urbanisation degree, province, firm size, branch, sales, independent shop

Research results

Significant results debit card payments

Acceptance		Surcharging	
Fixed costs too high	-4pp	Cost-sales ratio	+
No competition	-10pp	Fixed/variable costs too high	+10pp/+5pp
Firm size	+	No or weak competition	+26pp/+9pp
Urbanisation degree	+	Firm size	-
Branch, province, independent		Branch	

Estimated correlation all retailers:-0.3 (insignificant)

Estimated correlation SMEs -0.6 (significant)

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Research results

Significant results acceptance credit card payments

Fixed costs too high	- 29 pp
Fierce competition	+ 12 pp
Firm size small	- 21 pp
Urbanisation degree	+
Branch, independent	

Sample: All retailers who accept the debit card (n=837)

374 of them accept credit card payments

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Research results

Scenario analysis: impact decrease debit card costs on acceptance and surcharging:

- Card acceptance via cost perception :
- Surcharging via cost perception and costs

Probit results: Costs debit card too expensive = yes

Significant variables:

- Absolute costs (+) Cost increase € 1000 => +5/7 pp
- Competition (-)
- Independent (+)
- Firm size (-)

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Scenario analyses

Evaluating the impact of decrease in debit card costs for retailers on acceptance and surcharging

Two scenarios à la Tourist test (Rochet & Tirole, 2008)

1. Costs paid to external parties for cash = costs paid to external parties for debit card payments
 - cost lowering additional debit card payment with 6.8 eurocent
 - retailer level: EUR 1,600
2. Total costs for cash = total costs for debit card payments
 - cost lowering additional debit card payment with 1.4 eurocent
 - retailer level: EUR 350

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Scenario analyses

Table 6 Impact of costs reduction debit card payments for Dutch retailers, 2007

	Costs change per retailer	Perception: debit card too expensive	Acceptance	Surcharging	Number of debit card payments
Scenario 1	External costs debit card payments equal to external costs cash payments				
	- EUR 1600	-10.0 pp	+0.4 pp	-1.3 pp	+13 mio
Scenario 2	Total costs debit card payment equal to total costs cash payment				
	- EUR 350	-2.2 pp	+0.1 pp	-0.3 pp	+ 3 mio

Scenario analyses

First impression: differences in cost sensitivity between retailers and consumers wrt debit card services

Consumers (Bolt, Jonker & van Renselaar (08)

no surcharge: drop in costs of 23 eurocent leads to 67 mio additional debit card payments
=> per eurocent ± 3 mio debit card payments

Retailers

ext.costs cash=debit card: drop in costs of 6.8 eurocent leads to 13 mio additional debit card payments => per eurocent ± 2 mio debit card payments

Cost sensitivity consumers : retailers
3 : 2

Concluding

- Estimation results provide empirical support for predictions economic theory wrt costs, competition and firm size on card acceptance and surcharging
- Decrease in (fixed) costs increases card acceptance and leads to less surcharging
- Indications that cost sensitivity Dutch retailers for debit card services (somewhat) lower than cost sensitivity Dutch consumers
- Competition stimulates retailers to accept payment cards and limits their possibility to surcharge
- Firm size positively influences card acceptance
- The possibility to surcharge debit cards might stimulate card acceptance among retailers who would otherwise not accept them.

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Policy recommendations

- Lowering investment costs/fixed costs seem to be more important than lowering variable costs for increasing card acceptance
- Raising cost awareness among retailers
- In NL costs do not seem to be the most important factor for retailers to accept cards or not.

Tentative policy conclusion:
Small differences in cost sensitivity between consumers and retailers seems to support view lowering interchange fees for debit card services in Europe

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Thank you for your attention!

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