Provider Reactions and Cooperation Models in the Swedish Mobile Payment Space

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Abstract

The convergence of mobile and social media, enabled by the ever-changing landscape of information and communication technologies and wireless technologies, has over the last decade transformed our world into a Socio-Mobile Economy. Looking at the disruptive impact of this convergence on the global payment market, this study investigates the incentives behind different reactions and cooperation models that have been adopted by providers in the Swedish mobile payment market.

The methodology of the study has been built on a combination of both theoretical and empirical bases. The theoretical base constitutes a literature review along the line of concepts such as innovation management, disruptive innovation, business model innovation, resource-based theory of the firm and the transaction cost theories, to identify existing gaps within the literature. The empirical base constitutes of qualitative in-depth interviews with three providers in the Swedish mobile payment market.

The study shows three main reactions from the Swedish mobile payment providers. These providers have reacted to disrupt the disruption, attract a critical mass of customers, and to wrap their solutions with the right context. Currently, there is no cooperation between all three key input providers of a mobile payment solution, the banks, the MNOs and the card payment systems thus there are no full-integration or partial-integration models in the Swedish mobile payment market. Three cooperation models, the all-bank-centric, the MNO-centric and the light models were also identified in this market.

Key words: Mobile payments, disruptive innovation, managing innovation, business model innovation, strategic assets, transaction costs, and cooperation models.
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List of Abbreviations

B2B  Business-to-Business
C2B  Consumer-to-Business
C2C  Consumer-to-Consumer
ICT  Information and Communication Technology
NFC  Near field Communication
P2P  Peer-to-Peer
POS  Point of Sale
RFID Radio Frequency Identification
SMS  Short Message Service
WAP  Wireless Application Protocol
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1 Introduction

1.1 The Cashless Socio-Mobile Economy

The convergence of mobile and social media enabled by the ever-changing landscape of information and communication technologies and wireless technologies, has over the last decade transformed our world into a Socio-Mobile Economy. This transformation has spurred a wide range of opportunities for mobile related services within different industries. A few of such industries are the global retail and financial industries, where this convergence has spurred disruptive opportunities within the payment sector such as mobile payments.

Driven by changing trends, such as mobile banking, social media dependence, lack of bank accounts (in the case of developing countries), developments in wireless technologies coupled with the increasing consumer and merchant desire to try convenient, safer and cost-effective payment solutions (in the case of developed countries), traditional as well as challenging payment service providers have in recent years, leveraged mobile and existing card payment infrastructures to develop new and innovative payment solutions.

In Sweden the quest to limit cash usage as a result of high associated costs, high penetration of mobile phones and mobile subscriptions is gradually transforming this Nordic country into a Cashless Socio-Mobile Economy, which further enhances the need for mobile payment systems. Though flooded with different solutions and different business models, the Swedish mobile payment space^1 is still very fragmented and void of any standards.

Coming from different backgrounds, though some previously occupied financial service roles within the Swedish payment value chain, the major players, banks, telecom operators and other independent players, have all tried to develop supply-push solutions in reaction to this business opportunity. As a result of their different backgrounds, capabilities and resources, these players are reacting differently to the mobile payment opportunity. A closer look at how these players are reacting within this market, combining their different capabilities and resources, to meet the constantly changing market demand for “convenient”, “safer” and “speedy” payments solutions in order to create a sustainable competitive advantage, could be a great research arena.

Renowned for her culture embedded in research and technology, the Royal Institute of Technology boasts of a wide array of on-going research tilted towards the field of mobile payments yet amongst the many unanswered questions to this regard are; how the different players are reacting to disruptiveness of the payment industry spurred by the mobile revolution; which cooperation model these players have adopted; what resources and capabilities are key for success and also what are the different business models that have been adopted in the Swedish market.

^1 Swedish Mobile Payment Space: an expression used throughout this study to designate the Swedish mobile payment market.
1.2 Problem Puzzle

As mentioned above the increasing penetration of mobile phones, and developments in wireless and ICT have set to motion the possible disruption of the global payment industry by providing a new channel for payments service providers. This has opened up new opportunities for both traditional service providers as well as new entrants to capture value in this market. It is however unclear how the new entrants should position themselves in this market and how the traditional players should react to these new entrants. What resources should both traditional and new players try to possess that could enable them better compete. Providing answers to these questions will shed ample light on how the different service providers within the Swedish payment industry, have reacted to acquire strategic assets enabling them to gain competitive advantage in a market that has so much been affected by the mobile revolution.

1.3 Purpose

The purpose of this thesis, it to investigate how the traditional and new independent players in the payment market are reacting to the disruptiveness of the mobile revolution and the different cooperation models that have been adopted by these players, using well-acclaimed theories to analyse qualitative data collected from interviews with personnel from major payment service providers within the Swedish mobile payment space.
1.4 Disposition

In this section, the study has been introduced, a problem puzzle generated and the purpose of the study established. Also a disposition framework has been created to ease the reader’s tour through the study.
2 Background

This section provides the study with a background on payment systems and mobile payments in particular. Also the section also presents a literature review on mobile payments in a quest to identify gaps with the literature. The research questions will wrap up this section of the study.

2.1 Payments

The products and services we consume on a daily basis necessitate that they are been paid for to ensure proper functioning of markets and also eliminate frictions in trade. A payment is therefore the transfer of funds discharging an obligation on the part of a payer vis-à-vis a payee (the beneficiary). A well-orchestrated payment system, backed by reliable and safe payment instruments is therefore vital for the smooth functioning of markets and friction eliminations. Payments could be between financial institutions in which case are termed as wholesale payments and are characterized by time-criticality, usually small in number and usually of high value. Retail payments on the other hand, which are mostly the type of payments this thesis will focus on, are those between non-financial institutions such as private households, non-financial corporations and government agencies. They are mostly of low average value, and usually of high volumes.

Traditionally, payments were mostly cash-based (i.e. use of bank notes and coins) but with the proliferation of e-commerce due to advancements in telecommunication technologies, most business to consumer markets moved online enabling consumers to shop for products and services online at the convenience of their homes. In order to eliminate trade frictions in these markets, payment innovators had to leverage cashless payment instruments in response to the opportunities presented by online business models, thereby pushing our world towards a cashless society by deploying innovative cashless payment instruments notably payment cards, credit transfers, direct debits, and other alternative payment methods as seen for example in Europe.

2.1.1 The European Cashless Payment Space

According to A.T.Kearney European Payments Strategy report published in June 2013, non-cash payments amount to roughly 280 billion annually and one-third of this amount occur in Europe. This report also suggested that within the EU-27 there has been an increase in non-cash transactions from 70 billion in 2005 to 91 billion as of 2011 growing at a 4.5 per cent rate and that this growth rate could get up to an annual 8 per cent by the end of the decade which could mean 175 billion transactions by 2020 (see Figure 2-1 below). In some countries, this trend has been facilitated by government led-initiatives, placing a limit on cash payments such as Italy where purchases above €1,000 must be paid electronically with prospects of
lowering this limit to €300. In some countries the trend is technology-push to meet growing customer preferences for convenience, ease of use and speed, which reduces cash usage.

![Graphical Projection of Cash and Non-cash Transactions in the EU](image)

**Figure 2-1 Graphical Projection of Cash and Non-cash Transactions in the EU**

As mentioned in the payment section above, non-cash payments constitute electronic payments made through credit transfers and direct debits, debit and credit cards, as well as cheques. As seen in Figure 2.1 above, the European share of retail cash transactions is decreasing as opposed to non-cash payments schemes, which could get as low as 60 per cent by 2020. One of the major reasons behind government led-initiatives to encourage non-cash payment schemes is the cost of cash. A move from cash and other paper-based payment schemes towards the above electronic schemes could save up to 1% of a country’s annual GDP once the transaction costs are absorbed, thus substantially reducing the social cost of its payment system (Humphrey, Kim, & Vale, 2001). Deploying cost efficient electronic payment schemes backed by innovative technologies such as credit and debit cards, credit transfers and direct debits, which ensure convenience, speed and ease of use, could enhance customer experience, which means payment providers could increase their fees along with the added value. These increased fees could mean increase in revenues for these cashless payment instrument providers, which constituted mostly of financial institutions such as banks and credit card scheme providers. Despite being less costly vis-à-vis cash, the revenues from electronic payment schemes such as credit and debit card, credit transfers and direct debits have been anticipated to stagnate due to regulatory and competitive pressures. They are also prone to fraud and are unsuitable for micropayments as well as person-to-person payments due to high costs per transaction and non-anonymity (Au & Kauffman, 2008). However, with the abovementioned proliferation of e-commerce, advancements in wireless communication technologies and the Internet boom, payment service providers have been able to deploy alternative payment solutions based on e-wallets such as PayPal etc. The growth in revenues for these alternative payment methods, have been slow until after 2010 (See Figure 2.2 below). This growth could be justified by the growing penetration of innovative wireless communication technologies coupled with mobile phone penetrations particularly Internet-enabled smartphones enabling the mobilization of payment services to support e-commerce
(Karunnayake, De Zoysa, & Muftic, 2008), offering electronic commerce an extended reach in the form of mobile commerce (m-commerce). This growth in alternative payment methods are been forecasted to boost the EU-27 payment revenues generated by cashless payment scheme, by 75 per cent between 2010, and 2020 (A.T.Keaney, 2013) (see Figure 2.2 below) as mobile phones are being leveraged to compliment these non-cash payment schemes.

Cashless payment schemes may be cost effective vis-à-vis cash and other paper-based schemes, but mobile phone supported electronic payment schemes promise far more benefits as they are expected to reduce the use of cash as well as credit and debit cards, which could result in a disruption in the set costs and benefits associated with making payment transactions. In addition to the cost advantage, the mobile phone could also constitute a security tool for secure payments in e-commerce and m-commerce owing to the integrated SIM card, which is an ideal bearer for a private digital signature of a PKI system, permitting the protection of personal information (Ding & Unnithan, 2005).

The cost advantages, promising revenues, and security associated with the mobile phone, have attracted payment service providers to build payment schemes based on the mobile phone. Today, not only have e-wallets been transformed into mobile wallets (m-wallets), but customers are able to withdraw funds from their bank accounts as well as their credit and debit cards using their mobile phones, but also shop for products and services both online and offline, remote and at point of sale. This contemporary phenomenon is called Mobile Payment and it constitutes a disruptive innovation in itself but also it offsets the dynamics of an entire industry as new players such as MNOs (mobile network operators) and other independent players have entered this industry that was formerly dominated by financial institutions (Banks) and payment scheme providers such as card companies, forcing these incumbents especially banks to rethink their strategy, and business models. Failure to react could push these incumbents towards a possible extinction in the payment market, which constitutes a significantly large portion of their revenues (Radecki, 1999). It is thus worth looking at how these different players thrive to fare in this industry but first it is worth answering questions such as “So what is mobile payment?” in order to shed a little light onto this contemporary phenomenon.
2.2 Mobile Payments

Mobile payments are the use of mobile devices to effectuate the transfer of money or funds from a payer to a payee via an intermediary or without an intermediary (Mallat, 2007). Just as earlier innovations in the payment market such as credit and debit cards, constituted new initiation and confirmation channels for face-to-face cash-based payments at points of sale with merchants (ECB, 2010), mobile payments constitute both a complimentary and a competitive payment channel for both cash and electronic payments instruments. This is due the fact that unlike product innovations in other industries, which go from low-tech to high-tech, the payment industry constitutes a peculiar case where low-tech payment alternatives such as cash actually coexist with the high-tech schemes and at times even prevent their wide adoption (Hartmann, 2006). In this market mobile payments compete with and compliment cash and other cashless payment instruments on two fronts. At point of sale i.e. purchases of goods and services, they complement cash, cheques, credit and debit cards while their access to account-based payments such as money transfers (between account holders), internet banking payments and direct debit assignments makes them a suitable complimentary channels for payment of bills and invoices (Dahlberg, Mallat, Ondrus, & Zmijewska, 2006) see Figure 2-3 below.

This complimentary nature of mobile payment services, however constitutes a major setback as it institutes a certain level of complexity vis-à-vis their diffusion, which depends on the switching cost and the zone of acceptance of the consumers (Gaur and Ondrus, 2012)

2.2.1 The Drivers

Based on a research carried out by Blue Panda Interactive (2012) several trends that have propagated the growth of mobile payments were identified see Figure 2-5 below.

The benefits of Mobile Banking on both the supply and demand side are ground breaking. On the supply side, not only does mobile banking constitute low transaction cost as compared to other bank channels, they contribute in overall cost reductions, increase customer base, enhance customer loyalty as well as create new mechanisms to stimulate impulse buy and new sale and marketing approaches. On the demand side mobile banking reduces visits to branches

![Figure 2-3 Relationship between Mobile Payments and Other Payment Instruments](image-url)
and calls to contact centres, generate more transactions and gets customers to be aware and educated about their money. In 2011 both in the US (5% in 2008 to 15% in 2011) and Canada (8% in 2010 to 20% in 2011) rise in the number of active adult mobile bankers were recorded.

As of 2011, Social Media accounted for 50% of all page views on the mobile phone, and out of the over 1,2 Billion globally internet-connected smartphones, 77% of were used for searches and of which, 30% were for product searches, while an average of 29% accounts for purchasing advice sought after via social media. This dependence on mobile devices to access social media is further justified by the percentage of mobile users who use Facebook and Twitter in US (50,9% for Facebook and 12,5% for Twitter) and Europe (31% for Facebook and 7,4% for Twitter).

Technological trends also account for the growth of mobile payments. Recent advancements in wireless, ICT, and mobile technologies have created the possibility for telecom companies to upgrade their infrastructure. These technological advancements include the dramatic growth of 3G networks and 4G networks (though still awaiting wide spread adoption), coupled with the high penetration of mobile subscriptions, which tripled that of landlines since 2002. Other innovative mobile devices, such as the iPad/tablets, have had record adoption rates, tripling that of the iPhone. The dependence on these technologies has been justified by the increase in sales of smartphones of over 63% in 2011 and the fact that 5,9 Billion people use mobile phones globally.

As of 2011, over 2,5 billion people were Unbanked around the world, many of which are in Africa, Asia, and Latin America. This trend is usually due to lack of access to banks and in some cases, the high interest rates offered by banks. Since the unbanked people across the globe currently own mobile phones they rapidly adopted mobile payment solutions such as MPesa in Kenya, which offers retail and person-to-person (P2P) payments to compensate for the lack of bank accounts and the possibility to navigate around high interest rates and transaction fees.
The proliferation of digital technologies, have greatly enhanced both Consumer and Merchant Acceptance for mobile devices as an online business channel. Having developed apps for both tablets and smartphones, merchants have been able to access consumers through their smartphones, which has contributed to an increase in consumer purchases of 24% and 18% via mobile websites and mobile apps respectively. Since mobile technologies permit merchants to push local offers, discounts, and rewards to incent in-store traffic, these merchants have been able to experience increase in online traffic as well sales from tablets. This highlighted consumer and merchant dependence on mobile devices, greatly enhanced the incentive for service providers to develop more solutions that leveraged the mobile phone and other mobile devices to tap into their perceived benefits.

<table>
<thead>
<tr>
<th>Remote payments</th>
<th>Proximity payments</th>
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<tr>
<td>Low value payments</td>
<td>Ringtones, games, low-value P2P payments</td>
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Table 2-1 Classification of the types of Mobile Payments

2.3 Literature Review on Mobile Payments

The global mobile payment market is currently under transitions with numerous tried and failed solutions. Though having a promising future, the uncertainty hovering around the success of potentially new technological innovations is huge. Being a contemporary phenomenon, the mobile payment literature is a little over a decade old. Though the literature on mobile payments covers a broad range of issues related to both the demand and supply sides, most of the focus has been on the demand side (consumer adoption) and most often, whenever the supply side was researched, the focus was on the technological aspects of mobile payments. However, this review will be along the lines of the themes, managing disruptive innovation and business model innovation, the resource-based view of the firm and security and adoption of mobile payments.

2.3.1 The Disruptiveness of Mobile Payments

Both scholars and practitioners have predicted the disruption of payments industry as a result of mobile payment. However the first explicit research on the disruptiveness of mobile payments was carried out by (Ondrus & Pigneur, 2005). Based on their study, they argue that mobile payment disruptions will go along based on two potential scenarios. First there will be the potential consumers’ switch from card-based to phone-based schemes. The second potential scenario is a shift from operator-driven schemes (developed by financial institution and MNOs) to self-organized schemes driven by independent new comers. Extending their work a year later, (Ondrus & Pigneur 2006) identified that despite the potential disruption, traditional players such as financial institutions had adopted a “wait and see” policy, and they argue that the disruption was not going to be in the nearest future. Switching their focus on to the tech-
nology aspect of mobile payments (Ondrus & Pigneur 2007) also studied the potential disruptive technologies of mobile payments and they argue that NFC-based mobile payment schemes have the most potential to fare in the mobile payment space. However, they identified potential hurdles to full NFC potential, which could be spurred by the lack of a sound business case that could help down play the key issues within the value chain. They concluded that for NFC-based solutions to take full potential the technology must be deployed on both consumer and merchant sides to attract high transaction volumes, which is key for NFC base schemes.

Concurring with the works of (Ondrus & Pigneur, 2005; 2006; 2007) on the disruptive potential of mobile payments, Au & Kauffmann (2008) highlighted the fact that there exists substantial evidence that mobile payment schemes will replace cash and card scheme, but again they argue that there are challenges that must be overturned for mobile payments to attain widespread adoption. (Au & Kauffmann, 2008) went further to touch a little bit on the business aspects of payments arguing the lack sound business models has been a major hurdle preventing mobile payments from meeting consumer expectations. Not only are the works of these authors a little out-dated, considering the fact that the mobile payment industry is constantly transforming itself, but despite the fact that they tried to touch the business aspects of mobile payments and business models, they never really provided explanations regarding the existing mobile payment business models.

2.3.2 Business Models and Mobile Payments

Other authors have looked at mobile payments and business models. Rochet & Tirole (2003) highlighted the need for payment providers to understand the dynamics of a multi-sided business such as mobile payments, which involves multiple partners (e.g. MNOs, financial institutions and technology providers) and two distinct sets of customers (the consumers and merchants), who must actively participate in order to generate positive externalities.

Based on their work on mobile payment business models, Camponovo & Pigneur (2003) argue that like any other emerging industry, the mobile payment industry is characterized by a large number uncertainties regarding technology, business strategy and consumer demand. They highlighted the fact that the economic characteristics underlying mobile businesses have a profound impact on the adopted business model. They also claim that the complexity associated with providing a complete end-to-end solution due to the fact that payment solutions are based on complementary competences, which could only be acquired through partnerships and acquisitions, makes partnership an important aspect of this industry. Camponovo & Pigneur (2003) also argue that for mobile payment solutions to be successful and sustainable, business models that do not only address mobility, network effects, and natural monopolies issues, but that are profitable to all different players needed to provide an end-to-end solution, must be developed.

Pousttchi et al (2008) argue that though most mobile payments providers have tried to develop business models for their solutions, these business models were either developed from a technology view or from a purely economic view, rather than a comprehensive view. In con-
clusion they argue that the blind-eye over the interrelation within their business models from a mobile payment providers perspective has been at the root of many failed solutions. Pousttchi et al (2009) also argue that despite being in the wake of 3G mobile networks, which has greatly reduced the mobile payment hurdles, there is a lack of interdependency of technical, human and market factors, which is crucial for the success of mobile payment business models. They proposed that for mobile payment schemes to be successful, these factors must be sensitively orchestrated.

In a much recent study on mobile payments and business models, Bourreau & Verdier (2010) in line with Pousttchi et al (2009), argue in favour of the need for interdependencies between three key players of the mobile payment value chain (i.e. Banks, MNOs and Payment system providers). They proposed 6 business models for mobile payments services. They argued that the adopted business model of a mobile payment service could determine the degree of dependency or the form of cooperation with the above key players. These authors went a little deeper into the business aspects of mobile payments and highlighted the need of a sound business model while proposing several business models that could be adopted. However they never touched how those business models could be managed owing to the fact that mobile payments constitutes a disruptive innovation with huge uncertainties and also their research did not provide much information on the incentives to cooperate.

2.3.3 Resources and Mobile Payments

According to research on transaction cost economics, the cost associated with performing market transactions goes a long way to incentivize the management of a firm to decide whether to develop a product or technology in-house, purchase it from the market or cooperate with external partners (Williamson, 1979). The choice to adopt the second to option is mostly as a result of the lack of resources and capabilities to carry out the development in-house. However, cooperating with external partners does not only permit firms to gain access to external resources but also benefit from cost sharing. Aligning with this view, mobile payments involves interdependencies between MNOs and banks, thus developing a successful mobile payment system will necessitate collaboration. Bourreau & Verdier (2010) argue that should both the banks and MNOs decide to pursue the development of a payment system in-house, not only will they lose out on the costs sharing opportunity, but they will incur transaction costs associated with entering each other’s market to build each other’s capabilities so as to develop an end-to-end mobile payment solution, which depends on their existing resources (Pousttchi et al, 2009).

Despite the acclaimed importance of resources in the development of product or technology, very few authors have looked at mobile payments in relation to resources. Dalberg et al (2008) used the resource-based view and resource dependency to explain the emergence of dominant/ non-dominant design in the Finnish mobile payment market. Evans (2009) argues that for a multi-sided platform such as mobile payment, the more actors there are; present to share their resources, the greater the incentive for other actors to join the platform. Taking a holistic view of mobile payments, Pousttchi et al (2009) identified key resources for mobile payments at a macro-level. Not only did these authors lack an explanation on how the main
actors could build a strong importance in the ecosystem, the lack of a micro-perspective on the different actors limits the understanding of the mobile payment ecosystem (Gaur & Pigneur 2012). Taking a micro-perspective on actors, Gaur & Ondrus (2012) looked at the key resources and capabilities of the banks and they identified Brand Image, Banking System, and Bank Accounts, as 3 strategic assets that impart the banks with strong bargaining power and competitive advantage over the other actors. They concluded that the manner, in which the banks would deploy these strategic assets, would depend on how the other actors deploy their own strategic assets.

