Abstract

One of the main application areas of mobile payment services in Sweden is retailing. The main stakeholders involved in this service are mobile payment service providers, banks, merchants, and consumers. The main focus of this paper is on the change of expectations of different stakeholders taking part in service provisioning. Analysis has been performed by comparison of the initial expectations before the introduction of a mobile payment service and expectations after practical experience of the service usage. Three cases of mobile payment solutions for retailing have been investigated: BART provided by Swedbank, SEQR provided by Seamless, and a service provided by Payair.

The analysis indicates that a number of expectations of stakeholders about mobile payment services did not come true. The results for the different cases differ but the main findings are: banks were excluded from direct service provisioning; merchants see some advantage to deploy mobile payment, but are uncertain which solution will be a dominant in the market; consumer expectations of improved purchasing experience and usefulness are not met. The performed analysis also helps to identify some of the reasons that can be seen as obstacles for a wider penetration of mobile payment services.

Keywords: Mobile Payment Services, Stakeholders, Stakeholder Expectations, Retailing, Merchants.
1 Introduction

One of the main areas of mobile payment application in Sweden is retailing. These are solutions applied for payments at point of sale (PoS) terminals. Traditionally, implementation and deployment of mobile payment solution involves participation of different stakeholders, such as mobile network operators, banks, mobile payment solution providers, merchants, and consumers.

It needs to be mentioned that in Sweden mobile network operators have mainly been focused on SMS payments and tickets for public transport, leaving retail industry out of their interest. Mobile payment solutions for shops and restaurants have been provided by start-up companies and banks, for example: Seamless, Payair, PayEx, and Swedbank. A number of retailers, restaurant chains, and online shops have tried and deployed solutions provided by the mentioned companies.

Different stakeholders (merchants, retailers, and consumers) have different expectations when they select to deploy and use mobile payment solutions. Hence, the main research question of this paper is:
• How do expectations of mobile payment service for retailing change over time for different stakeholders?

The objective of this paper is to contribute to a better understanding of expectations of different groups of stakeholders that affect acceptance of mobile payment and its penetration in the market.

The paper is organized as follows: the literature review is presented in the next section of the paper. The methodology, data collection methods, research approach, and analysis framework are presented in the third section. Then an overview of results and findings is given. Finally, we discuss different aspects of stakeholders’ expectations about mobile payment.

2 Literature Review

Mobile payments have been analyzed from different perspectives. In this section, the overview of literature sources is focused on researches dedicated to mobile payment stakeholders and different aspects of their expectations of the service.

A study that is the most relevant to the current research has been performed by Au and Kauffman (2008). Researchers have developed a theoretical framework for analysis of mobile payment industry and involved stakeholders. They have specified the following mobile payment stakeholder categories: (i) technology producers; (ii) sellers (merchants) or business intermediaries; (iii) end-users, consumers, buyers; and (iv) government and regulators. In addition, a number of economic theories are incorporated into their model and are related to different stakeholders: (i) consumer demand and choice in the process of maximizing utility, and the technology acceptance model (TAM) that is common in analysis of “ease of use, usefulness and usage” of mobile payments for consumers; (ii) network externalities explaining “value creation in the networked economy”; (iii) switching costs of services that are factors explaining customers loyalty to a brands and resistance to change existing service provider; (iv) complimentary goods when increasing demand of one increases demand for the other; (v) information technology value that companies sometimes cannot fully achieve; (vi) economics of technology adoption and diffusion in the market depends on such aspects as “market structure, firm size effects, when to launch a technology product, and the period for return on investment”.

