

Mobile Payment: Critical Success Factors for FinTech Business Models

Bachelorarbeit

zur Erlangung des akademischen Grades „Bachelor of Science (B. Sc.)“ im Studiengang Wirtschaftswissenschaft der Wirtschaftswissenschaftlichen Fakultät der Leibniz Universität Hannover

vorgelegt von

Name: Ahmad

Vorname: Mahmoud



Prüfer: Prof. Dr. Michael H. Breitner

Ronnenberg, den 30.10.2017

Table of Contents

List of Figures	IV
List of Tables	IV
List of Abbreviations	V
1. Introduction	1
1.1 Motivation and Relevance	1
1.2 Research Objective and Structure.....	2
2. Theoretical Background	3
2.1 Terminology FinTech.....	3
2.2 Classification of Mobile Payment Services	4
2.3 Technological Enablers	6
2.4 Mobile Payment Platforms	8
2.5 Stakeholder in Mobile Payment Ecosystem	11
3. Business Model Concepts, Typologies and Components	14
3.1 Definition and Function of Business Models.....	14
3.2 Business Model Components.....	16
3.3 Business Model Analysis Framework	18
4. Systematic Literature Review	22
4.1 Research Methodology	22
4.1.1 Research Methodology according to Webster and Watson (2002)	22
4.1.2 Selection of the Relevant Literature and Structuring the Review	23
4.2 Meta-Analysis.....	26
4.3 Results and Critical Evaluation.....	28
4.3.1 User Level Success Factors	28
4.3.2 Provider Level Success Factors	32
4.4 Recommendation for Further Research	41
5. Discussion on Critical Success Factors	43
6. Limitations	50
7. Conclusion and Outlook	51
List of References	VII
List of Appendices	XV
Appendices	XVI
Ehrenwörtliche Erklärung.....	XXII

1. Introduction

“Apple Pay is a step towards mobile payments becoming even more mainstream and it’s the right step because it’s how I think we’ll be making payments in the future”

- Richard Branson, founder and chairman of Virgin Group (Green, 2014)

1.1 Motivation and Relevance

In today’s increasingly interconnected and mobile society the prospects to implement smart phones for payment transactions are high. According to a survey of eMarketer & AP (n.d.) the world-wide penetration of mobile phones is increasing and expected to pass the 5 billion user mark by 2019.

Despite these promising predictions and growth prospects, most of the proposed mobile payment services face difficulties to prevail in the mass market. Although, the consumers’ awareness of mobile payment is improving, the adoption of these offerings stagnated over the recent years (Accenture, 2016, pp. 5f.). However, FinTech i.e. IT start-ups and internet companies that exploit the convergence between finance and technology, recently entered the financial service market to provide innovative services. Since the beginning of the so called “FinTech 3.0 era” in 2008, financial institutions have lost the confidence of customers. Obviously, the currently established business model of the traditional financial institutions is doubted by the new entrants regarding its sustainability and efficiency. Among others, the banks’ standardized business segment of payment services has gained an increased attention due to relatively low entry barriers. Here, FinTechs aim to meet the consumers demand for user-friendly, ubiquitous and flexible access to services with their innovative solutions. Undoubtedly, the emergence of start-ups and global players such as Square or Apple will redefine the roles of traditional providers in the payment processing.

The suggestion of Richard Branson that payments via the mobile phone will become the dominating payment method proved to become true. Especially the increased number of Apple Pay users in recent years indicates that Apple has a high potential to determine and shape the future of mobile payment. Nevertheless, it seems that only a few FinTechs will prevail in the highly competitive market for mobile payment and successfully transform from niche suppliers to mass market service provider. Early calls from research suggest that an investigation of various internal and external factors is needed to understand the determinants of success in the mobile payment market (Ondrus, and Pigneur, 2009, p.350). However, despite the increased efforts in practice

and research in recent years, there is still a lack of knowledge regarding the success factors of mobile payment.

1.2 Research Objective and Structure

In search of an explanation for the varying success of mobile payment in different regions and especially its slow diffusion in the Europe, academic research recommends an in-depth analysis of the underlying business models. Obviously a sustainable and sound business model builds the basis for a successful penetration of the mass market (Moon, 2015 as cited in Tiberus and Rasche, 2017, p. 8).

Thus, this bachelor thesis provides a theoretical contribution to research in the field of mobile payment by investigating the critical success factors (CSF) that are addressed in the scientific literature. Moreover, the identification and analysis of the most important characteristics for a sustainable FinTech payment business model will give some indication on their capabilities to challenge the banks position and gain market shares.

The aim of this thesis is to provide a comprehensive analysis into this topic by answering the following two research questions:

- 1) What are the critical success factors for mobile payment?
- 2) How are the requirements of a sustainable business model for mobile payment and which components are critical for the success?

In order to accomplish an extensive exploration of the above explained research objective this paper is structured into six successive chapters. After the introduction, the second chapter presents the essential theoretical foundations in the field of FinTech and payments to ensure a basic understanding. In this context, first the concept of FinTechs is explained briefly and a classification of mobile payment services is given. Moreover, the market for mobile payment is investigated regarding its enabling technologies, digital platforms and main actors. Subsequently, in chapter 3 first a conceptual framework of the business model concept is presented in order to describe the key components of FinTech business models. Thereafter, a business model analysis framework that has been adjusted to the peculiarities of mobile payment is presented. It follows in section 4 an extensive literature review of academic research according to the methodology of Webster and Watson (2002). After a brief description of the underlying methodology and literature selection procedure, a meta-analysis is given in order to synthesize the results of previous studies quantitatively. From the set of identified articles various CSFs for mobile payment services are derived and critically evaluated.

