

# FACTORS INFLUENCING INDIVIDUAL CUSTOMERS' TRUST IN MOBILE BANKING

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## Abstract

The paper explores the individual customers' confidence in the mobile banking sector in Lithuania. Skvarciany and Jurevičienė (2017b) identified the factors and their sub factors influencing confidence in the banking business. In order to assess the importance of these factors for the mobile banking sector, we used expert evaluation method to distinguish the most important factors and sub factors that could lead to a higher confidence level of commercial banks' individual clients and analytic hierarchy process method for data processing. The experts assigned the factors and sub factors with the weights which show the most important ones in customers' confidence-building process in mobile banking. The results indicate that the key factor influencing customers' confidence in mobile banking in Lithuania is customers' characteristics and the weightiest its sub factor is computer literacy.

**Keywords:** confidence, commercial banks, mobile banking.

**JEL Code:** G21, G41, D90

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## Introduction

The current paper is an extension of a broader five-year study (Gaile-Sarkane, Jureviciene, Skvarciany, & Iljins, 2017; Skvarciany, 2017; Skvarciany & Jurevičienė, 2017a, 2017b) investigating the determinants influencing individual customers' confidence in various types of banking service providers – traditional, mobile and internet banking in the Baltic states. In particular, this study revisits an earlier paper by (Skvarciany & Jurevičienė, 2017b) and uses data from Lithuanian banking market. The aim of the research is to identify the most important determinants that influence the use of mobile banking. The methods used are expert evaluation method – for ranking the factors, having impact on individual customers' confidence in mobile banking and analytic hierarchy process method for data processing.

## 1 Literature Review

Mobile banking is rapidly expanding in recent years as one of the most advanced means to use various banking services. Innovations and new technologies that are especially popular in the

banking sector forces mobile banking penetration in various countries. In fact, mobile banking is an evolution of e-banking which gives bank's clients an opportunity to complete their financial transactions via mobile devices (Afshan & Sharif, 2016; Mohammadi, 2015). On the other hand such kind of services alongside with internet banking and other „technological innovations“ relate to caution from costumers side which is usually called „confidence“, „reliance“, „trust“. In fact, confidence is one of the key factors that are necessary for m-banking adoption and usage (Malaquias & Hwang, 2016; Singh & Srivastava, 2018). Moreover, mobile banking technology has the potential to improve people's quality of life and to bring efficiency to banks” (Malaquias & Hwang, 2016). What is more, mobile banking helps traditional banking to reach the better service quality and reduce its (service's) costs (Afshan & Sharif, 2016). “Customers are encouraged to believe in the service provider which offers economic content as the party that can be trusted. The truthfulness of these offers is defined as the capability of the service provider“ (Dimiyati & Subagio, 2018).

Another investigation about natural culture influence, this time in electronic banking acceptance, was made by Zhang, Chen, Liu and Zhu (2018). They analysed relationships between consumer behavioural intentions to use electronic banking and the constructs of performance expectancy, effort expectancy, social influence, perceived risk, and confidence. Zhang et al. (2018) analysis was based on Hofstede's national cultural dimensions. It showed that people considering a possibility to use e-banking pay attention to confidence in the bank which system there are about to use (Zhang et al., 2018).

The problem how to establish the confidence relationship between two devices that enable to establish local links to perform direct data exchange was examined by Guo, Ma, Li, Zhang and Liu (2018). They proposed an evolutionary positioning awareness model for mobile devices linked to the device-to-device connection and considered that compared to the existing confidence rating systems, the detailed situation that a mobile device may confront. They “use what a device wants and what it can obtain to depict the situation of the device when given a concrete interaction (transaction)” (Guo et al., 2018).