It is possible to specify a big number of empirical studies looking into analysis of factors affecting the acceptance of the mobile payment by consumers applying TAM model and its extensions ( Constantinou et al., 2006; Goeke and Poutschi, 2010; Kim et al., 2010; Shin, 2009; Wu and Wang, 2005). Overall, the contribution of these studies is in identification and quantitative test of factors affecting the intention to use mobile payments. The most commonly tested factors are perceived ease of use of the
service, trust in mobile payment service provider, perceived risks, perceived security, perceived usefulness, and cost of the service. Schierz et al. (2010) when testing the “perceived compatibility” factor of the TAM model have identified that this factor has a substantial effect on customer intention to use mobile payment services. Specifically, finish researchers (Mallat et al., 2009) were looking into adoption of mobile ticketing and have specified the following factors affecting service adoption: ease of use, perceived usefulness, compatibility, mobility, and use context.

Relatively smaller set of studies is dedicated to acceptance of new payment solutions by retailers. The most important acceptance factors are relative advantage, compatibility of the solution with the existing infrastructure, return on investment (ROI), network externalities and critical mass, security, service complexity, and personnel learning costs (Mallat and Tuunainen, 2005; Van Hove, 1999).

Mobile payments can be seen as a platform providing different mobile services and bringing together two groups of users: retailers or merchants (as service providers) from one side and customers from another side. These two different groups are linked to each other by the network effect phenomenon and represent a two-sided market (Eisenman et al., 2006). Hence, availability of ubiquitous infrastructure is one of the most critical factors for the wider penetration of an innovative payment solution. In terms of the theory of network externalities, mobile payment is an example of “network goods” and deals with an infrastructural dilemma or the “chicken and egg” problem (Van Hove, 1999). On one hand, merchants are not willing to invest in the development of infrastructure without critical mass of consumers, however, consumers will not adopt mobile payment substituting currency if it cannot be used everywhere (Mallat, 2007).

Furthermore, a change of one payment method to another implies service switching costs. They affect different aspects of the service like compatibility with existing devices; transaction and economic costs which appear when switching suppliers like new service activation fees; costs of learning to use a new service; uncertainty about the quality of a new service or a brand; and psychological costs of switching (Klemperer, 1995).

However, there has been implemented a limited amount of studies addressing problems of organizational technology acceptance in the mobile payment, m-commerce, and related areas. So, obstacles to the adoption of business-to-business applications using the example of e-markets are explored in works implemented by Johnson (2009; 2010). The author has specified the following barriers: risk perception, lack of knowledge, trust, the size of a firm, and readiness of organization to adopt a new service.

An example of study of expectations of some groups of stakeholders (mainly customers) have been presented by Lidén and Edvardsson (2003). Authors have investigated customer expectations on service guarantees in the public transport in Stockholm. The study confirmed that consumer expectations are affected by the situation in the industry, service characteristics, and the service guarantee. Johnson and Fornell (1996) have investigated “consumer expectations, perception of performance, and satisfaction for bank loans”.

The main contribution of the revised literature is in its provided insights about the expectations of different stakeholders. This was used and applied in the development of the research framework.

3 Methodology

A qualitative method utilizing the multiple case study approach has been used for the research. Hence, the main data collection methods have been interviews, questionnaires, and observations (Eisenhardt, 1989). The selection of a case study approach can be justified by an opportunity to perform analysis on different levels, for example, within case and cross-case analysis (Eisenhardt, 1989; Yin, 1984).

The analysis has been focused on a set of mobile payment solutions for retail that are available in Sweden. They are SEQR, Bart, and Payair. Accordingly, retailers that use these solutions have been selected for case study analysis.
3.1 Data Collection

Both secondary and primary information has been used. The secondary information in the form of press releases, web sites, and other types of sources has served as a background for understanding the overall situation in the market (a desk-top research stage).

Primary information has been collected in different ways. Several events dedicated to retail have been attended (e.g., Retail day 2013 (Retaildagen) and Retail Forum 2013). In 2014, in-depth personal interviews with top-level managers representing companies participating in the selected cases have been carried out. The companies are Axfood, the third largest retail network; mobile payment providers Seamless and SwedBank. Each interview lasted between one hour and hour and a half. The interviews were recorded and later transcribed. The discussed questions were related to initial expectations that these stakeholders had before the service deployment and roll out, and what were the outcomes of the service deployment. Moreover, a questionnaire covering similar themes has been sent to a number of retailers including McDonalds, a fast-food restaurant chain; Davids, an e-shop; and others.