None of the above-cited authors, except for Gaur and Ondrus (2012) came close to the purpose of this study. Despite taking a micro-perspective of the key resources, capabilities and strategic assets of payment industry, which brings their study closest to the purpose of this study, focusing on the banks, does not only create a void in the literature regarding what strategic assets the other actors possess but also how they try to compete against the banks with such strategic assets conferring them so much bargaining power and competitive advantage.

2.3.4 Adoption, Security, Reliability, and Mobile Payments

Studies on the adoption of mobile payments, suggest that the success of a mobile payment solution greatly depends on the consumers and merchants. Evans (2009) identified adoption as a key aspect for the success of mobile payments from the demand-side. He argued that the more merchants are present, the more consumers will like to use their mobile phones to pay. They argue that with such a multi-sided platform, mobile payment providers on the supply-side must try to attract more actors to reach the ignition point as fast as possible, since failure to reach this point in time is tantamount to failure and disappearance. Identifying the contingency factors of the mobile payment industry, Dahlberg et al (2006) pointed out consumer power and merchant power as key determinants of the adoption of a mobile payment solution. On the one hand, they argued that consumer adoption drives the success of mobile payments by increasing the volume of transaction. On the other hand merchants create the market for payments providers and their lack of involvement has been the root cause of many failed solutions. Though identifying consumer and merchant adoption as key, these authors did not provide explanation on the incentives for neither consumers’ nor merchants’ adoption.

Other authors have tried to fill this gap by looking at the adoption incentives from both the consumer and merchant perspectives. Based on their study on merchant adoption in Finland, Mallat and Tuunainen (2005) did not only classify factors affecting merchant adoption into five categories; relative advantage, compatibility, complexity, cost and security, they argue that the high costs of mobile payments solution prevented adoption of Finnish merchants. Heijden (2002) argued that the cost function is one of the most inhibiting factors of mobile payment system adoption.

From a consumer perspective Linck et al (2006) identified security as the most essential condition for consumer acceptance of mobile payments and they classified the security function into five categories; confidentiality, authentication, integrity, authorization and non-repudiation. Based on a study by the (Swedish Trade Federation 2011), the ease-of-use and
the authentication steps also constitutes inhibitors from both the consumer and the merchant perspectives. The study shows that Swedish merchants were most concerned about the ease-of-use factor of payment solutions. Though a lot has been covered via-a-vis the adoption, security, and the reliability of mobile payments, the literature fails to offer information regarding what strategies the different actors have been able to implement to downplay the inhibiting factors associated with mobile payment adoption.

### 2.4 The Gap Analysis

Looking at the literature review, one could see that there are gaps in the literature regarding how the key players in the mobile payment market are reacting to the disruptiveness of mobile payments. Bourreau & Verdier (2010) acknowledged that various cooperation models have been identified but there are still no explanation on the incentives behind certain cooperation models. Gaur & Ondrus (2012) also identified key strategic assets of banks which constitute a source of competitive advantage but however, acknowledged the need for more research to be carried out to identify key assets from other players and how they react to downplay the power of the banks and other inhibiting factors of the mobile payment market. Not only are these gap related but they are considered important gaps to fill.

### 2.5 Research Questions

- **RQ1:** How have the main Swedish providers reacted to the mobile payment opportunity and what are the incentives behind their reactions?
- **RQ2:** What business models and cooperation models could be identified in the Swedish mobile payment market and what are the incentives behind these different business models and cooperation models?

### 2.6 Summary

In this section, light has been shed on the payment market, the types of mobile payments as well as drivers have been identified, and the literature regarding mobile payments has been reviewed and gaps identified. Based on the gaps in the literature the research questions have also been generated.
In this section, the study will delve into the Swedish mobile payment industry to identify trends, solution, stakeholders, and key providers of this market.

3.1 General Overview

Like most European payment markets, the Swedish payment market has been characterized by a steady shift in the use of cash at the profit of electronic payment schemes. There are no up-to-date data on this fact but based on a report from The Riksbank (2011), as of 2010 the total cash usage accounted only for about 2.9% of the Swedish GDP as opposed to 9.6% in the 1950s. Based on a later survey conducted by The Riksbank (2012), an increase in the volume of transactions regarding card-based schemes quadrupled, while the transaction value tripled between the years 2002 and 2012. According to the Swedish Trade federation (2011a), the increase in both the volume and the value of card based transactions only goes to highlight the increase use of card-based payment schemes to pay for low value transactions. This is backed by The Riksbank (2012) survey, which highlights that, over 70% payments made in 2012 were executed using card-based schemes.

Mobile payment penetration however, cannot boast of such concise data, primarily due to the lack of established solutions. However, based on a survey conducted by The Riksbank (2011b), about 10% of Swedish consumers attested to have used mobile payments. Though the study was no specifics on the types of mobile payment solutions they had used, an article in The Economist (2013) vouched for the existence of a customer space for mobile payments in Sweden based on the fact that Swedes are particularly willing to try new things. Another article in The Economist (2014) highlights Sweden as the leader in the mobile-payment technology basically due contactless payments. In addition to their willingness to try new thing, up to 94% of the Swedish population has access to Internet (The Economist, 2014).

According to the Swedish Post and Telecommunications Authority (PTS, 2012), mobile subscriptions do not only outnumber fixed-line subscriptions by 3:1, but with just a population of 9.5 million, Sweden boasts as of 2012, a mobile subscription of up to 13.7 million, making a mobile penetration of at least 140 per cent. Out of this 13.7 million, 9.7 are used for data. Out of which 2.1 million are standalone broadband contracts without calls. 4.2 million are mobile phone subscriptions with at least 1 GByte per month data usage; and a further 3.5 million are used for calls and data without including add-on data subscriptions. In the first half of 2012, Swedes consumed 73,300 TBytes of mobile data, which is about 73 per cent higher than they did in 2011.

Looking at the merchant side of the market, according to a 2011 study conducted by HUI research, and reported by the Swedish Trade Federation, not only are 64 per cent of Swedish merchants willing to try new payment technologies be they via RFID and mobile phones, but for those merchants dealing in fast moving consumer goods, this number gets up to 72 per cent (Swedish Trade Authority, 2011).
With such data, which not only shows how mobile phones have become such a vital component of consumers’ daily lives, but also how merchants are interested in trying out new payment technologies based on the mobile phone, it is clear that Sweden constitutes an interesting market with huge opportunity for traditional payment service providers and other new comers. It is thus interesting to investigate how these payment providers are reacting to this opportunity.

3.2 The Stakeholders

Concurring with the classification of Ondrus and Pigneur (2006), three main stakeholder groups could be identified in the Swedish mobile payment space, which are 1) Consumers, 2) Merchants, and 3) Providers. Due to the purpose of this study, the focus will be based on the providers though a little light will be shed on the other two. Figure 4.1 below only serves as an illustrative framework of the different stakeholders embedded in the Swedish mobile payment space.

![Figure 3-1 Key Stakeholders in the Swedish Mobile Payment Space](image-url)

The Consumers are very important stakeholders in the mobile payment value chain. By adopting and using the mobile payment service, they create the demand for a mobile payment service and actually drive and enhance its success. Based on this premise, it could be said that the success of a mobile payment service solution depends on the consumers even though they do not have a direct influence on the service provider (Dahlberg, Mallat, Ondrus, & Zmijewska, 2006).

The Merchants also have an important role in the development of mobile payment services. They create the market for financial institutions and other payment providers. The lack of merchant involvement in the development and deployment has been highlighted as the cause
of several failed mobile payment initiatives (Dahlberg, Mallat, Ondrus, & Zmijewska, 2006). Not only their role in the mobile payment value chain should not be underestimated, merchants could also switch roles within the value chain to become payment providers (Ondrus & Pigneur, 2005; Ondrus & Pigneur, 2006) as seen with the case of Octopus in Hong Kong (public transportation) and IKEA card (retail).

The Providers are the group of players who offer mobile payment solutions to the consumers. There are many different types of payment providers but they could be grouped into two main categories; existing and challenging players see Table 4.1 below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of player</th>
<th>Example of players in Sweden</th>
<th>Primary driving forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing players</td>
<td>Banks &amp; National clearing organisations</td>
<td>Large and small banks, and their joint company Swish, Bankgirot</td>
<td>Protection of existing markets, lowering of cost, protection of supplementary services</td>
</tr>
<tr>
<td></td>
<td>Card company</td>
<td>Master Card, Visa</td>
<td>Protection of existing market and sales, lowering of cost</td>
</tr>
<tr>
<td>Challenging players</td>
<td>Telecom operator</td>
<td>Teliasoner, Telenor, 3, Tele2, and their joint company Wywallet</td>
<td>Find new revenue streams, widen service portfolio, establish market position</td>
</tr>
<tr>
<td></td>
<td>Technology Innovator</td>
<td>Seamless, iZettle, PayAir</td>
<td>Establish market position, gain niches, gain supplementary services, gain revenue sources</td>
</tr>
<tr>
<td></td>
<td>Process Innovator</td>
<td>Payer, klarna, PaybyBill, Payson, Collector, PayEx</td>
<td>Establish market position, gain niches, gain supplementary services, gain revenue sources</td>
</tr>
</tbody>
</table>

Table 3-1 Classification of the different Swedish Mobile Payment Players and their driving forces

As seen in the table above, the existing players constitute of financial institutions and card scheme providers. Financial institutions e.g. banks with bank accounts for both consumers and small businesses being the core of their operations in the retail market as most of their services are tied to bank accounts. For these players, offering mobile payments is key to ensure customers retention. Losing out in this market will mean losing out on an opportunity to profit from supplementary services. Payment Scheme providers e.g. card companies, having invested heavily in their existing infrastructure, seek to maintain or increase the volume of transaction through their infrastructure, which is basically where they generate profits. Though most emerging solutions whether NFC or traditional cards, are based on the card infrastructure, they still have an incentive to protect their existing markets and lower their costs (The Riksbank, 2013).

The challenging players comprise of mobile network operators, and independent players. Mobile Network Operators, MNOs having invested heavily in 3G licenses and with shrinking profit margins in their core mobile services, such as voice calls, they consider mobile pay-
ments as a potential source for supplementary revenues. Coupled with their existing customer base, which is a large share of the population, they already control the mobile payment infrastructure and they have been offering SMS payments to their customers for a while. These players thus consider themselves, as natural players in the mobile payment market. Independent Players constitute of technology and process innovators. They are new comers with little or no previous involvement in the ecosystem for electronic payments yet they have the technological and business knowhow to disrupt the market. Technological Innovators base their payment services on new technologies, permitting them to create new payment services. Process Innovators have previously occupied different role in the retail payment market but they focus on the processes in the payment value chain, offering services related to credit granting and debt recovery as well as rationalising payees’ invoicing and system solutions (The Riksbank, 2013).

Stakeholders, such as transit authorities, technology vendors, mobile network providers, operating system providers and handset manufacturers etc. fall within the “Other” category.

![Figure 3-2 The Typical Mobile Payment Value Chain](image)

### 3.3 Available Mobile Payment Solutions in Sweden (a brief description)

As highlighted in the general overview section of this chapter, the high penetration of mobile services in Sweden, coupled with high willingness to try new things provided a great opportunity and a great incentive for payment providers to develop mobile payment solutions. Currently mobile payments are somewhat hyped in this market, even though it is still fragmented. Flooded with several new solutions, some of which are still on trial basis, the market is void of any standards. In order to make sense of the different solutions offered in this market a brief description based on information gathered from each provider webpages will be given below. However, this study will only focus on three of these solutions, which will be accompanied by flow diagrams to add more depth to their descriptions. The descriptions will be in order of providers, i.e. financial institutions, mobile network operators and independent players.

#### 3.3.1 Swish (Joint solution of major Swedish banks)

Swish is a C2C mobile payment application as a service, born of a collaboration between a majority of the top Swedish banks; Nordea, SEB, Swedbank/Sparbankerna, Danske Bank, Handelsbanken, and Länsförsäkringar. Launched in December 2012, with the main drive to capitalise on the business opportunity offered by the high mobile penetration in Sweden, this solution works on both iOS and Android devices (Swish, 2012). Available to all private customers of the partner banks, the solution permits real-time money transfers between account
holders of partner banks. It only suffices for both the payer and the payee to have the Swish application together with a third party electronic identification application, the BankID installed on their mobile devices. See Figure 3-3 below.

Figure 3-3 The Swish Consumer-To-Consumer Payment flows

Making a payment is simple. The payer enters the payee’s mobile phone number and authenticates the payment by entering a 6-digit PIN code requested by the BankID application and the funds are immediately credited to the payee’s bank account (Swish, 2012). Another third party service provider the Bankgirot ensures that the transfer is cleared in real-time (Bankgirot, 2009).

3.3.2 Bart

Bart used to be mobile payment application, also provided by banks. Unlike Swish, it was a C2B solution, which targets retail purchases. Developed by Swedbank and Sparbankerna and tested within the Stockholm area in the late 2012, the solution enabled C2B transactions at point-of-sale. Directly linked with the consumer’s bank account and with the use of QR-codes scanning technology, the solution permitted its consumers to effectuate payments at POS.

The solution worked as follows; during a payment, the consumer is notified of the amount at checkout and once the amount is entered the application created a QR-code that is placed at the scanner at check out. Once the QR-code is scanned the consumer is then debited to her Swedbank credit or debit card. The bills issued by the merchant are electronically stored within the payment application. The Bart initiative was shut down on February 28, 2014 reason being that provided by a single bank the solution failed garner a critical mass (Swedbank, 2014).
3.3.3 WyWallet (Joint Solution by Swedish MNOs)

Just like Swish, WyWallet is a joint solution but unlike the latter it was born of the strategic alliance between the Swedish mobile telecommunication operators, Telia, Telenor, Tele2 and 3, to form a separate company, 4T Sverige AB. Unlike Swish, WyWallet is both a C2C and a C2B mobile payment solution as it permits its customers to effectuate P2P money transfers as well as payment for products and services both online and in physical stores via SMSing whether the user has a smartphone or not and it could be used with iOS, Android and other Java supported platforms (4TSverigeAB, 2011).

The consumers have to first of all deposit money in their WyWallet account, which acts as a mobile wallet. Depositing funds can be made two ways; 1) via credit and debit cards, in which case automatic card top-ups option can be activated to trigger automatic top-ups once the balance falls below certain amounts, 2) the consumers could make deposits from their bank accounts. Having segmented their market into 3 consumer segments, Prepaid, Business subscribers, and Post-paid subscribers, all three segments can top up via cards and bank transfers but the last two have the possibility to benefit from WyWallet credits of up to SEK 1000, and are billed at the end of the month. The Postpaid customer segment enjoys the privilege of making purchases via SMS-payments even without funds in the WyWallet account. In this case, they are billed via their monthly invoice from their affiliated MNOs (4TSverigeAB, 2011).

Being a C2C and C2B mobile payment solution, the application is currently equipped to support, 1) C2C payments, 2) physical POS payments, 3) online payments, 4) prepaid SIM top-ups, 5) vending machine payments, and 6) traditional SMS-payments.
In order to receive funds via C2C payments the payee does not require an existing WyWallet account. An account will be created automatically upon transaction and all she has to do is download the application to access funds. However, making withdrawal requires that a wire transfer be made via the WyWallet web interface.

The solution is still cost free to its users though within this year 2014 they are planning on instituting a business model that enables them to better create and capture value. Based on this business model, every transfer will cost 1 SEK, while a 3% commission will be charged for every withdrawal (with just one free withdrawal per month) as brokerage fees. Post-paid private subscribers are as of now being charged 19 Kr for each invoice as administrative fees (4TSverigeAB, 2011).

At POS, payments are NFC initiated. With aid of a specific sticker that must be attached to the users’ mobile device, they can swipe their phones at checkout followed by a reply to a PIN code-enabled authorization to validate the payment. The process is the same for online payments but rather than swiping their device at checkout to use the NFC technology, the payer only has to enter her phone number at checkout and then reply to the PIN code-enabled authorization request to accept the payment. Prepaid SIM top-ups and vending machine purchases can be effectuated via direct transfers, and by entering the machine ID respectively. However, at vending machines entering the machine ID must be followed by traditional SMS payments, which are debited to the payer’s WyWallet account.

3.3.4 SEQR

SEQR is a C2C and C2B mobile payment solution provided by the Swedish independent mobile payment provider Seamless Distribution AB. Operational since spring 2012; the solution targets both small and large businesses (merchants). With the aid of QR-codes and NFC technologies supported by their ERS 360° mobile payment architecture, SEQR offers the possibility for consumers to effectuate payments in stores, restaurants, parking lots, online and in-app, as well as make money transfers at no charge (Seamless, 2014). See figure 3-5 below for an illustration of the SEQR payment flow.

Currently supported by iOS, Android mobile platform with the possibility of extending to Windows before the end of this year 2014, during a purchase the consumers either use the NFC technology by swiping their device, or scan a QR-code at checkout and approve the payment with a personal PIN code. Once the payment is approved, an electronic receipt is then generated and stored in the SEQR application. Because the solution is not dependent on bank accounts, to be able to use the service the consumer must register an invoice account with a third party financial service company usually a recommended process innovator such as Collector or PaybyBill (Seamless, 2014), which handles the billing and invoicing to consumers and payment transfer process to merchants, based on the bills they issue via the SEQR application.

For C2C payments between consumers, the payer either enters the payee’s bank account detail or better still to avoid complicated bank account number the payee’s mobile phone number serves the purpose. Once authorised, the money is paid into the payee’s bank account after
one working day. If the payee is not a SEQR user, an SMS containing instructions on how to access the money will be sent to the payee’s phone and the money will be in their account once they register their bank account with SEQR (Seamless, 2014) see Figure 3-5 below.

![Diagram of SEQR C2C and C2B Payment flows](image)

**Figure 3-5 The SEQR C2C and C2B Payment flows**

In collaboration with partners, Q-Park and soon APCOA, the SEQR solution enables payments for parking fees. It suffices for the consumer to select within the application how long she intends to park at a selected car park and make a payment at no extra cost. The application also sends a 15 minutes reminder before the time expires, should the consumer decide to extend the time (Seamless, 2014).

### 3.3.5 Other Independent Mobile Payment Solutions offered in Sweden

*PayAir* is also an independent mobile payment solution. Like SEQR, it is based on QR-code scanning technology and it is available for iOS, Android, and Windows mobile platforms. Launched on trial basis since spring 2011, as a C2B solution, which enables consumers to make purchases both online, and at physical POS, using integrated PayAir buttons to activate the application and scanning QR-codes respectively via the mobile devices. In addition to serving Swedish merchants such Webhallen, SIBA, Eventim, Davids, and Skin City etc. the solution also boasts of a global foothold being present in over 25 countries. Unlike SEQR, rather than building its own mobile payment infrastructure, PayAir leverages the existing card infrastructure, which permits purchases to be instantly billed to the consumers’ credit or debit card at no extra cost (Payair, 2011).

*PayEx Mobile:* was launched by PayEx Finance AB, an independent Swedish mobile payment service provider, with a vast experience in the Swedish payment market as a process innova-
tor. Previously handling invoicing and other financial services including developing the WyWallet application, this company decided to move down the value chain to offer mobile payment services. PayEx Mobile is a C2C and C2B mobile payment solution similar to WyWallet, and it is supported by iOS and Android mobile platforms. With purchases at POS based on the NFC technology, the functionality of the solution is similar to SEQR and WyWallet. Just like the WyWallet account, the PayEx account also acts as a mobile wallet from whence funds are withdrawn. In the C2C arena, it is mandatory that both the payer and payee have registered PayEx accounts, and unlike Swish and SEQR the withdrawal of funds from the above accounts could take up to 3 days with a withdrawal fee. Unlike SEQR the solution is dependent on the card schemes for topping-up the mobile wallet.

*EasyPark* is a card-based mobile payment service with a broad coverage in Sweden, which permits consumers to pay for parking tickets with their iOS and Android mobile devices. The service is also available in other Nordic and European countries such as Italy, Germany, and Spain. *iZettle* is another Swedish mobile payment innovation, which allows both consumers and merchants to accept cards with their mobile with a revenue model based on a 3% transaction fee. *Selecta* mobile payment application also exists in Sweden and it is a card-based C2B solution, which permits consumers to make purchases via their mobile phones. *Payd*, a solution developed by Payson is also a C2C card-based mobile payment solution available in Sweden, which permits money transfers between Facebook users.

Despite the vast amount mobile payment solutions available in Sweden, this study will focus on just three of the above described solutions, which are basically Swish, WyWallet and SEQR. The reason being that these three solutions are more established and they encompass amongst them most of the different value-added services and business models available in the Swedish mobile payment market.

### 3.4 Summary

In this section, light has been shed on the Swedish mobile payment market. Trends such as, quest to reduce cash and the high mobile penetration rates and swedes willingness to try new things have been identified. Various mobile payment solutions have been identified, though the focus has been on three most established solutions WyWallet, SEQR, and Swish. The next section will delve into the methodology on which the study was carried out.
4 Methodology

This chapter provides an explanation of the research methodology that underlies this study. It will try to provide the rationale behind the chosen research philosophy while also providing a brief presentation of the interviewees and some justifications regarding the validity of this study as well as forwarding a stream of delimitations that are associated with it.

4.1 Research Philosophy, Approach and Strategy

The decision regarding which research philosophy was best suited for this study was based on the two main research paradigms highlighted by Saunders et al. (2009). However, the purpose of the study which is to understand actions of key actors within the Swedish mobile payment space greatly narrowed the decision making process due its interpretivist characteristics (Saunders et al, 2009, p. 108). The above-chosen research philosophy constituted the basis on which other choices were made such as the choice of research approach and strategy.

Based on the above philosophy, an inductive approach was then chosen as the best fit (Saunders et al, p. 124) as this study aimed at making sense of how these actors are striving to sustainably and innovatively compete. The contemporary nature, thereby limited knowledge on mobile payments also necessitated the study to be of a multi-purposed nature (Adam et al. 2007, p. 20). However, a blend of descriptive and exploratory purposes was considered the best fit.

Designing the research strategy involved selecting three key actors in the Swedish mobile payment market, from whom primary data regarding their different payment solutions were collected through qualitative interviews. On the one hand, looking at three key players made the study more of a triple case study, while the choice to study the Swedish mobile payment space provided its natural location. On the other hand, amongst the different data collection techniques suitable for case studies proposed by (Yin, 2011), using qualitative face-to-face interviews to obtain data is greatly justified by the fact that this study only sought after the provision of findings that are not arrived at by means of statistical procedures or other means of quantification (Corbin & Strauss, 1990), but rather connections and consistencies in established theories that will be used to answer the research questions, which emphasizes to a great degree subjectivity and flexibility (Kohlbacker, 2005). However, in circumstances where face-to-face interviews were not possible Internet-mediated interviews were conducted by emailing the questions to the participants.

