The Impact of Blockchain Technology in the Payments Industry

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BACKGROUND

IMPACT OF BLOCKCHAIN TECHNOLOGY ON BUSINESS MODELS

Business Models

- “The rationale of how an organization creates, delivers, and captures value” (Osterwalder and Pigneur 2010)
- BM is important to secure a competitive advantage (Johnson et al. 2008)

Blockchain Technology

- Alternative mechanism for the trust between two parties (Nakamoto 2008)
- Bitcoins are an application of the technology → digital currency
- Impact beyond processes, products, and services (Swan 2015)

Payments Industry

- Bitcoins are disrupting payments (Robleh et al. 2014)
- Great upheaval due to regulation and innovation
- Erosion of income from traditional sources

How does blockchain technology impact current and new business models in the payments industry?

- Delphi study among experts in the payments industry knowledgeable about blockchain technology
- Results synthesized in a framework structured around 4 areas of thoughts
DATA COLLECTION AND DATA ANALYSIS

**Delphi Method**
- Exploratory study design
- Structured communication process
- Opinion and ideas on the development of blockchain
- Evaluation of statements in the light of group evaluations

**Data Collection**
- 3 Round Approach
  - Collection
  - Evaluation I
  - Evaluation II
- 45 Experts
- Online Survey Design
- 20,000 words of qualitative data

**Data Analysis**
- Coding with MaxQDA
- Coding by three researchers
- More than 500 codes
- 45 Statements
# FINDINGS

## STORY LINE AND PANELIST FEEDBACK

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<th>4 Areas of Thoughts</th>
<th>10 Statements</th>
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<td>Blockchain-enabled services</td>
<td>New services with blockchain technology</td>
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<td>P2P and direct transactions</td>
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<td>Changed income structure</td>
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<td>Changed Financial Structure</td>
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<td>Potential for BMs</td>
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RESEARCH QUESTIONS

POTENTIAL DEVELOPMENT IS HINDERED BY CHALLENGES

What are the challenges currently hindering the breakthrough of blockchain technology?

How can the rationale behind the challenges be explained at the current stage of the development?
METHOD

DATA COLLECTION EXTENDED BY 4 INTERVIEWS

Data Analysis
- Coding with MaxQDA
- More than 500 codes
- 45 Statements
- Evaluation of statements

(Linstone and Turoff 1975)
(von der Gracht 2012)

6 Challenges

- 4 in-depth expert interviews
- Experts from both financial institutions as well as fintech startup companies
- Semi-structured interview guideline
- Data analysis started with descriptive codes according to the 6 challenges
- 84 coded segments

(Eisenhardt 1989)
(Yin 2009)
6 KEY CHALLENGES WITH HIGH CONSENSUS

- More Practical Use Cases
- Integration and Adaptation
- Standardization, Unification, and Interoperability
- Availability and Robustness
- Latency and Response Times
- Exchange between Market Players
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