



*Scenario-based Development of Market Entry Strategies:  
The Case of Electronic Consumer Billing in Germany*

**Master's Thesis**

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**Master's Thesis Presentation**

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## Outline

- Background
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  - Key Argumentation Chain (Itella)
- Research Questions
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## Problem Definition

- Success of electronic invoices both in Finland and internationally
- Growing market for electronic consumer billing
  - e.g. Netposti (FIN), eFaktura (NOR), arved.ee (EST)
- Germany:
  - Large market, so far only marginal penetration of electronic billing services
  - low use of online banking services
  - 80% of consumer contracts are charged through direct debit
  - challenging and unclear legal situation of electronic documents
  - consumer interest is low



## Key Argumentation Chain



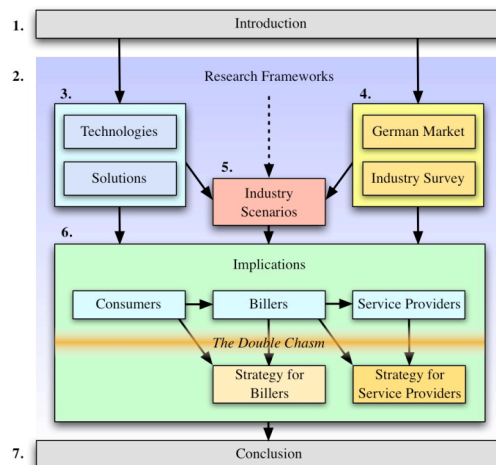


## Research Questions

- $Q_1$ . *What is the current state of electronic consumer billing in Germany?*
- $Q_2$ . *What are the challenges that electronic consumer billing faces in Germany?*
- $Q_3$ . *How is the market likely to develop and how should service providers and billers approach consumer billing?*



## Thesis Structure



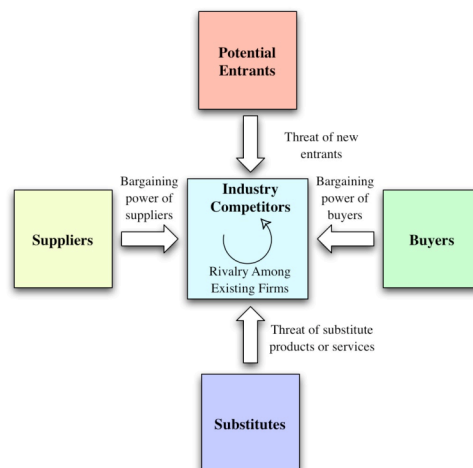


## Methodology

- Research Frameworks
  - Structural Analysis of Industries (Porter, 1980)
  - Industry Scenarios (Porter, 1985)
  - Technology Adoption Life Cycle (Rogers, 1962)
    - Revised Model (Moore, 1991)
- Industry Survey / Case Studies
  - Interviews
  - Building Theory from Case Study Research (Eisenhardt, 1989)

