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USABILITY OF MOBILE DISTRIBUTION CHANNEL FOR FINANCIAL SERVICES

Introduction

Last year there were a lot of empirical papers about factors influencing usage of mobile devices in financial services. Many models of ICT acceptance indicates the usefulness as a determinant of use also in context of financial services. Usefulness means the extent to which a person believes that using an ICT system will enhance their job performance¹. Each new distribution system for financial services creates a competitive advantage over previously used ones as it gives consumers new possibilities. The recent innovation, which is Internet banking, has given customers unlimited access to funds held in bank accounts, regardless of time and place. In the case of mobile banking an obvious advantage may be the option of paying with the device without any additional components, such as a payment card. In contrast to other distribution channels operation systems, mobile payment does not need to be made through a bank. Additionally there isn't a single mobile payment system which is limited to banking transactions with mobile devices. This constitutes both an advantage and weakness of mobile payments. What other usefulness can consumers expect from mobile banking? Mobile banking services should exploit the possibilities of mobile devices. A good example would be to use QR codes for bill payments without painstakingly inputting vendor data.

There is no doubt that an increase in use of mobile banking is associated with the popularization of the Android and IOS software in mobile devices. Both software systems for mobile phones and tablets have enabled the standardization of financial applications that anyone can easily install on their device. Most mobile

¹ L.K. Soon, L.H. Seok, K.S. Yong: *Factors Influencing the Adoption Behavior of Mobile Banking: A South Korean Perspective*. "Journal of Internet Banking & Commerce", aug. 2007, tom 12, No. 2, Business Source Complete.

banking solutions are a part of the Internet banking system. Using Internet banking is a prerequisite for using mobile banking. The number of active consumers using internet banking in Poland equaled 11.4 million at the end of 2012². In the case of several Polish banks total downloads of mobile applications exceed a hundred thousand. Estimates indicate that mobile banking applications can be actually used by approximately one million Poles³.

1. Theoretical background

The studies of perception of the Internet as a sales channel revealed many factors that affect the behavior of buyers.⁴ Most of these were used in internet technology acceptance models trying to explain the propensity to use ICT⁵. Among them, especially important for mobile banking seem to be a relative advantage, perceived risk and trust. The study emphasized the importance of such factors as time savings, convenience, transaction costs, perceived usefulness and perceived ease of use. Research shows that the costs and benefits affect the intention of using mobile banking⁶. The simplest benefit may be convenience, cost security. Other studies reveal that intention of usage mobile banking is determined by attitude toward mobile banking and perceived behavioral control. The attitude is dependent on relative advantage and complexity⁷. For the perceived behavioral control self-efficacy was significant. In the conceptual model seven factors influencing the intention of using mobile banking were defined, and they were the following ones: perceived usefulness, perceived ease of use, subjective norms, self efficacy, perceived cost, security and trust⁸. Subjective norms referred to perception of

² *Bankowość internetowa i płatności bezgotówkowe. Podsumowanie IV kwartału 2012 roku. Raport.* The website Polish Bank Association: <http://www.zpb.pl>.

³ The website of the Inspector General for the Protection of Personal Data: <http://www.giodo.gov.pl>.

⁴ M.K. Chang, W. Cheung, V.S. Lai: *Literature Derived Reference Models for the Adoption of Online Shopping*, "Information & Management" 2005, Vol. 42, p. 545.

⁵ *Wpływ technologii informacyjnych i komunikacyjnych na zachowania konsumentów – stadium empiryczne.* Red. R. Mąciak. Wydawnictwo UMCS, Lublin 2011, pp. 27-32.

⁶ S. Yung-Cheng, H. Chun-Yao, C. Chia-Hsien, H. Chih-Ting: *A Benefit-cost Perspective of the Consumer Adoption of the Mobile Banking System*. "Behaviour & Information Technology" September-October 2010, Vol. 29, No. 5, p. 505.

⁷ A.R. Beiginia, A.S. Besheli, M.E. Soluklu, M. Ahmadi: *Assessing the Mobile Banking Adoption Based on the Decomposed Theory of Planned Behaviour*. "European Journal of Economics, Finance and Administrative Science" 2011, Iss. 28, p. 14.