In addition to appropriately selecting the research philosophy, approach and the strategy, it is also very important to answer the research questions in the most satisfactory manner possible. In order to achieve that, the study was then carried out such that, it comprised of both a theoretical and an empirical base, which necessitated that it encompassed a literature review and the formulation of a theoretical framework constituting a basis on which empirical data from both primary sources (the interviews from the key Swedish mobile payment players) and secondary sources were been interpreted and analysed.
4.1.1 The Theoretical Base

As highlighted above, setting up the theoretical base for this study, did not only require that it shed ample light on the Swedish mobile payment space but also on the traditional payment space on which mobile payments are built. This part of the study was built on secondary data from basically published peer-reviewed literature. However, due to the contemporary nature of this market space coupled with its ever-changing landscape, which tends to occur on an ultra-fast pace, these published literature were complimented with working papers, conference proceedings, press releases, reports from consulting firms, and newspaper articles. Individually validating these data sources from an intentional, objectivity, and credibility perspectives ensured the maintenance of a high degree of integrity.

In addition to building an understanding of both the Swedish mobile and traditional payment spaces, it was also important to build a theoretical framework suitable enough to solve the problem puzzle underlying this study. Achieving that, necessitated that appropriate theories be identified through a thorough scan of qualitative secondary data from peer-reviewed literature and online databases, while also considering other relevant theoretical references in the reviewed mobile payment market literature. After selecting and analysing a wide array of theories, the search was then narrowed down to three theories, which best provided the possibilities to solve the problem puzzle. These theories were then used to build the theoretical framework of the study. The three theories comprised of the concepts of: (1) Managing Innovation, (2) Resource Advantage theory, and (3) Business Model Innovation. Reviewing the literature, certain trends were identified. It was actually identified that most research had been focused on the demand-side of mobile payments concentrating mostly on adoption and despite views shared by Markides (2006) that mobile payments could be disruptive on both the demand and supply-sides, most research on the supply-side have been focused on the changing technological environment with very limited research focusing on the business processes. As a justification for the relevance of these theories, it should be noted that these theories have been used extensively in relation to mobile payments e.g. Managing Innovation (Dahlberg et al, 2006; Hughes and Lonie, 2007; Mallat, 2007; Mallat et al, 2004), the Resource advantage theory (Gaur & Ondrus, 2012; Pousttchi et al, 2009), business models and business model innovation (Pousttchi et al 2009; Componovo & Pigneur 2003; Bourreau & Verdier, 2010). The high degree of complementarity between all three theories, further justifies their relevance to this study since they could be used to provide a solid basis for a cross and multi-perspective analysis of the empirical findings. The next section looks at the empirical base of this study.

4.1.2 The Empirical Base

Building the empirical base for this study necessitated that primary data be collected from key players in the Swedish mobile payment space, which were basically mobile payment service providers. Using a purposive sampling technique, contact was established with all mobile payment service providers within the Sweden and though not all of them accepted to participate, those that accepted still provided the possibility for the study to cover the three major categories of payment providers, which are the financial institutions, the mobile network op-
erators and the independent payment providers (see Section 4.1.3 for the presentation of the interviewees). The other key stakeholders such as regulatory authorities, merchants, and consumers, were not contacted due to the nature of the purpose of the study. However, payment scheme providers such as card companies were not contacted due to the fact that their services were considered interwoven with that of the financial institutions precisely the Banks, which could provide insights to that regard.

As mentioned above in section 4.1, the interpretivistic philosophy chosen for this study, coupled with the descriptive and exploratory purposes, narrowed down the choice of research strategy to a qualitative study, which warranted that the empirical data be collected through recorded qualitative semi-structured face-to-face interviews. This permitted the respondents to be asked open and probing questions to gain further insights about aspects not initially covered by the interview framework. Internet-based interviews were also conducted via emails to interviewees who were interested in participating but couldn’t do face-to-face interviews. However, in such a case, concise yet probing question were sent and in case of a misunderstanding the questions were reviewed and re-sent for clarification. Though it took some time to get the final data from the internet-based interviews since follow up questions were re-sent to clarify certain answers that were deemed unclear, or needed more light shed upon, the final answers to the questions were satisfactory though it took more than two months to conduct the internet-based interviews.

Both data from the recorded face-to-face and the internet-based interviews were then transcribed through a process of data reduction and display to wrap up the construction of the empirical foundation. This process permitted easy analysis, conclusion and verification to be made. It was however, only conducted after all interviews had been carried out to limit the possibility of analyses made and conclusions drawn without considering every bit of the entire data set thereby reducing the chances of ignoring relevant data. Sieving out the redundant data, and restructuring the relevant data to suit the theoretical framework, the restructured data were compared to the theoretical framework and possible connections identified, which were later analysed (Yin, 2011). Based on the analysis, suitable and verified conclusions were then drawn and research questions answered.

Having justified the chosen research method; it is also of great importance that the study provides some information on the interview structure and the participants that make up the study.

4.1.3 Interview Structure and Respondents

Building the interview framework based on the abovementioned theoretical and empirical bases enabled strong connections and links to be established between the theory and the empirical findings. The interview framework was built in a way that when new insights were gain these insights were carefully reviewed and the study was pivoted ensuring the possibility to validate theoretical bases of the study. At the end of the process the framework encompassed 6 basic themes; (1) the Swedish payment market past and present, (2) the key stakeholders and their strategic assets, (3) how the different stakeholders are managing business model innovations, (4) competing strategies underlying the main solution solutions in the Swedish
market, and (6) the future of the mobile payment market. These themes were designed to cover both general and company specific factors as shown in Figure 4-1 below.

Figure 4-1 The Interview Framework

With the primary focus of the study being to take a micro-perspective of the mobile payment market from the supply side, five interviews were conducted with the key mobile payment providers in the Swedish market. Despite the numerous payment solutions offered in Sweden, the four interviews conducted, only covered 3 providers. The selection was based on the fact that they were the most established, and they represented the three major provider segments, financial institutions, MNOs, and independents players.

As already described in Section 3.3.1, Swish is C2C mobile payment application as a service born of the collaboration of the majority of the largest banks in Sweden and launched in December 2012 with a vision to offer customers the possibility to effectuate real-time transfers between bank accounts. One interview from SEB and one from Swedbank were complemented in order to gain deeper insight of this solution.

<table>
<thead>
<tr>
<th>Solution</th>
<th>Swish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company/Owner</td>
<td>Joint venture: Danske bank, Handelsbanken, Lånsförsäkringar, Nordea, SEB, Swedbank</td>
</tr>
<tr>
<td>Respondent</td>
<td>1: Jan Forsell (SEB), 2: Jesper Ahgren (Swedbank)</td>
</tr>
<tr>
<td>Position</td>
<td>1: Business Developer, 2: Business Developer</td>
</tr>
</tbody>
</table>
As described in Section 3.3.3 above, WyWallet unlike Swish is a joint mobile payment solution born of the collaboration between the four major Swedish MNOs. It caters for both the C2C and the C2B markets and it operates as a mobile wallet enabling consumers to effectuate money transfers, SMS-initiated, as well as NFC enhanced payments in stores.

<table>
<thead>
<tr>
<th>Solution</th>
<th>Wywallet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of Interview</strong></td>
<td>2014-02-20, 2014-04-25, 2014-05-15 (via email)</td>
</tr>
<tr>
<td><strong>Company/Owner</strong></td>
<td>4T Sverige AB (Joint Venture: Telia, Telenor Tele2 and 3)</td>
</tr>
<tr>
<td><strong>Respondent</strong></td>
<td>Ted Stålberg</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td>Sales Manager SMS payments</td>
</tr>
</tbody>
</table>

As described in Section 3.3.4 above, SEQR is also a C2C and C2B mobile payment solution offered by an independent player Seamless Distribution AB. Launched in 2012, with a core vision to bypass the current card payment system, the solution has as C2B value proposition to the merchants which is the reduction of transaction fees by up to 50%.

<table>
<thead>
<tr>
<th>Solution</th>
<th>SEQR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of Interview</strong></td>
<td>2013-12-12, 2014-02-15 (Face-to-Face)</td>
</tr>
<tr>
<td><strong>Company/Owner</strong></td>
<td>Seamless Distribution AB</td>
</tr>
<tr>
<td><strong>Respondent</strong></td>
<td>Stefan Görling</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td>Business Developer</td>
</tr>
</tbody>
</table>

### 4.2 Research Validity, Reliability and Generalizability

Together, these concepts constitute a measure to judge the quality of a research design, by looking at its weakness or flaws thereby highlighting certain limitations the research may entail. The quality of a research is synonymous to the trustworthiness of the research reports and a good research (Seale, 1999) should try to reduce the criticism it might spur. To reduce the chances of criticisms from positivist and quantitative adherers, it is imperative to ensure the validity, and reliability of the study.

The *validity* is the extent to which the results of the conducted study reflect what it claims to measure. As pointed out by (Yin, 2011, p. 78) for an interpretivist study, taking measures that ensure proper collection and interpretation of data, which minimized misinterpretation of interviewees, could boost the validity of a study. In order to achieve this, measures were taken to ensure that the interviewees were fully understood and to eliminate the chances of such misinterpretations and misunderstandings affecting the results.

Ensuring the *reliability* of a research design requires that data are collected transparently in such a way that should the study, be carried out by different observers or other occasions
(Saunders et al, 2009, p. 159), or if repeated under different circumstances (Bryman, 2001) will yield the same results. As the discussion of the study illustrates the author’s viewpoint, and opinion constructed from the author’s logic of thinking the reliability of the study is considered relatively low. Other aspects that could reduce the reliability of the study could stem from the researcher bias and perceptions (Denzin, 1978). Reducing this type of bias was achieved by ensuring that the study is not developed in line with any particular researcher’s idea but rather developed in line with the literature and the case study while providing opinions from an unbiased perspective.

Finally ensuring the generalizability of a research constitutes taking measures to ensure that the results of one study could be extended to other cases or situations. As justified by (Collis & Hussey, 2009) the aim of this study was however, not to achieve this since it was based on an interpretivistic philosophy rather than a positivistic philosophy where the focus was to extend conclusions from a sample on to the general population from which the sample was chosen.

4.3 Summary

Looking back at this section it is important to note the extent to which the contemporary nature of a phenomenon such as mobile payments and disruptive innovation, coupled with the research questions have greatly shaped the research philosophy, purpose, and strategy of the study. The choice of email internet-mediated interviews was as a result of the busy schedules of the participants who could only participate via emails.
5 Theoretical Framework

This chapter constitutes the core of this study, and concomitantly with its purpose, it provides a solid theoretical framework, based on which the empirical findings will be explained and analysed.

Since mobile payment presently constitute an under-performing, yet innovative way of delivering payment services, thus showing the characteristics of a disruptive innovation as justified by Ondrus and Pigneur, (2006) in their research aligning mobile payments to Christensen’s, (1997) disruptive innovation, this theoretical framework will be embedded in the theory of innovation. However, it will focus more on the managerial aspect of innovation since, like any other innovation, successfully competing on the basis of innovation hinges on effective management (Nonaka & Martin, 1991).

5.1 Innovation

Considerable attention has been paid to the concept of innovation and there are a series of definitions to describe innovation. According to Schumpeter J. A. (1934), innovation is a radical act, which results in the introduction of a completely new element, or the recombination of existing elements in a new way, to produce something new to the market, which could result in an increase in turnover and monopoly profits for the firm. In line with Schumpeter J. A. (1934), a vast part of the literature considers innovation as a basis for the competitive economy (Porter and Ketels, 2003), which is more of a strategy embedded in a timed sequence of internally consistent and conditional resource allocation decisions to achieve an organization’s objectives (Ramanujam and Mensch, 1985).

Despite this growing importance of innovation in the literature as a basis for competitiveness (Nagano, Stefanovitz, & Elaine, 2014), until much recently, the innovation literature had been more focused on technological innovations of manufacturing industries and their products. This view is greatly refuted by (Sundbo, 1997), as he claims that although they are rare, innovations do occur within services in a less systemic but rather strategic way, which is more market-oriented. With the development of sophisticated information and communication technologies, certain service industries such as the banking and financial industries have incorporated technological innovations into their processes, blurring the lines between product and process innovations. Other authors have tried to isolate different types of innovation.

5.1.1 Types of Innovation

Concurring with the Schumpeterian concept of innovation, Tidd et al, (2011) claim that innovation is not all about opening new markets or offering new ways to serve established markets but is also more of a process driven by the ability to see connections, spotting opportunities and taking advantage of them. Based on the degree of novelty, and actual changes different types of innovation could be identified.

Product Innovations, on the one hand, could be changes in the actual product an organization offers, such as a new design of a mobile phone, a new car, or a new payment service. Product innovations could either be Architectural innovations, which result in the changes in the link-
ages between the core concepts and components, without changing the actual core concept of a product, *Radical Innovations*, which result to the total changes in the core concept of the product (Henderson & Clark, 1990) by employing totally new technologies, which enhance the consumer experiences and benefits, and changing the market structure by creating new roles. As opposed to radical innovations, product innovations could also be *Incremental* if only modest changes are made to the current value proposition in existing markets (Abernathy & Utterback, 1978).

*Process Innovations* on the other hand, result in changes in the manufacturing and delivery processes (Tidd, Bessant, & Pavitt, 2011) and as argued by Sundbo (1997), the infusion of ICT in certain service industries has considerably blurred the lines between product and process innovations. Most of the time, these product and process innovations could be more of Steady-State innovations in which case the rules of the game do not change and players may still innovate and successfully compete by doing what they have always done but just better. But sometimes within the steady-state, patches of *Discontinuous innovations* may occur, which redefine the rules of the game opening new opportunities yet challenging the existing players to succumb to the changes by repackaging their offerings to meet new market conditions or otherwise render their offerings obsolete (Tidd, Bessant, & Pavitt, 2011).

These discontinuous innovations could also be *Disruptive Innovations*, in which case they may kick-start with an initially bad performance as compared to existing products in the same category but rather change the topography of the market by introducing new features, enhancing product performance, resulting in different cost structures, which might attract certain niches and customer segments thus enhancing the adoption of the product and after a series of iteration and reintroduction of improved versions, could actually become competitive at the later stages of the product’s life cycle (Garcia & Calantone, 2002), a characteristics which best describes the current mobile payment services (Ondrus & Pigneur, 2005).

Generally innovations are usually complex processes, characterized by so much uncertainty. The degree of uncertainty varies depending on the degree of novelty involved but however, successfully competing based on innovation, necessitates that they be better managed. The next section delves into the concept of innovation management, which constitutes the first building block this theoretical framework.

### 5.2 The Concept of Innovation Management

Great interest has been paid to the concept of managing innovations in the literature, which could be justified by the works of several researchers. Nagano *et al*, (2014) argue that uncertainty constitutes the basis of a series of challenges associated with managing innovations. Other authors have over the years delved into these challenges.

One of the key challenges is bridging the *information gap*, i.e. the lack of information regarding target markets, consumers, and existing technologies. Galia & Legros (2004) suggested that bridging this gap necessitates that firms seek information regarding their target markets, their target consumer preferences as well as the appropriate technologies to serve these mar-
kets and meet customer needs. However, in order for a firm to convert this information it must build an absorptive capacity, which enables the recognition of valuable external information, their assimilation, and application to meet commercial ends (Cohen & Levinthal, 1990).

Generating new ideas internally could also go a long way to bridge the information gap. Some authors have pointed out challenges in conceiving new ideas (Nemeth, 1997), evaluating and selecting the most feasible ideas (Sharma, 1999), connecting this portfolio of ideas with external information to match the strategic context of the firm (Cooper & Edgrett, 2008) as well as transforming these ideas into innovative products and services (Cooper, 2009).

Corroborating the above notions of information gap and idea generation Mu et al, (2009) also talk about the huge uncertainty associated with innovations. They argue that by seeking ways to increase its stock of knowledge, a firm improves its response to uncertainty as well as its ability to predict the future of the marketplace. Concurring with Mu et al, (2009), Tidd et al, (2011) argue that innovations are characterized by a high degree of uncertainty and managing innovation has as main goal to reduce this uncertainty by instituting routines, maximizing and speeding up the innovation process as well as enabling the management of activities through different phases, which especially in service innovation with associated intangibility and proneness to imitation, could differentiate between success and unsuccessful new service development (NSD) projects (Jin, Chai, & Tan, 2014) as they constitute guidelines for transforming opportunities into innovative products and services (Nagano, Stefanovitz, & Elaine, 2014). Tidd et al (2011) propose a model of the innovation management process, which constitutes of three critical phases basically; search, select, and implement see figure 5-1 below.

![Figure 5-1 Managing Innovation (Tidd, Bessant, & Pavitt, 2011)](image)

### 5.2.1 Search and Scan Phase

The Search Phase is the first step to bridging the information gap. It involves routines such as prospecting and ideation. Prospecting on the one hand, stipulates that before introducing a new product or service, it is imperative for firms to scan the marketplace for consumption trends and consumer needs, emerging technologies that could best enable them respond to opportunities for the development of new products and services. This is fundamental for the innovation process as it enables trend spotting and the understanding of tendencies of change,
competitor strengths and weakness as well as shifts in the politico-regulatory environment (Nagano, Stefanovitz, & Elaine, 2014).

Within the “steady state”, such vital information could result in the improvement of existing products and services through incremental innovation. In cases where firms have to deviate from the ‘steady state’ as a result of discontinuities in the market place, continuous reliance on information from existing customers might be deceptive since they are usually stuck in the same mind-sets as their supplier firms. Rather, a firms could pickup signals for new disruptive and social trends, which lie outside their mainstream operation by tapping into the reservoir of knowledge that exists within its periphery by establishing joint ventures, exploiting its distribution networks, and subsidiaries as sources of innovation. These sources could be very vital for the innovation process, as they constitute an external perspective on innovation, which could challenge the corporate mind-set and instil new ideas.

New social trends might mean new markets and the redefinition of market boundaries (Tidd et al., 2011) as seen in the payment industry where MNOs have redefined their markets to offer mobile payment services. Dealing with such a challenge, requires that the firm seeks information about its disruptive innovation in unlikely places such as fringe users, and pre-early adopters with high tolerance for failure, as well as deviating from strategic alliances to forming strategic dalliances to exploit weaker links (Tidd, Bessant, & Pavitt, 2011). This could also be achieved by incorporating different stakeholders within its periphery such as competitors, as well as establishing links with research labs, which are vital sources of potential new ideas and first-hand information about market dynamics and technological trends. If properly assimilated such information could enhance the firm’s ability to forecast market and technological trend, enable learning from its competition, as well as learning from its own mistakes.

Enhancing the assimilation of the information gathered through the search phase necessitates that the firm establishes a high involvement innovation atmosphere within its walls by communicating the market information to all key employees in order to get them involved in the innovation process (Nagano, Stefanovitz, & Elaine, 2014). Employees are a vital resource to every firm and they form the basis of the firm’s idea generation process. They could brainstorm to decode and analyse the gathered information to identify trends, generate new ideas, and imagine new ways to show case old ideas, which could lead to the development of new products and services i.e. radical innovations or a better ways to deliver existing products or services. In some cases, internalizing and assimilating this information may be hit by blinkers of cognitive dissonance limiting the possibilities of an accurate interpretation of the information for what they really are due to path dependencies arising from prior financial, physical and emotional investments, which could result in core competences being transformed into core rigidities (Leonard-D, 1992). This failure to decode the signals trapped in the market information might lead to them losing out to the competition such as Kodak’s epic failure to see the potential of digital imaging (Tripsas & Gavetti, 2000).
5.2.2 Select (Strategic Selection) Phase

While prospection and ideation address the question of what could be done? The Select Phase is a strategy-oriented phase, which tries to answer questions regarding what strategies could be selected from a range of possibilities (Nagano, Stefanovitz, & Elaine, 2014). Contrary to the steady state, i.e. dealing with well-understood problems and a known innovation space, in the discontinuous state, the select phase is more about analysing the alternatives, selecting the best possible options in which to invest vital resources, and also planning how the innovation process will be organized (Tidd, Bessant, & Pavitt, 2011).

Analysing the market information gathered through prospecting, involves evaluating, categorizing, and comparing the generated ideas. Planning the innovation process is a fundamental move towards aligning the innovation process with the corporate image, the vision and the future of the sector in which it operates. Once that has been established, the projects to allocate resources would be those that have a strategic fit with overall corporate strategy. Building a successful innovation strategy thus requires a good understanding of the market dynamics in order to paint a better picture of the competitive environment, the competitors’ strengths and weaknesses and other external forces such as regulations. This knowledge of market dynamics may also help in the identification of existing technologies that could be developed in order to offer the firm a resource position barrier. Thus, it is vital that the firm selects those opportunities whose development could be met by its existing and easily acquirable resources.

With no single firm having the monopoly over knowledge, bridging the information gap under uncertain conditions such as disruptive innovation makes the acquisition of such resources through collaboration with external partners extremely essential in this phase. Thus in cases of disruptive innovations, which usually lie outside the mainstream of operations, (Markides 2006) suggests that to limit conflicts it is vital that the firm establishes a parallel structure through either incubators, project teams, new ventures, small scale start-ups, and corporate ventures. These structures could be used to generate knowledge and once identified as promising with a profitable future, should be internalised into the mainstream.

5.2.3 Implementation Phase

This phase constitutes the core of the innovation management process with the inputs on the one hand being the strategies, ideas and resources. The outputs on the other hand, are the developed products and services, and the target market suitable for their launch. Being a phase that involves product and technology development, it comprises of four sub-processes and thus takes the highest amount of cost and time.

First the acquisition phase which involves the combination of new and existing knowledge to offer a new solution to an innovation problem. It involves the generation of markets and technological development through internal or external sources. According to Schumpeter J. A. (1934), this combination of new and existing knowledge is imperative since some existing innovations might have a spill over effect on the new innovations.
The execution phase constitutes the next sub-phase and it involves the use of stage-gate approach, which requires gatekeeping each stage of the innovation process ensuring that the projects that go through to the next stage are authorized by the management and otherwise annulled. This authorisation of projects is only guaranteed if the projects align with the overall corporate strategy. In the case of discontinuities, the management sets expectations for authorised projects, ensures the development of an innovation culture within the firm, and establishes a facilitative organisational setting, which enhances goals and reward systems.