3.2 Research Approach and Analysis Framework

In order to identify expectations of different groups of stakeholders involved in a provisioning of mobile payments, a conceptual framework used by Weinberg and Garnsey (2010) has been adapted and applied for the research purposes. The above mentioned researchers have used this framework to study expectations of different stakeholders participating in merges and acquisitions of small firms. One of the benefits of the framework is the opportunity to reflect a change of expectations in time.

Main dimensions of the framework have been identified while performing literature review and during interviews with representatives of different stakeholders. The main groups of mobile payment stakeholders for services applied in retail industry are mobile payment service providers, banks, merchants (e.g., retail and restaurant chains), and consumers. Expectations of these stakeholders regarding introduction of mobile payment were used as initial research assumptions (see Figure 1).

Private sector companies (i.e., mobile payment providers, banks, and merchants) perform in the competitive market environment. Analysis of this dynamic and uncertain environment and development of a strategy become a background for development of “expectations about future value of strategy” and “strategic resources” (Barney, 1986). The most common expectations of strategy implementation are following: improved efficiency, uniqueness of a product or provided service, profit maximization, and financial strength (Barney, 1986). This was also confirmed in interviews with representatives of different stakeholders (mobile payment providers, banks, and merchants).

Hence, based on literature insights and the information received during the interviews, we propose the analysis criteria for the stakeholders in the focus. Mobile payment service providers expect a successful application of new technology (Technology); increasing network of merchants accepting the payment with increasing number of consumers (Network); and Return on Investment (ROI) regarding a developed solution.

Banks expect that mobile payments are an opportunity to diversify into new markets and to attract new consumers by an increased range of services (Growth); and to gain competitive advantage because of a provisioning of a new service.

Expectations of merchants regarding mobile payments can be defined by the following criteria: a developed infrastructure of mobile payment and sufficient number of consumers (Network); a smaller money transaction fee (Cost); ROI in case if an initial investment into mobile payment solution deployment is needed; competitive advantage because of a provisioning of a new service; expectations that the adopted solution will be a dominant market leader (Market dominance of solution); compatibility with existing technology; easy-to-use solution that does not require too big installation,
registration, and learning costs; and improved purchasing experience because of a convenient service, a quicker and easier purchasing process, and time-saving on queuing.

Finally, a concept of customer expectations can be defined as “pre-trial beliefs about a product … that serve as a standard or reference points against which product performance is judged” (Zeithaml and Parasuraman, 1993). In their article researchers argue that customer expectations on a service exist in two levels: a desired level as a service “should be”, and an acceptable level of a service, or an adequate service. “The difference between desired service and the level of service considered adequate” (Ibid) represents the zone of tolerance or a range of acceptable service levels.

The expectations of consumer have been identified using results of the previous studies based upon TAM model, theories of network externalities, and switching costs (Au and Kauffman, 2008; Goeke and Pousttchi, 2010; Kim et al., 2010; Mallat et al., 2009). The following criteria have been identified: a developed service infrastructure (Network), a small or zero service transaction fee (Cost); compatibility of the service with handsets; easy-to-use solution that does not require too big installation, registration, and learning costs; improved purchasing experience because of a convenient service, a quicker and easier purchasing process, and time-saving on queuing; and added value services and functionality of a solution (Usefulness of service).

These initial expectations of different stakeholders have been used as a starting point ($t_0$) and compared against the outcomes of mobile payment solution introduction ($t_1$), as presented in Figure 2. This will allow identifying and comparing a change in stakeholder expectations. Several cases of mobile payment application in retail industry have been analyzed using the proposed analysis framework. Results and findings are presented in the next section of the paper.