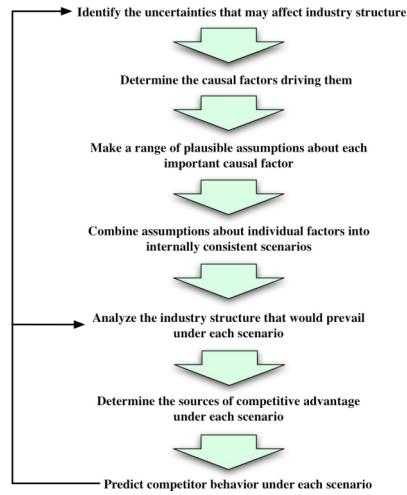


## Five Forces Driving Industry Competition

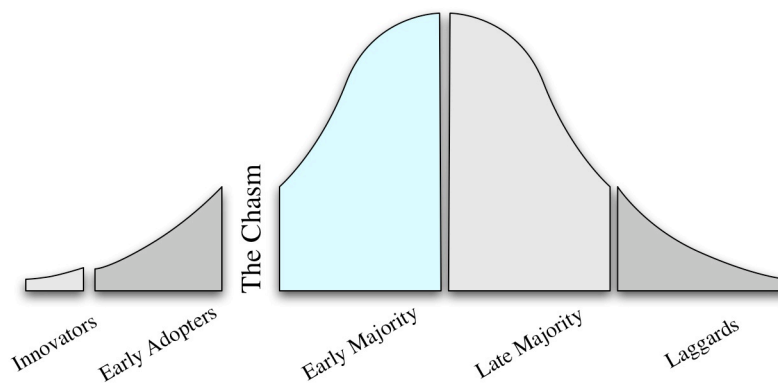




## Constructing Industry Scenarios



## Technology Adoption Life Cycle





## Electronic Consumer Billing (Technologies and Solutions)

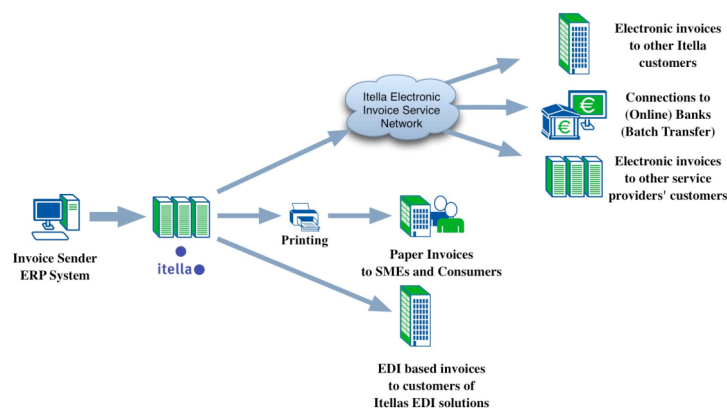
- Technologies
  - TCP/IP, FTP, HTTP, SMTP, HTML, Finvoice, XML, EPL, PDF, PKI, QES, SSL/HTTPS, SSH, VPN, ...
  - The technological implementation of electronic consumer billing is the smaller challenge
  - Legacy formats present the only problem (e.g. EPL)
- Solutions
  - Electronic (B2B) Invoicing Operator Networks vs. EDI
  - Electronic Bill Presentment and Payment (EBPP)
    - One single interface to receive, accept and pay bills
  - Billing Models
    - Biller Direct
    - Thin/Thick Consolidation

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## Electronic Invoicing Operator Networks (1/2)



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## Electronic Invoicing Operator Networks (2/2)

- Advantage over EDI:
  - Only one incoming and outgoing connection needed
  - EDI: One connection for every sender and recipient
  - Significantly lower initial investment required
  - Format conversions as needed
  - Forwarding to correct channels on a per case basis



## Billing Models

- Biller Direct
  - The biller presents the bill on his own portal site
  - The consumers visit the site upon their own initiative (email notifications)
- Thick Consolidation
  - Several billers send their bills to one portal site provider
  - Consumers can receive all bills in one place
  - Best replacement for the traditional mailbox
- Thin Consolidation
  - Billers present the bills on their own portals
  - Summaries of the bills are sent to a consolidator
  - The consumer can receive summaries of all his bills in one place and is redirected to the biller's portal if he wishes to see the detailed bill



## German Market Environment

- Telecommunications service providers the first adopters of electronic consumer billing
  - shrinking margins, all possible cost savings measures are considered
  - high volume bills
  - vast majority of bills paid using direct debit
  - consumers pay little interest to their bills, as payment is automatic
- Electronic consumer billing is not used in any other sector!
- Banks
  - very heterogeneous market
  - almost 2400 individual banks in Germany
- Legal aspects
  - A bill or invoice is only legally valid if it is a paper bill, sent using a verified EDI connection, or is signed using a qualified electronic signature.
  - The QES process is very complicated, making the option very unattractive for consumers.