⁸ S. Singh, V. Srivastava, R.K. Srivastava: *Customer Acceptance of Mobile Banking: A Conceptual Framework*. "SIES Journal of Management" April-August 2010, Vol. 7(1), p. 58.

other people's opinions whether a person should perform particular behaviour. In other studies, the authors tested the model consisting of eight factors affecting the intention to use mobile banking; four of which have a negative impact on the usage of mobile banking, while the other four were positive. The factors negatively correlated with the intention to use mobile banking were: device barrier, perceived risk, lack of information and perceived financial cost. The positive factors contained: subjective norm, perceived usefulness, perceived ease of use and self-efficacy⁹. Perceived financial cost was defined as the extent to which a person believes that they have enough money to pay for the system. The study also revealed that the factors influencing m-banking may differ in different countries. The main factors which were similar for most countries were perceived usefulness and lack of information¹⁰. Further studies emphasize the importance of usefulness for the intention to use mobile banking, but also indicate mobile experience and technical support as a source of intention to use mobile banking.¹¹ Customers experience and high level technical support directly affect people's intention to use mobile banking technology.

It is worth noting that some studies show equal perceived usefulness of internet banking and mobile banking¹². However the two distribution channels differ in the perceived cost, perceived credibility and perceived ease of use. Attitudes toward internet and mobile banking are also different¹³.

2. The aim of the research and research methodology

The aim of this study was to characterize the frequent usage habits of mobile banking in relation to other distribution channels. The research was also designed to test the perception of new possible usefulness of mobile banking and the factors determining the use of different distribution channels for financial services among users and non-users of mobile banking. The purpose of the study was to answer the following questions:

⁹ J. Sripalawat, M. Thongmak, A. Ngramyarn: *M-banking in Metropolitan Bangkok and a Comparison with Other Countries*. "Journal of Computer Information Systems" Spring 2011, p. 67.

¹⁰ *Ibid.*, p. 74.

¹¹ Chung N., Kwon S.J.: *The Effects of Customers' Mobile Experience and Technical Support on the Intention to Use Mobile Banking*. "Cyberpsychology & Behavior" 2009, Vol. 12, No. 5, p. 542.

¹² Khan M.Z.A., Khan S.: *Internet Versus Mobile Banking: A Study of Peshawar City (Pakistan)*. "Journal of Internet Banking and Commerce" December 2012, Vol. 17, No. 3, p. 11.

¹³ *Ibid.*, p. 10.

- RQ1. How does the frequency of use of different distribution channels differ among people using and not using mobile banking?
- RQ2. How do people use mobile banking in the financial services?
- RQ3. What factors influence the use of mobile banking, internet banking and bank branches?
- RQ4. What usefulness of mobile banking can be expected by its users?
- RQ5. How do different characteristics of users determine the intention to use mobile banking?

The study was conducted using a standardized questionnaire and quantitative method. The printed questionnaire was self-completing by tested persons. The questionnaire consisted of thirteen questions that were mostly grid composed and eight demographics questions. The five-point Likert scale was used to compare different distribution channels. Sample has been selected purposely in order to select people using internet banking. Data analysis was conducted using SPSS software. A total number of 162 people were investigated, 40 of whom used mobile banking. 57% of the surveyed people were under the age of 24, 23% aged 25-34, 20% aged over 35. 62% of the surveyed were women, 38% men. The data were collected between February and April 2013.

3. Preliminary research findings

RQ1. The questioned declared that they mostly use online banking, ATMs and payment cards. The dominant frequency of usage in all these cases is 2-3 times a week. Among the respondents the largest percentage of people do not use the virtual branch at all (92%), cash deposit machine (67%), mobile banking and call centers. People using mobile banking compared to all the surveyed people declare a higher frequency of use of payment cards (the dominant answer was daily) and mobile banking (dominant answer was 2-3 times a week). The higher frequency of use also applies to the Internet channel and ATMs. In these cases, however, without altering the most common indications. A small percentage of people using mobile banking declare that they don't use a specific banking services distribution channel, which may indicate a bigger diversity of ways to use financial services by this group of people. Mann-Whitney test confirmed a significantly higher frequency of use online banking, ATMs, payment cards, cash deposit machines, virtual branches and of course mobile banking by people using mobile banking (compared to non-users). It may suggest that a more active user of financial serv-

ices often use a variety of distribution channels for financial services, including mobile banking.

RQ2. Among the respondents declaring the use of mobile banking the highest percentage use such functions as: checking accounts, transferring money from accounts for bills and paying for purchases in a shop (Table 1). It is worth noticing that only a few types of mobile banking transactions are used by more than half of its users. The most frequently used possibility is to check accounts via mobile devices.