4 Results and Findings

A number of developed mobile payment solutions for retail are available in Swedish market. In this paper the main focus will be on Bart, SEQR, and Payair services.
4.1 Case of BART

4.1.1 Background Information

Bart is a mobile payment solution dedicated to retail. The service was introduced by Swedbank in 2011–2012. At the same period of time a number of meetings with Swedbank representatives took place. Bank representatives considered a clear strength of this solution the fact that transfers and payments were directly linked to customers’ bank accounts. In addition, this service was open: it was possible to register credit cards issued by other banks. This was considered as an added value to customers and a low barrier to start using the solutions. Hence, bank was expecting strong relations with consumers from one side, and direct relations with retailers and restaurants from another side.

In November 2012, Axfood, the third largest retail chain in Sweden, started a pilot project trying Bart solution in three shops in Stockholm (Axfood, 2012; Swedbank, 2012). By April 2013, the service was installed in 400 Axfood’s stores all over Sweden (Swedbank, n.d.).

However, in January 2014, Swedbank announced about closing of Bart service (SvD, 2014). By that time, the number of service users has reached 20,000. The size of investment in the service by Swedbank was not disclosed.

4.1.2 Analysis of Stakeholders’ Expectations

The change of stakeholders’ expectations over time is illustrated in Figure 3. In this case, many expectations of involved stakeholders proved to be wrong.

Figure 3. Snapshots of expectations of stakeholders involved in Bart mobile payment provisioning over time.

Swedbank did take several roles: a mobile payment service provider and a bank, so expectations of both stakeholders’ groups were combined. Despite initial expectations, not so many consumers were using the service, meaning wrong expectations about growth of the market share. Moreover, the number of mobile payment transactions was low. The only merchant that deployed the solution was Axfood. Due to the fact, that actual deployment of the service took quite a long time since its announcement by banks (approximately three years), many retailers interested in the solution took “wait and see” position. This means wrong expectations about the growth of merchant network. Bank’s expectations about ROI were also wrong: the bank invested into the service and its deployment
at Axfood, but the service was closed. Potentially, Bart could be a source of a competitive advantage for the bank serving as an instrument for a development of own network of merchants and consumers. However, the decision to close the service means an unfulfilled opportunity that can be indicated as a change in expectations.

Expectations of Axfood about growth of network and increasing number of users were wrong. The ceased Bart service means wrong expectations about ROI, competitive advantage, and expectations that the adopted solution will gain dominance in the market (Market dominance of solution). There is a change of expectations regarding improved purchasing experience and ease of use of the solution: personnel and consumers had problems using the service. Other expectations of Axfood remained unchanged, they are a smaller money transaction fee (Cost) and compatibility with existing technology.

Consumer expectations about development of merchant network and easiness of usage were wrong. Bart did not provide improved purchasing experience. Due to the fact that the solution functioned as a bank card in the mobile phone, there is also a change of expectations about its usefulness to consumers.

4.2 Case of SEQR

4.2.1 Background Information

Since spring 2012, SEQR service, developed by Seamless, can be used for payments in a number of different shops, e-shops, and restaurants using QR-codes (Seamless, 2012; Sellebråten, 2013). The solution can be used free of charge and is not linked to any bank account or card, hence, there is no dependence on consumers’ affiliated banks. In order to use the service, users have to register a credit account at Collector (Seamless, 2012). This financial service company handles all questions related to payment transfers and issues monthly bills to the consumers. In 2013, SEQR mobile payment solution was integrated with one of the most popular cashier systems LS Retail (Seamless, 2013b). This means that SEQR can be used without installation of additional equipment in shops.

Currently, the network of retailers accepting payments via SEQR is growing. As an example, this mobile payment solution was introduced in McDonald’s, a chain of fast-food restaurants. During summer 2012, SEQR was tested at four restaurants in Stockholm (Seamless, 2013a; Thoresson, 2012). The pilot project was successful, and in March 2013 Seamless and McDonald’s reached an agreement about the introduction of SEQR service in other chain’s restaurants in Sweden. Currently, mobile payment service is rolling out.