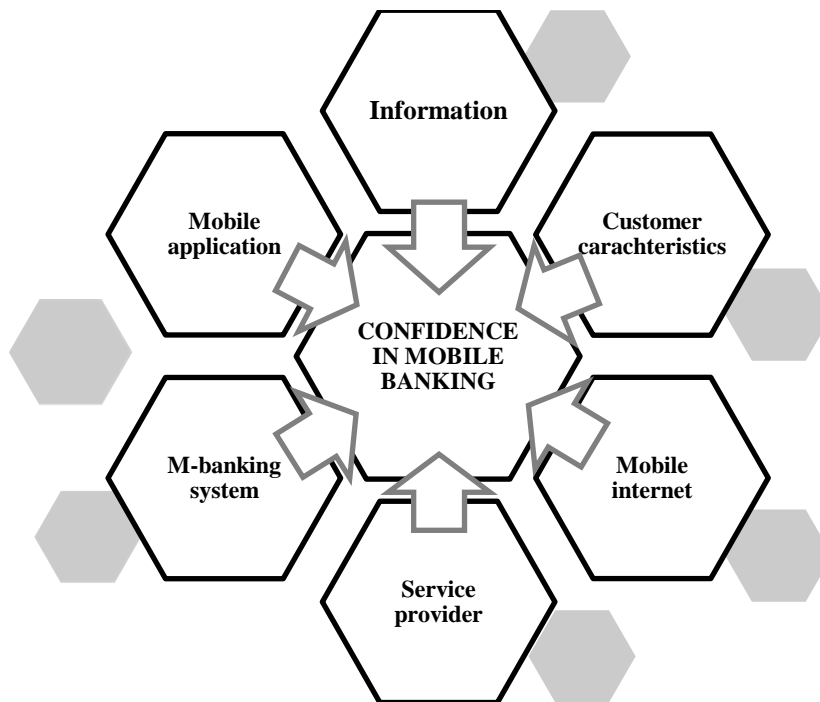
Summarizing recent researches in confidence in various types of banking, we can conclude the following. Sánchez-Torres, Canada, Sandoval and Alzate (2018) made an inclusive examination of customer confidence in e-banking and the influence of existing government guidelines on e-commerce in Colombia. The following factors hypothesized to build confidence in the use of e-banking has been proven to be significant: confidence, expected duration of work and expected workforce had a positive influence on the use of financial websites and the state support has not had a substantial effect. The main purpose of the study

conducted by Zhang et al. (2018) was to investigate whether consumer confidence in a trusted online company can influence their original confidence in a newly created “internet-only” bank that is related to the company. Their outcomes show that brand confidence in the internet company increases initial confidence in its affiliated “internet-only” bank. This, in turn, strengthens internet-only banking. In addition, these results show that brand trust in the internet company conveys the initial trust in “internet-only” banking through the expected duration of the activity and the perceived risk.

Salimon, Yusoff and Mohd Mokhtar (2017) examined the combined roles that comprehended utility, comprehended ease of use, comprehended security and hedonic motivation in the field of e-banking. . The aim of their research was also to identify the hedonic motivation to pass the effect of other e-bank acceptance factors. Empirical results have shown a significant and positive relationship between understandable utility, comprehended security and e-banking adoption. The similar results have been found between understandable utility, understandable ease of use, comprehended security and hedonistic motivation. Notwithstanding, the promotion was not identified between understandable ease of use and e-banking adoption. Hedonic motivation is important as a mediator between understandable utility, comprehended security and e-banking adoption. The investigation did not discover any the effect of hedonic motivation between understandable ease of use and e-banking adoption (Salimon et al., 2017).

Consequently, the recent researches proved the concept created by Skvarciany and Jurevičienė (2017b) for investigation of factors and sub factors influencing confidence in mobile banking and used in the current research.

**Fig. 1: Factors Influencing Confidence in Mobile Banking**



Source: according to Skvarciany and Jurevičienė (2017b)

The following sub factors of the factors distinguished above were marked out for the analysis (Skvarciany & Jurevičienė, 2017b):

- Information: transparency, quality, reliability
- Customer characteristics: propensity to confidence, age, social influence, computer literacy
- Mobile internet: internet existence, signal strength, internet quality, network coverage
- The service provider (bank): reputation, image, good customer service
- M-banking system: system benefits for a user, perceived benefits, perceived security, structural security, context offer, system quality
- Mobile application: perceived ease of use, convenience/practicality of using mobile application.

## **2 Research Methodology**

The purpose of the current study is to determine the weights of the distinguished factors leading to confidence in mobile banking building process. The area of the research is Lithuanian market. In order to achieve the goal of the research, expert evaluation method is used. The number of experts was selected according to Libby and Blashfield (1978) recommendations. The authors claim that the highest reliability level is reached when the number of experts vary from 5 to 9.

Hence, seven experts participated in the study. In order to process the data from the survey, the analytical hierarchy process (AHP) is used.

According to the selected method, experts compare all the alternatives (factors and their sub factors) provided for evaluation with each other by filling pairwise comparison matrices  $A = (a_{ij})_{n \times n}$ . For completion the matrices experts used the balanced scale developed by Salo and Hämmäläinen (1997). The scale has approximate values that are as follows: 1; 1,22; 1,5; 1,86; 2,33; 3; 4; 5,67; 9. Since the matrices are completed they are being tested for consistency. Pairwise comparison matrix is considered to be consistent if there is such priority vector  $\mathbf{w} = (\omega_1, \dots, \omega_n)$  that  $a_{ij} = \omega_i / \omega_j, \forall i, j$ . If the aggregated matrix is consistent, priorities are computed using the normalized geometric mean method.

### 3 Empirical Findings

For the purpose of getting the reliable survey results, the particular requirements were set for the experts. The requirements are as follows ( Skvarciany & Jurevičienė, 2017b):

- i. to have work or research experience in the banking sector for at least 4 years
- ii. to have at least a Master's degree in one of the following study areas: economics, econometrics, finance, management or business administration.