Once a potential disruptive innovation opportunity has been validated to strategically fit the overall corporate strategy, the management designates a non-traditional marketing and business development team to develop an appropriate business model to support the innovation. At this stage it is also imperative to identify key internal and external partners with valuable resources to help develop the product, service or technology. Thus the basic challenge of the execution phase is to transform ideas into successful products and services.

The launch phase involves prototyping of the product or service to enable customer testing. Customer testing ensures there exists a market need for the product or service and also provides an opportunity to explore customer preferences, which could provide vital insights for setting up pricing policies and developing appropriate advertising strategies.

5.2.4 Learning Phase

After launching the product service or technology, the firm should try to sustain the innovation process by evaluating and monitoring the innovative performance of the product, service or technology to identify flaws, progress as well as analysing the results, which constitutes the basis for learning.

Learning from the progress and flaws of the innovation process could be re-incorporated into the system to improve performance. Such ability of reviewing, improving and at times replacing the existing routines regarding certain elements with the innovation management process could go a long way to build a dynamic capability, which could serve as vital resources and a basis for competitive advantage in the market place.

5.3 The Concept of Business Models

The success of every innovation, hinges on firm’s ability to commercialize its products and services. Seeking ways to fit the products and services to the market and developing new ways of delivering new and radical innovations could hold the key to a firm’s innovation management process and thus competitive advantage in its target market. A viable business model could go a long way to achieve this.

Despite the wide array of definitions available within the literature, which try to describe the concept of business models, the general consensus depicts the business model as a framework that permits value creation, value delivery, and value capture (Osterwalder & Pigneur, 2010).

The strategic nature of business models makes them part of more than a decade old strategy literature including authors such as Chandler (1962); Ansoff (1965); and Andrews (1972).
However, other recent findings regarding business models have been carried out by Chesborough et al. (2002) and Christensen et al. (2008), with the most recent being attributed to Osterwalder & Pigneur (2010), who based on the findings of the two former authors, developed 9-building block business model canvas deemed valuable for this study see Table 5-1 below.

<table>
<thead>
<tr>
<th>Key Partnerships: The network of suppliers and partners that make the business work.</th>
<th>Key Activities: Most important things a company must do to make its business model work.</th>
<th>Value Proposition: The bundle of products, services, as well as experiences that a company creates it target customer segment.</th>
<th>Customer Relationships: Type of relationship a company establishes with a specific customer segment e.g. automated, self-service etc.</th>
<th>Customer Segments: The different groups of people or organizations a company aims to reach e.g. mobile users, merchants.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Resources: The strategic assets a company requires to make its business model work.</td>
<td>Channels: How a company communicates and accesses its target customer segments to deliver a value proposition e.g. the Web, Apps etc.</td>
<td>Cost structure: A sum of all costs incurred to operate the business.</td>
<td>Revenue Streams: Cash a company generates from each customer segment, e.g. subscription, transaction, brokerage fees etc.</td>
<td></td>
</tr>
</tbody>
</table>

Table 5-1 The Different Building Blocks of the Business Model (Osterwalder & Pigneur, 2010)

Some authors have managed to establish a connection between business models and mobile payments despite criticism vis-à-vis the potentially misleading nature of business models, which might spur faulty thinking from a managerial perspective (Porter, 2001). These authors include (Au & Kauffmann (2008); Bourreau & Verdier 2010); Camponovo & Pigneur 2003); Lao & Lui 2011); Lim 2008); Ondrus and Pigneur 2005); and Schiessler & Wiedmann 2008)

5.3.1 Business Model Innovation

Unlike product, service, or technology innovations, which focus on the introduction of new products, services and new technologies, business model innovations focus on changing the ways products, services and technologies are delivered to the customers (Markides, 2006).

As highlighted in the managing innovation section above, the successful implementation of an innovation hinges on management’s ability to transform ideas into products, services or technologies that could be commercialized. Part of this implementation process is to figure out how to best capture value from an innovation. According to Christensen & Overdorff (2005) the most successful and transformative companies are those that take a new technology and wrap it up in a viable business model, while competing on the basis of creativity in developing the technology and its commercialization.
While during the steady state, an existing business model could be leveraged to capture value from incremental innovations, in discontinuous circumstances, usually characterized by radical and disruptive innovations, non-traditional marketing and business development teams within the company must tweak their existing business model or develop an entirely new business model to be able to capture value from such radical and disruptive innovations.

Markides (2006) defines business model innovation as the discovery of a fundamentally different business model within an existing business. He also argues that for a business model to be classified as an innovation, it must ensure the increase the economic pie by either attracting new customers or by encouraging existing customers to consume more. In the case where the new business model attracts new customers, it usually spurs a dilemma for established firms since the new business model usually conflicts with existing business model as it attracts customers that lie outside the incumbent’s area of focus. Under such circumstances the firm must find a way to make both business models coexist.

Unlike disruptive product or service innovations, which could take decades to gain respectable size, business model innovations could quickly gain respectable sizes with examples such as the Internet banking and No-frills flying business models, which have grown phenomenally over the last decade. Markides (2006) argues that those new business models are not necessarily superior to existing business model. Drawing an analogy from the Internet banking and No-frills flying business models, which have only managed to garner up to 20% of their respective markets, he argues that business model innovation is not an optimal strategy. Despite the previous claims, Markides (2006) proposes three circumstances within which it becomes advantageous for a firm to develop new business models. 1) When a firm is making an entrance into a new market where the existing players enjoy first mover advantage for example Canon’s entrance into the copier market or the independent mobile payment service providers entering into the payment market dominated by financial institutions. 2) When a firm’s current strategy is inappropriate and/or the firm is in crisis. 3) When a firm is attempting to scale a disruptive and new to the world product, service, or technology so as to make it attractive to the mass market. A typical example of the third scenario is the case of mobile payments. Payment for goods and services is nothing new but using mobile devices instead of plastic cards is certainly new and disruptive.

Charitou & Markides (2003) argue that though creating a separate unit to exploit disruptive business models seems like the best way forward, as it downplays the inherent conflicts between established businesses and innovations, firms do not necessarily need to create a separate unit as suggested by Christensen et al (2008). They argue that even though they have to respond to disruptive innovations they can do so in several ways. According to them firms could either react by not adopting the new business model but respond in a way that tries to disrupts the disruptors.

Radical innovations could be disruptive from both the demand and supply sides. From the demand side they are disruptive because they result in product and value propositions that enhance changes in consumers’ habits. From the supply side they are disruptive because they create markets that undermine the competences and the complementary assets on which the
competitors have built their success. This two-sided disruptiveness renders radical innovations a supply-push rather than demand-pull phenomenon originating from technology developers (Markides, 2006).

Christensen et al (2008) argue that the main reason why companies hesitate to innovate their business models is due to the perceived unattractiveness associated with new business models vis-à-vis their existing business model. A switch from existing business models could mean alienating existing relationships with distributors and other stakeholders within their value network. For example, if British Airways decides to start selling tickets on its website, it risks alienating relationships with travel agencies (Markides, 2006). The classic Eastman Kodak is an example of what befalls companies who give a blind eye to the forces of disruptive innovation and were taken aback by the digital film technology.

5.3.2 Managing Business Model Innovation

Charitou & Markides (2003) argue that in the wake of a disruptive innovation such as mobile payments, firms must respond but they however, they are not obliged to adopt new business models. They propose 5 ways to deal with disruptive business models. 1) The firm may choose to focus on its traditional business. 2) Ignore the innovation and carry on with business as usual. 3) Attack to disrupt the disruption. 4) Adopt the innovation and play the game simultaneously. 5) Fully embrace the innovation and scale it up.

They also claim that two factors usually affect the degree of response to the disruptive innovation. These are the ability and the motivation to respond to the innovation. See Figure 5-2 below.

![Figure 5-2 Modalities of Response to Disruptive Business Model (Charitou & Markides, 2003)](image-url)

At low motivation due slow diffusion and limited threat to existing business model the firm should ignore the innovation and focus on its existing business model despite how high the ability to respond to the innovation is. If the motivation is high as opposed to a low ability to respond, the firm should attack the innovation in a way that disrupts the disruption or should
either embrace it fully or abandon its traditional business. At both high motivation and high ability to respond to the innovation, the firm should adopt a new business model and incorporate it with its existing business model.

According to Christensen et al (2008), despite what the motivation and the ability to respond to an innovation are, when a company decides to pursue business model innovation, the company must;

- First of all, focus on satisfying its customers and their desire to get the job done,
- Develop a delivery model that cost effectively takes the created value to its potential customers,
- Compare the new business model to its existing business model for possible iterations.

In cases where the company must create a separate unit, to reduce the possibility of conflicts and cannibalisation of its existing business as suggested by Christensen et al (2008), Charitou & Markides (2003) suggest that if a firm must operate ambidextrously, it is imperative that the new business model has no strategic fit with existing processes and values. On the contrary if the process and the existing values have a strategic fit then there is no need to adopt an ambidextrous approach.

In addition to answering questions as to whether the new business model has a strategic fit with existing processes and values of the firm, questions regarding whether the firm possesses the resources to pull-off the innovation must also be answered. The ability of an established firm to respond to a disruptive innovation is determined most importantly by the degree and size of conflict between its new business and traditional business models, but also by the time it has at its disposal and its portfolio of capabilities and resources. This brings this theoretical framework to its next building block, the resource-based view of the firm.

5.4 Resource-Based View of the firm

As seen in the previous section, resources are key inputs to the innovation management process. They constitute the foundation for strategy formulation as well as sources of profitability thus the relevance for the resource advantage theory of competition as vital building block for this study. First brought to the academic world by Hunt & Morgan (1995) as the comparative advantage theory of competition, the theory stipulates that the possession of a key resource may offer comparative advantage in the marketplace. According to Wernefelt (1984), such comparative advantage results from the fact that certain resources may confer onto a firm the possibility to enjoy a resource position barrier, a situation where a particular firm’s resource position directly or indirectly hampers competitors from catching up within a particular market. A resource position barrier could only be valuable to a firm if it could be translated into an entry barrier in at least one of its market, which could in turn be translated into a source of competitive advantage.

From a resource-based perspective, resources and capabilities are the main foundation stones of strategy and sources of profitability. However, the resource-based view of the firm stipulates that until a firm utilizes its unique resources, to build unique capabilities, its competitive
position in the marketplace could be short-lived. With such huge importance placed on resources and capabilities it’s only natural this paper elaborates on these concepts.

5.4.1 Resources, Capabilities and Mobile Payments

A firm’s resources are those set of factors it owns and controls, while its capabilities are its capacity to deploy its resources usually in combination with organizational processes to effect desired ends. Thus, *Strategic Assets* are those resources and capabilities, which offer a firm the possibility to enjoy a competitive advantage (Amit & Schoemaker, 1993).

As mentioned in the literature review above, a few studies have been carried out linking up the resource-based view of the firm and mobile payments (Gaur & Ondrus, 2012; Pousttchi et al, 2009). Pousttchi et al (2009) identified three sets of resources in mobile payments market notably; human, intangible and tangible resources. *Human resources* are the people who combine the tangible and intangible resources through different organizational processes to meet a desired end such as the development of a product, a service or a technology. *Intangible* resources are patents, brands, and full banking licences etc., while *tangible* resources could be the payment infrastructure amongst others. As mentioned above, for a firm such as a mobile payment provider to build upon its resources and its capabilities, it must convert them into to strategic assets. Thus, they must have positive characteristics such as scarcity, inimitability and limited substitutability, low tradability, and high durability and complementarity.

5.4.2 Strategic assets and Mobile Payments

Based on Amit & Schoemaker (1993) approach on strategic and nonstrategic assets, while studying the banks, Gaur & Ondrus (2012) identified three strategic assets of the mobile payment market.

The expertise, efforts, and experience in performing financial transactions, along with the cost associated with establishing *Banking System* constitutes a valuable asset in the mobile payment market. Based on tacit knowledge with usually low replicability, makes it a strategic asset characterized by inimitability, low tradability, but also high durability as it could also take a long time to be built and it involves both legal and capital investments and thus limited substitutability. In the mobile payment market, financial institutions such as banks and other process innovators enjoy a resource position barrier based on the banking systems they have built over time through processing of macro transactions and clearing and settlement of funds. Thus, for non-financial institutions to provide mobile payments they must acquire this expertise.

Next is control over customer *Bank Accounts*, which constitute consumer (issuing bank) account and merchant (acquiring bank) account. These accounts can be plugged and integrated directly with payment solutions to facilitate settlement of payments. Bank accounts comprise of two distinct information; customer financial data, and customer relationships built over time due to account maintenance. In the payment value chain, the financial institutions especially banks, are privileged to have control over bank accounts. Bank accounts are strategic asset since they are specific and cannot be replicated by other players. In addition to the fact
that these financial institutions will not easily share these information with other players of the mobile payment value chain, control over bank accounts is not only a resource which exhibits limited substitutability, inimitability, but also low tradability. Based on these attributes control over bank accounts is a strategic asset that can confer competitive advantage or a strong bargaining power in a market such as the mobile payment market with so much inter-dependency.

*Brand image* constitutes customer trust and customer loyalty. This is an intangible asset that cannot be replicated by the competition. Customers tend to associate a high importance to trust when it comes to payments. The trust related brand image cannot be traded easily, nor can it easily imitated by competitors due to the long-term relationship needed to build it. This offers the banks and other financial institutions advantage in the marketplace. The banks however, having established a long-term relationship with customers, enjoy the most customer trust when it comes to the financial market. However, other players within the payment value chain can borrow some of this trust by establishing relationships with these financial institutions such as the relationship between the banks and the credit card companies.

Other assets include the *Payment Infrastructure*, which hosts the transactions and the different technologies that support clearing and settlement, and security. Technology providers usually have an advantage in this area. However, this asset is not strategic as they could be replicated by the competition, as seen in the case of MPesa solution in Kenya where a non-financial company such as an MNO built a payment infrastructure to support SMS-initiated payments. A bank could also develop the technology to host their banking system, which could confer onto them even more advantage. *Risk management expertise* could be a vital capability in the mobile payment market. It enables the careful scrutiny of financial transactions to limit fraudulent activities. Tied to the human resources, and the organizational processes within financial companies, this capability used to confer advantage onto financial institutions such as banks especially with respect to macro-payments. However, other financial companies such as credit card companies can substitute this capability; while companies like MNOs can grant credit for micro-payments, making it a capability that is not completely inimitable and thus not a strategic asset. *Bank license* also constitutes a key resource in the mobile payment market. It offers the payment provider the possibility to grant a legal guarantee to the merchant (Poustdtchi et al 2009). However, the bank licence is not a strategic asset since there are legislations that grant competitors such as MNOs, the right to offer legal guarantee to merchants as banks.

Thus for a company to provide mobile payment services, it must seek ways acquire these strategic assets if it has to successfully compete in the mobile payment market. This takes us to the next building block of this theoretical framework.

### 5.5 Transaction Cost View of Strategic Alliances

According to the transaction cost economics, resources need not be owned or fully controlled by a single firm (Williamson, 1979). Defined as the cost associated with performing market transactions, transaction cost economics is very instrumental in cost economizing as it stipulates that for a given product or service, a firm might choose to produce its own in-house, pur-
chase it from the market, or produce it jointly with partner firms in a strategic alliance, all in view of sharing resources, risks, and achieving cost effectiveness, (Williamson, 1979).

The concept hinges on the logic that, should the transaction cost increase beyond an affordable level, in-house production of the product or service becomes profitable. However, when the cost of producing the same product or service through partnering with other firms is lower than both the transaction costs of acquiring it from the market, and that of producing it in-house, the firm should forge strategic alliances with external partners, which could enable them gain access to partners’ resources to achieve cost effectiveness, share risks while meeting customer needs, but most especially, build competitive edge in the marketplace.

The economic literature, however, stresses the existence of a network effect in retail payments since the adoption of payment solutions depend on how better the providers can incentivize both consumers and merchants to get aboard their platform. From the supply-side this network effect coupled with the presence of economies scale, creates huge incentives for competing players to standardize and cooperate. The cooperation between the different players may reduce the cost incompatibilities such as the case of payment cards. In relation to the transaction cost economics, industries characterized with interdependency require that the key actors within the industry collaborate and share resources to deliver an end-to-end solution.

5.5.1 Cooperation Models in the Mobile Payment Space

As vital as interdependencies may seem to be in the retail payment market, the banks though competing within the market for deposit, have historically enjoyed considerable dominance owing to their possession of complementary and strategic assets in the payment market. In the mobile payment market, the banks face natural competition from MNOs and if they decide not to cooperate, then they will have to incur costs for venturing into each other’s markets. On the other hand if the development involves the coordination between the banks, MNOs and non-banks there might be some coordination costs associated. In addition to these coordination costs, the presence of non-bank parties could mean that there could be regulatory uncertainties, which might cause players to adopt a wait and see stance.

Based on the input they control, Bourreau and Verdier (2010) identified three key players of the mobile payment value chain. The MNOs and the Handset manufacturers have control over the design and distribution of the mobile phone, which is an essential input to the mobile payments. The MNOs on the one hand, own the SIM card and they commercialize and subsidize the phones, while the Handset manufacturers produce it. The banks have control over their customer bank account, while payment platforms such as Visa or MasterCard have control over a large acceptance network. Thus adopting a mobile payment business model involves the choice regarding the tolerable degree of dependence and cooperation that could exist with these three key players. See Figure 5-3 below.
A payment provider may decide to develop a solution without cooperating with the MNOs or the mobile handset manufacturer in which case, the mobile payment solution is in the form of an application stored in the memory card of the handset. The solution could also be developed in such a way that just a weak link is established between the banks, in which case it will be built upon the existing card payment system such as Visa or MasterCard to access customer accounts without relying directly on the banks. Though existing payment systems such as Visa and MasterCard have control over a large acceptance network, a payment provider may also adopt a model that bypasses their control, by developing their own infrastructure and targeting niche markets, such as vending machines or building direct relationships with customers and a few affiliated merchants.
As seen in (Figure 5-4 above) schematic representation of the possible economic relationships between the key players of the mobile payment value chain, the dashed lines represent relationship that could either exist or not, while the solid lines represent existing relationships. Based on the degree of dependency or form of cooperation with the above-mentioned key players, five different business models could be identified.

<table>
<thead>
<tr>
<th>Model</th>
<th>Bank</th>
<th>MNO &amp; Handset manufacturer</th>
<th>Payment platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Model</td>
<td>Weak</td>
<td>Weak</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td>Suitable for niche markets. Weak cooperation with banks and existing payment platforms such as card payment systems to top up wallet accounts e.g. Obopay. Consumers could also make purchases on affiliated merchant pages through pre-registered debit or credit cards e.g. Amazon’s MPS, Paypal mobile payments.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile-centric model</td>
<td>Weak</td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td></td>
<td>Could either be the mobile prepaid model or the bill-to-carrier model where service providers charges consumers on their mobile bills. Could also be a blend of a direct debit and text message confirmation system e.g. mpass, the joint solution by Vodafone and O₂.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank-centric model</td>
<td>Strong</td>
<td>Weak</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Banks could develop a mass-market mobile payment solution without cooperating with the MNOs and the handset manufacturers. However they maintain strong cooperation with an existing payment platform such as the existing card payment infrastructure e.g. Caisse d’Epargne’s MOVO service in France</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial-integration model</td>
<td>Strong</td>
<td>Strong</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Based on a situation where an MNO could create or integrate with a bank or vice versa. In such cases both the MNO and the bank offer a combination of mobile communication services and payment services with strong affiliations to acceptance network controlled by a payment system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-integration model</td>
<td>Strong</td>
<td>Strong</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Based on vertical integration along the value chain where a single company may provide mobile services, payment services and also has access to a large acceptance network. This could also be achieved by setting a joint venture between, banks, MNOs and a payment system.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 5-2 Classification different Mobile Payment Cooperation and Business Models**

A payment provider could adopt a *light model* establishing the lowest degree of cooperation with all three key players (see Table 5-2 above). This model is easier to implement due to low barriers to entry and it is strategically suitable to target niche markets. Difficulties in attracting a critical mass of consumers, and merchants, could be a major setback associated with this model but building on the existing payment infrastructure, could render the model more profitable as existing infrastructures could offer access to profitable niches. Otherwise, they could eventually build a huge acceptance network if they could scale their activities as in the case with Amazon and Paypal.
A payment provider may also choose to adopt the Bank-Centric or the Mobile-Centric model. These models are characterized by strong cooperation with either a bank or an MNO (or a handset manufacturer). The bank-centric models are seen in cases where a bank may decide to offer an end-to-end mobile payment solution in which case they must develop a mobile payment platform as in the case with the French company Caisse d’Epargne. The mobile-centric model on the other hand is seen adopted mostly by start-ups who launch payment applications for the purchase of digital content, which are charged to customer via reverse billing managed by the MNO.

Lastly a mobile payment provider may also choose to adopt either a Partial-Integration or a Full-Integration model. These models are costly to implement since they necessitate strong bonds with all three key players, which may accompany substantial coordination costs, and also as a result of the varying incentives of the different players. However, once successfully built they may generate substantial benefits for the participants. Setbacks could stem from the fact that certain existing investments could be cannibalised and exist relationship alienated.

5.6 Summary

This section has provided the study with a solid theoretical framework based on the theories of innovation, innovation management, business models and business model innovation, the resource-based view of competition and the concept of transaction cost economics in relation to mobile payments while delving into the concept of cooperation models in mobile payments. These theories and concepts will be used to analyse and make sense of the empirical findings, which will be presented in the next chapter.
6 Empirical Findings

This chapter presents the empirical data that were collected from interviews held with key mobile payment providers of the Swedish mobile payment industry. These findings will be presented along the themes of the interview framework presented in section 4.4.1.