4.2.2 Analysis of Stakeholders’ Expectations

Figure 4 illustrates the change of stakeholders’ expectations over time. The main change is related to the fact, that SEQR solution is independent on banks. As a result, this group of stakeholders has been excluded from the service provisioning process. A new stakeholder – financial service company Collector – handles financial transactions and billing. For this company mobile payments provide an opportunity to attract and serve new consumers (Growth).

Seamless expectations have remained the same. The company actively improves existing solution, develops network of merchants by attracting such big market players as McDonald’s, and is expecting to increase ROI.

There are some changes in expectations of McDonald’s. Decision to deploy SEQR was affected by overall trend in the market. Overall, SEQR meets company’s expectations. Due to the fact that deployment of SEQR does not require investment and there is no need to upgrade PoS terminals, the company was not concerned about ROI and about a developed infrastructure of mobile payment and
sufficient number of consumers (Network). It needs to be added, that the user base is too small yet, and mobile payment accounts for a very small share of transactions.

Figure 4. Snapshots of expectations of stakeholders involved in SEQR mobile payment provisioning over time.

SEQR provides a lower cost per transaction compared to credit/debit cards, and by that meets expectations of the company. Several competitive advantages are a perception of the company’s brand as modern and learning how to accept mobile payments. There is some degree of uncertainty about the opportunity of SEQR to take a dominant position in the market. McDonald’s will decide later if it stays with this solution. The SEQR solution is compatible with existing technology and does not require to upgrade PoS terminals, hence, it is easy from an integration point of view. The solution is easy-to-use for personnel. However, it is difficult to say that it improves purchasing experience, since it is just another way of paying.

SEQR in most of the points meets the expectations of consumers. However, it does not provide improved purchasing experience and additional value services to users (Usefulness).

4.3 Case of Payair

4.3.1 Background Information

A mobile payment service developed by Payair uses QR-codes for payment transfers. The mobile payment application is directly linked to the bank accounts of the users. In 2013, Payair was integrated with cashier system Cash IT (Payair, 2013a). Hence, it can be used at all types of shops.

Some retailers and online shops use this solution. For example, Davids, a Swedish electrical retailer, introduced this mobile payment solution on its online shop in January 2013 (Payair, 2013b). By this step, company expects to make a purchase process quicker and easier (Payair, 2013b).

4.3.2 Analysis of Stakeholders’ Expectations

The change of stakeholders’ expectations over time is presented in Figure 5. It is possible to state that Payair expectations have remained the same. The company actively improves existing solution, develops network of merchants by attracting new ones, and is expecting to increase ROI.
In this mobile payment service, the main function of banks is to manage bank accounts of existing consumers. Hence, banks expectations about growth of their market share, opportunity to attract new consumers, and competitive advantage can be considered wrong.

Davids' decision to deploy Payair was affected by expectations to gain a competitive advantage: first of all, that was seen as an opportunity to access new consumer segments that use this technology for quick spontaneous purchases; secondly, this solution provided an easier order placement (Easy-to-use); and finally, marketing value of joining new mobile payment solution. The later target has been reached, the company gets attention of different media, but the number of mobile payment transactions has been disappointing so far (Network). That is why Davids is not planning to invest more time or money in to any new mobile payment solution until there is a clear market leader (Market dominance of solution). Integration of mobile payment solution was mainly financed by Payair, so, the company was not concerned about ROI.

Payair mainly meets the expectations of consumers. However, it does not provide improved purchasing experience and additional value services to users (Usefulness).

### 5 Discussion

Expectations of different stakeholders involved in mobile payment services and change of these expectations were illustrated using the three cases of mobile payment applied in retail industry in Sweden. In general, many stakeholders select to develop or adopt mobile payment solutions because of the common trend in the market and a need “to do something in the area”. One of the cases (Bart) can be associated with wrong stakeholders’ expectations regarding the payment solution. The rest two cases are examples of more successful solutions that mainly meet expectations of stakeholders.

Expectations of mobile payment providers Seamless and Payair have not changed. These companies utilize the new technology, look into extension of the merchant network, and ROI of the solutions. In the case of Bart, Swedbank, as a service provider, did not manage to develop a bigger network of merchants. The expectation on ROI proved to be wrong as well.