## Industry Survey

- Assessment of the electronic consumer billing from billers' and consumers' viewpoints
- Answering the questions:
  - *What is the billers' attitude towards electronic consumer billing?*
  - *How do consumers view consumer billing?*
- Since asking the consumers directly was not possible:
  - *How do billers perceive the attitude of consumers towards electronic consumer billing, and what is the attitude of billers towards consumers?*





## Participating Companies

- Versatel
- T-Mobile
- T-Com
- Lycos Europe
- Zurich Group
- coreus AG
- paybox solutions AG
- Deutscher Sparkassen- und Giroverband



## Survey Results (1/4)

Table 4.2: Participating billers' current billing solutions

Billers	1	2	3	4	5	6
Sector	telco	telco	telco	telco	telco / content	insurance
El. consumer billing	yes	yes	yes	yes	no	no
Paper	no	no	yes	yes	no	yes
Digital Signature	no	no	yes	yes	n/a	n/a
C. self-care <sup>a</sup>	yes	yes	yes	yes	n/a	n/a
Plans <sup>b?</sup>	n/a	n/a	n/a	n/a		no
Consolidation <sup>c</sup>	no	no	yes	no	yes	no

<sup>a</sup>Integration of the electronic consumer billing solution into a customer self-care portal.

<sup>b</sup>Existing plans for deployment of an electronic consumer billing solution

<sup>c</sup>Would participate in a consolidated service if it met the requirements.

All participating billers' solutions were fell short of reaching the initially targeted adoption rates



## Survey Results (2/4)

Table 4.3: Additional motivation for the deployment of electronic consumer billing solutions.

Added value orientation	Customer relationship orientation
<ul style="list-style-type: none"><li>• Electronic bill presentment as an added-value alternative to paper bills –guaranteed reception is essential</li><li>• Offering customers added-value services through flexible bill presentment solutions</li><li>• Technology leadership</li><li>• <i>Will consider sending bills through consolidating service</i></li></ul>	<ul style="list-style-type: none"><li>• Electronic bill presentment as customer relationship and marketing channel</li><li>• Strengthening the marketing relationship by delivering the bill to a comprehensive Customer Self Care Portal</li><li>• <i>Will not surrender their customer relationship to provide added-value to the customer (i.e. consolidation)</i></li></ul>



## Survey Results (3/4)

- Motivation for deployment
  - Cost savings, internal process optimizations
  - Only few billers mentioned the benefits to the customer relationship
- Advantages
  - Cost savings
  - Speed increase of the entire billing process
  - Perceived advantages for consumers: less paper, easy cost analysis
- Disadvantages
  - Slow adoption
  - Low consumer interest, low acceptance of e-commerce in general
  - Legal challenges



## Survey Results (4/4)

- Importance of consumers for billers
  - Customer relationship approach
    - Benefits for biller are more important than advantages or disadvantages for the consumer
    - Focus on cost savings and strengthening of the customer relationship
  - Added-value orientation
    - Main focus on customer satisfaction
    - The solutions must be optimized to deliver the consumer an added-value



## Scenarios (1/2)

Table 5.2: Consistency of consumer influence / biller interest and the electronic billing model.

- Uncertain variables:
  - Consumer influence
  - Biller interest
  - Consolidation

		Consumer Influence / Biller Interest			
		Low / Low	Med / Low	Med / High	High / High
Consolidation	No	①	②	③	×
	Yes	×	×	④	⑤



## Scenarios (2/2)

1. “No-Value Service“
2. “Slow Adoption“
3. “Growing Interest“
4. “Growing Value“
5. “Full-Value Service“



## Results

*Q<sub>1</sub>. What is the current state of electronic consumer billing in Germany?*

*Q<sub>2</sub>. What are the challenges that electronic consumer billing faces in Germany?*

*Q<sub>3</sub>. How is the market likely to develop and how should service providers and billers approach consumer billing?*



## State of the Market (Q<sub>1</sub>)

- Electronic consumer billing in Germany is still in a nascent phase.
- So far, no key players, low differentiation in available services
- Mostly high volume billers in Telco sector offer electronic bills
  - biller direct only
  - low user value
  - billers **do not** leverage electronic consumer billing
    - cost savings
    - customer relationship
- For smaller volumes electronic consumer billing is seen as risky
  - high initial investment in relation to savings
  - adoption of systems is hard to project