6.1 Swedish Mobile Payment Space and Trends

The key stakeholders of the Swedish mobile payment market are the consumers, the merchants, financial institutions such as the banks, and card companies, the MNOs and competitive new entrants the independent players (Personal Communication; Forsell, 2014). On the one hand the lack of cost transparency is becoming an issue as consumers are getting less tolerant with hidden fees and demand some cost transparency, a market need that has so far been met by the banks through their mobile banking services (Carlström, Personal Communication, 2014). On the other hand with merchants’ margins on a falling trend, the high card transaction fees are also becoming a major issue for these merchants who are seeking new technology-based services such as mobile payments to get around the issue of card fees (personal communication; Görling, 2014).

The card-based issuers and payment providers, the merchants, the banks and the card companies have invested a lot in card payment systems and they are very reluctant to capitalize on the mobile payment opportunity (personal communication; Görling, 2013), a fact which Forsell (personal communication, 2014) concurs by saying that payment card issuers such as banks and merchants are adopting a wait and see” strategy until they can see a potential disruptive threat of mobile payments. This could be due to the fact that having invested in the existing card payment infrastructure; adopting mobile payments, they will run the risk of cannibalising their existing businesses and alienating relationship with key players in their value chain (personal communication; Ahrgren, 2014; personal communication; Forsell, 2014).

With a lot of transactions been done via credit and debit cards with chips and PIN codes the Swedish payment market is more advanced as compared to other markets such as the USA, where transactions are via cheques, credit cards without chip nor PIN codes, and high share of cash streams, and some European countries such as Romania where card payments are not only inexistent but there is a high probability that they will be leapfrogged by mobile payments (personal communication; Görling, 2014). In Sweden there is a drop in the use of cash but the banks feel there is no urgent need to replace cash. In addition, their card payments are currently well established and they fulfil their purpose meeting the need of the consumers who are quite happy with card payments (Personal Communication; Ahrgren, 2014; Personal Communication; Stålberg 2014).

Despite the wide adoption of card payment schemes in the Swedish market, the MNOs and independent players are developing mobile payment solutions that either bypass the banks or the card existing card payment infrastructures i.e. Visa and MasterCard (personal communication; Forsell, 2014). Swedish independent players such as Seamless, who have built their solution bypassing the existing card payment infrastructure, could disrupt the market enormously by significantly lowering transaction fees to merchants coupled with an added ad-
vantage that all merchants and consumers can use their solution (personal communication; Ahrgren, 2014).

The role of the MNOs in the Swedish mobile payment market is still not very clear. This could be due to the fact that most successful cases of MNO-operated solutions could only be cited in areas with higher unbanked population such as Mpesa in Kenya, where the banking system doesn’t address the needs of the locals (personal communication; Forsell, 2014; personal communication; Gorling, 2013). However, in Sweden an MNO-operated solution Wy-Wallet, has been built in such a way that there is very little cooperation the banks, but rather strong cooperation with the existing card payment schemes, which allows consumers to top-up their mobile wallets directly using their payment cards (personal communication; Ahrgren, 2014).

From a mobile payment perspective, Forsell (personal communication, 2014) feels that there is currently low demand for mobile payments in Sweden though the adoption of the Swish solution provided by the banks highlights the existence of a market need for C2C mobile payments in the Swedish market. Merchants’ response to the independent players’ solution SEQR, also highlights a market need for C2B mobile payments as well in Sweden though most merchants are not yet ready due to their lack of capabilities and technology to adopt mobile payments (personal communication; Görling, 2014). Many merchants are waiting for the major merchant chains to decide before choosing what service to invest in (personal communication; Stålberg, 2014). Ahrgren (personal communication, 2014) feels that the wide use of card is the cause for the low demand. Görling (personal communication, 2014) believes that the demand from the merchants could push the demand for mobile payments.

Görling (personal communication, 2013) thinks that Swedish mobile payment market is way gone past the experimental phase as it is now in its growth phase with a lot of execution and land grabbing going on though the market is still shaping up with a lot of players, who will definitely not succeed. He also feels that it is not guaranteed that mobile payments will replace cash and card-based instruments anytime soon. Forsell (personal communication, 2014) agrees by saying it is still too early to say a particular player will dominate the market and that it could take a few more years before the winners will emerge while solutions which are unable to garner a critical mass of consumers and merchants will soon give way (Stålberg, personal communication 2014).

Looking at what consumers really consider as value, Ahrgren (personal communication, 2013), says that consumers want to see the benefits and comfort of using mobile payments instead of existing payment systems. He also says that the consumers want to have efficiency and flexibility in their everyday lives, and Görling (personal communication, 2014) claims that merchant also want to provide consumers with more efficient, speedy, and flexible payment choices at POS. In addition to the drivers mentioned above, trends such as positive attitudes towards QR-codes, which have been used in advertising and the high penetration of gaming, which require users to pay with their mobile devices paved the way for QR-code based mobile payment services (personal communication; Görling, 2014).
6.2 Main Providers and Strategic Assets

The interviewees identified three potential sets providers in the Swedish mobile payment market. These are the Banks, the MNOs and the independent players.

6.2.1 The Banks

Having operated as mediators of financial transactions; the banks feel they are natural players with a key role in every payment network whether mobile or otherwise (personal communication; Ahrgren, 2014). Their control over issuing and acquiring accounts, constitutes a strategic asset since consumers want the convenience of having their money available to them for anything at anytime rather than having their money tied up in a mobile wallet. This requires that a third party solution is linked to a bank account whether directly or via card schemes is in the case with Swedbank’s card-based mobile payment solution Bart (personal communication; Ahrgren, 2014). Having access to customer accounts does not automatically translate into success in the mobile payment market. It is important to garner a critical mass of customers as fast as possible, something that Swedbank failed to achieve with its Bart solution prompting its liquidation (personal communication; Arhgren, 2014). Forsell (personal communication, 2014) believes that an individual bank solution would have difficulties to attract more customers in a short time and as such the major Swedish banks had to collaborate to develop their mobile payment solution, Swish. Such collaboration could further expand their network of Swedish issuing and acquiring accounts, which with limited third party access, could constitute a strategic asset and a source competitive advantage for the banks (personal communication; Görling, 2014).

In addition to their control over a vast network of Swedish issuing and acquiring accounts, (Carlström, Personal Communication, 2014) points out that the banks currently own the infrastructure and network to carry out card payments and with their legacy in managing payment networks, they could leverage their current mobile banking and network of card users to create a positive network effect. The banks also have their reputation as an asset since their long lasting legacy as payment mediators and their closer relationship with customers has over the years permitted them to earn customers’ trust in offering financial services (personal communication; Görling, 2014; personal communication; Ahrgren, 2014). Forsell (personal communication, 2013) says that the banks’ strong position could be used to exclude new actors from the mobile payment ecosystem by utilizing their collateral assets, such as their many market channels and strong brand image. Their many years of experience as financial institutions have made them capable of affecting and adapting to industry regulations, which could be difficult for new actors to adhere to.

6.2.2 The MNOs

Just like the banks, the MNOs enjoy a close relationship with end users. The MNOs have a relationship with every consumer who owns a mobile phone and therefore have an opportunity to integrate their payment service from the start of the chain (personal communication; Görling, 2014). Being major players in the mobile ecosystem, the closeness to the consumer offers the MNOs the possibility to earn their trust (personal communication; Stålberg, 2014).
Ahrgren (personal communication, 2014) feels that the level of consumer trust enjoyed by the MNOs is very high and they have a natural role in the mobile payments though he feels their trust record is not as cemented as the banks’, especially not when it concerns financial services such as payments.

The collaboration between the four biggest Swedish MNOs to develop their WyWallet solution gives them the possibility to enjoy an even wider network of Swedish mobile phones users (personal communication; Forsell, 2014; personal communication; Görling, 2014), which could be leveraged to attract merchants and other stakeholders (personal communication; Stålberg, 2014). Contrary to their close relationship with the consumers, the MNOs do not have any legacy in payment networks, nor do they have any previous relationship with customers from a financial perspective (personal communication; Ahrgren, 2014). Forsell (personal communication, 2014) says the MNOs lack the necessary solidity and credibility needed to operate an end-to-end mobile payment solution. However, this is not a major issue since partnerships with credit providers (financial process innovators) could offer the MNOs a means to garner some trust and credibility via these financial institutions (personal communication; Stålberg, 2014).

6.2.3 The Independent Player

Despite not having any previous relationship with consumers like the Banks and the MNOs, Ahrgren (personal communication, 2014) believes the independent players have an advantage since all consumers and merchants can use their solution. Also the lack of connection to the traditional payment market offers them the freedom to innovate, design, and develop their mobile payment solution in a more radical way without risk of cannibalising any existing business models or alienating existing relationships (personal communication; Görling 2014). Unlike other independent players in the Swedish market, Seamless Distribution AB possesses the necessary competence in the payment market, owing to their legacy in building payment infrastructures (personal communication; Ahrgren, 2014). Görling (personal communication, 2014) says with knowledge in developing and managing transaction technologies precisely transaction switches for mobile operators, which permits their customers to top-up their pay-as-you-go accounts, constitutes a major asset for Seamless distribution AB and their SEQR solution, which permits them to develop their own platform, by bypassing the existing card payment infrastructure thus offering them the possibility to offer lower transaction fees to merchants. Stålberg (personal communication, 2014) believes their connection to strong brands, such as McDonalds, Max, and Axfod could give them the possibility to build trust around their mobile payment solution by leveraging the merchants’ own distribution system to expand and create a positive network effect.

Ahrgren (personal communication, 2014) however, feels that the fact independent players such as Seamless Distribution AB lacks an in-house acquiring system could be a major problem when expanding. Forsell (personal communication, 2014) believes that having an in-house acquiring system will require that they incur the same costs as the banks, which means they will struggle to offer lower fees to the merchants.
Görling (personal communication, 2014) believes that the lack of brand image as regards consumer trust in handling financial transactions constitutes a major setback for the MNOs and the Independent players compared to the banks who have established a reputation of security and trust. Collaboration with banks could grant these players the possibility to tap into such reputation but currently the banks are not granting access to customer accounts, which creates huge barrier for these independent players (personal communication; Görling, 2014). The banks’ joint solution Swish being focused on C2C mobile payments, while WyWallet and Seqr focus more on C2B mobile payments means Swish is not their direct competitor but however, should they decide to offer C2B mobile payments they could become a huge competition (personal communication; Stålberg, 2014; personal communication; Görling, 2014). Forsell (personal communication, 2014) says that despite the Swish collaboration, the banks have different incentives and venturing into the C2B market would mean cannibalizing their existing card business, in which they have invested so much. Görling (personal communication, 2014) believes banks are collaborating to offer C2C payments because that is not their profit area. He feels if they will venture to do payments in stores and compete with the cards each banks card payment division will start complain.

6.3 Swish - The Banks (Joint Venture - Swish)

6.3.1 Business Model Innovation

Forsell (personal communication, 2014) says, the banks are natural players in the payment and financial markets and they believe they have an ultimate role to play in any payment setting. Ahrgren (personal communication, 2014) states that if the banks are not present in mobile payments, the infrastructure will not be as strong. Despite the cost-cutting potential of mobile payments, the banks still do not consider mobile payments as an important part of their business (personal communication; Forsell, 2014). Ahrgren (personal communication, 2014) states that the limited importance accorded to mobile payments by the banks maybe partly due to the currently low demand for mobile payments and partly due to the currently high penetration and adoption of card payment systems in Sweden which caters for the C2B payments market both online and in physical stores. Having identified competing solutions, which offer C2B mobile payments, Forsell (personal communication, 2014) says since none of these competing solutions better meets the needs of the Swedish C2C payment market, offering mobile payments constituted not only a means to reduce the cost of cash for the banks but also a unique chance to become first movers in the emerging and growing C2C mobile payment market. The banks’ combined solution Swish, enjoyed a quite positive adoption as over 200 000 consumers used the application in the first few months of its launch in 2012, while since the second half of 2013, the user base grew to about 4000-5000 users per day since the beginning of 2014 the Swish user-base has increased to the neighbourhood of millions of users (personal communication; Ahrgren, 2014), which justifies the existence of a C2C mobile payment market need (personal communication; Forsell, 2014).

Ahrgren (personal communication, 2014) states that the different banks have different levels of motivation. For SEB bank, mobile payments are still not highly prioritized while at
Swedbank mobile payments are top priority. Forsell (personal communication, 2014) says that Swedbank’s top prioritization of mobile payments could be tied to the fact that they are leaders in the Swedish market for POS payments with cards. With Swedbank’s individual C2B solution Bart, liquidated earlier this year due to failure to attract a critical mass of consumers and merchants, the banks think the Swedish market is not yet ready. Though motivated by the desire to reduce the cost of cash and the possibility of market leadership, with a perception that the market is not yet ready, the banks’ motivation to develop a full-fledged mobile payments solution, which targets both the C2C and C2B markets, is low even though they have the capability and the resources to offer mobile payments (personal communication; Ahrgren, 2014).

The banks operate different business models in different markets. In the loans and deposit market, they target both retail and corporate customers earning interest fees from lenders and other fees from other bank operations. In the card payment market, the banks are either issuers (issuing cards to cardholders) or acquirers (managing the relationship with the merchants). They rely on the infrastructure of payment technology companies, Visa and MasterCard to offer cardholders safe, convenient, and rewards associated with card payments and improved sales to the merchants, payment options to customers while capturing value through card fees and transaction fee cuts, and late payment interests (personal communication; Forsell, 2014; personal communication; Ahrgren, 2014). Forsell (personal communication, 2014) states that developing their joint CSC solution Swish, necessitated that the banks tweak their payment business model to better address the C2C mobile payment market, which does not have different needs but only targets bank account holders offering them safe, convenient and real-time peer-to-peer payments transfers via smartphones. Both business models operate simultaneously and are both incorporated in the mainstream of each partner bank thus they both share banks’ resources such as reputation and trust, the banking system and managerial resources as well as access to bank accounts, even though Swish was initially launched as a separate unit (personal communication; Ahrgren, 2014).

6.3.2 Mobile Payment Service Development

Forsell (personal communication, 2014) says despite the individual banks haven earned the customers’ trust, and have control over their bank accounts as well as have a banking system in place that permits the them to better mediate transactions and manage financial risks, the complex nature of mobile payments with network externalities, makes it difficult for a single bank to provide a competitive and sustainable solution since a single bank can not garner the critical mass of customers in a short time to create a network effect. Ahrgren (personal communication, 2014) concurs by saying the failure garner a critical mass best describes the ill fate met by Swedbank’s individual solution Bart. In addition to issues associated with generating a network effect, Ahrgren (personal communication, 2014) also says since payments did not hold any value except they are wrapped in the right context, another major issue faced by the banks and other players such as the MNOs was finding the right context to wrap around their mobile payment solutions.
In order to attract more customers through a network effect six Swedish banks led by SEB had to collaborate to develop the C2C mobile payment solution, Swish (personal communication; Forsell, 2014). The collaboration between the banks to develop the Swish solution is only at the level of the infrastructural and platform development. Two other third party companies the Bankgirot, and Teknik Finansiel AB, also joint ventures between all Swedish banks created to build two technological resources the Bankgirot (for real-time payments on the Swish platform), and the BankID (for security), confer onto the Swish platform the capabilities to offer real-time, secure, and simple C2C mobile payments (personal communication; Ahrgren, 2014). Having their own acquiring system the banks did not have to collaborate with independent players such as process innovators (personal communication; Forsell, 2014) but however, since the Swish solution is a mobile application as a service there is a dependence on the handset manufacturers whose operating systems must support the Swish application such as iOS and Android devices (personal communication; Ahrgren 2014). With the Swish application being directly linked to consumer accounts, the solution bypasses the existing card payment infrastructure (personal communication; Forsell, 2014).

Looking at the competing solutions, without giving too much detail, Forsell (personal communication, 2014) says in addition to a technology based acquiring system, competing solutions such as WyWallet and Seqr, are NFC and QR-code enabled. Ahrgren (personal communication, 2014) says such technologies permit easier, faster, and convenient checkouts in both online and physical and POS but since the Swish solution only permits peer-to-peer payments and most recently to businesses in-app, such technologies are not deemed necessary and besides the banks’ card payment solution is universally accepted and best meets customer needs of the present Swedish C2B payment market.

6.3.3 Competing Strategies

According to Forsell (personal communication, 2014) the banks face a serious threat from the competition in the C2B payment market as independent players such as Seamless Distribution AB have not only designed their mobile payment solution, in such a way that by-passes the banks’ existing card payment system, and are threatening to lower transaction fees charged to the merchants by 50%. Ahrgren (personal communication, 2014) says C2B mobile payments could only be a threat to the banks’ card payment system if they are not the ones offering it. Thus they have an incentive to develop a C2B mobile payment solution, which coupled with their key resources and capabilities, could give them an edge in the mobile payment market. He also reveals that with C2B mobile payment market being a profitable one, the banks’ vision for the Swish solution goes beyond the C2C markets, and the platform is currently being re-designed to effectively support C2B payments since they are working on the possibility of consumers to make simple payments to companies and organizations by the end of the summer 2014.

According to Forsell (personal communication, 2014), though the banks have the capability to manage C2B transactions, competing in physical or online stores, based on their Swish solution, would require that all cash registers be directly linked to the Swish system which could be even more costly to develop than their current card payment system. He also says that ra-
ther than incurring such costs, which will definitely cancel out the promising cost advantage of C2B mobile payment platforms, the banks have decided to keep Swish as a C2C solution. Ahrgren (personal communication; 2014) says independent players such as have Seamless Distribution AB advantage because it was easier for them to build their C2B mobile payment solution SEQR. It only required them to extend the functionality of an already existing infrastructure to communicate with the cash register. This is a big issue for the banks because with their Swish solution being a joint venture between banks with different incentives regarding mobile payments, it means it could be longer before the banks decide to upgrade their Swish solution to target the C2B mobile payment market (personal communication; Ahrgren, 2014).

Unlike the MNOs and independent players, the banks believe that their over-a-decade-old control of customer accounts, coupled with the legacy in payment networks such as their current and widely adopted card payments system, and Forsell (personal communication, 2014) say the banks are most trusted by the customers to handle financial transactions. Ahrgren (personal communication, 2014) agrees to the trusted image of the banks but says that their legacy in payment networks could be a limiting factor for the banks to invest in mobile payments, unlike the independent players who are unregulated and have the freedom to innovate without fear of cannibalizing any existing businesses.

According to Forsell (personal communication, 2014), the banks currently have no mutual strategy regarding C2B mobile payments at point of sale but they however hold a continuous dialogue with each other to promote knowledge building and one of the outcomes of these dialogues is to extend the Swish platform to incorporate money transfers to both businesses and organisations by the end summer 2014. Forsell (personal communication, 2014) says investing in C2B mobile payments at POS would mean the banks would either cannibalise their existing card payment system, in which they have invested heavily, or find a way to build a mobile payment solution around it. Ahrgren (personal communication, 2014) agrees with the banks’ ownership of the infrastructure and network surrounding their card payment system, coupled with their knowledge on payment networks, the banks have a high incentive to become advocates of mobile card payments as the preferred mobile payment methods. He also feels that a strategic move for the banks to compete in the C2B mobile payment market would be to start offering mobile payments based on cards and then phase-out the card when they are no longer needed. He believes this would permit the banks to optimally use their card payment system to drive a change in consumers’ behaviour towards mobile payments.

The Swish solution has experienced a huge growth in demand since the beginning of 2014 with over 1,2 million Swedish users (personal communication; Forsell, 2014). Leveraging their branches, web pages, and mobile banking applications the partner banks have been able to reach out to their existing customers to create awareness of the Swish application (personal communication; Calström, 2014). Despite the growing demand for Swish, the banks have kept the solution simple though customers would be able to make simple payments to companies and organizations such as parks, churches and camping sight. All these companies and organizations would need to do is link a Swish number to their bank accounts.
6.4 WyWallet - The MNOs (Joint Venture - 4T Sverige AB)

6.4.1 Business Model Innovation

Being in control of mobile communication networks and services such as voices calls and data, the MNOs also consider themselves as natural candidates to provide mobile payments but it is an entirely new market for them (personal communication; Stålberg, 2014; personal communication Ahrgren, 2014). Faced with stringent EU regulations regarding payments, Swedish MNOs and other European MNOs alike with plunging revenues in voice calls, had a choice to either become compliant and offer mobile payment services or to stop offering payments and say good bye to their new found revenue stream (personal communication; Stålberg, 2014). Becoming compliant not only meant entering into a market, which is lies outside their traditional scope (personal communication; Stålberg, 2014; personal communication, Ahrgren, 2014), but most importantly it meant they would have to ensure they could attract large volumes of transactions, which is key for any payment solution (personal communication; Stålberg, 2014).

According to Stålberg (personal communication, 2014), developing their WyWallet solution didn’t require the MNOs to target new sets of customers since they already had a close relationship with the same customers through their voice calls services and offering mobile payments meant creating more value for their existing customers. Stålberg (personal communication 2014) also says, the fact that mobile payments lies outside their mainstream business, the MNOs had to design a separate business model to accommodate this newfound opportunity to generate subsidiary revenues. The MNOs had to create a joint called 4T Sverige AB, separated from their mainstream businesses, which provides their mobile payment solution WyWallet. Both business models operate simultaneously and are only related in the sense that consumers could be billed through their existing voice-call billing system, depending on which type of customers they are see Table 6-1 below for WyWallet market segmentation.

<table>
<thead>
<tr>
<th>Customer Segments</th>
<th>Payment Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cash</td>
</tr>
<tr>
<td>Private Subscribers</td>
<td>✓</td>
</tr>
<tr>
<td>Business Subscribers</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>Prepaid</td>
<td>✓ ✓</td>
</tr>
</tbody>
</table>

Table 6-1. WyWallet Market Segmentation

Stålberg (personal communication, 2014) says despite being highly motivate to offer mobile payments due to the opportunity it presents as a subsidiary revenue stream, with no legacy in financial risk management and payment networks nor the knowledge in developing transaction technologies, meant that there can’t be any cannibalisation of their existing voice-call business model but also that the MNOs do not have the ability to offer an end-to-end mobile payment solution. This forced the MNOs to cooperate with other players in the mobile pay-
ment value chain such as banks, and technology and process innovators to develop their solution.