Overall, it is possible to state that banks have wrong expectations about possible value and benefits of mobile payment solutions implemented in retail industry. In the case of SEQR and Payair, banks do not directly participate in the service provisioning. In the case of Bart, expectations proved to be
wrong for Swedbank: (1) there was not that quick growth of number of users and number of transactions; and (2) there is a question about real competitive advantage that this solution could propose. Indeed, there was some scepticism about Bart and its value for retailing. Due to the fact that the solution performed as a credit card on mobile phone, it is difficult to justify its value when it is possible just to use a credit card.

Mobile payment solutions meet expectations of merchants in a number of aspects, for example, the cost of money transaction is lower compared to bank cards. In addition, solutions are mainly compatible with existing technology, and do not require additional infrastructure or upgrade of PoS terminals (SEQR), or can be integrated as online payment (Payair). However, Bart solution required additional installation of PoS terminals. Adoption of SEQR and Payair solutions proved that they are easy-to-use solutions and do not require too big installation, registration, and learning costs. But this was not the case for Bart. Merchants are also not concerned about ROI since they do not invest into mobile payment solution deployment. Some merchants also see some competitive advantage of mobile payment deployment, but not all their expectations have been fulfilled.

However, merchants are expecting a more developed network of mobile payment, a bigger number of service users, and increasing number of mobile payment transactions than it is now. The small consumer base is the major disappointment for all analyzed mobile payment solutions. Merchants also have doubts if the adopted solution will be a dominant market leader. There are also some doubts if mobile payments provide an improved purchasing experience.

One of the major expectations of consumers that has not been addressed so far is improved purchasing experience. Existing mobile payment solutions provide just a payment functionality. They do not provided added value services, such as loyalty programs, enhanced consumer guidance in the shop, shopping advices or similar services. Bart solution highlighted the following wrong expectations: underdeveloped service infrastructure, problems using the solution, and usefulness of service that is a replacement of a payment bank card.

6 Conclusions

The purpose of this paper is to analyse and track a change of expectations of different groups of stakeholders taking part in mobile payment solutions applied in retail industry. The identified stakeholders are banks, mobile payment solution providers, merchants, and consumers.

Analysis has shown that one groups of stakeholders – banks – had wrong expectation regarding benefits of mobile payments applied in the retail industry. Moreover, banks are excluded from direct service provisioning. Expectations of mobile payment providers have mainly been proved, with exception of the ceased Bart solution.

There are some changes in expectations of merchants. Despite the fact, that merchants see some benefits of deployment of mobile payment service, they expect an increase in a number of mobile transactions and number of consumers using the service. At the same time, retailers are not sure if the selected mobile payment solution can take the dominant position in the market. Decision if they stay with the deployed solution is postponed for the future.

The most interesting case is the case of Bart. This is an example where the most of stakeholders’ expectations proved to be wrong. The solution failed to provide potential competitive advantage to the service provider (Swedbank). This can be explained by a number of factors: long deployment time, small network or merchants, not easy-to-use solution for personnel and consumers, small consumer base, and small number of transactions.

Discussed mobile payment solutions do not meet the expectations of consumers about improved purchasing experience. In order to attract more end-users and reach a bigger penetration, mobile payment solutions applied in the retail industry should provide additional services and value that would approve their usefulness.
Moreover, in the situation when there are several mobile payment solutions serving for the same objective (e.g., retail), a wider penetration of any of the solution is limited to uncertainty related to which mobile payment solution is capable to become a market leader. This uncertainty affects the decision of merchants to accept one or another mobile payment solution.

The major contribution of this paper is in the attempt to track a change of expectations of different groups of stakeholders taking part in mobile payments. This research was limited to analysis of only three cases applied in only one industry. This limitation could influence the estimation of common trends and generalization of the research results. The future work would include analysis of a bigger number of mobile payment use cases.

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