⇒ **Great possibilities for market entry, yet very uncertain and risky!**

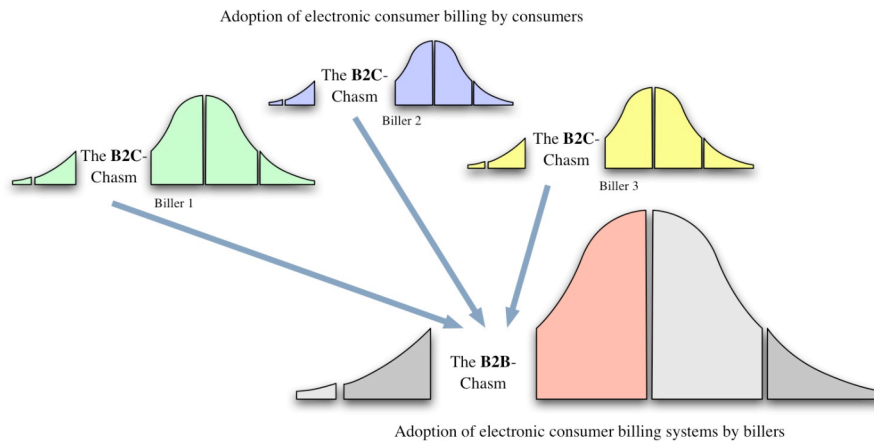


## Challenges (Q<sub>2</sub>)

- Electronic consumer billing is usually a part of internal process optimizations
  - Mainly seen by billers as cost savings initiative
  - Current solutions deliver little to no added value to the consumer
    - Therefore, the adoption rates are far below the expectations and requirements for success
- Legal Requirements
  - Qualified Electronic Signatures
    - Complicated to implement and use
- Payment integration (EBPP) is not seen as needed
  - Domination of direct debit payments
- Double Chasm



## Double Chasm (1/2)

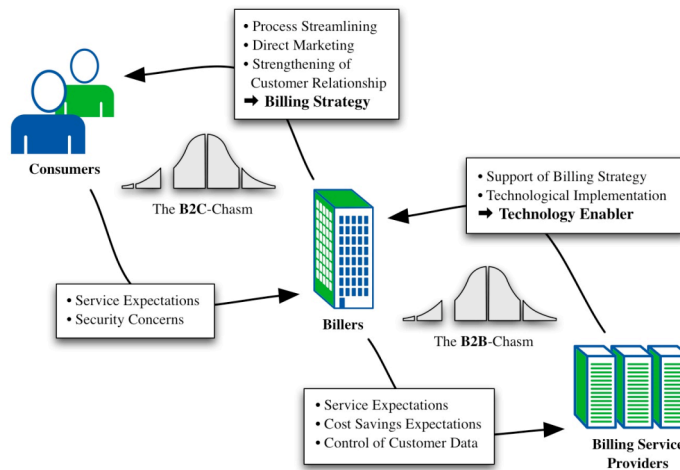


## Double Chasm (2/2)

- When marketing services to billers, service providers need reference cases
- However, unless biller succeed in driving the adoption of their individual solutions, these references do not exist
- Service providers must therefore concentrate on developing services that deliver an added value to the consumer



## Strategic Recommendations (Q<sub>3</sub>) (1/2)



## Strategic Recommendations (Q<sub>3</sub>) (2/2)

- Successful adoption of electronic consumer billing requires a *bottom-up approach*, starting from the consumer
- A comprehensive *billing strategy* is needed,
  - defining the target customers and how to address them
  - defining the benefits to that target group
  - defining the timeframe of adoption and expected cost-savings
- Service providers have to develop their services with the consumer in mind, *even though* they will not sell directly to the consumer
- Service providers consult and support billers in the development of an individual billing strategy
  - Service providers become **service enablers**



## Summary

- Electronic consumer billing in Germany has a very difficult position
  - A multitude of different factors influence the development
- Determined first-movers have the chance to influence market development
- Main focus should be on driving consumer adoption
  - Billers must offer their customers an added value to justify individual switching efforts (paper to electronic)
    - Billing strategy
  - Service providers must help billers drive adoption to create success stories as reference cases
- The market is not developed enough to predict timeframes



## Questions

Thank you!

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