Interchange fees and innovation in retail payment systems

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Introduction

- **Slow pace** of innovation in retail payment systems for decades…
  - Paper check for 700 years, plastic card for 50 years
  - Role of the interchange fee (IF): allocation of costs between the acquiring and the issuing sides, etc.
- … but **acceleration** of innovation due to the development of web and new digital devices
  - At POS: contactless cards (Visa PayWave), mobile phone as payment card (NFC), mobile phone as POS terminal (Square), etc.
  - E-commerce: web checkout (Paypal), telephone bill as payment account, …
  - P2P: SMS-based money transfers, …
Introduction

Patents submitted to the European Patent Office (EPO) for “payment” technologies, per year
Introduction

• Question addressed in this presentation: *What is the impact of IF on innovation in retail payment systems?*

• Main message: the IF affects innovation in payment systems through two different (but related) channels,
  ◦ Issuers’ and acquirers’ (and potential entrants’) *incentives to invest* in innovative payment solutions
  ◦ Merchants’ and consumers’ *incentives to adopt* innovative payment solutions
Innovations in payment systems

- **Innovation** = product innovation (*introduction of new payment services*) + process innovation (*cost reductions + quality of service improvements*)

- **Cost reductions**:
  - security/reduction of fraud
  - transaction costs, etc.

- **Quality of service improvements**:
  - convenience, simplicity
  - customer relationship management
  - possibilities of differentiation, etc.
Innovation in payment systems

- Two-sided nature of retail payment systems
  - Membership and usage externalities between two distinct groups of users: consumers and merchants
  - Implies adoption externalities: the innovating firms might have to solve the “chicken and egg” problem

- Economies of scale and network effects
  - Strong incentives for standardization and cooperation between competitors
A model of innovation (B&V 2011)

Incentives to innovate?

Incentives to adopt the innovation?

Interchange

payment system

Interchange

competition between issuing banks

competition between acquiring banks

consumer fee

merchant fee

consumers

merchants

retail prices

adoption externality
Adoption incentives

**Adoption externality** between consumers and merchants

Consumers’ adoption incentives depend on…
- the price of the new payment instrument,
- its quality,
- the number of merchants who adopt the innovation

Merchants’ adoption incentives depend on…
- the merchant fee,
- the adoption cost of the innovation,
- the number of consumers who adopt the innovation
Adoption incentives

• Short-term perspective: the innovation has been developed. Effect of a lower IF on users’ adoption incentives?

consumers

- Price effect (higher consumer fee): adoption ➤
- Externality effect (higher # of merchants): adoption ➤

merchants

- Price effect (lower merchant fee): adoption ➤
- Externality effect (lower # of consumers): adoption ➤

example with a uniform distribution of merchants

Consumer adoption...
➤ for low degrees of externality (if IF not too high)
➤ otherwise

Merchant adoption... ➔
Innovation incentives

- **Long-term perspective**: the innovation has to be developed. Effect of a lower IF on issuers’ incentives to innovate (= invest in quality improvements)?

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<thead>
<tr>
<th>Example with uniform distribution</th>
<th>Low degree of adoption externality</th>
<th>High degree of adoption externality</th>
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<td>Effect of a lower IF on quality investments</td>
<td><em>(if IF not too high)</em></td>
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- **Low externalities**: a high IF softens competition
- **Strong externalities**: a low IF stimulates merchants’ adoption
Cooperation and Innovation

- **Historical examples** of cooperation between banks to create common networks (e.g., Visa)
- Many **recent examples** of partnerships or Research Joint Ventures for the development of new payment solutions:
  - JV MasterCard + Smart Hub (MNO), 2010
  - Alliance Visa + Monetise, 2009
- **Should cooperation for innovation be encouraged in retail payment systems?**
- **What is the effect of the IF on the incentives to cooperate for innovation in payment solutions?**
Cooperation and Innovation

- **Should we encourage cooperation for innovation in retail payment systems?**
  - Yes, if strong adoption externalities between consumers and merchants ➔ higher investments in quality of service with cooperation compared to no-cooperation

- **Effect of IF on incentives to cooperate?**
  - With a high degree of adoption externalities between consumers: incentives to cooperate increase with the IF
Conclusion

- Acceleration of innovation in payment services, driven by the development of digital devices (computers, smartphones, tablets, etc.)
- Effect of IF on innovation in payment systems?
  - Short-term perspective (effect on adoption incentives) vs. long-term perspective (effect on innovation incentives)
  - Effect depends on the magnitude of adoption externalities between merchants and consumers
- Cooperation socially desirable if strong adoption externalities
- Incentives to cooperate higher with high IF
References