Table 1

Types of transactions made by mobile banking users

| Type of transaction | Percentage of people using this type | Dominant Frequency | 75th percentile of frequency |
|--|--------------------------------------|-------------------------|------------------------------|
| Transferring money from accounts for bills | 62,5 | Once a quarter or less | Once a week |
| Checking accounts | 90 | Two, three times a week | Two, three times a week |
| Repayment of credit card | 20 | Once a month | Once a month |
| Cash loan | 5 | Once a quarter or less | Once a quarter or less |
| Opening deposit account | 27,5 | Once a quarter or less | Once a month |
| Topping-up a mobile phone | 42,5 | Once a month | Two, three times a month |
| Paying for purchases in store | 45 | Once a quarter or less* | Two, three times a week |
| Withdrawal from an ATM without a card | 20 | Once a quarter or less | Two, three times a month |
| Money transfer to another phone | 35 | Once a quarter or less | Once a month |

* There are a number of modal frequencies; the lowest of them is given

In some cases, low frequency of using mobile banking is a result the specificity of the product. Not all of the functions of mobile banking listed in the table are available in each bank. Some of the options listed in the table have been launched recently. A relatively new product available at the some mobile banking systems, is the ability to withdraw from an ATM using a mobile phone. Even though this option was launched less than a month ago, some of respondents use this feature.

RQ3. In order to investigate the perceived differences of questioned people to typical distribution channels (Internet, branches, mobile) it was used five-point Likert scale consisting of 11 statements. Statements included assessment of various factors affecting the perception of financial services distribution channels. These included eg. assessment of convenience, safety, cost of using channel. Analysis of the reliability of scales was made by a coefficient α . The reliability Lik-

ert scale for mobile banking was $\alpha = 0,61$, internet banking $\alpha = 0,74$, branches $\alpha = 0,69$. Differences in the perception of distribution channels presents Figure 1.

There are significant differences in the perception of branches versus internet and mobile banking as regards comfort, ease of use, time consuming, cost and predicted frequency of use. In all these cases, the perception of the internet and mobile banking is more favorable as a bank branch. The situation is reversed in terms of perceived safety and specific skills. Bank branches does not require special skills and are perceived as a more safe. The perceived differences between internet banking and mobile banking are much smaller. Dependent sample t-test showed significant differences in the case of security, providing by a bank the necessary information and perceived group of users of the channel. Mobile banking is perceived as even less secure than internet banking, less adapted to the older people needs and insufficiently communicated by banks compared to internet banking. There is no obvious advantages mobile versus internet banking. This may be a problem for the broader popularization mobile banking.