Without revealing too much detail, Stålberg (personal communication, 2014) describes the WyWallet value proposition as a safer and convenient way for consumers to transfer money and pay for items both in-app and at physical POS via the mobile phones. In addition to the above benefits, the possibility to access digital transaction and purchase history, as well as account balances in-app, enables the consumers to not only have increased control over their economy but also enables them to become more educated about it. The revenue model is a blend of variable and fixed transaction fees for merchants, while the cost structure hinges on insourced services from partners. The delivery model is based on smartphones applications running on iOS, Android and Windows, and java applications for the old phones though they are not being used (personal communication; Stålberg, 2014).

6.4.2 Mobile Payment Service Development

According to Stålberg (personal communication, 2014), with no legacy in managing financial risks, managing payment networks, and payment transaction technology development, the MNOs faced major hurdles developing an end-to-end WyWallet solution in-house. They had to partner with other key players of the mobile payment value chain to access external resources and make up for lacking capabilities. Stålberg (personal communication, 2014) also says human resources were initially shared between the joint venture and the partner MNOs but 4T Sverige AB made subsequent recruitments from external sources.

Through partnerships with financial institutions such as SEB Euroline a Swedish acquirer owned by SEB bank, which handles their WyWallet’s debit and credit processing and PayEx, a payment process innovator, which handles the invoicing and consumer credits and also responsible for building and development of the WyWallet platform, the application, the account structure as well as the technical platform around it, the MNOs were able to make up for their managerial and technological deficiencies, (personal communication; Stålberg, 2014).

Despite the WyWallet solution being a mobile wallet, Stålberg (personal communication, 2014) feels that the solution would not be so convenient if consumers were unable to access their bank accounts from the WyWallet platform. He also acknowledges that consumers want to have access to their funds at all times and in order to achieve this the WyWallet application was designed to allow the possibilities for top-ups via bank transfers and via the existing card payment systems. Despite this dependence on the existing banking system and the existing card payment systems, Stålberg (personal communication, 2014) says the dependence is however weak since both systems are only used as top-up options since consumers can also make top-ups via their prepaid accounts and can also make purchases and get billed through their affiliated partner MNOs without requiring to make withdrawals from their bank accounts.

Like any other payment platform, security is a major concern for the WyWallet solution. Without giving out too much detail, Stålberg (personal communication, 2014) says unlike Swish, which relies on a third party technology the BankID, for its security, the WyWallet se-
curity technology is built into the WyWallet application and at checkouts the underlying PIN-based authentication technologies, QR-codes and NFC ensure the transaction is even more quicker, safer, and secure. He adds that main competing solutions in the C2B market such as SEQR are based on the same QR-code and NFC technologies. The former is however less safer and currently considered unreliable while the latter is more reliable and sophisticated and the MNOs believe NFC-based mobile payment solutions are the future and are willing to invest in the development of the technology.

6.4.3 Competing Strategies

The MNOs face threats from both the banks and the independent players. Stålberg (personal communication, 2014) believes these threats stem from these major issues; 1) how to attract more transaction volumes, and 2) how to successfully operate in a market which is out of the traditional markets where the incumbents such as banks have earned the loyalty of the customers. Stålberg (personal communication, 2014) says in order to deal with the first issue the four major MNOs in the Swedish market had to combine forces and with over 13,7 million mobile subscriptions, within which over 4,2 million are mobile phone subscriptions with at least 1 GByte per month data usage; and a further 3,5 million are used for calls and data without including add-on data subscriptions. With a close relationship with these customers in their voice-call and data markets respectively, the MNOs were able control a huge consumer base, which could be leveraged to attract merchants, and other players and ensure large transaction volumes.

Without any legacy in managing payments and financial transactions, the MNOs were able to make up for their lack of competence by outsourcing the handling of debit and credit, and the handling of invoicing and consumer credits to financial institutions such SEB Eurolíne and PayEx respectively (personal communication; Stålberg, 2014). Stålberg personal communication 2014), say though unlike the independent players SEQR (Seamless Distribution AB), with an advantage due to their legacy in building transaction technologies, a partnership with a process and technology innovator PayEx, also ensured that MNOs were not only able build their WyWallet platform, the application, the account structure as well as the technical platform around it, but also to make up for their managerial and technological deficiencies.

In addition to technological and managerial resources and capabilities, customers’ trusts in relation to financial services, is also very important to offer mobile payments. Stålberg (personal communication, 2014) feels that even though the MNOs have earned consumers’ trusts over the years due to their close relationships with these customers in the voice-call and data markets, which is high in relation to the independent players, their level of trust in relation to financial services such as mobile payments is relatively low as compared to the banks. This gives the banks a competitive edge in the payments and financial markets (personal communication; Ahrgren 2014; personal communication; Stålberg 2014; personal communication; Görling, 2014). Stålberg (personal communication, 2014) says the MNOs can borrow some of this trust through their partnerships with financial institutions, as well as leveraging the existing card payment and bank account networks, which allow consumers to top up their WyWallet accounts though Ahrgren (personal communication, 2014) thinks the prepaid strategy used
by the MNOs could be a major setback in the future since locking-up funds in the WyWallet account goes contrary to the findings from a research carried out by Swedbank, which stipulated that consumers wanted their funds available to them for anything at all times.

With varying customer demographics, the MNOs didn’t want to target a specific customer segment. Though the solutions was initially launched as an in-app SMS-initiated mobile payment solution, their intention to move into e-commerce saw that the solution was rolled out on trial basis physical POS to enable consumers make proximity payments since 2013 (personal communication; Stålberg, 2014). Stålberg (personal communication, 2014) also says that the MNOs are still experiencing low demand for their WyWallet solution but the key for the solution is that the MNOs were able to wrap their solution in the suitable context, which is allowing consumers to make payments for bus and train tickets as well as shop at vending machines using their mobile phones. He also believes that this will help enhance the behaviour and once that happens, a lot of value-added services such as digital couponing and other loyalty schemes will be added to the platform in the future.

6.5 SEQR – The Independent Player (Seamless Distribution AB)

6.5.1 Business Model Innovation

According to Görling (personal communication, 2014) the mobile payment market is a new market for Seamless Distribution AB, as the company has no legacy in the management of payment networks and financial risks. However, the company is not entirely new to payments as they have a legacy in building transaction technologies due to their role in the payment ecosystem, which is basically selling transaction switches to mobile operators, which enables their prepaid consumers to top-up their pay as you go and prepaid accounts. Offering mobile payments for this independent player did not only constitute a means to attract new revenue streams, secure market position in a growing market or to move up the value chain and establish closer relationship with the end users, but it also meant catering for a whole new set of customers, the consumers and the merchants (personal communication; Görling, 2014).

Görling (personal communication, 2014) says that with mobile payments lying outside their tradition transaction switch business, the company had to develop a new business model to support its mobile payment solution SEQR. Initially both business models were operated under separate units but after identifying the huge potential for SEQR business model, it was later re-incorporated into the mainstream business. The transaction switch business model is still a significant part of Seamless Distribution AB’s business, though mobile payments are more prioritized in Sweden and other advanced western markets in which the company operates. Görling (personal communication, 2014) says that though both business models offer different value propositions and target different sets of customers they are related in the sense that the transaction switch business model constitutes the backbone technology for both business models and constitutes a platform with huge possibilities to build some add-ons one of them being to develop mobile payment services. He adds that there were already existing interfaces linking transaction switches to card terminals and POS vendors and all what had to be
done was add interfaces to the transaction switches that facilitate communication with cell phones.

Stirred by the current CEO’s vision of the payment market, coupled with the fact that the company already had the technology in place, the company felt it had the ability and the capability to offer mobile payments. Thus the decision to provide mobile payments was easily arrived at. Görling (personal communication, 2014) however, says that the real motivation was that mobile payments constitutes a supplementary source of revenue and also a way for the company to put its full potential to use by moving further up the value chain to deal directly with the end user, selling them life changing payment experiences and seizing the opportunity to re-brand itself as a consumer brand rather than selling products and technologies to other business customers (personal communication; Görling, 2014).

Görling (personal communication, 2014) says that the SEQR business model is to facilitate, secure transfer of funds from one party to the other, and take a commission in between. Seamless Distribution AB already had the technology and the capability to do payments in-stores, on home pages and on magazine ads and it was just a matter of where to put more efforts to attract more customers and more transaction volumes in a way that will better enable the company to compete in the market where traditional players such as banks have a huge legacy and large customer base. The vision behind the SEQR solution is to simplify payments and seek for ways to cut down transaction fees to attract merchants who are unhappy with the high transaction fees associated with the current card payment systems Visa and MasterCard, while gaining market share in the process (personal communication; Görling, 2014).

Though interrelated, the value propositions of both the transaction switch and the mobile payment business models are not only different but they target different customer segments. The mobile payment value proposition however, varies between the merchants and the consumers. On the one hand, consumers are guaranteed ease-of-use, simple, safer, and faster payments. The merchants on the other hand, are offered faster, and easier checkouts and increased security but most of all, lower costs since these merchants do not have to invest in any additional infrastructure or hardware. Value-added services such as targeted campaigns and loyalty programs to incentivize consumers to visit physical stores are also offered to the merchants as a way to add traffic to their stores (personal communication; Görling, 2014).

### 6.5.2 Mobile Payment Service Development

Being a technology company with a legacy in developing technologies, which underlie transactions, coupled with their tradition of running server infrastructures, the development of the technological part of the SEQR solution was done in-house. However, expert consultants are also used in some areas to do external reviews on security so as to get an outside perspective. Thus Seamless did not have to partner with other key stakeholders to develop their SEQR platform (personal communication; Görling, 2014). The platform is built in such a way that it orders the issuing account (consumers’ banks) to credit the acquiring account (merchants’ banks) rather than letting acquiring bank make withdrawals from the issuing bank account. This reduces the risks of double debits and skimming. From this design stems a major set
back since the Swedish banks are not granting easy access to customers’ bank accounts primarily because they are the largest credit and debit card processors and granting access to SEQR will alienate their relationship with Visa and Mastercard (personal communication; Ahrgren, 2014; personal communication, Görling, 2014). Görling (personal communication, 2014) says even though there is a provision in the European Payment Service Directive, the PSD-II, obliging European banks to grant third party access to customers’ accounts upon customers’ requests, the negotiations are still on-going and may take a while before such a directive is implemented. This lack of access to bank accounts coupled with the fast growing nature of the industry complicates matters even more for the independent player.

In addition to the lack of access to bank accounts, another major issue stems from the fact that developing SEQR meant operating outside traditional market. In order to offer an end-to-end payment solution, Seamless had to deal with setbacks resulting from the lack of competence in managing payment networks, and financial risks. Making up for these deficiencies meant the company had to either develop these capabilities or outsource these activities (personal communication; Görling, 2014). However, unlike other European markets, in the Swedish market, there is the possibility to link up with either a bank or a credit company. This down-plays to a certain extent, though for the time being, the need for partnerships with banks while awaiting the EU payment service directive with provisions obliging Banks to grant third party access to consumer accounts if mandated by the consumer without necessarily collaborating with the banks. If skewed towards the independent players, this legislation could confer on to them the potential to further disrupt the banks’ card payment business model (personal communication; Görling, 2014; personal communication; Ahrgren, 2014). However, Gorling (personal communication, 2013) says that Seamless is not waiting on that since the mobile payment industry is moving faster than the authorities whose negotiations are still on-going and may take a while before such directives are implemented.

Making up for their managerial deficiencies and lack of access to customer bank accounts, Seamless had to partner with process innovators (third party financial service companies), Collector and PaybyBill with whom their customers must register an invoice account. These companies handle the billing and invoicing to consumers and payment transfer process to merchants based on the bills they issue via the SEQR application (personal communication; Görling, 2014). According to Görling (personal communication, 2014), partnering with these financial institutions also helps Seamless to downplay the consumers’ trust advantage and the reputation of security enjoyed by the banks as they could borrow some trust from these institutions to make up for their lack of brand image as regards handling financial services, which constitutes a major hurdle for provider such as WyWallet and SEQR (personal communication; Görling, 2014).

Operating on a business model that bypasses the banks’ existing card payment systems the SEQR solution is therefore not dependent on the existing card payment system. However, despite a restricted access to customer bank accounts, there is still a weak dependence on the banks as users could use their bank accounts as a top-up option for their invoice accounts created with third party financial process innovators, Collector and PaybyBill (personal commu-
nication; Görling, 2014). Without giving out too much detail, Görling (personal communication, 2014) says, SEQR being a mobile application as a service, it is only logical it necessitates some level of dependence on MNOs who on the one hand provide telecommunication network and internet, thus facilitating data transfers etc., and the Handset manufacturers who on the other hand design operating systems and interfaces which host mobile applications. Both the MNOs and the Handset contribute to the user experience but not to the functionality of the SEQR application, which make the dependence on a particular MNO or Handset manufacturer a weak one (personal communication; Görling, 2014).

Görling (personal communication; 2014) says developing a mobile payment solution always requires that a balance be struck between usability and security. With the solution branded as SEQR (SECURE), Seamless had the incentive to find the perfect amount of balance to ensure that their solution kept its ease-of-use vision and at the same time being secure (personal communication; Görling, 2014). Without also giving too many detail, Görling (personal communication, 2014) say the security technology is built into the SEQR application rather than being offered by a third party, which could slow down the transaction at checkout, thus affecting the user experience, which would not be any way forward.

Like the WyWallet solution, which is the main competitor in the C2B mobile payment market, the underlying technologies for the SEQR solution are QR-codes and NFC technology, which ensure faster and secure transactions at checkouts (personal communication; Görling, 2014). Swish, which is mainly a C2C payment transfer solution has the BankID and Bankgirot. The BankID on the one hand is an advanced security technology but not only is it expensive, but also the shift from a payment card with 4-digit PIN-code to a 6-digit PIN-code the mobile BankID, and with the latter being a third party application means that consumers will have to go back and forth of apps, which could be a even bigger setback should the banks decide to transform their Swish solution into a C2B solution in stores since it will slow down transactions at checkout. The Bankgirot technology on the other hand offers the Swish solution a competitive advantage since it permits real-time money transfers and could even be an even greater advantage should Swish offer real-time C2B payments, which is a feature offered by neither the WyWallet nor SEQR solutions (personal communication; Görling, 2014).

### 6.5.3 Competitive Strategies

In the Swedish payment market, Seamless faces huge competition from both the banks and the MNOs. In addition to lack access to customer bank accounts, the lack of legacy in managing financial transactions, financial risks and payment networks, another major issue stems from the lack of previous relationship with the customers as compared to banks and MNOs who not only enjoy such relationship with customers but whose joint ventures to create Swish and WyWallet respectively, guarantees them more users, and could give them an added advantage, should they convert these vast user bases into transaction volumes (personal communication; Görling, 2014).

Görling (personal communication, 2014) says, partnering with financial process innovators Collector and PaybyBill, did help Seamless to make up for the lack of competence in manag-
ing payment networks and financial transactions but in order to compete with the banks and the MNOs who have established themselves as consumer brands with long lasting relationships with Swedish customers, Seamless had to adopt a different and more competitive approach, which would enable them to attract more users and large transaction volumes to the SEQR platform without directly competing with the banks and the MNOs for customers relationships. The first step to achieving this, was focusing on physical stores, partly due to the fact there are really large transaction volumes in physical stores and the transaction cake to split in physical stores is larger than having a large market share in online transactions and partly due to the fact that the major competitors such as WyWallet were not present in physical stores (personal communication; Görling, 2014).

Though in the C2B market the SEQR solution primarily focuses on physical stores because that is where habits are formed and brands are built, the SEQR solution also supports e-commerce targeting online stores. However, since early this year Seamless made another strategic turn towards m-commerce, partnering with merchants such as McDonalds Sweden, permitting consumers to shop for items and make payments using SEQR via McDonalds mobile application by scanning a QR-code and authorizing the payment with a pin code (personal communication; Görling, 2014).

Görling (personal communication, 2014) says that in the mobile payment market, the banks only currently compete with their joint venture C2C mobile payments solution Swish. However, in the payment market in general, they compete with their card payment businesses Visa and MasterCard, which are a not only a well-established and globally accepted payment system but also a major substitute and competitor for mobile payments after cash. Despite its global acceptance, not only is the traditional card payment system built upon a complex infrastructure, which slows down payment flows but also, all the involved systems and hardware must be certified and all involved players take a cut of the transaction fees, resulting in high transaction fees (personal communication, Görling, 2014). Having invested so much in the card business, which justifies the banks’ reservation to offer mobile payments in stores since venturing into the C2B mobile payment market would mean cannibalizing their existing card business. This makes it hard for the banks to collaborate in the C2B mobile payments market since they all have different incentives (personal communication; Görling, 2014; personal communication; Forsell, 2014). However, Görling (personal communication, 2014) believes the banks are only collaborating to offer C2C mobile payments because it is not their profit area.

According to Görling (personal communication, 2014), Seamless spotted the trend that merchants in the Swedish market were been hit by lower and lower margins and would be seeking for ways to be cost-effective. Offering them a possibility to cut down on the transaction fees they incur with the current card payment system could be a unique business opportunity since merchants will be willing to try other technologies to get around the high transaction fees. However, he added that, competing on the basis of cost, required that the current card payment system be bypassed which was a minor issue since Seamless already possessed the necessary technology to ensure that its SEQR solution be built without any dependence on the
current card payment system as it aims at offering up to 50% reduction in transaction fees as card transaction fees are becoming an issue for merchants.

The strength of the MNOs on the other hand, hinges on the fact that they have closer relationship with almost everyone with mobile phone in Sweden and have been able to build some level of consumers’ trust operating closely with customers. This user-base has been fortified even more by their collaboration to form the joint venture solution, WyWallet but unlike the banks their trust advantage is however not related to financial services (personal communication; Görling, 2014). Görling (personal communication, 2014) say Seamless didn’t consider WyWallet as a major competitor in the mobile payment market until they rolled out their solution in stores. Despite WyWallet now competing in stores, Görling (personal communication, 2014) feels that the history of the MNOs could have been reason for their slow venturing in stores since they think in line of SMS-initiated payments and prepaid reverse billing which could be a setback since consumers want to have their funds in one place available to them at all times anywhere (personal communication; Ahrgren, 2014). The SEQR solution however, competes with WyWallet in the ticketing market through SMS payments and Görling (personal communication, 2014) says that, it was easy to offer SMS payments since the SEQR infrastructure was built to accommodate additional platforms depending on the profitability.

The SMS payment feature is only used for ticketing and it is not branded as SEQR. However constitutes a way to build the habit of mobile payments. Value-added services such as loyalty programs, customized offers, and coupons are constantly being added onto the SEQR platform to incentivize consumers to visit merchants’ physical stores especially those merchants who cannot afford a full-scale loyalty program. Working with customized offers and other loyalty programs and coupons, coupled with the fact that the SEQR platform offers Seamless the possibility to track consumers’ transaction history thus the capability to push target offerings in ways that the merchants simply cannot. Seamless is also working on developing more technology in this area since the key is to attract as many merchants and thus high transaction volumes in the shortest possible time (personal communication; Görling, 2014).

Other strategic moves by Seamless includes 1) a recent partnership with key stakeholders in the Swedish hospitality industry and employees organization, Visita which offers SEQR agreements with 6400 hotels, restaurants, amusement parks, camp sites, ski and spa resorts, 2) the launch of the charity collection campaign, which targets elderly people who want to donate to charity via the SEQR application and 3) partnership with Q-park, which enables consumers pay for parking with their phones. Even before focusing on the older generation through the charity campaign and parking, the demographics showed there is a cross-section of older people who use the SEQR application. This goes contrary to the norms that tech-friendly consumers are usually the early adopters to this kind of products and services. However, this strategic move is a way to build the mobile payment attitude since once these consumers use this application to pay for parking and donate to charity it will be easier to for them to start doing mobile payments (personal communication; Görling, 2014).

Görling (personal communication, 2014) feels that SEQR is better positioned in the Swedish mobile payment space though he feels that with the banks having cooperated to increase their
consumer base by forming the joint venture Swish, they could become a major competition should they decide to offer a C2B mobile payment solution. Forsell (personal communication; 2014) concurs by saying the banks have a unique advantage vis-à-vis the other players due to their access to customer accounts though Gorling (personal communication, 2014) feels that the banks haven’t capitalized on that asset yet. However, as of early 2014, SEQR boasts of an affiliation with 3500 merchants in Sweden, 450 in Romania with plans to launch SEQR in Belgium and Finland by mid 2014 (personal communication; Görling, 2014).

6.6 The Future of mobile payments

The interviewees also had the views on the future of the mobile payment space and the global mobile payment market in general. Ahrgren (personal communication, 2014) believes that cash usage will drop, but card based systems will last a little longer since they are fully deployed and that consumers are quite happy with these payment instruments. A view that Gorling (personal communication, 2014) partially agrees but however feels that cash will last a little longer due to the associated anonymity and the universal acceptance unlike card payments, which require a third party infrastructure to complete the transaction such as electricity, and internet connection while he believes that the current payment cards will only stay as far as the full adoption of mobile payments. Gorling (personal communication, 2014) also believes that it would not be long from now as the superior consumer experience associated with mobile payments such as the possibility to check account balances, receive invoicing for purchases, could push the adoption of mobile payments forward thus expediting the obsolescence of payment cards.

Ahrgren (personal communication 2014) and Stålberg (personal communication, 2014) believe that with the global adoption of card payments, in order for mobile payments to phase-out the current card payment system they have to be at least as good as the latter. This would require introducing appealing value-added services to attract users since, which according to Ahrgren (personal communication, 2014), mobile payments as stand-alone services do not carry. Ahrgren (personal communication, 2014) believes that such value-added services could even boost the demand for mobile payment solutions to surpass the current card payment systems and enable the different mobile payments providers to sustainably compete if could wrap their solutions with the right context. Görling (personal communication, 2014) shares this view as he highlights the fact that adding value added services to the current mobile payment platforms such as charity, and car packing services is actually a good context to wrap around mobile payments, which could attract less tech-friendly and older generation of mobile users.

Stålberg (personal communication, 2014) feels the future mobile payment market will not be flooded with a lot of new entrants but rather it will be characterized by a lot of innovation to the current business models. He however, adds that there would be a lot of competing solutions in the near future but that the technological trajectory will follow almost the same trend as the payment card, which is decided a few global standards. He is backed by Görling (personal communication, 2014) who believes that some key players will stick around a little longer while changes will occur along the line of value added services rather than new players getting into the market. Görling (personal communication, 2014) feels that the market will be
decided by a few global standards but it definitely won’t be a duopoly like the card payment market, which is dominated by Visa and MasterCard. He also feels cash usage will continue to go down and payment cards will give way for mobile payments solutions and with their flexibility in innovating, independent solutions will gain market share.