The fourth chapter ends with recommendations for further research. Based on the results of the literature review, in chapter 5 the key success factors are discussed thoroughly with respect of their implications on the banks' business. Finally, after presenting the limitations regarding the stated research objective in section 6, in the final section of the thesis conclusions are drawn and recommendations for further research possibilities are given.

2. Theoretical Background

In the following chapter, the essential theoretical foundations on which the problem is based are depicted. This includes a section of definitions and delimitations on FinTech and mobile payment services. Subsequently, the enabling technologies for mobile payment services and their potential applications are presented. Finally, the payment ecosystem is examined thoroughly to illustrate the interdependencies of the main stakeholder.

2.1 Terminology FinTech

Currently there is no universal accepted definition of the term "FinTech", which is a diminutive of the both combined words "financial services" and "technology" (Puschmann, 2017, p.70; Zavolokina et al., 2016). Usually the term refers to young companies or start-ups that deploy innovative technologies and business models in order to provide consumers a more convenient and efficient access to financial services. However, also globally operating and technology oriented internet companies such as Apple, Google and Amazon entered the financial services market and are associated as FinTechs in a broader sense. Thus, FinTechs describe non-banks which specialise on a specific business segment or function of traditional financial service providers. They mainly digitalize products and services provided by banks in the field of payment, financial consultancy, finance, and investment. Through the implementation of various information and communications technologies (ICT), their business models and service offerings are optimized. Specifically, the use of big data analytics, block chain, near field communication (NFC), digital platforms as well as authentication and security technologies differentiate them from traditional providers. (Gomber et al., 2017, pp. 549f.). They are highly represented in industrial countries including USA, UK, Canada and Germany, but also India as emerging market with an increasing IT sector (Haddad, and Hornuf, 2016, p. 21). However, more recently Fintechs are perceived by banks as potential cooperation partners. Banks have high expenditures for IT and could reduce

Therefore, the proposed recommendations for banks must be viewed critically, as usually multitude changes will affect them in their strategic decision making for the business unit of payments.

7. Conclusion and Outlook

FinTechs, emerging innovative financial technology service providers, have gained considerable attention by practitioners and scholars. Not only start-ups, but also large IT companies enter the financial service sector to challenge banks in various business functions with innovative business models.

Within the scope of this thesis the business model of FinTechs is analysed regarding to its specific characteristics. Moreover, the most relevant factors that contribute to the success of mobile payment are identified and discussed for implications. For this purpose, the academic research on mobile payment is systematically analysed in order to identify CSFs of this services. From a set of 71 peer-reviewed articles the 20 most relevant CSFs are derived. A distinction is drawn between CSFs, on the one hand, which refer to the business model of mobile payment providers and CSFs, on the other hand, which contribute to the user's acceptance.

Regarding the relevant characteristics of FinTech business models, the findings of this study indicate that their lean and agile value creation architecture enables them to appropriately react to the changing market conditions. In this context, the impact of financial regulation on the success of FinTechs is demonstrated. Especially, the user-centricity and high degree of automatization of the business model facilitate FinTechs to meet the customers' needs more cost-efficiently compared to banks. As the proposed business model analysis framework indicates, value or innovation for mobile payment is always co-created with the customers.

Unsurprisingly, technology related factors are identified as the most contributing factors to the success of mobile payment. The evidence from this study suggest that the agreement on a technical standard will be crucial. On the one hand, the NFC technology is predicted to become an important technological enabler for the contactless payment due to its increased maturity and interoperability. Moreover, the combination of improvement mobile networks with emerging cloud-based technologies and mobile applications enable innovative services. On the other hand, the results show that by applying biometric authentication and security technologies to their services, FinTechs have found a solution to inspire business confidence. Furthermore, this paper stresses the importance of collaboration between FinTechs and banks. Based on the findings that currently most of the developed solutions complement the card-based payment

and require non-replicable resources owned by banks, it is assumed that mobile payments will rather optimize the traditional payment value chain.

Even though a vast amount of literature on the issues of mobile payment exists, only a few of these academic articles refer to FinTechs. Therefore, this study encourages researchers to close the research gap by elaborating on the dynamic development of FinTechs in the field of mobile payment. Besides, this research has raised many questions in need of further examination of Regulatory Sandboxes and FinTech Hubs. Due to the increased standardisation of NFC technology, future research should also examine the acceptance of users for payments via the evolving NFC compatible wearables. Moreover, future research may focus on analysing the interaction among the identified CSFs. Obviously, the implementation of specific factors concurrently affects the achievement of other objectives. In this context, the validation of the identified CSFs with a Delphi method is recommended in order to include practical appraisals about a possible rank order of the identified factors. Thus, future studies should complement to the thesis by conducting a quantitative research, e.g. expert interviews and user surveys, to provide empirical evidence for the findings. In addition, it is recommended to explore to what extent the identified CSFs are currently implemented in the mobile payment services of successful actors.