Overall, seven experts participated in the study and all of them satisfied the requirements that are presented above. The results of the expert evaluation are presented in the Table below.

**Tab. 1: Weights Given by Experts to Factors Having Impact on Individual Customers Confidence in Mobile Banking**

Factor	Weight
Information	0.132
Service provider (the bank)	0.178
Mobile internet	0.137
Mobile banking system	0.166
Mobile application	0.177
Customer characteristics	0.210

Source: authors' calculations

The experts ranked customers characteristics to the first position as the most powerful factor in the confidence-building process in mobile banking (Table 1). Hence, it could be stated that commercial banks need to take into account every consumer's individual characteristics in order to motivate them to use mobile banking. Actually, it would be worth for banks to divide customers into several groups with different priorities. It could help banks to systemize the needs of customers based on their characteristics. What is more, service provider (the bank) and

mobile application have almost the same weights, which show that they are equally important. In order to understand which customers' characteristics and which service providers and mobile application's determinants are the most crucial, the experts were given to rank not only factors but also the sub factors of confidence in mobile banking. The global priorities of the sub factors are presented in the table below.

**Tab. 2: Global Priorities of Sub factors Having Impact on Individual Customers' Confidence in Mobile Banking**

Factor	Sub factor	Global priority of sub factor
Information	Transparency	0.033
	Quality	0.031
	Reliability	0.063
Mobile internet	Internet existence	0.081
	Signal's strength	0.045
	Internet quality	0.052
	Network coverage	0.021
Service provider (the bank)	Reputation	0.034
	Image	0.045
	Good customer service	0.036
Mobile application	Perceived usefulness of mobile application	0.020
	Perceived ease of use of mobile application	0.023
Customer's characteristics	Propensity to trust mobile banking	0.033
	Age of user	0.042
	Social influence	0.023
	Computer literacy	0.025
Mobile banking system	System benefits for user	0.055
	Perceived usefulness of mobile banking	0.122
	Perceived security of mobile banking	0.044
	Structural security <sup>1</sup>	0.058
	Context offer <sup>2</sup>	0.043
	Mobile system quality	0.064

Source: authors' calculations

Analysing Table 2 it becomes clear that the most vital factor is perceived the usefulness of mobile banking. Despite the fact that this sub factor is a component of m-banking system factor that was ranked to be in the fourth position. It is obvious that if customers do not see the usefulness of using mobile banking, other factors and sub factor of confidence lose their sense as if a consumer does not understand the usefulness, he/she probably will not use mobile banking at all. Due to this, commercial banks in Lithuania have to prepare more information on the usefulness of mobile banking in order to motivate customers to use it. Regarding customers' characteristics, the most important sub factors according to the experts is the age of a user.

<sup>1</sup> Structural security – existence of legal technological structures ensuring the security of payments

<sup>2</sup> Context offer – a feature that offers customers optimum information and services based on their location and wishes

Actually, the younger the user is, the higher is his/her ability to adopt new technologies. Regarding mobile application, all sub factors have approximately equal weights. It could be explained by the fact that consumers will not use the mobile application if they do not understand its usefulness and if it is difficult to use. Actually, the usage of mobile application ought to be easier than the usage of online banking as only in this case the mobile banking has sense. Regarding the service provider, the image was ranked as the most vital factor of the group. However, there are factors which weights are higher than sub factors of the factors that were ranked for the first three positions. These sub factors are as follows: information reliability, mobile internet existence and quality, mobile banking's system structural security and quality. Based on these results, it could be stated, that quality is one of the most significant factors influencing consumers to use mobile banking.

## Conclusions

The article analyses the factors and their sub factors having an impact on individual customers in mobile banking. Based on scientific literature review six factors influencing clients' confidence were picked out by Skvarciany and Jurevičienė (2017b) and used in this survey: information, the service provider (the bank), mobile internet, mobile application, customers' characteristics, and the mobile banking system. The investigation was made in Lithuania. Expert judgement method was used in order to distinguish the most important factors/sub factors that could lead to a higher confidence level of commercial banks' individual clients. Seven experts participated in the survey, all of them matched the set requirements mentioned in part 3 of the paper. Distinguished factors and their sub factors were ranked by the experts. It was found that the most important factor determining individual customers' confidence in mobile banking is customers' characteristics. The most important sub factors of the factor "customers' characteristics" is the age of a user. Actually, the younger the user is, the higher is his/her ability to adopt new technologies and accept changes. However, the most vital sub factor is perceived the usefulness of mobile banking which belongs to m-banking system group. Actually, if consumers do not find the m-banking system as a useful tool for their transactions and other operations, they will not use the system despite all the other advantages.

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