Forsell (personal communication, 2014) also feels that the future will see the same players and the same solutions but however, there will be variations at the level of value added services to enhance the customer experience. He also believes that the merchants have the possibility to drive the development of the C2B mobile payment market should they align themselves to form a critical mass and promote several solutions, which could facilitate consumer adoption. Ahrgren (personal communication, 2013) forecasts that third party actors such as Seamless in particular, and other non-traditional actors such as Google, PayPal, and Apple, public transportation and also consumers to play a vital role in the development of mobile payments. Görling (personal communication, 2014) believes global players such as Google, PayPal and Apple could not only drive the development of mobile payments but could pose a huge worldwide competition if they get their execution right.

Forsell (personal communication, 2014) concludes by saying that for any of the traditional players such as the banks to continuously drive the payment market as they currently do, they would have to think beyond the existing mobile payment delivery channels such as mobile application. This is because potentially new technologies may disrupt the market in the future to render mobile applications obsolete.

6.7 Summary

The empirical findings reveal Swedish payment market is experiencing a disruption as a result of the mobile revolution. The interviewees from the three major providers revealed certain insights regarding the provider reactions towards mobile payment business model and the types of cooperation that exists within the Swedish payment market. In the next section, these finding will then be matched-up with the literature to build an analysis.
7 Analysis

This chapter provides analyses of the empirical findings while making sense of certain trends such as similarities and differences that might exist between industry and academia by cross-referencing the literature and the empirical findings. Presenting the analyses in this way would add more credibility and validity to this study.

7.1 Managing Mobile Payment Business Model Innovation

Based on the findings, mobile payment constitutes a disruptive and innovative system of payment, propagated by innovations in ICT and increased mobility of consumers. If better managed to reduce the inherent uncertainties, mobile payments could render traditional payment systems like cash and payment cards obsolete. Like Charitou & Markides (2003) suggested, the major providers in the Swedish payment space have all responded to the mobile payment opportunity based on the two modalities of response, which are the motivation to respond and the ability to respond.

7.1.1 Ability and Motivation to Respond to Mobile Payment

Based on the resources, capabilities, and strategic assets required to offer an end-to-end mobile payment service, the findings reveal that the three major Swedish players investigated in this study have different abilities to respond to discontinuities in the payment market and the business opportunity they present in the form of mobile payments.

The MNOs have always had a high motivation to offer mobile payments as a result of their shrinking revenues in their traditional voice calls and data markets, and their heavy investments in 3G licenses. Thus mobile payments for them constitute a potential subsidiary source of revenues, which if better managed could also enable them gain market share in a market, which is not their traditional market. Despite the high motivation, the MNO has a low ability to respond to mobile payments due to lack of assets such as capability in developing a sophisticated payment infrastructure to handle mobile payments, access to bank accounts, an established banking system that permits better management of payment transactions and financial risks and a brand image such as that of the banks which could attract consumers’ trust vi-s-à-
vis financial services. They however, responded by developing a simple SMS-initiated mobile payment solution, which enabled mobile users to pay for traffic tickets from funds stored in their mobile accounts, while external partners such as PayEx managed the clearing and settlement. Following an increase demand from both customers and EU regarding security issues such as money laundering surrounding SMS payments the MNOs reacted to the mobile payment opportunity by fully embracing and adopting a mobile payment business model. They developed a joint solution WyWallet through a separate company, 4TSverige AB. The WyWallet platform was developed PayEx, which manages it, while SEB Euroline, another Swedish process innovator, handles its financial services. The 4TSverige AB joint venture still operates as a separate unit from the MNOs’ mainstream businesses.

The banks have a high ability to respond to mobile payments but their motivation is low. They also believe the currently low demand for mobile payments plays down the threat for mobile payments to their card payment business. More so the low motivation is tied to the fact that fully adopting a mobile payment business model will alienate their card business in which they have made heavy investments. However their response to the disruptive mobile payment business model is in such a way that disrupts the disruption. Focusing on the C2C markets by building a joint solution Swish using sophisticated technologies such as the bankgirot and the bankID to offer real-time p2p payment transfers, not only puts them as strong competitors within the C2C market but it also disrupts the disruption. Also, the fact that competitors lack key strategic assets i.e. access to bank accounts, an established banking system and expertise to handle payment transactions and manage financial risks, offers the banks comparative advantage. This comparative advantage gives the Swish solution both the possibility to enjoy a leadership position in the Swedish C2C mobile payment market and also to consolidate their market shares by providing more value to their current private customers. While pending an EU legislation, which could grant third parties access to customer bank accounts, the banks’ control of customer accounts offers them the possibility to enjoy a resource position barrier.

Seamless’ competence in developing transaction technologies constitutes a high ability to respond to a mobile payment business model though this ability is not at the level of the banks’ as a result of deficiencies in key strategic asset in the payment market such as access to bank accounts, an established banking system the management abilities to handle financial risks and payment transactions and the brand image that attracts consumer trusts which could take decades to build in-house. However, this player has a high motivation to respond to mobile payments. Seamless considers mobile payments as a means to enter the payment market, gain market share and above all a means to secure a subsidiary revenue stream. With no in-house acquiring systems to manage financial transactions, they must either incur the same cost as the banks if they have to build it in-house, which mean they could struggle to offer lower fees to the merchants. To make up for these deficiencies in strategic assets, it had to partner with key financial players within the Swedish market i.e. Collector, and PaybyBill. Through these third party financial players, they were able gain access to key assets such as a banking system and customer invoice accounts, management capabilities and above all borrow some consumers’ trust vis-à-vis the financial services. This possibility to operate their solution using invoice
accounts from Collector and PaybyBill means that the banks can’t transform their access to bank accounts resource position barrier into an entry barrier.

7.2 Stakeholder Reactions to Mobile Payment Opportunity

The empirical findings reveal different reactions from the key providers in the Swedish mobile payment market. However, despite their different reactions four different trends were identified, all backed by similar incentives. Despite having different abilities and motivational levels to respond to the disruptive mobile payment business model, the different players all reacted to disrupt the disruption, ensure large volumes of transaction and finding ways of wrapping their solution with the right context.

7.2.1 Disrupting the disruption

Being the initiators of the mobile payment disruption, prompted by their high motivation to locate a new source of revenue due to falling profit margins in their traditional markets and their heavy investments in 3G licenses, the MNOs had begun offering SMS-initiated mobile payments, which was a less secure and less sophisticated payment system. However, growing regulatory demands regarding payment security and money laundering opened up the market to technology providers who could provide more secure payment services based on sophisticated technologies. The MNOs then had to developed a more sophisticated mobile payment solution or see their first mover position stand for nothing the in Swedish payment market. Their reaction to offer their secure WyWallet solution, which targets both the C2C and C2B markets, disrupts the Swedish payment market as it bypasses the banks though there’s a weak dependence on the existing card payment system for top-up of the WyWallet accounts.

Seamless, also reacted by adopting a mobile payment business model and by disrupting the mobile payment disruption. Identifying the trends within the market and figuring out the needs of the merchants who are having issues reconciling lower profit margins with high transaction fees, this player leveraged its knowledge in building transaction technologies to build a mobile payment solution, which bypasses the existing card payment systems. Bypassing the existing card payment infrastructure does not only disrupts the banks existing card payment business model by offering consumers an easier, convenient, faster, and secure alternative, but the fact that their SEQR solution is based upon an in-house payment infrastructure, offers the possibility to lower transaction fees for merchants due to reduced coordination costs. The business model is also disruptive in the sense that unlike the WyWallet business model, which is based on leveraging the MNOs’ joint consumer base to attract merchants the SEQR is a flip side of the latter as it aims at building a network of merchants to attract consumers.

Fully aware of a future potential threat posed by mobile payments to their existing card payment business, the banks could not ignore the potential disruption of mobile payments. Rather, they have reacted both by adopting a mobile payment business model and by disrupting the mobile payment disruption. By limiting third party access to customer bank accounts, the banks are leveraging their control over issuing and acquiring accounts to create a resource position barrier. This barrier, though it could be short-lived pending EU legislations granting
third party access to bank accounts, offers the banks the possibility to compete in the C2B payment market using their existing highly and universally adopted card payment system. Targeting the C2C mobile payment market with their far more superior Swish solution compared to the C2C mobile payment services offered by the MNOs and Seamless, considering the real-time, vast consumer network and cost free benefits to account holders of partner banks. This offers the banks a way to secure their leadership position in the C2C market and also a way to build positive attitudes towards mobile payment amongst their retail customers. It also serves as a customer retention strategy while protecting their C2B card payment systems, pending full adoption of mobile payments to get into the C2B mobile payment market.

7.2.2 Attracting the Critical Mass

As seen in the literature, for every payment business model with a revenue model that is based on transaction fees, the profitability, viability and competitive advantage of a mobile payment business model hinges on the ability for the provider to attract a critical mass of customers and other stakeholder. This could enable the building of a positive network effect, which will ensure large volume of transactions via the payment platform.

The MNOs’ move to form a joint venture could be classified as a strategic move towards attracting large volumes of transaction. With an already vast network of Swedish mobile users affiliated to the individual networks, combining the user bases of four of the largest mobile operators in Sweden, guarantees the WyWallet solution with a customer base of over 4.6 million Swedes with a mobile phone. This large consumer base could be leveraged to attract merchants, hence to build a positive network effect, which could also be used to attract other stakeholders on to the WyWallet platform.

Offering mobile banking solutions to their existing customers, the banks figured out a single bank could not offer a competitive mobile payment solution. With the infusion of telecommunication technologies into the payment industry, the uncertainty surrounding mobile payments would be enormous for any non-technology oriented service company such as a bank. This means that the risks and transaction cost of developing a solution in-house would be very high for a single player, which will definitely mean failure as seen with the case of Swedbank’s solution, Bart. More so, for a regulated industry such as the banking industry with restricted access, the transaction cost of acquiring strategic assets such as access to customer bank accounts from the market is even higher. This left the banks with only one option partner amongst themselves to share risks and cut down on costs, but most of all access a large network of customer bank accounts. By leveraging this network of customer accounts, the banks have been able to incentivize more customers onto their Swish platform by generating a network effect, which depending on the adoption of mobile payments could mean large volumes of C2C mobile payment transactions.

Seamless on the other hand, took a different approach to attract a critical mass. With no previous relationship with Swedish payment customers it was hard to compete with the MNOs and the banks. Their SEQR business model focuses on the merchants. Incentivizing merchants with lower transaction fees is a strategic move to attract more merchants onto the
SEQR platform. Partnerships with over 3500 merchants in Sweden including large chains such as Axfood, and McDonalds, organizations such as Visita and Q-park etc. offer Seamless control over a vast network of grocery shops, restaurants, hotels amusement park, camp sites, ski and spar resorts as well as car parking lots. Attracting a vast network of merchants through value added services such as customized offers and loyalty schemes; Seamless could attract a critical mass of both consumers and other merchants alike, which could guarantee large transaction volumes.

7.2.3 Wrapping their solution with the right context

With mobile payments having no standalone value, except for when they are wrapped with the right context, the three providers had to look for ways to better showcase their solutions. With mobile payments being a complementary payment system to cash and card payment systems, choosing the right context to deliver a mobile payment solution, could reduce switching cost from other substitutes and thus offer a competitive edge.

Looking at the strength of banks, considering the high adoption and penetration of their payment cards, competing based on a disruptive technology such as mobile payments, which are usually characterized by low initial demand, the MNOs had to select a market in which they could thrive without directly competing with the cards. Initially focusing on low-valued SMS-initiated proximity payments to pay for public transportation was not only disruptive and a great experience for Swedish commuters, but also a great context to showcase mobile payments and build the habit. Launching their WyWallet solution, which took their SMS-initiated mobile payments a step further, by allowing consumers to pay for items at vending machines, parking lots, restaurants, as well as shop for fast food in stores, which meets the market need for quicker safer and convenient checkouts permitted the MNOs to add value to their solution.

Offering mobile payment for an independent player such as Seamless meant competing with giant incumbents who do not only enjoy first mover advantage such as the MNOs but also, who possess assets strategic enough create a resource position barrier such as the banks. Selecting the right context was imperative for this player to sustainably compete in this market. Focusing on the C2B payment market meant their SEQR solution will have to compete directly with the MNOs’ WyWallet solution and the existing card payment system. However, focusing on physical store while attracting merchants with low transaction fees constitutes a great context to distinguish their solution from the competition. From the consumer perspective 3 strategic moves were taken by this player to build the right context around their solution. 1) The charity campaign, which enables the older generation to donate to charity via the SEQR application. 2) Their m-commerce partnership with McDonalds, which enable consumers to make purchases using the SEQR application within McDonalds. 3) The partnership with Q-Park, which enables car owners to pay for parking via their mobile phones. All three strategic moves target both the younger and older generations and they all constitute ways of building the positive attitude towards mobile payments and also a better way to showcase the benefits of mobile payments.
Without cannibalizing their existing card payment business model, the banks responded to the mobile payment disruption by focusing on the C2C mobile payment market. Building their Swish solution to target the C2C mobile payment solution, the banks had to figure out the right context to best sell their solution. Usually C2C payments between banks could be very inconveniencing especially on weekends as they could take over 48 hours before they are cleared. Identifying the need for quicker and safer C2C payments, the banks leveraged their BankID and Bankgirot technologies to deliver a secure and real-time C2C mobile payment solution that downplays the clearing delays for transfers made between account holders of different banks. By focusing on limiting the clearing and settlement delays, the banks were able to wrap a great context around their Swish solution.

7.3 Cooperation Models in the Swedish Mobile Payment Space

Having identified three categories of mobile payment providers in the Swedish mobile payment market, who are behind the three well-established solutions covered by this study, three key inputs for developing a mobile payment solution were also identified in the Swedish mobile payment market. These are the mobile phone, the customer bank account, and a payment platform. Just as indicated in the literature by (Bourreau & Verdier, 2010), the mobile phone input is controlled by the MNOs and the handset manufacturers, while the banks and the card payment systems, Visa and MasterCard control the customer bank accounts and the large acceptance network respectively. Since different players may control these different inputs, there is thus the need for some degree of cooperation between these players.

Looking at the three most established solutions in the Swedish mobile payment market; Swish, WyWallet, and SEQR, it’s easier to identify the fact that none of these solutions were built based on a strong cooperation between the MNOs and Handset Manufacturers, the Banks and Card Payment Systems. Contrarily, some of these solutions have been built by establishing a strong cooperation with either the Banks or the MNOs, or weak a cooperation with the all three key input providers. Some were even established in a way that at least one of the input providers has been bypassed.

7.3.1 The Swish All-Bank-Centric Model

The Swish solution shows a strong dependence on the banks since the Swish platform leverages the banks’ access to customer bank accounts, their joint Bankgirot, and BankID technologies. There is however, a very weak dependence on both the MNOs and the Handset Manufacturers. The strong cooperation with the banks, weak cooperation with the MNOs and Handset manufacturers, tilts the Swish business model towards a Bank-centric mobile payment business model. However, unlike the Bank-centric cooperation model adopted by Caisse d’Epargne for their MOVO solution, the Swish cooperation model shows no dependence on either the existing card payment infrastructure or the large acceptance network, which they control. The banks had to build a new payment infrastructure rather than relying on the existing card payment systems which supports their C2B card payment business model. Thus the Swish cooperation model would rather be considered as an all-bank variation of the bank-
centric cooperation model or better still all-bank-centric cooperation model. See Figure 7-2 below for an illustration of the Swish All-Bank-Centric cooperation model.

![Figure 7-2 The Swish All-Bank-Centric Cooperation Model](image)

### 7.3.2 The SEQR-Light Model

Without any direct access to customer bank accounts, the SEQR solution shows a weak dependence on the banks, which only constitute top-up options for consumer invoice accounts created with third party process innovators Collector and PaybyBill. Since the SEQR solution is an application as service, there is no cooperation with the MNOs but rather a weak dependence on the handset manufacturers.

![Figure 7-3 The SEQR Light Cooperation Model](image)

With a weak cooperation with both the banks and the handset manufacturers, the SEQR cooperation model would be classified as a light model. However, unlike the Obopay model, developing the SEQR solution, Seamless built its own payment infrastructure thus bypassing the existing card payment infrastructure and the large acceptance network they control. The SEQR model is thus a variation of the light model with no dependence on the existing card
payment infrastructure. Despite having a weak cooperating with the banks, there actually exists a strong cooperation with other financial institutions, which replace the banks. See Figure 7-3 above for an illustration of the SEQR light cooperation model.

7.3.3 The WyWallet MNO-Centric Model

The WyWallet solution is based on a weak cooperation between the MNOs and the banks. However, just like the SEQR solution the weak cooperation with the banks is due to the banks’ restriction of third party access to bank accounts. The MNOs have also replaced the banks with other financial process innovators. There is also a weak cooperation with the existing card payment infrastructure, which only serves as a top-up option for the consumers’ WyWallet accounts. With the help of a third party technology innovator PayEx, the MNOs developed their WyWallet platform. However, there is strong dependence on the MNOs through which postpaid consumers get reverse billing via their regular mobile subscriptions and the prepaid consumers for SMS-initiated payments. The WyWallet solution with its strong dependence on the MNOs’ is thus classified as a Mobile-centric model. See Figure 7-4 below for an illustration of the WyWallet MNO-centric cooperation model.

![Figure 7-4 The WyWallet MNO-Centric Cooperation Model](image)

7.4 Summary

This chapter, made a connection between the empirical base, the literature and the theoretical framework of the study so as to ease the sense-making process of the reaction of the mobile payment providers in the Swedish mobile payment space. Different cooperation models and the associated incentives have also been identified. The next section provides a discussion on other issues as well as reflections and answers to other questions that are not directly linked to the research questions.
8 Discussion

As mentioned in the concluding section of the previous chapter, this chapter provides a discussion on other issues that were not directly addressed by the analyses. While reflecting on these issues, some answers to other possible questions that are not directly connected to the research questions will be answered to make sense of the Swedish provider reactions. Also a conceptual model of managing mobile payment innovation will be designed to wrap-up this section.

8.1 Resources and Mobile Payment Strategy Formulation

The reactions from the three players correlated with the literature, which stipulates that resources and capabilities are not only the inputs of the innovation management process but also the foundations of strategy formulation. These players have all coined their strategies based on their access to the resources and capabilities needed to offer mobile payments. The partnerships forged by, the MNOs and Seamless, are all in view of accessing capabilities and resources which they could not efficiently develop in-house. Had they possess these resources or been able to develop these capabilities, it is clear their strategies would have been different and they probably would be able to develop their solutions in-house without cooperating with external parties and probably would be able to better compete with the banks.

Though third party companies offer the Bankgirot and the BankID, these companies are also joint ventures of Swedish banks. Thus the banks have built their Swish solution without any significant cooperation with the other players in the mobile payment value chain. They possess the key resources required to offer mobile payments and are fully aware of the strategic assets they possess especially the comparative advantage they enjoy via the control of customer bank accounts. Restricting third party access to bank accounts is a way to disrupt the market. Had it been they did not possess these assets, they probably would have tried to build them in-house or acquired them via the market or through partnerships, which would have shaped their strategy. Though focusing on the C2C markets reduces the chances of the banks cannibalizing their existing card business model, building their Swish solution to bypass their card payment infrastructure could be way to better prepare themselves for a future without payment card systems.

As seen in the literature the key assets in the mobile payment market enjoyed by the banks are an established Banking System, Brand Image, and control of customer Bank Accounts. These assets combined, possess the characteristics inimitability, low tradability, high durability and limited substitutability, which would normally make them strategic assets. Amongst these assets, the expertise of running a Banking System and trust related Brand image, could be acquired by the MNOs and Seamless from the market through partnerships with third party financial institutions. Thus, despite the strategic nature of these assets and the comparative advantage they confer onto the banks based on the resource position barrier they create, the banks cannot convert this position barrier into an entry barrier since in the EU, MNOs are not only allowed to grant credit for micro payments and offer legal guarantee to merchants as banks but also in Sweden non-financial institutions such as Seamless are legally backed to use other third party non-bank financial institutions to replace banks when offering payment services. The Banks’ control over customer bank accounts is definitely a strategic asset, which
does not only constitutes a resource position barrier but also an entry barrier that offers the banks a competitive advantage. Swedish consumers want to have their funds in one place rather than having them tied up in a mobile wallet or a separate invoice account. Access to bank accounts enables the payment system to be plugged directly to a customer’s bank account, which facilitates settlement and thus enhances the payment experience. However, this comparative advantage may only last as far as the EU legislation that demands banks to grant third party access to customer accounts isn’t passed. Even if the decision goes in favor of the MNOs and the independent players the interdependent nature of the payment market means that the bank will always be at center of any payment setting owing to the high bargaining power conferred onto them by their control over customer bank accounts.

8.2 Mobile Payment as a Business Model Innovation

Mobile payments business models constitute a business model innovation as they enable an increase in the economic pie by either getting existing customers to consume more, or attracting new customers.

In the case of the MNOs it was the former. The MNOs already had a relationship with mobile users but the value proposition was voice calls and the revenue model subscriptions fees, and sales of data and airtime credits. Offering mobile payments constitutes a different value proposition, which is the possibility for mobile users to shop and effectuate payments via mobile while leveraging this existing user base to attract a new set of customers, the merchants. Unlike the voice call revenue model, the mobile payment revenue model is based on transaction fees, which is a subsidiary revenue stream that will definitely increase their economic pie.

For Seamless Distribution AB on the other hand, mobile payments constitute a business model innovation, which enables them to increase their economic pie by attracting new sets of customers, the merchants. The traditional business model is based on building and management of technology-based transaction switches for MNOs, for a fee. The mobile payment business model has an all new value proposition, which is lower transaction fees aimed at merchants who are unhappy with the high transaction fees offered by the card payment duopoly Visa and MasterCard. Seamless then uses its network of merchants to attract consumers who are willing to shop online and in physical stores through loyalty programs and coupons to ensure large transaction volumes. The revenue model of transaction fees though just 50 per cent of what the card companies get, definitely increases their economic pie.