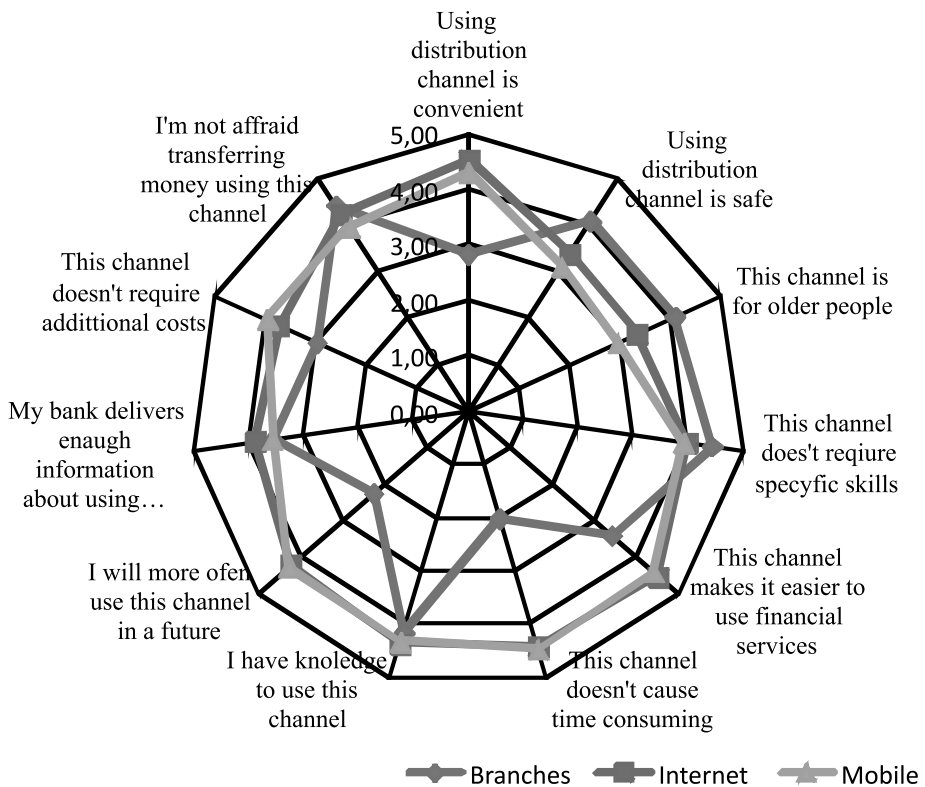


Figure 1. Perception of different financial service distribution channel

Using the same scale to compare assessment of internet banking and bank branches by users and not-users mobile banking it can be find significant differences. People using mobile banking asses worst convenience and time consuming in the case of branch banking than not-users mobile banking. Internet banking assessment differ with respect to safety and fear of transferring money. People which don't use mobile banking asses worst safety and afraid much more transferring money using internet banking than people using mobile banking. Bearing in mind the above, it should be underlined that safety may be key factor influencing on usage internet banking and then mobile banking.

RQ4. Among all the surveyed people most expected functionality of mobile banking is the ability to make NFC mobile payments for purchases in store. Other expected features are presented in Table 2.

Table 2

Expected functionality of mobile banking*

| Description | Average |
|--|---------|
| Withdrawal from an ATM without a card | 3,13 |
| Money transfer to another phone number which can be used as wallet | 3,37 |
| Saving a receipt on mobile phone while paying for purchases | 3,52 |
| Using QR codes for bill payments without painstakingly inputting vendor data | 3,40 |
| Transferring money to another phone via NFC | 3,01 |
| NFC mobile payments for purchases in store | 4,00 |
| Money transfer to online shop from mobile device | 3,38 |

*Five-point Likert scale.

Interesting proposals accepted by interviewed to a large extent concerned the using QR codes for bill payments and saving on mobile device receipt while paying for purchase. Both solution give an advantages mobile banking using the possibilities given by the mobile device. Among the researched people accepted proposals were also people who do not use mobile banking, and for which the proposed solution can be a source its competitive advantage. Independent sample t-test showed significant differences in expected functionality of mobile banking. Test revealed that people using mobile banking have a more positive attitude to almost all of the proposals. Only in the case “saving a receipt on mobile phone” there is no significant differences between mobile banking users and non-users. It may be a new feature that will increase interest in mobile banking. People not using mobile banking have the negative attitude (score below average) only towards to the proposals “transferring money to another phone via NFC”. Perhaps this solution is seen as a very risky by them.

RQ5. There are no significant differences in the propensity to use mobile banking according to age or to assess their financial situation. Chi-squared test doesn't show a significant difference. Mann-Whitney test does not show a significant difference in acceptance mobile, depending on the financial situation, the time of use of the Internet or mobile device. The only one significant factors that influence the tendency to using mobile banking is declared by the respondents attitude to market novelties. Mann-Whitney test confirmed a significantly higher frequency of using mobile banking by people with more positive attitude to novelties.

Conclusion

Usability of mobile distribution channel for financial services determine the competitive advantages of this distribution channel for financial services. The respondent declared that they mostly use online banking, ATMs and payment cards. Among questioned people about 25% declared using mobile banking applications. Such persons use other sales channels for financial services more frequently and more intensively. The most popular functions using by mobile banking customers were checking accounts and transferring money from accounts for bills. The new opportunities for the use of mobile banking, such a withdrawal from an ATM without a card, rapidly gaining attention. Mobile banking is perceived as insecure, even more then internet banking. People do not use for this reason online banking will not be interested in mobile banking. The mobile banking users worse assess the information received from banks on mobile banking in comparison to information about other channel distribution. Among all the surveyed people most expected functionality of mobile banking is the ability to make NFC mobile payments for purchases in store. As an attractive possibility is assessed this function also by people who do not use mobile banking today. It is worth noting that many of the respondents, even young people do not know what is a mobile banking and how to use it. They often do not understand what opportunities it offers and how it differs from online banking. It should be emphasized the need of educational communication activity of banks. The study confirmed a significantly higher frequency of using mobile banking by people with more positive attitude to novelties.

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Summary

The paper presents results of the studies users of mobile banking. The research confirmed that users of mobile banking use other sales channels for financial services more frequently and more intensively. The most popular functions using by mobile banking customers were checking accounts. Mobile banking is perceived as insecure, even more than internet banking. The most expected functionality of mobile banking is the ability to make NFC mobile payments for purchases in store.

Keywords: mobile distribution, channel, financial services