The Banks’ traditional retail banking business model involves interest rates from deposits (savings and loans) and transaction fees for their card payment business. Offering mobile payments for the banks would merely be a delivery model innovation, which is basically a switch from their card business to mobile channels. The value proposition and the revenue models will be unchanged. Based on the literature, the Banks’ joint C2C mobile payment solution Swish would not be a business model innovation. Reason being that unlike the WyWallet and the SEQR solutions the Swish solution does not increase the banks’ economic pie. Though it permits the banks’ existing retail customers to consume more by using their mobile phones to effectuate real-time P2P money transfers, no transaction fees are currently charged.
However, for the banks the C2C mobile payment business model serves as a way to cut down on the cost of cash, consolidate their market share and to build the habit of mobile payments while protecting their card payment business in which they have invested so much. Currently their payment cards are widely adopted and meet the market needs more than mobile payment solutions, which current enjoy very little adoption. Probably when the demand for mobile payment increases, they will either leverage their existing card payment infrastructure to develop a card-based mobile payment solution to take advantage of their extensive card user-base or develop an in-house platform that bypasses the existing card payment infrastructure as Seamless Distribution AB did with their SEQR solution.

8.3 The Mobile Payment Innovation Management Process

Managing every innovation process reduces the uncertainties associated with the innovation. For a disruptive innovation such as mobile payments these uncertainties could be enormous. Irrespective of a firm’s incentives to pursue a mobile payment business model, whether driven by the quest to secure subsidiary revenue streams to support an ailing mainstream business model as in the case with the Swedish MNOs or the desire to protect existing market share and cost reduction as in the case of the Swedish banks or better still get the desire to enter a new market as in the case of Seamless distribution AB, successful innovation depends on effective management of the innovation process which constitutes a set of routines.

![Conceptual Model of Mobile Payment Innovation Management](image_url)

Figure 8-1 Conceptual Model of Mobile Payment Innovation Management (Fondeson, 2014)
Based on the reactions and strategies of the Swedish mobile payment providers a mobile payment innovation management conceptual model could be developed, by extending the Tidd & Bessant (2011) model to cover certain aspects peculiar to the mobile payment innovation management process. See Figure 8-1 above for an illustration of the mobile payment innovation management conceptual model.

### 8.3.1 Search and Scan Phase (SS-Phase)

Like any other innovation management process, the payment provider must seek ways bridge the information gap by scanning the market in search for signals such as high penetration of mobile devices, high mobile subscriptions, e-commerce and m-commerce trend as well consumers’ willingness to adopt mobile services and other regulatory issues. Bridging the information gap gives the prospective provider the possibility to identify business opportunities vis-à-vis mobile services such as mobile payments and the readiness of the market. This may also enable the firm to identify existing solutions, the weaknesses, and strengths of the competition but most of all, identify those resources that underlie their strength. Benchmarking these resources with the firm’s own resources constitutes the basis of the firms strategy formulation process and that depends on whether or not the firm possesses these resources and capabilities.

### 8.3.2 Strategy Formulation Phase (SF-Phase)

In the mobile payment market possession of resources such as control of customer bank accounts, brand image, and capabilities such as expertise in financial risk and payment transaction management, brand image and technological knowhow to develop a payment platform confers onto incumbents such as Banks and card payment providers some comparative advantage vis-à-vis new entrants such as the MNOs and the independent players. In order to sustainably compete these new entrants must incur some addition costs to acquire these resources and capabilities. Based on the transaction cost economics, and depending on the transaction costs associated with each option, they may decide to develop these resources and capabilities in-house, acquire them from the market or form partnership to gain access to partners’ resources. For example the MNOs’ and Seamless distribution AB’s strategies towards partnering with third party financial institutions such as Collector, PaybyBill and SEB Euroline, were greatly shaped by the fact that they lacked in-house banking system and the knowledge in managing payment transactions, the consumers’ trust associated financial service provider brand image possessed by banks, and the access to customer bank account.

The high interdependency nature of the payment market also requires a payment provider to cooperate with three players of the payment value chain precisely the MNOs/ handset manufacturers, the banks, and payment systems such as the card payment systems for access to three key inputs i.e. a mobile phone, a bank account, and a payment platform respectively in order to develop an end-to-end mobile payment solution rather than just having access to key resources. The payment provider’s possession of any or all of these inputs could determine its degree of dependency on these players. For instance, if the provider is able to develop its own payment platform as seen with the case of banks (Swish) or the independent player (SEQR)
its solution could bypass the existing card payment platform. The provider could still develop its own platform yet bypasses the banks by establishing a weak dependence on the card payment system to enable its consumers to top up their mobile wallets as seen with the MNO-operated solution WyWallet. If the solution is an application, which could be stored on separate memory card rather than the SIM card of a smartphone, the provider could bypass the MNOs but would rather have to establish a weak cooperation with the handset manufacturers as in the case with the banks (Swish) and Seamless (SEQR). On the contrary if the provider’s solution relies on the reverse billing strategy of the MNOs it would have to establish a strong dependence on the MNOs as in the case with the MNO-operated solution WyWallet.

The degree of dependency on these key players could go a long way the determine the kind of business model a payment provider could adopt. Despite the type of mobile payment business model adopted by providers such as new comers the MNOs and independent players such as Seamless and even the incumbents such as the banks, such mobile payment business models will constitute a business model innovation and thus must be better managed not only to reduce uncertainties and to ensure its success but also to reduce inherent conflicts with existing business model and to kick-start its *Wheel of Implementation*.²

### 8.3.3 Wheel of Implementation (WOI)

Judging on the provider’s motivation and ability to respond to a disruptive business model such as mobile payments, it may either abandon its existing business model or pursue both business models ambidextrously, by creating a separate unit outside its mainstream business. Such a move will minimize business model conflicts.

If the provider is a bank with high ability to respond, yet with a low motivation due to heavy investments in the card payment infrastructure, the market information could come in handy to justify if the card business model meets its intended C2B market needs, or if the demand for mobile payments is still low. If that’s the case, the provider should respond by restricting access to customer bank accounts. This would not only be disrupting the disruption by creating a resource position barrier against new comers such as the MNOs and the independent players, it will also serve as a means to protect the card business model. Based on the market information gathered in the SS-Phase, the bank could adopt a mobile payment business model by creating a separate unit to launch a superior solution that focuses on the C2C market. Adopting this business model would not only minimize cannibalization of its card business but also it could help the bank to reduce the cost of cash, consolidate its market share while testing the market and building the mobile payment culture amongst its customers. An example constitutes the Swish solution with superior ease-of-use, safety, and real-time features.

For a new comer, when faced with a resource position barrier by incumbents such as limited access to customer bank accounts, the provider should adopt a business model that bypasses the banks. But since the customer account is a vital component of a mobile payment solution,

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² *Wheel of Implementation: Concept coined for this study to represent a cycle of changes within the mobile payment innovation management process.*
if the provider has a high motivation despite a low ability to respond such as an MNO, or has both high ability and motivation to respond such as Seamless Distribution AB, then depending on the market restrictions, the provider could respond by developing a prepaid solution based on the mobile wallet which relies on the card payment system for wallet top-ups e.g. the WyWallet solution. Bypassing the banks for non-bank payment provider such as an MNO or an independent player with no in-house acquiring system, would also require that the provider partners with third party financial institutions (process innovators), which will not only manage the billing and invoice process e.g. the WyWallet solution partnership with SEB Euroline, but also with whom customers could hold invoice accounts linked to customer bank accounts from whence funds could be drawn e.g. the SEQR solution’s partnership with Collector and Payby Bill.

Also for an independent player such as Seamless Distribution AB with an ability to build its own payment infrastructure the lack of any legacy in managing payment transactions could mean freedom to innovate with no risk of cannibalization of existing business models and alienation of business relationship as it is with the case between the banks and the card payment systems. Adopting a business model that focuses on the C2B markets while exploiting the weaknesses of existing card payment solutions, such as high transaction fees, could enable this players to meet merchants needs by offering lower transaction fees which could build some competitive advantage. However, such a solution must be build a cooperation model that bypasses the card payment platform, to downplay high associated coordination cost e.g. the SEQR solution.

Since the payment platform is neither an essential input nor a strategic asset, an MNO with no legacy in building payment transaction technologies may also develop a solution with limited dependence on the card payment infrastructure. However, in such a scenario it will have to cooperate with technology innovators to develop its platform such as the MNO-Techno-Innovator3 partnership between the Swedish MNOs and PayEx. By developing its own payment infrastructure, the MNO or the independent player will not only disrupt the card payment business, but also achieve a means to gain market share in an entirely new market while increasing its economic pie. Depending on the strategic fit between its mobile payment business model and its mainstream business model a new entrant could create a separate unit to support its new business model and keep it as a separate business, e.g. 4T Sverige AB (WyWallet) or re-incorporate it into its mainstream business e.g. SEQR.

The economic theory highlights the creation of a positive network effect as a prerequisite for a double-sided business model such as mobile payments, which targets two distinct customer segments i.e. the consumers and the merchants. Hence the provider’s mobile payment business model must attract as much consumers and merchants to ensure a critical mass. Achieving this feat could seem easy to for a bank or an MNO with existing relationships with customers in the payment market or consumers in the voice call market respectively. However

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3 MNO-Techno-Innovator partnership: Term coined for this study to denote the partnership between MNOs and payment technology innovators.
for a single bank or a single MNO, attracting a critical mass of customer to generate a positive network effect would be hard to achieve in a short time. For a provider, the best way forward would be to form joint ventures e.g. the all-bank and the all-MNO joint ventures to develop the Swish and WyWallet solutions respectively. Forming such joint ventures pulls together their combine customer bases, which could be leveraged to incentivize other consumers as well as other banks (the Swish C2C solution), or leveraged to incentivize merchants as is the case of the WyWallet solution. For an independent player such as Seamless distribution AB, with no previous relationship with payment customers, be they consumers, or merchants, the provider should focus on the merchants by luring them in with low transaction fees and other value-added services such as loyalty program. This could enable the provider to build a vast network of merchants, which could be leveraged to attract both consumers and other merchants alike. Whether it is bank-operated, MNO-operated or an independent solution, attracting a critical mass is imperative for mobile payment services, which is based on a transaction fees revenue model since it will guarantee large volumes of transactions.

Figuring out the right target niche to serve is also important for a mobile payment provider. Focusing on the needs of the targeted niche could offer the provider the possibility to better compete by meeting the needs of its customers better than the competition. For a bank-operated solution in order to limit conflicts between business models such as their globally adopted and successful card payment business, which targets the C2B markets, the provider should focus its mobile payment business model on the C2C markets to offer simple peer-to-peer money transfers. Wrapping the solution with the right context to meet the customer needs is also very important. An example could be drawn from the Swedish market where the banks didn’t only figure an opportunity to become market leaders but also the market need for faster, safer, and convenient payments and were able to leverage their Bankgirot and BankID technologies to associate their C2C Swish solution with real-time, secure, and convenience contexts.

For an MNO or an independent player with no previous relationship with payment customers, and the possibility to bypass the card payment systems, targeting a niche of merchants who are unhappy with the current transaction fees demanded by the card companies, could be a good strategy. Even though the WyWallet and the SEQR solutions cater for both the C2C, and the C2B markets through both online and in-app delivery channels, the MNOs and Seamless focus more on the merchants since the banks’ do not compete in the C2B mobile payment market. Seamless however, focuses more on physical stores of large merchant chains such as Axfood, McDonald, etc. since that guarantees the possibility for high transaction volumes. Seamless is however, better equipped to compete in this niche due to the fact that merchants are not required to install any additional hardware, and its low transaction fees are very attractive to the merchants. In addition to the cost context the lures merchants, partnerships with Q-Park, and its charity campaign also associates the SEQR solution with parking convenience and the possibility of donating to charity via mobile. Wrapping the solution with these charity and parking contexts makes the solution attractive to automobile commuters and the older generation alike while placing SEQR ahead of the competition.
Choosing the right context to showcase a mobile payment solution does not only add value to the solution from a consumer perspective, but also, it could help in building the culture of mobile payments amongst consumers and merchants. With the right context figured out, a provider can launch its mobile payment service. For a disruptive innovation such as mobile payments with low initial demand the provider could launch its solution as a minimum viable product. This could facilitate the learning process, as the provider will be able to gain vital feedback firsthand from real life customers. Based on the feedback the provider could iterate its solution by making incremental innovation followed by a re-launch, or make radical innovations which might require a new resources, new partners or a change in business model. In the latter case the provider will have to make a new turn along its wheel of implementation.

8.4 Summary

This chapter provided reflections on resources and capabilities as the sources of strategy formulation, and mobile payments as a business model innovation from the perspective of the banks, the MNOs and the independent player. A conceptual model of mobile payment innovation management was also been designed and explained in this section to make sense of how the different providers have managed their mobile payment innovation.
9 Conclusion

This chapter wraps up the thesis as it draws a conclusion on the analysis and the empirical findings to provide the best possible answers to the research questions.

RQ1: How have the main providers reacted to the mobile payment opportunity and what are the incentives behind their reactions?

The three most established mobile payment providers in the Swedish mobile payment space have all responded to the mobile payments based on different incentives. However, three general reactions have been identified in the Swedish market.

The key providers have not only adopted a mobile payment business model, but they have also reacted to disrupt the disruption as seen in the case with the Banks and the independent player Seamless. Disrupting the innovation for the banks constitutes a way to protect their existing card payment business and their market share from new entrants such as the MNOs and the independent players. For Seamless, disrupting the disruption is profitable on several fronts, such as gaining market share in an entirely new market, establishing itself as consumer brand and also attracting new revenue streams.

Due to the importance of a network effect in mobile payments, all three players have implementing different strategies aimed at attracting a critical mass of customers. The strategic alliance between the major Swedish banks to build the Swish solution, does not only increases its user base, but also creates a positive network effect, which in turn creates a huge incentive for other customers to use the platform. Similarly the joint venture between the top four Swedish MNOs to build their WyWallet solution also increases the solution’s user base. With WyWallet being both a C2C and a C2B solution, the MNOs could use their combined consumer base to build a positive network effect since they could leverage this consumer base to attract more consumers, which could in turn be used to attract merchants and other stakeholders thus attracting a critical mass. Seamless’ strategy to attract a critical mass constitutes a flip side of that of the MNOs. With no previous relationship with existing payment customers, the independent player decided to build a network effect based on key merchant chains by offering them low transaction fees. As this network expands Seamless will be able to leverage this network of merchants to attract consumers through coupons and loyalty schemes etc., as well as attract other merchants and maybe the in the near future stakeholders such as the banks.

Since mobile payments hold no stand-alone value, the three providers have also reacted by trying to wrap their solutions with the right context. With mobile payments being more of a service-based experience, with an intangible value for the consumer, selecting the right context that meets market need may go a long way to boost the adoption and also building positive attitudes towards the service. Focusing on security and speed, the banks leveraged their BankID and Bankgirot technologies to wrap both secure and real-time payment contexts around their Swish solution. Focusing on micro payments in public transport sector as well vending machines, the MNOs on the other hand, have been able to enhance consumers’ experience of shopping for traffic tickets and fast food without necessarily having cash on them. Similarly, in addition to the cost advantage of the SEQR solution, providing micropayments...
through its partnership with Q-park, Seamless’ mobile payment solution is more of an enhanced consumer experience in paying for parking fees both remotely and at proximity. Launching their charity campaign, which offers the older generation of generous Swedes the possibility to donate to charity using their mobile phones, is also another way to boost the value of mobile payments via the SEQR platform as a life changing experience.

**RQ2:** *What business models and cooperation models could be identified in the Swedish mobile payment market and what are the incentives behind these different business models and cooperation models?*

The three mobile payment providers investigated in this study have adopted three different cooperation models. The Swish solution with no cooperation with the MNOs and the card payment system operates an all-bank-centric business model. The WyWallet solution on the other hand with weak dependence on both the banks and the card payment system yet a strong dependence on the MNOs operates an MNO-centric model. While the independent solution SEQR solution with weak dependence on both the banks and the MNOs and no cooperation with the card payment system operates on Light model. The Swedish market is however shows the presence of neither a partial integration nor a full integration model since there are no solutions based on strong cooperation with all three key input providers the banks, the MNOs and a payment system with a large acceptance network such as the card payment system. This lack of partial and full integration models may be due to he fact that these players have different incentive to offer mobile payments and that mobile payments are still a growing industry. Maybe in the future regulatory authorities may force these players to cooperate to build a standard as it did with the case of the card payments.

**9.1 Summary**

*This section has successfully wrapped up the study by answering the research questions. Three reactions were identified from the key providers. These players also adopted three different cooperation models. However the focus and strategy of the research highlights a few limitations that must addressed. Based on these limitations future arenas of research could be proposed and this issues are addressed in the next section.*
10 Limitation and Future Study

This section takes a dual perspective. First, it tries to explain certain aspects that limit this study, and then tries to propose some areas for future research.

10.1 Limitations

Limitations constitute those aspects or conditions that reduce possibility for the study to cover certain vital issues regarding the studied area.

Though the study is very much localized to the Swedish market, it is also limited to the most established mobile payment solutions and thus does not cover all the solutions offered in this market. Focusing on just the established solutions limits the possibility to identify how all the mobile payment providers have reacted, and also identify all other cooperation models that actually exist in the Swedish market.

Despite the studied solutions being established, mobile payments are still not fully adopted in the Swedish market. The WyWallet, Swish and SEQR solutions are still in their development phases and thus certain aspects regarding these innovations such as profitability and market growth could not be measured. Maybe if the study had been carried out a little bit later in these solutions’ life cycle, it would have been possible to use success metrics such as adoption, to estimate the profitability and competitiveness of the different cooperation models, but most of all the success of mobile payments in general.

10.2 Future Studies

The limitations to this study created a few gaps, which could be considered as potential arenas for future studies.

With the possibility of payment providers such as the MNOs and the independent player to bypass the banks by partnering with process innovators, it is worth investigating the level of trust these consumers have for these process innovators vis-à-vis financial services.

With some providers having established weak relationships with the banks while other have bypassed the banks in the current Swedish payment market, another future arena of studies could be to investigate the future roles of the banks in Swedish mobile payment market.

Lastly certain global players such as Apple have launched their mobile payment solution Apple Pay. This service is based on a cooperation model that relies on strong dependence on the card companies, and the banks. It is thus worth looking at how this global player will fare in this market based on the associated coordination costs involved and how the Swedish players will react to this global player in the future.
11 Bibliography


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List of references


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Appendix - Interview Questions to M-Payment Providers

The Swedish Mobile Payment Space

- How would you describe the current Swedish payment market? What major trends can you identify in this market?
- How would you evaluate the current performance of payment systems in relation to the traditional payment systems (e.g. cash and card-based payments)
- Do you think there is demand for Mobile payments in the Swedish market? What trends point to this demand? How do you experience this demand? Do you think the market is ready for mobile payments?
- What are the main drivers? What market needs drives the mobile payment market?
- How does Mobile payments in general and your solution in particular change the way people do payments today?
- Which key stakeholder can you identify in the Swedish payment ecosystem? What is each stakeholder’s role in the Swedish payment value chain?
- How would you describe your current role? Did you have previous role in this ecosystem? How much has your role changed?

Key Players and Strategic Assets

- What strategic assets can you associate with the different players in the Swedish mobile payment market?
- What competitive solutions can you identify in the Swedish mobile payment market? What are the key strength and weakness underlying each solution?
- What key resources and capabilities in relation to mobile payments can you identify in the Swedish mobile payment market? Does a particular stakeholder possess them?
- Did you have to collaborate with any of they players to gain access to key resource and capabilities?
- What key resources and capabilities in relation to mobile payments do you possess?
- How would you rate the level of trust consumers have for your competition in relation to your brand?

Business Model Innovation

- Will you consider the payment market your traditional market? Did offering mobile payments permit you to attract new customers or enter new markets? What does mobile payment represent for you entire business?
- Did you have to develop a new business model in order to serve this new market? How did this affect your traditional business model(s)? Do you plan to adopt a new business model to support mobile payments?
- Do you operate both your old and new business models simultaneously? Do you operate them within the same company or did you create a separate unit for the new business model?
- How inter-related is your mobile payment business model and you other business models? Did you create a separate unit to execute the new business model? What major setbacks did you encounter in the course of executing this business model? If any
Appendix

- How prioritized is mobile payments within your firm? Can you elaborate on 1) your level prioritization given to mobile payments, 2) the level of prioritization your partners have given to mobile payments?

- What motivated you to adopt this business model and enter into the mobile payment market? And how would you rate your motivation to offer mobile payments?

- Do you think you have the ability to offer mobile payments? Is your ability tied to any key resources? What resources are tied to both business models? And what has changed from your previous business model?

Mobile Payment Service Development

- What key issues did you have to address in order to develop your solution? Did you partner with others players in the Swedish market to address these issues?

- What key resources and capabilities would you say were vital for the development of your solution? Do/did you own these resources and capabilities?

- Is your solution dependent on the banks, the existing card payment system, and the MNOs, or some other independent player? How would you rate your level of dependence?

- How do consider security in relation to your mobile payment solution? What measures did you take to ensure security? Does an external partner(s) provide your security?

- What key technologies underlie your solution? Does these technologies offer your solution any advantage(s)? Do you own them or do you insource them?

- What technologies underlie your competitors’ solutions? Do you think these technologies offer them any advantage over your solution?

Competing Solutions and Strategies

- What major issues have you faced or are you facing so far competing in the Swedish payment market? Have you dealt these issues already? Can you elaborate on how you dealt with them?

- How would you rate the strength of your competitors? Can you identify their strengths or weaknesses? How do you think the competition is capitalizing on your weaknesses and your strengths?

- How have you managed to neutralize these strengths? How have you capitalized/ plan to capitalize on these weaknesses?

- How do you perform financial services such a clearing and settlement? Did you do it in-house? If Yes or No what are the incentives? What are the advantages?

- How do you rate the trust and loyalty your consumers have on you to deliver financial services as compare to your competition?

- How do you experience the demand for your solution? How do you drive this demand? Does your solution offer value added services? If Yes or No? And what are the incentives?

The future of Swedish Mobile Payments Market

- What do you think the future hold for mobile payments in relation to the other payment instruments?

- What do you think would determine success in this market? Would it be tied to some key resources?

- Do you think the current business models will give way?

- What technologies do you think will underlie the mobile payments of the future? What will constitute this dominance?